CITY OF MADEIRA BEACH
Comprehensive Plan
Data and Analysis

~~~~~~~~~~~~~~~~~~~~~~~~~~

2023
~~~~~~~~~~~~~~~~~~~~~~~~~~

Data and Analysis for the Comprehensive Plan of the City of Madeira Beach

TABLE OF CONTENTS

Chapter	Section	Subsection	Subsubsection	Page Number
4.0 DATA AND ANALYSIS				7
	4.1 Overview and Relationship to Existing Data Analysis			7
		4.1.1 Sources of Data and Analysis		7
		4.1.2 New Dates and Clarifications		7
	4.2 Future Land Use			7
		4.2.1 Introduction		7
		4.2.2 Population		7
		4.2.3 Existing and Future Land Use		8
			A. Existing Land Use	8
			B. Future Land Use Needs	10
		4.2.4 Coastal High Hazard Area		12
		4.2.5 Electric Distribution Substations		12
		4.2.6 Open Space, Landscaping,		12

		Redevelopment, and View Corridors		
		4.2.7 Consistency with Forward Pinellas Countywide Plan Rules		12
		4.2.8 Hazard Mitigation		12
		4.2.9 Revisions to Definitions		13
		4.2.10 Regionally Significant Resources and Facilities		13
	4.3 Mobility			14
		4.3.1 Road Facilities Located in Madeira Beach		14
		4.3.2 Pedestrian and Bicycle Infrastructure		16
		4.3.3 Public Transit		17
		4.3.4 Waterways		18
	4.4 Housing			18
		4.4.1 Inventory and Analysis		18
			A. Housing Units by Type	18
			B. Seasonal Housing	19
			C. Housing Units by Year Constructed	20
			D. Households by Tenure	21
			E. Cost and Value of Housing	22
			F. Subsidized Rental Housing Units	23

			G. Residential Group Homes	23
			H. Mobile Home Parks, Subdivisions, or Condominiums	23
			I. Historically Significant Housing	23
		4.4.2 Analysis of Housing Data		23
			A. Projection of Households by Size and Income Range	23
			B. Projected Housing Units by Type	23
			C. Affordable and Workforce Housing	23
	4.5 Infrastructure			24
		4.5.1 Stormwater Management		24
		4.5.2 Potable Water		24
			A. Introduction	25
			B. Potable Water Facility Capacity, Projected Demand, Surplus, or Deficits	25
			C. Conservation and Reuse	27
			D. Alternative Water Supply Projects	28
			E. Financing	29
			F. General Performance of Existing Facilities and Adequacy of	29

			Adopted Level-of-Service	
		4.5.3 Solid Waste		29
	4.6 Conservation and Coastal Management			30
		4.6.1 Working Waterfront		30
	4.7 Culture and Recreation			31
		4.7.1 Acreage in Recreation and Open Space		31
		4.7.2		31
		4.7.3 Level-of-Service		31
	4.8 Intergovernmental Coordination			31
	4.9 Capital Improvements			32
5.0 BIBLIOGRAPHY				36
6.0 APPENDICES				

List of Tables

Number	Title	Page
1	City of Madeira Beach Total Population	8
2	Madeira Beach Future Population Estimates	8
3	Existing Future Land uses	8
4	2018 Annual Average Daily Traffic (AADT) and Level of Service (LOS)	15
5	2020 Annual Average Daily Traffic (AADT) And Level of Service (LOS)	15
6	Pedestrian and Bicycle Infrastructure	16
7	Madeira Beach Housing Units by Type, 1990-2020	18
8	Madeira Beach Housing Units Percentages by Type, 1990-2020	19
9	Household Vacancy Status in Madeira Beach	19
10	Condominiums and Tourist Accommodations in Madeira Beach 2022	20
11	Total Housing Units by Year Constructed	20

12	Housing Built Pre-1980 and Housing Built Post-1980 In Madeira Beach	21
13	Households by Tenure in Madeira Beach	21
14	Cost and Value of Madeira Beach Housing	22
15	Madeira Beach Households by Housing Costs	22
16	Madeira Beach Demand Analysis	26
17	Madeira Beach Supply Analysis Existing Sources	27
18	Madeira Beach Future Source Options	27
19	Potable Water	29
20	Schedule of Capital Improvements Fiscal Years 2023 through 2027	32

List of Maps

Chapter	Section and Title
6.0 Madeira Beach Comprehensive Plan Maps	
	6.1a Madeira Beach Future Land Use Map
	6.1b Madeira Beach Roadway Network Map
	6.1c Madeira Beach Public Transit Map
	6.1d Madeira Beach Active Transportation Map
	6.1e Madeira Beach Coastal High Hazard Area Map
	6.1f Madeira Beach Environmental Map
	6.1g Madeira Beach FEMA FIRM Map

4.0 DATA AND ANALYSIS

4.1 OVERVIEW AND RELATIONSHIP TO DATA AND ANALYSIS

4.1.1 Sources of Data and Analysis

The City of Madeira Beach originally adopted its Comprehensive Plan in 1999. The City adopted its Evaluation and Appraisal Report (EAR) in 2006 and updated the data and analysis of the Comprehensive Plan based upon the recommendations of the EAR in 2008. Unless specifically provided and updated herein, the city will rely on the definitions provided in Chapter 163 of the Florida Statutes and the data and analysis documents from the 2008 update.

4.1.2 New Dates and Clarifications

Throughout this amendment to the City of Madeira Beach Comprehensive Plan, revisions are made to the data and analysis as well as to applicable goals, objectives, and policies to provide updates and clarifications to the names of agencies, existing intergovernmental agreements, and to bring into current time any references to past dates. Numerous revisions are made for the sake of consistent language and accessibility without any substantive change to Goals, Objective, Policies, and Strategies.

4.2 FUTURE LAND USE

4.2.1 Introduction

Data and analysis for the Future Land Use Element includes an updated population projection for the new planning timeframes of 2025. Existing land uses are inventoried, and future land use needs are projected to meet the planning timeframes. Data and analysis on coastal high hazard areas and hazard mitigation planning are discussed in the Coastal Management and Conservation Element. The infrastructure needs and services are presented for the facilities located in and serving the city.

4.2.2 Population

According to the 2020 U.S. Census, the population of Madeira Beach was 3,The population is projected to increase only slightly. These trends for a very slight population growth rate are consistent with the trends described in the comprehensive plan. The factors that support this trend include the built-out character of the community and the very low amount of vacant land remaining in the city. The sources of the slight population growth are predicted to result from limited infill development of the few vacant residential lots existing in the community, the potential for a transition of some seasonal units to full-time, year-round residences, and moderate redevelopment.

Population projections for 2025 as the new planning

timeframes for the city, have been updated from the University of Florida Bureau of Economic and Business Research, 2021 and the 2020 U.S. Census information and are presented in Table 1.

Table 1: City of Madeira Beach Total Population

1990	2000	2010	2020	2021 (UF BEBR Estimate)
4,225	4,511	4,263	3,895	3,886

Source: UF Bureau of Economic and Business Research, 2021, U.S. Census, 2020

Table 2: Madeira Beach Future Population Estimates

2020 (US Census Population)	Population Change Between 2010 and 2020	Annual Population Decline Rate Between 2010 and 2020	2030 Population Estimate	2040 Population Estimate
3,895	-368	-0.86%	3,571	3,274

Source: Population estimates based on the annual population decline rate between 2010 and 2020.

4.2.3 Existing and Future Land Use

An existing land use map 2007, provides current information regarding the land uses in he city. The existing land uses have been updated and are summarized below to replace the information in Section 4.2.3 of the2008 data and analysis. In addition, land needs to support the forecast population are described.

The city is almost completely built-out horizontally and has only a very limited amount of vacant/undeveloped land remaining. Therefore, the land use descriptions in the comprehensive plan have remained largely unchanged, with minor changes in the distribution of acreage among individual land uses. Redevelopment and a moderate increase in the number of mixed-use developments is anticipated for the future.

A. Existing Land Use

Existing land uses are shown in Table 3.

Table 3: Existing Future Land Use

Land Use Category	Acres	Percent
Residential Urban	166.36	34%
Residential Medium	91.63	18.7%
Residential/Office/Retail	18.04	3.7%

Resort Facilities Medium	34.74	7.1%
Commercial General	34.19	7%
Planned Redevelopment-Mixed Use	80.09	16.4%
Recreation/Open Space	14.07	2.9%
Preservation	23.04	4.7%
Institutional	27.26	5.6%
Transportation/Utility	0.15	0.03%
Total	489.58	100%

Source: Pinellas Planning Council

1. Residential Land Use. The land use character of the city remains predominantly residential, with single-family detached housing occupying the largest amount of acreage and multi-family having the largest number of units. Of the 446.9 acres that comprise the city, 282.6 acres (63.2%) are devoted to residential land uses. Approximately one-third of the housing in Madeira Beach is single-family detached, with the other two- thirds comprised of duplex, triplex, and multiple family dwellings.

2. Commercial Land Use. In total, commercial land uses occupy 67.1 acres or 15.0 percent of the total land area. The type of commercial activity found in the city is generally retail, restaurant, and services for tourists and visitors. There is also a small amount of land associated with marine-related activities and commercial fishing businesses.

