Coastal Florida Partnership Project (R2P2)



WELCOME

SANIBEL FINAL REPORT PRESENTATION
JANUARY 14, 2025





Coastal Florida

Recovery & Resiliency Partnership Project (R2P2)

What is R2P2?

The Recovery and Resiliency Partnership Project (R2P2) program provides free technical assistance to communities impacted by a major disaster declaration.

The program's goal is to develop a set of community-driven conceptual designs that reflects a participating communities' vision for long-term recovery and are poised to leverage federal, state, and nonprofit funding resources for implementation.





Coastal Florida

Recovery & Resiliency Partnership Project (R2P2)



This effort focused on design concepts for:

- Island-wide mobility & connectivity
- Potential barge landing
- Naturalizing existing seawalls
- Enhancing Sanibel's Town Center
- Evolution of Sanibel Island Golf Course



Prepared For

Managed By





CITY OF SANIBEL

U.S. ENVIRONMENTAL PROTECTION AGENCY

Prepared By





DOVER, KOHL & PARTNERSTOWN PLANNING & URBAN DESIGN



SPIKOWSKI PLANNING ASSOCIATES
PLANNING & IMPLEMENTATION



Coastal Florida

Recovery & Resiliency Partnership Project (R2P2)

How can I find out more?

coastalFLR2P2.com



R2P2 Planning Process

Initial discussions and communications between EPA, FEMA, and City of Sanibel staff and leadership began immediately following Hurricane Ian. A consultant team was brought on board by EPA, with funding from FEMA, to support the City of Sanibel with technical assistance. This team helped the City and Federal Agencies to refocus the initial list of project ideas and needs, and quickly visited the City and the potential project sites in February 2023. The team then developed some 'food for thought' based on the site visits and discussions, and brought that material back to the community of Sanibel during several days of open design meetings hosted at the Community House in July 2024. The City and consultant team hosted a public information session on the evening of July 10, with a full house of over 50 people in attendance. This was followed by a two-day open studio at the Community House during which residents were invited to drop in or attend project-specific meetings to discuss their questions and bring forward ideas. A public survey was published online for 3 weeks following the July open studio, garnering responses from 507 people.

For more information on the *Community Engagement Process*, please see the *Appendix*.









Could We Move Around Sanibel Even Better Without Driving?

For many decades, traffic on Periwinkle Way has come to a near-standstill during peak travel periods. A number of minor improvements have been made over the years, and more are possible; however, useful improvements often encourage more driving, meaning the congestion doesn't go away.

Thriving cities often face their own version of the same basic problem — too many cars, not enough space. Sanibel has created a model network of shared-use paths to allow people to move around without getting in a car. Since solutions that encourage more driving can be futile, promising solutions in other cities tend to involve other ways for people to move around, such as public transit, more safe and convenient bike/walk facilities, allowing destinations needed by local residents to be closer to residential areas, etc.

Finding ways to better connect at a personal scale, between and across neighborhoods, making it easier to participate in local patterns of life on Sanibel, is also a mechanism for improving the community bonds that improve local resilience.

How might these solutions, or others, work under Sanibel's unique conditions? This report presents a connectivity map that identifies promising mobility ideas for the city's future.



How Can Sanibel Be Better Prepared for the Next Ian?

Homes and businesses on Sanibel that have been replaced or rebuilt after Hurricane lan will be stronger and more resistant to future hurricanes. The same will be true for public buildings and infrastructure.

However, the immediate post-lan situation on Sanibel revealed the vulnerability of the Sanibel Causeway to storm surge and waves. It also revealed the absence of adequate facilities for barges to deliver emergency relief supplies and personnel, construction equipment, fire trucks and other emergency vehicles, etc., when the causeway is out of service for any reason.

The causeway itself is being rebuilt to very high standards and may be able to survive a future lan-like strike. If not, or if other parts of the county's transportation network are severed, county and city officials will face the same difficult situation without at least one hardened barge landing on Sanibel and on the nearby mainland. This report presents conceptual designs for a permanent barge landing on Sanibel that can boost the island's resilience in the event of another major hurricane.

3

Could More Natural Conditions Be Created Along Canal Seawalls?

Seawalls along canals are only permitted in certain locations in Sanibel, due to the damage caused by seawalls to coastal habitat that is a vital interest to the City of Sanibel. Sanibel codes discourage structural seawalls by prohibiting rebuilding of many seawalls after a certain level of deterioration or damage. Seawalls in designated areas may be rebuilt to special code standards, for instance in certain canals near San Carlos Bay and the Causeway, and in certain canals south of Periwinkle Way and east of Lindgren Boulevard.

Most lots facing the man-made canals on the east end of Sanibel have vertical concrete seawalls that were installed before Sanibel's current regulations were enacted. Vertical

seawalls provide almost no opportunity for natural conditions to reestablish themselves on canal banks.

Seawalls deteriorate over time and need to be repaired or replaced, providing an opportunity for seawall enhancements to be made at the same time. This report suggests conceptual designs for habitat enhancements that could be encouraged or required by the City of Sanibel to assist the City in meeting its vision for maintaining its more natural, healthy, and resilient coastal environment.



Could Sanibel Create a True Town Center for Its Residents?

The Sanibel Plan designates an area for a future Town Center intended to primarily benefit seasonal and year-round residents. This area is well-located and has significant potential for becoming a true Town Center; but physical progress has been very slow. This report suggests design features and regulatory changes that could more fully realize Sanibel's long-time intention to have its own Town Center.

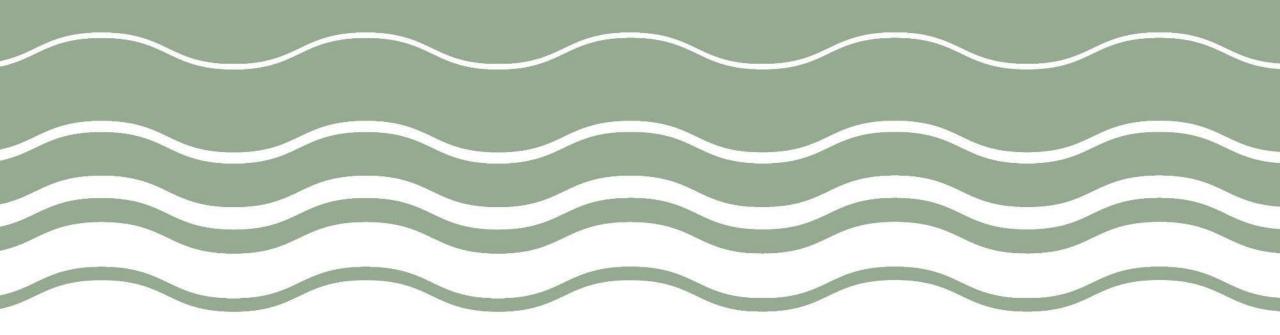
5

Is There a More Resilient Future for Sanibel?

Due to thoughtful restrictions in the Sanibel Plan, Sanibel is close to its ultimate development build-out. However — times change; conditions change; and opportunities can arise that hadn't been foreseen when the Sanibel Plan was created.

This report presents ideas for restoring natural ecosystem and resilience functions to the Sanibel Island Golf Course if the opportunity for such change arises.

COMMUNITY ENGAGEMENT











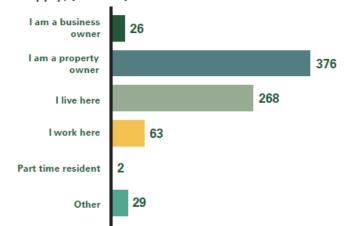
www.coastalFLR2P2.com



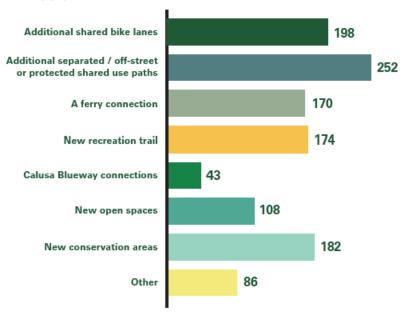
Online Survey

Following the Community Input Session, an online survey was shared with the community to further capture feedback. Over the course of three weeks from July 10th–31st, a total of 505 respondents completed the survey providing a broader range of sentiments than were offered at the input session. It is noted that 86% (436) of survey respondents did not attend or watch any part of the Design Workshop; this survey feedback could be further vetted by future community input events. Graphic summaries of the results of the survey are provided on the following pages, along with key takeaways.