Commercial uses are concentrated along Gulf Boulevard and on 150th Avenue with significant redeveloping nodes at Madeira Way, the northern anchor and Johns Pass Village, the southern anchor. These commercial areas serve the needs of the citizens of the city and residents of surrounding communities, tourists, and visitors.

3. Agricultural (Fishing) Land Use. There is only a small amount, 0.3 acres of agricultural land use located within the city. This area is associated with the commercial fishing operations and water-dependent recreational uses.

4. Recreation/Open Space Land Use. Within the city, there is a total of 29.6 acres of recreation/open space land that occupies 6.6 percent of the land area. This acreage is comprised of several parks with beach access to the Gulf of Mexico along Gulf Boulevard, a large city park on Boca Ciega Bay in the area of the municipal complex, a smaller city park along 150th Avenue, Teardrop Park on Crystal Island, and several street ends along Boca Ciega Bay.

5. Conservation/Preservation Land Use. Within the city, 22.4 acres comprising 5.0 percent of the land area is conservation/preservation land. This includes significant Gulf of Mexico frontage and an island in Boca Ciega Bay just north of John's Pass.

6. Marinas. A commercial marina is located on 150th Avenue, consisting of 4.5 acres or about 1.0 percent of the land area of the city.

7. Public/Semi-Public Land Use. Public/Semi-Public land uses comprise only 30.5 acres or 6.8 percent of the land area of the city. The primary parcel in this category serves as the location for the Madeira Beach Elementary and Middle Schools.

8. Vacant/Undeveloped Land. As described above, the City of Madeira Beach is primarily built- out. Only 9.6 acres or 2.1 percent of the city land area is vacant. The vacant property that does remain is made up of a few residential lots and several vacant parcels located along commercial corridors. T these vacant parcels are scattered within the city.

9. Historic Resources. There are no historic resources identified by the City of Madeira Beach. The Archibald Park Snack Shack has been assigned the Master Site File Inventory Number 8PI11581 as of March 1, 2007. However, there are no criteria requiring a demonstration of historic significance in order to be added to the Master Site File. While this building has been listed in the inventory, the City has established no preservation or maintenance policy for the protection of this building.

B. Future Land Use Needs

There have been few land use plan amendments since the previous EAR-based amendments and the land use pattern in Madeira Beach has remained stable. There has been no increase in allowed residential density citywide; the trend in local redevelopment activities has resulted in fewer dwelling units rather than more. This reduction in density may be due, in part, to the establishment and enforcement of the county coastal construction control line and enforcement of comprehensive plan densities.

The city is almost completely built-out. Redevelopment of previously developed land is, and will continue to be, the focus of the comprehensive plan and consistent with the land development regulations.

It is anticipated that this slight population growth will result from limited infill development of the few vacant residential lots existing in the community, and moderate redevelopment.

Two particular areas within the city are considered focal areas, or anchors, and thus subject to more specific planning strategies. These are Madeira Way, the northern anchor and Johns Pass, the southern anchor.

Redevelopment of several properties in the Madeira Way are the result of action taken by the Board of Commissioners to proceed with a redevelopment land use designation for the area. A master redevelopment plan has been developed for the area generally bounded by 150th Avenue, Gulf Boulevard, 153rd Avenue, and Boca Ciega Bay. This designation allowed the community to stipulate particular development goals and approaches for this area that include mixed-use development and design guidelines to enhance the area as a town center and foster a sense of place. The redevelopment area plan is intended to develop a vision for this area, including the public properties at City Hall, Rex Place, and the Gulf Beaches Public

Library. The area plan also serves as the technical basis for an amendment to designate the area with a Planned Redevelopment – Mixed Use land use category.

4.2.4 Coastal High Hazard Area

The coastal high hazard areas (CHHA) based on the SLOSH model is provided in the Conservation and Coastal Management Element. The City will continue to use the Forward Pinellas Countywide Plan Rule that defines the CHHA for regulatory purposes. The Coastal Storm Area consists of the area within the CHHA, the area within the velocity zone or Zone V, areas that are surrounded by the CHHA, and islands that are connected to the mainland by bridges or causeways. The CHHA boundary (Coastal Storm Area) as adopted by the Forward Pinellas is legally binding on the City. This line is depicted on the 6.1e Madeira Beach Coastal High Hazard Area Map () and is the boundary line used to determine whether increases in density or intensity are appropriate.

4.2.5 Electric Distribution Substations

There is currently one electric substation within the city and no vacant parcels large enough to accommodate a new substation. However, consistent with state law, the comprehensive plan has a policy that ensures that new substations are permissible in all future land use plan categories except Preservation. State law provides that electric substations may be excluded from preservation, conservation, and historic preservation categories.

4.2.6 Open Space, Landscaping, Redevelopment, and View Corridors

The City adopted an objective to preserve view corridors by keeping them clear of buildings, accessory structures, and structured parking. Other advantages of requiring view corridors during redevelopment include reduced impervious surfaces, increased pedestrian access, and improved on-site stormwater management.

Developers are able to provide view corridors in the form of increased landscaping and other site features through the flexibility offered in the planned development district. This strategy to protect view corridors is especially important along Gulf Boulevard to break up the continuous "wall" effect along the Gulf of Mexico and as redevelopment occurs throughout the city, the views of Boca Ciega Bay are also increasingly valuable and worthy of protection.

4.2.7 Consistency with Forward Pinellas Countywide Plan Rules

The County is currently revising their comprehensive plan and the City anticipates it will make subsequent modifications to the comprehensive plan to accord with changes resulting from the County's effort, once adopted, if consistent with the community's adopted vision.

4.2.8 Hazard Mitigation

The Pinellas County Local Mitigation Strategy (LMS) provides analyses of vulnerability to various types of hazards. The city has a high vulnerability to coastal flooding and coastal erosion. The city has a high vulnerability to minor and major tropical storms. According to the LMS, the probability for hurricanes in Pinellas County as a whole is high, and higher surges than indicated by the Saffir/Simpson Hurricane Scale are expected.

The LMS establishes goals for public education, protection of property and infrastructure, and comprehensive coordination of mitigation efforts.

The Conservation and Coastal Management Element and the Intergovernmental Coordination Element of the comprehensive plan contain objectives and policies for consistency with the goals and objectives of the LMS.

For purposes of coordinating evacuation activity the City will continue to coordinate with Pinellas County Emergency Management regarding voluntary and mandatory evacuations.

People with special needs may register with the Madeira Beach Fire Department or the Pinellas County Emergency Management Department. This registration places a person in the database. In an emergency, such as an evacuation, a bus is provided to transport individuals with special needs to a shelter. There are no group homes or mobile homes identified within the city. There are no nursing homes or hospitals within the city.

Objectives and policies pertaining to hurricane evacuation are updated to ensure consistency with the 2022 Comprehensive Emergency Management Plan and coordination with countywide emergency management requirements.

All objectives and policies pertaining to hazard mitigation and hurricane evacuation have been consolidated into the Conservation and Coastal Management Element.

4.2.9 Revisions to Definitions

The glossary of the comprehensive plan is not adopted but does provide essential definitions for understanding terms in the plan. The following revised definitions are provided to meet requirements for consistency with the Pinellas Planning Council Countywide Plan Rules and to provide additional definitions desired by the city.

Ancillary Non-residential Use – Off-street parking, drainage retention areas, and open space buffer areas for adjacent, contiguous, non-residential uses.

Coastal Storm Area – the area that includes the Coastal High Hazard Area, the Tom Stuart Causeway and land areas connected to the mainland of Pinellas County by the causeway, any area surrounded by the CHHA or by the CHHA and a body of water, and all areas located within the Velocity Zone, or Zone V, as designated by the Federal Emergency Management Agency.

Density – The measure of permitted residential development expressed as a maximum number of dwelling units per gross acre of land area, excluding public road rights-of-way and submerged lands.

Floor Area Ratio (FAR) – A measurement of the intensity of building development on a site. A floor area ratio is the relationship between the gross floor area on a site and the gross land area. The FAR is calculated by adding together the gross floor areas of all buildings on the site and dividing by the gross land area.

Impervious Surface Ratio (ISR) – A measure of the intensity of hard surfaced development on a site. An impervious surface ratio is the relationship between the total impervious surface area on a site and the gross land area. The ISR is calculated by dividing the square footage of the area of all impervious surfaces on the site by the square footage of the gross land area.

4.2.10 Regionally Significant Resources and Facilities

The Tampa Bay Regional Planning Council Strategic Regional Policy Plan identifies the following regionally significant resources and facilities: coastal barrier islands, that include the majority of Madeira Beach; Tom Stuart Causeway) as a hurricane evacuation route; Gulf beaches; Boca Ciega Bay; Gulf of Mexico; and Gulf Boulevard. The comprehensive plan already contains sufficient policy guidance to address protection of natural resources, access to beaches and surface waters, and hurricane evacuation. No additional objectives or policies are needed to address the presence of these regionally significant resources and facilities. Florida Statutes Section 380.093 requires the identification and inventory of critical assets. Pinellas County is in the process of conducting a statutorily-compliant countywide Vulnerability Assessment to satisfy the statute.