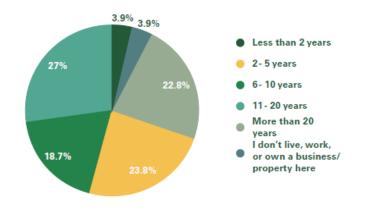




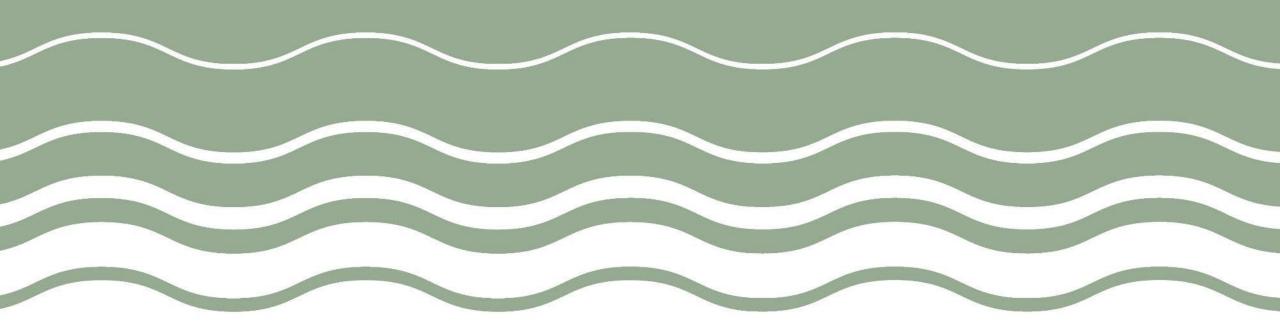
Which types of connections are a top priority to you? (check all that apply) [N = 482]



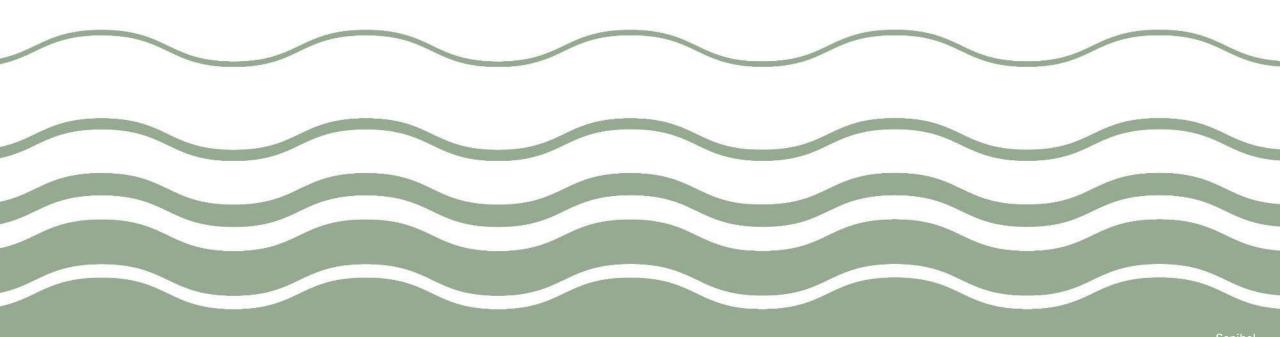
If you live, work or own a business/ property on Sanibel, for how long have you done so? [N = 504]



SANIBEL Focus Areas



Focus Area: Island-Wide Mobility & Connectivity



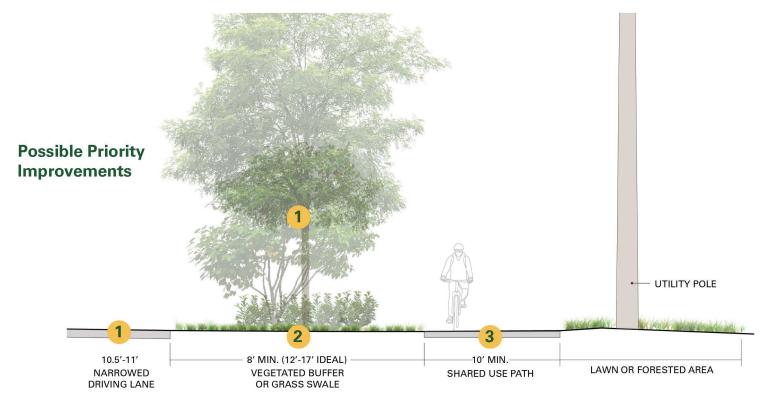
Sanibel Captiva Road Existing Conditions