4.3 MOBILITY

4.3.1 Road Facilities Located in Madeira Beach

Madeira Beach has two State Roads that cross through the municipal boundaries. Gulf Boulevard (SR 699) is the main North-South Corridor in Madeira Beach. Within Madeira Beach, Gulf Boulevard (SR 699) is Signalized Arterial Road with 4 travel lanes and a divided median. Tom Stuart Causeway/150th Ave (SR 666) is the main East-West Corridor in Madeira Beach. From the boundary of Madeira Beach to the intersection of Duhme Road, Tom Stuart Causeway/150th Ave (SR 666) has 6 travel lanes and a divided median. From the intersection of Duhme Road to the intersection of Gulf Boulevard (SR 699), Tom Stuart Causeway/150th Ave (SR 666) has 4 travel lanes and a divided median. Both sections of Tom Stuart Causeway/150th Ave (SR 666) are signalized arterial roads.

In 2019 and 2021, Forward Pinellas released Annual Level of Service Reports related to state and county roads within Pinellas County. Gulf Boulevard (SR 699) has a Level of Service (LOS) of D that is acceptable for an arterial road in an urbanized area. Gulf Boulevard is not projected to have capacity issues. Tom Stuart Causeway (SR 666) has a Level of Service (LOS) of C. A Level of Service (LOS) of C is reasonable for an arterial road. Tom Stuart Causeway (SR 666) is not foreseen to have capacity issues.

Table 4: 2018 Annual Average Daily Traffic (AADT) And Level of Service (LOS)

Gulf Boulevard (SR 699)

Facility Section	Facility Type	Road Type	Length (Miles)	Annual Average Daily Traffic (AADT)	Peak Volume	Peak Hour Capacity	Facility Level of Service (LOS)
Treasure Island Causeway-to-Tom Stuart Causeway	Signalized Arterial	4D	2.95	23,950			D
Tom Stuart Causeway-to-Park Boulevard	Signalized Arterial	4D	3.85	17,658			D

Tom Stuart Causeway/150th Ave (SR 666)

Facility Section	Facility Type	Road Type	Length (Miles)	Annual Average Daily Traffic (AADT)	Facility Level of Service (LOS)
Seminole Boulevard-to-Duhme Road	Signalized Arterial	6D	0.53	30,000	C
Duhme Road-to-Gulf Boulevard	Signalized Arterial	4D	0.89	30,000	C

Table 5: 2020 Annual Average Daily Traffic (AADT) And Level of Service (LOS)

Gulf Boulevard (SR 699)

Facility Section	Facility Type	Road Type	Length (Miles)	Annual Average Daily Traffic (AADT)	Facility Level of Service (LOS)
Treasure Island	Signalized Arterial	4D	2.95	21,500	D

Causeway-to-Tom Stuart Causeway					
Tom Stuart Causeway-to-Park Boulevard	Signalized Arterial	4D	3.85	17,011	D

Tom Stuart Causeway/150th Ave (SR 666)

Facility Section	Facility Type	Road Type	Length (Miles)	Annual Average Daily Traffic (AADT)	Facility Level of Service (LOS)
Seminole Boulevard-to-Duhme Road	Signalized Arterial	6D	0.53	25,000	C
Duhme Road-to-Gulf Boulevard	Signalized Arterial	4D	0.89	25,000	C

4.3.2 Pedestrian and Bicycle Infrastructure

Table 6: Pedestrian and Bicycle Infrastructure

Gulf Boulevard (SR 699)

Facility Section	Bicycle Infrastructure	Pedestrian Infrastructure	Sidewalk Width (Feet)
Treasure Island Causeway-to-Tom Stuart Causeway	Designated Bike Lanes On Both Sides of Corridor	Sidewalks on Both Sides of Corridor	4
Tom Stuart Causeway-to-Park Boulevard		Sidewalks on Both Sides of Corridor	4

Tom Stuart Causeway/150th Ave (SR 666)

Facility Section	Bicycle Infrastructure	Pedestrian Infrastructure	Sidewalk Width (Feet)
Seminole Boulevard-to-Duhme Road	None	Sidewalks on Both Sides of Corridor	4
Duhme Road-to-Gulf Boulevard	None	Sidewalks on Both Sides of Corridor	4

4.3.3 Public Transit

Pinellas Suncoast Transit Authority (PSTA) serves Madeira Beach with the Suncoast Beach Trolley and Route 68. The Suncoast Beach Trolley connects Madeira Beach with the rest of the barrier island communities in Pinellas County and to the Park Street Terminal in downtown Clearwater. The Suncoast Beach Trolley connects the Madeira Beach Town Center Activity Center with other Activity Centers like the Treasure Island Downtown, Clearwater Beach by Design, St. Pete Beach Community Redevelopment Area, and Clearwater Downtown Redevelopment Area. Park Street Terminal in downtown Clearwater functions as a transit hub that connects the Suncoast Beach Trolley with various Core, Frequent Local, Supporting Local, and Trolley PSTA routes. In St. Pete Beach, the Suncoast Beach Trolley will connect with the SunRunner Bus Rapid Transit that will provide high frequency bus rapid transit service between St. Pete Beach and downtown St. Petersburg. The Suncoast Beach Trolley is PSTA's sixth busiest route with 585,183 total trips in 2019 (PSTA, 2020). The Suncoast Beach Trolley currently operates with 30-minute headways seven (7) days a week, making it one of PSTA's more frequent routes (PSTA, 2020).

Route 68 is a Supporting Local route that serves as a connection between the transit hub at Tyrone Square Mall to Madeira Beach Town Center, and John's Pass Village. The transit hub at Tyrone Square Mall is served by twelve bus routes that connect the transit hub to the rest of Pinellas County. Route 68 serves the Tyrone Activity Center, and Madeira Beach Town Center. Route 68 is PSTA's 32nd busiest route with 64,580 total trips in 2019. Route 68 operates with 60-minute headways (PSTA, 2020).

Within the proposed John's Pass Village Activity Center, there are five (5) existing bus stops. One (1) stop is exclusively served by Route 68, one (1) stop is exclusively served by the Suncoast Beach Trolley, and three (3) stops are served by both routes. These three (3) collaborative bus stops have nearby crosswalks to allow riders to safely cross the Gulf Boulevard to access the stops. While all three (3) bus stops have benches, only two have a bus shelter.

PSTA's FY 2021-2030 Transit Development Plan (TDP) proposes to expand the frequency of service for both routes that serve Madeira Beach (the Suncoast Beach Trolley and Route 68). Under the TDP, the Suncoast Beach Trolley would have 15-minute headways (PSTA, 2020). Increasing the frequency of service to 15 minutes would increase the attractiveness of using public transit in Madeira Beach, since the public would have minimal wait times for the next Trolley. Tourists staying in nearby beach communities along Gulf Boulevard would be more enabled to ride the Suncoast Beach Trolley to Madeira Beach, which would in turn reduce the vehicular mobility pressure on existing roads and parking facilities.

PSTA would like to increase service for Route 68 with 30-minute headways for weekdays and 60-minute headways for weekends (PSTA, 2020). Doubling the frequency of service for Route 68 could potentially raise weekday ridership by 85.8% in PSTA's Optimal Plan Scenario (PSTA, 2020). Increasing the service frequency for Route 68 would provide the public—and particularly the transit-dependent public—from Pinellas County's inland communities better access to Madeira Beach for recreation and employment

4.3.4 Waterways

The Forward Pinellas Waterborne Transportation Committee has requested PSTA to study expanding ferry service in the Tampa Bay Metro Area. Forward Pinellas is developing a revised waterborne transportation section in their Advantage Pinellas: Long Range Transportation Plan. In their System Plan Vision, there are two routes proposed to connect to John's Pass Village. The North Intracoastal Route that would travel from North Beach Clearwater Marina with stops at Sand Key, Belleair Bluffs, Indian Rocks Beach, and John's Pass Village. The South Intracoastal Route would travel from John's Pass Village and connect to Jungle Prada, Treasure Island, and St. Pete Beach. John's Pass Village is the fifth highest scoring waterborne stop in the Proposed Countywide Waterborne Policy Framework. Any proposed route in the System Vision Plan would require a local funding match for capital and operating expenses.

4.4 HOUSING

4.4.1 Inventory and Analysis

A. Housing Units by Type

Between 1990 and 2020, the housing within the city has changed in terms of numbers of units as well as in the distribution of single-family versus multifamily units. Over the three (3) decade period, the total number of units has increased by 386 units to a total of 4,174 in 2020. During this same time period, the distribution of single-family units increased from 37 percent to 38 percent while the multi-family units showed a corresponding decrease from 63 percent to 60 percent.

Table 7: Madeira Beach Housing Units by Type, 1990-2020*

Unit Types	Madeira Beach			
	Total Housing Units 1990	Total Housing Units 2000	Total Housing Units 2010	Total Housing Units 2020
Single-family	1,384	1,410	1,565	1,604
Multifamily	2,366	2,542	2,635	2,519
Mobile Home/Other***	38	19	41	51
Total	3,788	3,971	4,241	4,174

Source: U.S. Census Bureau, 2000, U.S. Census Bureau, 2010, U.S. Census Bureau, 2020

* Total housing units.

** Estimates for housing units by type, tenure, and value are calculated separately, and may not equal estimates for total housing units.

*** In Madeira Beach, mobile home units are actually marine liveaboards or houseboats. There are no mobile home units identified in Madeira Beach.

Table 8: Madeira Beach Housing Units Percentages by Type, 1990-2020

Unit Types	Madeira Beach 1990	Madeira Beach 2000	Madeira Beach 2010	Madeira Beach 2020
Single-family	36.50%	35.50%	37%	38%
Multifamily	62.50%	64%	62%	60%
Mobile Home	1%	0.50%	1%	1%
Total	100%	100%	100%	100%

B. Seasonal Housing

The U.S. Census Bureau reported 1,071 units in the city as seasonal, recreational, or for occasional use. By the census definition, these seasonal units include time-sharing condominiums. These units are included in the census as vacant units and may be single-family residences or multifamily residences. Seasonal units represent 25.6 percent of the housing units in the city. This is significantly higher than the countywide, seasonal, recreational, and tourist units that account for approximately seven percent (7%) of all housing units.

There are 408 hotel or motel units in Madeira Beach. These units are distributed primarily along Gulf Boulevard and were updated in 2022.

Table 9: Household Vacancy Status in Madeira Beach

Label	**2000**	**2020**	**Change Between 2000 and 2020**	**Percent Change Between 2000 and 2020**
Total:	1,448	2,173	725	50.07%
For rent	246	578	332	135%
Rented, not occupied	*	0	NA	NA
For sale only	24	52	28	117%

Rented or sold, not occupied	34	44	10	29%
For seasonal, recreational, or occasional use	1,071	1,246	175	16%
For migrant workers	0	0	0	0%
Other vacant	73	253	180	247%

Table 10: Condominiums and Tourist Accommodations in Madeira Beach 2022

Type of Accommodation	2007		2022	
	Number of Units	Percent of Total	Number of Units	Percent of Total
Condominium	*	*	1678	69%
Timeshare	*	*	96	4%
Hotel, Motels	251	*	408	17%
Condo Conversion - motel, hotel, Condo Hotel and Motel	*	*	239	10%
Total:	*	*	2421	100%

C. Housing Units by Year Constructed

According to an inventory recently revised by the City, there have been 342 units constructed in the city since 2000. Of these, most were constructed before 2010. Since 2010, only 65 units were constructed, 31 of which were constructed since 2014. Most of the units constructed since 1990 are replacement units on existing lots subdivided in the 1950s. The majority of homes in the city, approximately half of the total, were constructed between 1940 and 1980.

Table 11: Total Housing Units by Year Constructed

	Madeira Beach city, Florida	
YEAR STRUCTURE BUILT	**Estimate**	**Percent**
Built 2014 or later	31	0.7%
Built 2010 to 2013	34	0.8%
Built 2000 to 2009	277	6.6%
Built 1990 to 1999	262	6.3%
Built 1980 to 1989	866	20.7%

Built 1970 to 1979	838	20.1%
Built 1960 to 1969	442	10.6%
Built 1950 to 1959	926	22.2%
Built 1940 to 1949	344	8.2%
Built 1939 or earlier	154	3.7%
Total housing units	4,174	4,174

U.S. Census Bureau, 2020

Table 12: Housing Built Pre-1980 and Housing Built Post-1980 In Madeira Beach

	2010		2020	
Time of Construction	**Number of Housing Units**	**Percentage of Total Housing**	**Number of Housing Units**	**Percentage of Total Housing**
Housing Built Pre-1980	2971	70%	2704	65%
Housing Built Post-1980	1270	30%	1470	35%
Total Housing	4241	100%	4174	100%

U.S. Census Bureau, 2020

D. Households by Tenure

In Madeira Beach, an almost identical percentage of units are owner-occupied (36.6 percent) as are vacant (36.4 percent). Of these 1,448 vacant units, 1,094 are identified as seasonal, recreational, or occasional use. Another 27 percent of the housing stock is occupied full-time as rental units. The percentage distribution of tenure of occupancy in Madeira Beach differs from the countywide statistics as a reflection of the seasonal, recreational, and occasional units located in the city, known as a popular beach community.

Table 13: Households by Tenure in Madeira Beach

Tenure	**2000**		**2020**	
	Number of Units	**Percent of Total**	**Number of Units**	**Percent of Total**
Owner-Occupied	1,454	36.6%	1,248	30%
Renter-Occupied	1,074	27.0%	753	18%
Vacant	1,448	36.4%	2,173	52%
Total	3,976	100.0%	4,174	100.0%

Source: U.S. Census Bureau, 2000, U.S. Census Bureau, 2020

E. Cost and Value of Housing

1. Median Housing Costs. According to the 2000 Census, the city's median gross monthly rent was $555. The 2020 census indicates that this figure had risen to $1509, almost triple in 20 years. The median value of owner-occupied housing in Madeira Beach was $171,000 in 2000 compared to $$471,000 in 2020.

Table 14: Cost and Value of Madeira Beach Housing

Ownership	**Year 2000**	**Year 2020**
Median Gross Rent	$555	$1,509
Median Value of Owner-Occupied Units	$171,000	$471,000

Source: U.S. Census Bureau, 2000, U.S. Census Bureau 2020.

2. Housing Cost by Household Income. Table 15 displays the relationship of housing costs for households in Madeira Beach from 2000 compared to housing costs for 2020. Approximately 41 percent of rental households in Madeira Beach in 2000 each paid 30 percent or more of their income for rent. That number rose in 2020 to 70 percent, indicating a reduction in renter occupied units from 1,074 in 2000 to 753 in 2020.. Households paying more than 30 percent of their adjusted gross annual income are considered cost burdened according to the definition in Section 420.004(3), Florida Statutes.

Table 15: Madeira Beach Households by Housing Costs

	2000		2020	
	Number	Percent	Number	Percent
Renter-occupied Units	**1,074**	**100.0%**	**753**	**100.0%**
Households paying 30% or more of their income for rent	448	41.7[1]	525	70%[1]
Households paying under 30% of their income for rent				
No cash rent	45	4.2	4	
Owner-occupied Units	**1,454**	**100.0%**	**1248**	**100.0%**
Households with mortgages paying 30% or more of their income for housing	270	18.6[1]	260	47%[1]
Households with mortgages paying less than 30% of their income for housing costs				
Not mortgaged	429	29.5	671	54%
Total Households by Tenure	2,528	28.4[2]	2001	39%[2]

Source: U.S. Census Bureau, 2000, U.S. Census Bureau, 2020
[1] The percentage is based on total rental or total owner households.
[2] This percentage is the percent of all households paying 30 percent or more of their income for either rent or mortgage.

F. Subsidized Rental Housing Units
There are no subsidized rental housing units in Madeira Beach.

G. Residential Group Homes
There are no residential group homes reported within the city.

H. Mobile Home Parks, Subdivisions, or Condominiums
According to the 2000 Census, there were a total of 19 units designated as "mobile home" in the city. These units are actually marine liveaboards or houseboats. There are no mobile home units in the City of Madeira Beach. The number of marine liveaboards has increased from 19 in 2000 to 51 in 2020.

I. Historically Significant Housing
There is no historically significant housing within the city.

4.4.2 Analysis of Housing Data

A. Projection of Households by Size and Income Range
Households had an average of 1.78 persons as reported by the 2000 census. No distribution by number of persons per household was available. The median household income in 2000 was $36,671.

B. Projected Housing Units by Type
The City of Madeira Beach is approaching horizontal build-out. Redevelopment of previously developed land is, and will continue to be, the focus of the comprehensive plan.

There have been no increases in residential density citywide; the trend in local redevelopment activities has resulted in fewer permanent dwelling units rather than more. This reduction in density may be due, in part, to the establishment and enforcement of the county coastal construction control line and enforcement of comprehensive plan densities.

C. Affordable and Workforce Housing
The City recognizes the importance of affordable housing and workforce housing. However, there are several factors including availability of vacant land for residential development and the inability to increase development densities that inhibit the City from adding residential density to meet affordable housing needs.

In the alternative, the City participates in countywide and regional housing programs designed to provide funding for affordable housing and workforce housing. The Housing Finance Authority of Pinellas County is a regional agency that helps families and individuals in Pinellas, Pasco, and Polk Counties purchase their first home. The Housing Finance Authority also has a variety of programs to assist public safety workers, teachers, and health care workers with housing down payment and mortgage assistance.

4.5 INFRASTRUCTURE

4.5.1 Stormwater Management

The City of Madeira Beach is responsible for a separate municipal storm sewer system and implementation and enforcement of NPDES regulations. The city is a co-applicant with Pinellas County in the National Pollutant Discharge Elimination System (NPDES) and assesses a citywide stormwater service fee for facility improvements. Southwest Florida Water Management District (SWFWMD) grants have been used to improve stormwater drainage and to install Continuous Deflective Separation (CDS) units in John's Pass Village and on 140th Avenue to implement the citywide stormwater management plan. The installation of the CDS units at Public Works, John's Pass Village, and 140th Avenue helped eliminate floatable waste in the Bay and Gulf waters during storm events.