Vehicular speeds are consistently too high on Sanibel Captiva Road. Despite the posted speed limit being 35 mph, the long straight sections and wide-open vistas promote much higher speeds, which are a danger to drivers and a mortal hazard to the plentiful wildlife. Even though there is a shared use path that runs the entire length of the road, vehicular conditions contribute to an environment unwelcoming to walking and biking.

The shared use path (SUP) runs along the northern side of Sanibel Captiva Road and has varying path width and width of the buffer to vehicular lanes throughout. This map and associated cross sections, A through D, depict these conditions. The most frequent condition is B2, with a 6 foot wide grass buffer and 6-8 foot wide shared use path.



use path existing conditions.



Traffic Calming

The first priority for Sanibel Captiva Road is to create a streetscape environment that does not promote high vehicular speeds. This means looking for opportunities to narrow the vehicular travel lanes where possible, either for continuous stretches and/or with edge bumpouts in important locations. Additionally, street trees and other vegetation should be incorporated into existing buffer areas.

Figure 17. Sanibel Captiva Road Proposed Cross Section

Expanded Buffer

The second priority is to expand the existing buffer areas. The context of Sanibel Captiva Road features long stretches with natural areas on both sides and relatively wide travel lanes. This condition leads to high operating speeds, and requires a wider buffer between moving vehicles and pedestrian/bicycle trails to create an environment where someone walking or biking feels safe and comfortable. In a downtown condition a 6 foot buffer may be appropriate. In this case, a minimum 8 foot buffer (10 feet or more desired) with trees and vegetation is necessary to achieve the same benefit.

Expanded SUP

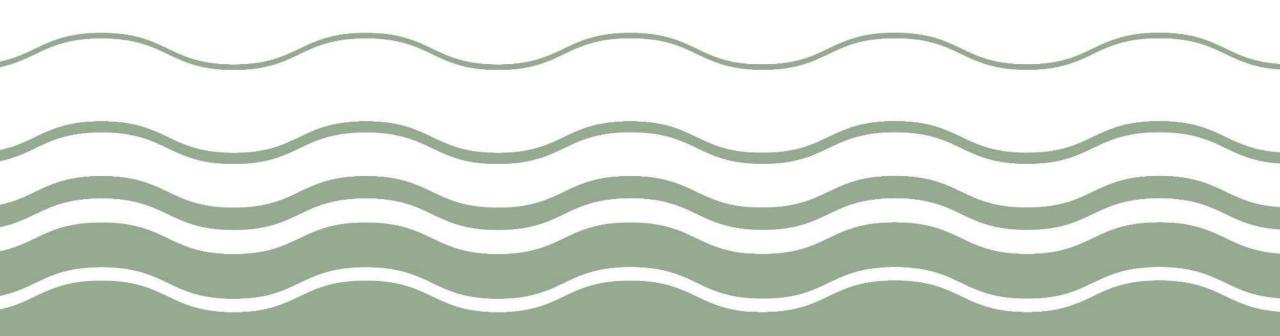
The third priority for improving walking and biking along Sanibel Captiva Road is to expand the Shared Use Path to a minimum of 10 feet wide. Several sections of the road already meet this criteria.

A majority of the existing sections can meet this criteria without major adjustments, however if needed in a tight area, the road alignment likely has room to shift south a few feet while staying within the right of way and without needing to move overhead utilities. In this context, if only limited width is available it is recommended that widening and improvement of the buffer should be a priority over widening of the path width.