All new development and redevelopment, depending on the magnitude of the impervious surface, must provide stormwater drainage retention and treatment for a 10-year frequency, 60-minute storm event. This level-of-service requires treatment of the first one-inch of runoff. The city is continuing to implement drainage improvements with funding from the stormwater service fees as well as grant revenue. The Capital Improvements Element identifies the projects anticipated through 2027.

4.5.2 Potable Water

A. Introduction

The Potable Water Sub-Element is supplemented with the Water Supply Facilities Work Plan. The City of Madeira Beach receives all potable water supplies, treatment, and distribution from Pinellas County Utilities. Through an interlocal agreement and master water supply contract,

Tampa Bay Water, the regional water supply authority, provides all the potable water needed by its six member governments, including Pinellas County Utilities as an operational entity within Pinellas County. Through the agreement and contract, "Tampa Bay Water is obligated to meet the current and future water needs of its member governments. In order to meet these needs, Tampa Bay Water owns and operates water supply facilities including wellfields, surface water withdrawals, a seawater desalination facility, treatment facilities, storage facilities such as the off-stream reservoir, pumping stations, and transmission mains." (Regional Water Supply Plan, page 8)

The water demand data provided in the SWFWMD 2020 Regional Water Supply Plan is the best available data. The water demand population data used in the 2020 Regional Water Supply Plan is based on a model that projects population fluctuations at the census block level, distributes the projections to parcels within each block, then normalizes the projections to BEBR medium county level data.

B. Potable Water Facility Capacity, Projected Demand, Surplus, or Deficits Madeira Beach relies on the data and analysis contained in the Tampa Bay Region Community Planning Pages from the Southwest Florida Water Management District. The Tampa Bay Community Planning Pages Demand Analysis and Supply Analysis are the appropriate data and analysis for the Madeira Beach water supply facilities work plan. Located below are the demand analysis and supply analysis data tables from the Tampa Bay Region Community Planning Pages.

Table 16: Madeira Beach Demand Analysis

Utility Name	2020	2025	2030	2035	2040	WUP (MGB)	Per Capita Water Use (2011-2015)
Pinellas County Utilities (20142)	**(Supplied Through Tampa Bay Water)**						
Municipal Population Served	10,041	10,194	10,424	10,662	10,600	0.000	79
Demand (MGD)	0.789	0.801	0.819	0.838	0.833		
Total Utility Service Area Population	504,863	514,010	526,816	539,181	543,701		
Demand (MGD)	39.670	40.388	41.395	42.366	42.721		
Domestic Self Supply							
Population Served	0	1	2	2	2		54
Demand (MGD)	0.000	0.000	0.000	0.000	0.000		
Municipal Population	10,041	10,195	10,427	10,664	10,603		79
Total Demand (Municipal)	0.789	0.801	0.819	0.838	0.833		
Total Demand (Utilities)	39.670	40.388	41.395	42.366	42.721		

Key:
WUP= Water Use Permit
MGD- Millions of Gallons Per Day

(Southwest Florida Water Management District, 2020)

Table 17: Madeira Beach Supply Analysis Existing Sources

Existing Sources	
	Current Yield (MGD)
Total Permitted Quantities	0.000
Water Supply Authority Quantities	224.620
Total Current Yield	0.000

(Southwest Florida Water Management District, 2020)

Table 18: Madeira Beach Future Source Options

Future Source Options		
	2040 Potential Yield (MGD)	***Responsible Entity***
Conservation	0.094	All

(Southwest Florida Water Management District, 2020)

C. Conservation and Reuse

1. Inventory of Reuse Water Service Providers: Residents of Madeira Beach receive reclaimed water from Pinellas County Utilities.

2. Conservation and Reuse Practices and Regulations: Water conservation is regulated by Pinellas County. This includes enforcement of water use restrictions during declared water shortage emergencies, water saving plumbing devices, and use of reclaimed water for irrigation.

3. Water Supply Provided by Other Entities: The City of Madeira Beach is a retail customer of the Pinellas County Utilities Department and therefore, has adopted the Pinellas County Utilities Department's 10-year Water Supply Facilities Work Plan into the City of Madeira Beach Comprehensive Plan. The County's work plan addresses the requirements needed to serve current and future development within the City's jurisdiction.

4. Conservation: Conservation programs are adopted from Pinellas County and Southwest Florida Water Management District. Pinellas County is working to address resource uncertainty using reclaimed water that offsets of the use of potable water consumption, conservation programs that prevent the waste of potable water, and the development of alternative sources of potable water supply and storage methods.

5. Local Specific Actions, Programs, or Regulations: The City of Madeira Beach has adopted by reference those provisions of water conservation ordinances that are applicable to Madeira Beach which may be adopted by Pinellas County or recommended by the Southwest Florida Water Management District.

6. Identify any Local Financial Responsibilities as Detailed in the CIE or CIS: The City of Madeira Beach is not financially responsible for the potable water infrastructure. The city's Capital Improvements element shown below does ensure that the City will work with Pinellas County to ensure an adequate supply of water is available, that level of service standards are met and that the budget is adequate to provide the required services.

7. Reuse: State law supports reuse efforts. Florida's utilities, local governments, and water management districts have led the nation in the quantity of reclaimed water reused and public acceptance of reuse programs. Section 373.250(1) F.S. provides "the encouragement and promotion of water conservation and reuse of reclaimed water, as defined by the department, are state objectives and considered to be in the public interest." In addition, Section 403.064(1), F.S., states "reuse is a critical component of meeting the state's existing and future water supply needs while sustaining natural systems."

8. Local Specific Programs, Regulations, or Opportunities: The City of Madeira Beach is provided reclaimed water by the Pinellas County Utilities Department and supports water reuse initiatives and watering regulations set forth by the County.

9. Identify any Local Financial Responsibilities as Detailed in the CIE or CIS: The City of Madeira Beach is not financially responsible for the reclaimed water infrastructure. The city's Capital Improvements element shown below does ensure that the City will work with Pinellas County to ensure an adequate supply of water is available, that level of service standards are met and that the budget is adequate to provide the required services.

D. Alternative Water Supply Projects

The 2020 Regional Water Supply Plan is coordinated with the Tampa Bay Water Long-Term Master Water Plan. Because the wholesale potable water supply is provided by Tampa Bay Water, the required water supply projects are selected and implemented by that agency. The selected projects, approved by the Tampa Bay Water Board, are then incorporated into the Master Water Plan. The Water Board selected the Downstream Enhancements Phases A/B for System Configuration II of the Master Water Plan for implementation. These enhancements meet the region's water needs through 2040. (Special District Public Facilities Report, 4) No individual water supply project is selected by Madeira Beach.

E. Financing

The capital costs for water supply development projects are the responsibility of Tampa Bay Water. Such costs are recaptured through the sale of water to Pinellas

County Utilities, and through them, by Madeira Beach.

F. General Performance of Existing Facilities and Adequacy of Adopted Level-of-Service

- General Performance: The Special District Public Facilities Report includes a summary of the existing Tampa Bay Water facilities . Pinellas County facilities are described in the Water Supply Element of the Pinellas County Comprehensive Plan.

- Level-of-Service Standards: The City of Madeira Beach adopted level-of-service standards for stormwater drainage and potable water. They are referenced in Policy 13.1.5.4 of the Madeira Beach Comprehensive Plan. These level-of-service standards are:

Stormwater Drainage:
Each newly developed or redeveloped property must be designed and maintained to retain on-site the first one-inch (1") of impervious surface runoff from the ten- year (10-year) frequency, sixty-minute (60-minute) storm event.

Table 19: Potable Water

Year	2020	2025	2030	2035
Gallons per capita per day (gpcd)	102	104	105	107

(Source: Regional Water Supply Plan, Chapter 4, Appendix 4, Table 34-A)

4.5.3 Solid Waste

The City continues to provide solid waste collection services for residential and commercial establishments solely within the municipal boundaries. Recycling containers are located at City Hall for voluntary recycling of select materials. In May 2006, SCS Engineers completed a draft report for the City of Madeira Beach, Solid Waste Collection: Cost of Service Study and Business Plan. This study contains detailed information about the number and type of customers, and the type of service provided by the City. The City's solid waste system is managed using a separate enterprise fund and rates are adjusted as warranted by documented expenses. The City relies on the data and analysis contained in the Pinellas County Comprehensive Plan Solid Waste Element, as amended. Pinellas County is responsible for the ultimate disposal of the solid waste that is delivered to its system.

4.6 CONSERVATION AND COASTAL MANAGEMENT

As a coastal community, Madeira Beach's major concern for the EAR is compliance with statutory requirements for "Peril of Flood" provisions of section 163.3178(f)(2) Florida Statutes. This requires an update to the data and analysis to include a vulnerability assessment ("VA"). An initial VA was completed by the University of Florida | Institute of Food and Agricultural Sciences ("UF|IFAS") Program for Resource Efficient Communities ("PREC") in 2020-21 under a grant from the Florida Department of Environmental Protection ("FDEP"). This initial VA was effective in identifying focus areas for potential development of Adaptation Action Areas under Florida Statutes. This initial VA does not, however, comply with section 380.093 Florida Statutes that was subsequently enacted in 2021. Pinellas County is in the process of completing a countywide, statutorily compliant VA to satisfy the requirements of F.S. § 380.093.

FEMA recently updated the Flood Insurance Rate Map ("FIRM"), which shows where the floodplains are located in Madeira Beach. The updated map is called the 6.1g Madeira Beach FEMA FIRM Map in this document.

All objectives and policies pertaining to hazard mitigation and hurricane evacuation are consolidated in the Conservation and Coastal Management Element. "Peril of Flood" compliant provisions were developed as part of the VA study and are included under Objective 8.2.3, Policies 8.2.3.1 through 8.2.3.6.

4.6.1 Working Waterfronts

The State of Florida has identified the importance of working waterfronts to employment, quality of life, and to the state and local economies. Increasingly, new developments are replacing working waterfronts with other commercial and residential uses. The lure of waterfront access combined with increased land prices threatens the continued viability of these important working waterfronts.

There are three (3) working waterfront sites in the City of Madeira Beach: the Madeira Beach City Marina on 150th Avenue and two private business locations. Each of these areas has separate issues and strategies.

At the City Marina, in addition to the public areas, commercial fisherman, charters, and water-oriented businesses are operating. Since this facility is City-owned, it is controlled and protected from redevelopment pressures,

The City of Madeira Beach is committed to encouraging and supporting the continuation of its working waterfronts and is proposing new policies for this continuation. The City of Madeira Beach has included an objective and associated policies for working waterfronts in the Conservation and Coastal Management Element. This objective and policies were recently renumbered as Objective 8.1.11 and Policies 8.1.11.1 through 8.1.11.4. Statutory provisions regarding working waterfronts are provided in Florida Statutes chapter 342, Sections 342.07 and
342.201 (2022).

4.7 CULTURE AND RECREATION

The Culture and Recreation Element was recently renamed, renumbered, and revised in conjunction with the City adopting proportionate-share development fees (or "impact fees")

4.7.1 Acreage in Culture and Recreation

As part of the study to develop the impact fees, City staff undertook an extensive review of the inventory of municipal-owned parcels of land. Of the 24 land parcels identified as municipal-owned, 61.02 acres were associated with culture and recreation. This acreage is comprised of several parks with beach access to the Gulf of Mexico along Gulf Boulevard, a large city park fronting Boca Ciega Bay in the area of the municipal complex, a smaller city park along 150th Avenue, and numerous street stubs where municipal street rights-of-way terminate at the water.

4.7.2

4.7.3 Level-of-Service Policy 10.1.1.1

The City is amending its recreation level of service to a level-of-service standard based on park land and replacement cost for culture and recreation facilities and services. The purpose of this change is to provide the city with greater flexibility to determine the culture and recreation needs of the population while ensuring that adequate culture and recreation land, facilities, and services are available to citizens and visitors. As needs change, the city has the ability to redevelop parks with different facilities, as a specific type and number of facilities are not mandated by the policies of the comprehensive plan. All levels of service are now located in the Capital Improvements Element and referenced in the relevant elements. The adopted LOS standard for improved municipal culture and recreation facilities and services is provided in Policy 13.1.5.4 of the Plan's Capital Improvements Element.

4.8 INTERGOVERNMENTAL COORDINATION

As discussed in the data and analysis for the Housing Element, the primary issue for Madeira Beach is coordinating the availability and provision of workforce and affordable housing. As

with most small horizontally built-out barrier island cities, the only effective means of ensuring the availability and provision of such housing is through cooperation with other entities that provide housing or financing.

A second issue of intergovernmental coordination is annexation. The City is not pursuing involuntary annexation but continues to consider requests from property owners for voluntary annexation. The intergovernmental coordination policies and objectives are updated to address the current situation with regard to the coordination of the availability of affordable housing as well as annexation. A complete updated inventory of entities with which the city coordinates is available at the EAR- based amendment resource page of the Pinellas Planning Council website [www.pinellasplanningcouncil.org/state/earba.htm].at https://forwardpinellas.org/about-us/agency-partners/.

4.9 CAPITAL IMPROVEMENTS

The capital improvements anticipated for Fiscal Years 2023 through 2027 are provided in Table 17.

Table 20 Schedule of Capital Improvements Fiscal Years 2023 through 2027

Project Title	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Interior and Exterior Maintenance of Structures at Archibald Park	$350,000.00	0	0	0	0
Beach Groin Renourishment Project	$3,500,000.00	$750,000.00	0	0	0
Patriot Park fishing piers rebuild	$100,000.00	0	0	0	0
Mill and Resurface Parking Lot at Archibald Park	0	$250,000.00	0	0	0
Pocket Park Improvements	$150,000.00	0	0	0	0
Construct Code Enforcement Dayroom	$150,000.00	0	0	0	0
Construct Public Works Building	$200,000.00	$2,000,000.00	0	0	0

Replacement of SCBA	0	$185,000.00	0	0	0
John's Pass Boardwalk Repairs	$50,000.00	$50,000.00	$50,000.00	0	0
Johns Pass Park - Parking lot improvements	$450,000.00	0	0	0	0
Engineering and Construction of a City Parking Garage	$250,000.00	$3,000,000.00	$3,000,000.00	0	0
Construct Basketball Court Enclosure	0	$300,000.00	0	0	0
Construct Concession Stand	$250,000.00	0	0	0	0
Renovate Dog Park	$200,000.00	0	0	0	0
Install Recreation Center Solar Panels	$100,000.00	0	0	0	0
Shade Awnings and Dugout Replacement	0	$150,000.00	0	0	0
Resurfacing of Marina Parking Area	0	0	$400,000.00	0	0
Seawall Renovation Project at City Marina	0	$200,000.00	0	0	0
Construct Transient Docks at City Marina	$200,000.00	$1,000,000.00	0	0	0
Parking Equipment - City Wide	0	0	0	$225,000.00	$225,000.00
Replace a 2016 Peterbilt garbage truck	0	$290,000.00	0	0	0
Watershed Management Plan	$95,000.00	$48,000.00	0	0	0

Mill and resurface, curb repair and stormwater drainage improvements at Area 3 - East Parsley, West Parsley, Marguerite, A Street, B Street, and Lynn Way	$1,500,000.00	$1,500,000.00	0	0	0
Mill and resurface, curb repair, and stormwater drainage improvements at Area 5 – 131st Ave E & 129th Ave.	$1,000,000.00	$1,000,000.00	0	0	0
Mill and resurface, curb repair and stormwater drainage improvements at Area 6 - 155th Ave, 154th Ave, 153rd Ave, 1st St E, 2nd St E, Harbor Dr and Municipal Dr	$200,000.00	$2,000,000.00	$1,500,000.00	0	0
Emergency Stormwater Repairs throughout the City	$200,000.00	$200,000.00	$200,000.00	0	0
Gulf Lane and Beach Access Drainage and Roadway Improvement Project	$2,500,000.00	0	0	0	0

Generator replacement for 141st Stormwater Station	$125,000.00	0	0	0	0
Total:	$11,570,000.00	$ 12,923,000.00	$ 5,150,000.00	$ 225,000.00	$ 225,000.00

5.0 BIBLIOGRAPHY

Florida Geographic Data Library (FGDL). (2020). *FGDL Metadata Explorer: Search and Download Data*. https://www.fgdl.org/metadataexplorer/explorer.jsp

Pinellas County. 2008 Comprehensive Plan. Retrieved on 12/20/2022 from: http://www.pinellascounty.org/Plan/default.htm

Pinellas County Government. (2023, March 6). *Potable Water, Wastewater and Reuse - Plan Pinellas*. Plan

Pinellas. https://plan.pinellas.gov/potable-water-wastewater-and-reuse/

Pinellas County. (2022) Pinellas County Enterprise GIS. http://new-pinellas- egis.opendata.arcgis.com/

Pinellas Suncoast Transit Authority. (2020a, April). *Pinellas Suncoast Transit Authority: FY 2021–2030 Transit Development Plan*. https://www.psta.net/media/4784/fy2021-2030-tdp.pdf; https://forwardpinellas.org/wp-content/uploads/2020/03/030920-PSTA-TDP-Draft-508.pdf

Southwest Florida Water Management District. (2020, November). *Community Planning Pages*. WaterMatters.org. Retrieved May 5, 2023, from https://www.swfwmd.state.fl.us/resources/plans-reports/rwsp/community-planning-pages

Southwest Florida Water Management District, 2020 Regional Water Supply Plan. Retrieved on 12/20/2022 from http://www.swfwmd.state.fl.us/

U.S. Census Bureau. (2010). *Madeira Beach: 2010 Demographic Profile Data*. https://data.census.gov/cedsci/table?g=1600000US1242400&y=2010&tid=DECENNIALSF12010.P1&vintage=2010&layer=VT_2010_160_00_PY_D1&hidePreview=false&cid=P001001

U.S. Census Bureau. (2020a). *Madeira Beach: 2013-2017 American Survey 5-Year Estimates*. https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/2017/

U.S. Census Bureau. (2020b). Madeira Beach city, Florida: Profile. https://data.census.gov/cedsci/profile?q=Madeira%20Beach%20city,%20Florida&g=1600000US1242400

University of Florida, Institute of Food and Agricultural Sciences, Extension Program for Resource Efficient Communities, *City of Madeira Beach Proposed Level of Service Standards*, September 2020.