Focus Area:

Barge Landing for Emergency Access



Barge Landing for Emergency Access

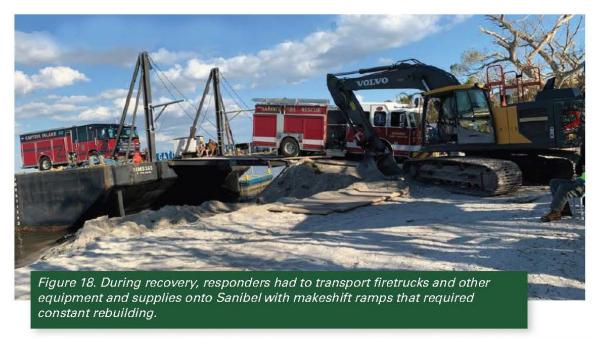
Challenge

When Hurricane lan hit, several sections of the Sanibel Causeway were destroyed, leaving the island isolated. To start recovery efforts, all equipment and personnel had to arrive and depart from the island by helicopter or boat. Without a suitable facility for barges to deliver critical equipment and supplies to the island, a small beach at the Sanibel boat ramp was used for makeshift landings. This access worked but was very inefficient, requiring constant rebuilding of the landing, the use of smaller vessels than desired, and slower loading/unloading. This was also a safety concern, as frequently large equipment landed using plates and sand embankment rather than proper ramps.

Creation of an access point that could be quickly and easily used during times of emergency would greatly increase Sanibel's resiliency.

What We Heard

The Sanibel Boat Ramp was identified as a location for emergency access because of its orientation toward the mainland and its existing infrastructure – including parking areas that can be utilized for equipment, staging, and storage during times of emergency. It is located close to densely populated areas, has easy access to the island's main eastwest access road (Periwinkle Way to Sanibel Captiva Road), and would keep the landing out of Outstanding Florida Waters.