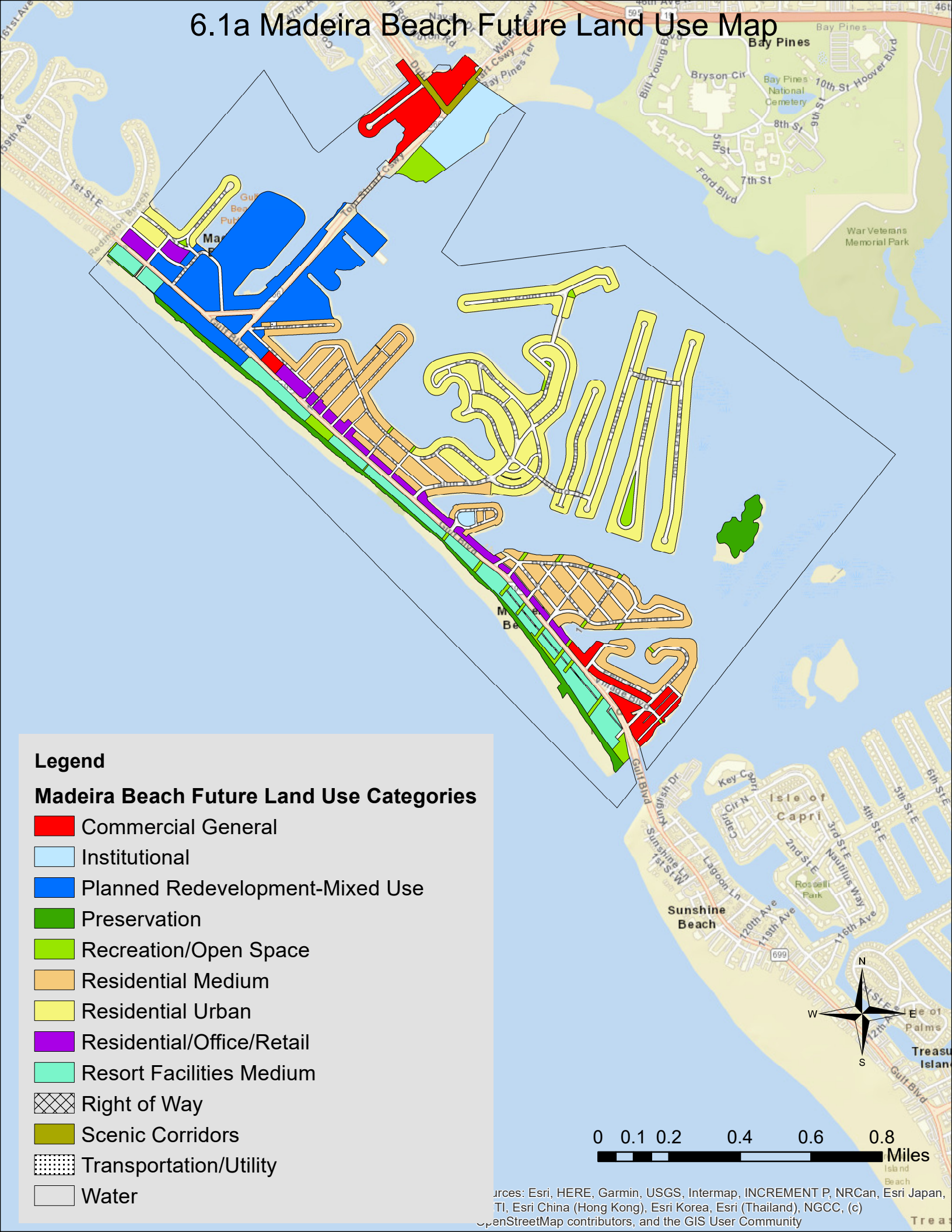
6.0 APPENDICES

6.1 Madeira Beach Comprehensive Plan Maps

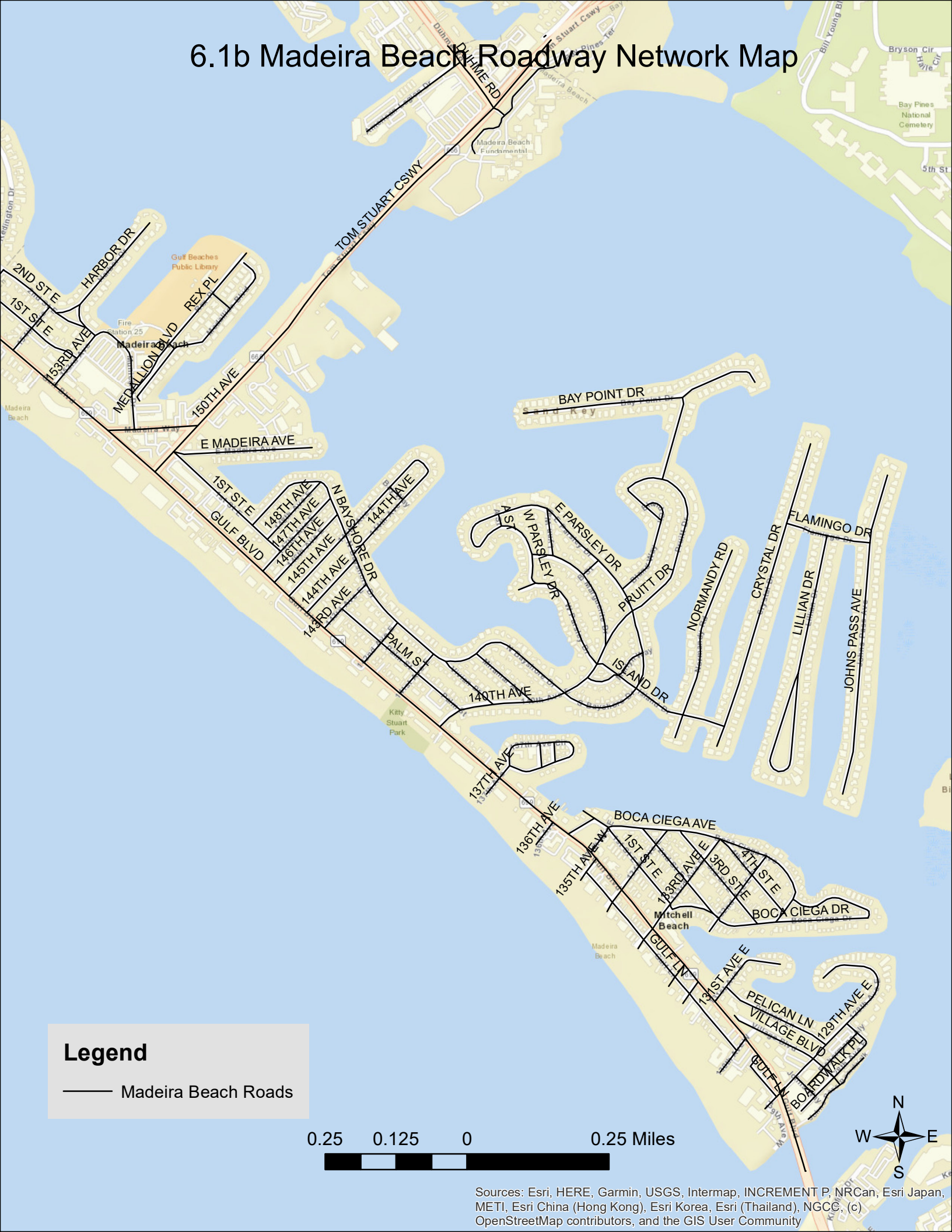
6.1a Madeira Beach Future Land Use Map

6.1b Madeira Beach Roadway Network Map
6.1c Madeira Beach Public Transit Map
6.1d Madeira Beach Active Transportation Map
6.1e Madeira Beach Coastal High Hazard Area Map
6.1f Madeira Beach Environmental Map

6.1a Madeira Beach Future Land Use Map



6.1b Madeira Beach Roadway Network Map



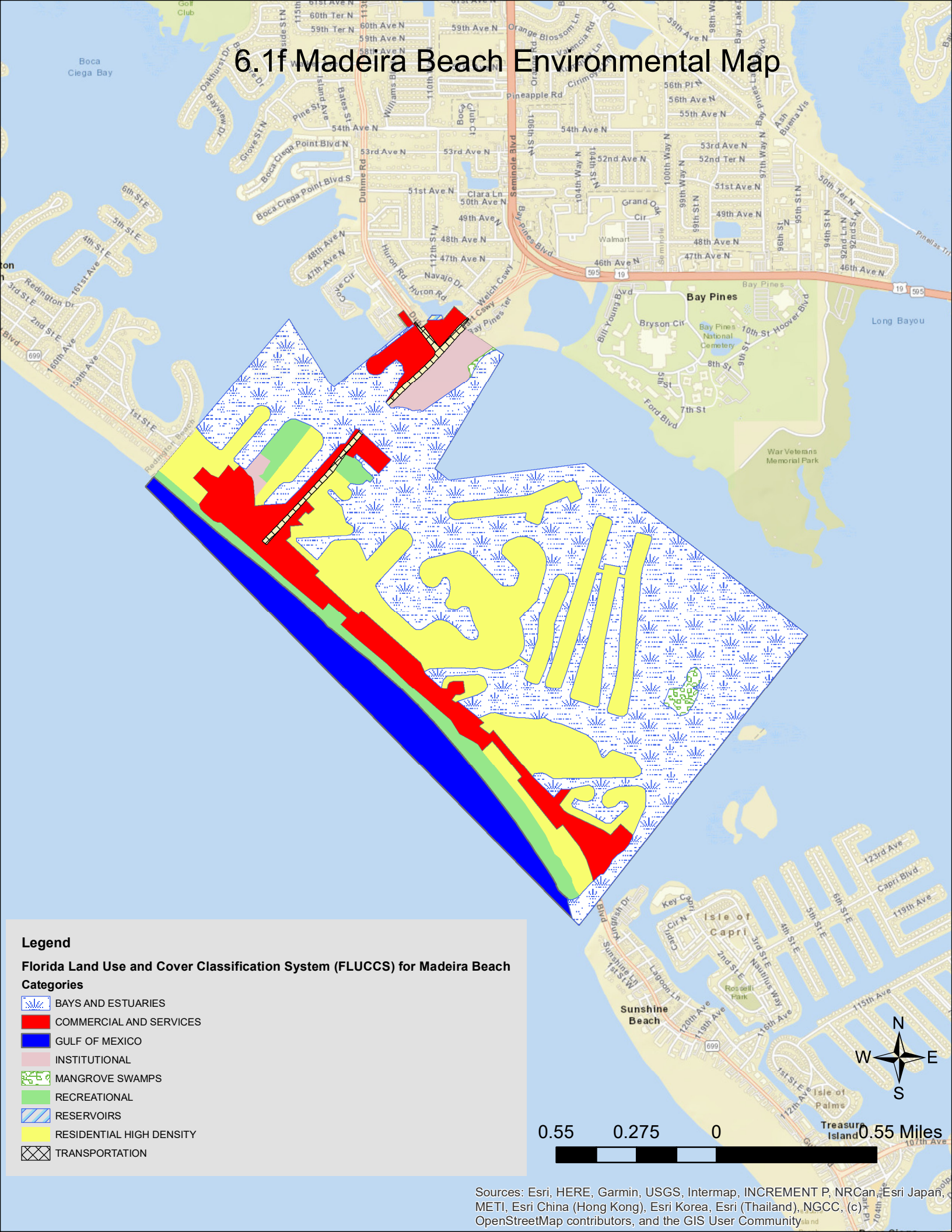
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

6.1c Madeira Beach Public Transit Map

6.1d Madeira Beach Active Transportation Map

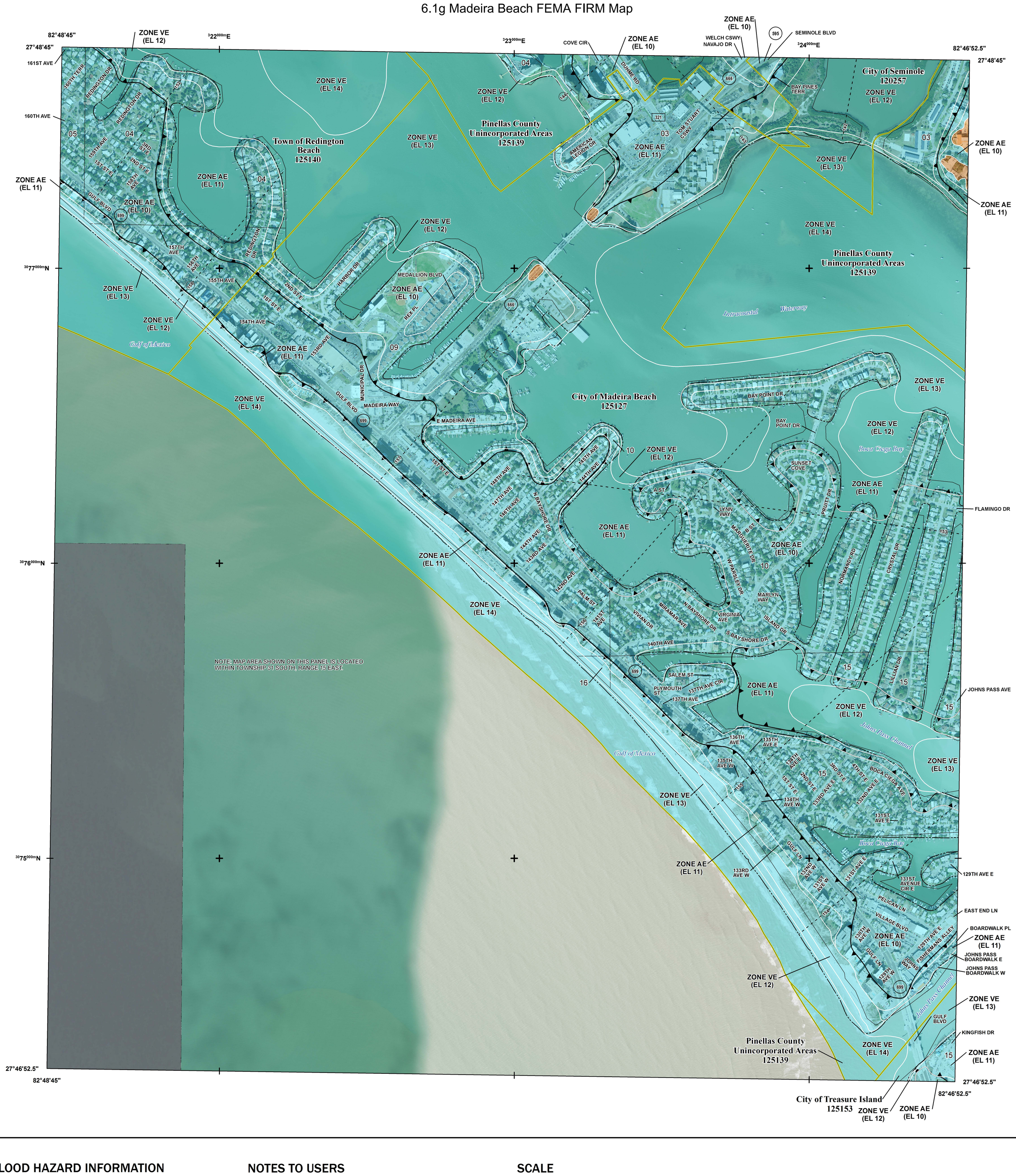
6.1e Madeira Beach Coastal High Hazard Area Map

6.1f Madeira Beach Environmental Map



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

6.1g Madeira Beach FEMA FIRM Map



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT HTTPS://MSC.FEMA.GOV

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A,V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN — Area of Minimal Flood Hazard *Zone X*
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- E 18.2 / 17.5 — Cross Sections with 1% Annual Chance Water Surface Elevation
- 8 — Coastal Transect
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature
- 513 — Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Mapping and Insurance eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at https://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study Report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was provided in digital format by the Federal Emergency Management Agency, dated 2009; the Florida Department of Transportation, dated 2017; the Florida Resources and Environmental Analysis Center, dated 2003; Pinellas County, dated 2017; and the U.S. Department of Agriculture, dated 2016.

LIMIT OF MODERATE WAVE ACTION: Zone AE has been divided by a Limit of Moderate Wave Action (LiMWA). The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave. The effects of wave hazards between Zone VE and the LiMWA (or between the shoreline and the LiMWA for areas where Zone VE is not identified) will be similar to, but less severe than, those in the Zone VE.

Limit of Moderate Wave Action (LiMWA)

SCALE

N

Map Projection:
Universal Transverse Mercator Zone 17N; North American Datum 1927; Western Hemisphere; Vertical Datum: NAVD 88

1 inch = 500 feet 1:6,000

0 250 500 750 1,000 2,000 feet

0 125 250 500 meters

PANEL LOCATOR

FEMA

National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

PINELLAS COUNTY, FLORIDA
and Incorporated Areas

PANEL 191 OF 327

FEMA

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
MADEIRA BEACH, CITY OF	125127	0191	H
PINELLAS COUNTY	125139	0191	H
REDINGTON BEACH, TOWN OF	125140	0191	H
SEMINOLE, CITY OF	120257	0191	H
TREASURE ISLAND, CITY OF	125153	0191	H

VERSION NUMBER
2.4.3.2

MAP NUMBER
12103C0191H

MAP REVISED
AUGUST 24, 2021