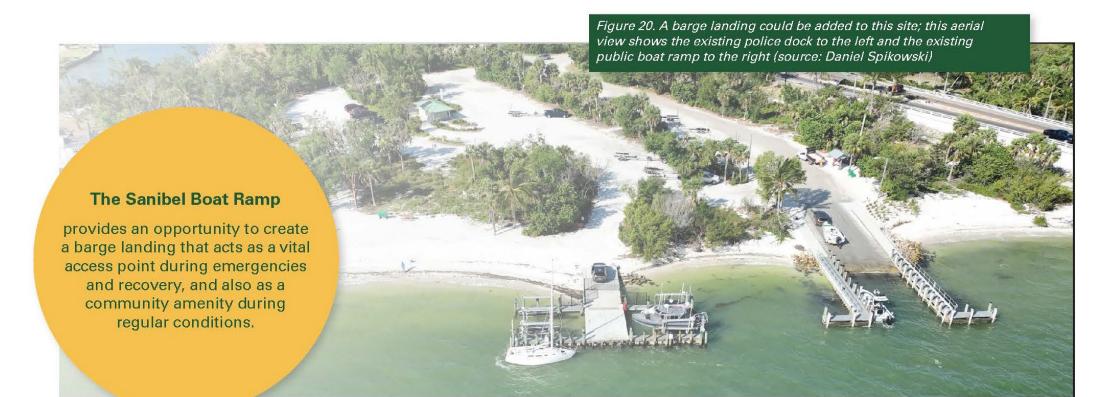


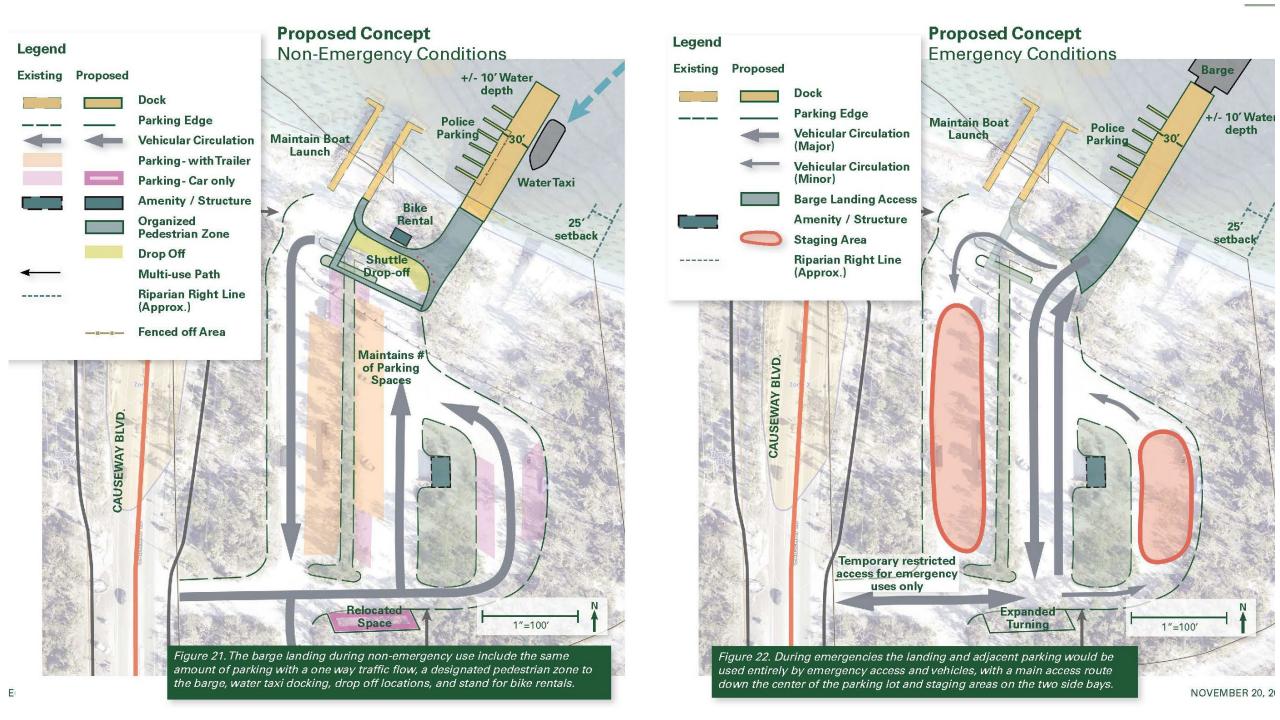


To prompt public discussion, diagrams were developed prior to the July design workshop to show two different potential site layout options, addressing the need for emergency access to the island as well as public access to the water during typical non-emergency conditions. Some of the public and City feedback on the diagrams included:

- Keep the boat ramp separate from the barge landing to provide better site function during non-emergency periods.
- The landing must be able to withstand large storm events.
- The landing must be designed for the desired or anticipated vessels that would need access during emergency conditions.
- Incorporating a passenger ferry landing during non-emergency times that is tied into bike rentals and public transport could help alleviate traffic issues on the island.

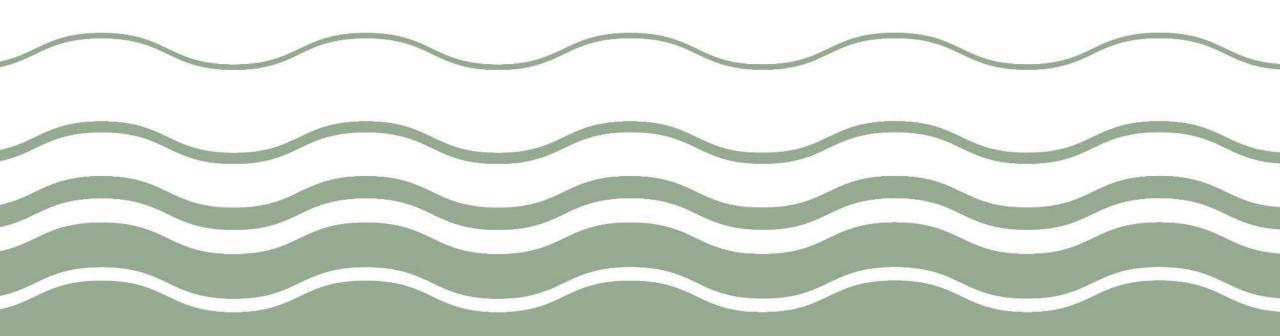
Another comment raised during the design workshop was a lack of public access to the island during emergency conditions. After Hurricane lan, homeowners were not able to access their properties to check on them, which resulted in many resorting to hiring expensive private vessels with inconvenient and unsafe landing locations. The consultant team explored the idea of providing both emergency and public access within the same area during emergencies; this possibility would pose significant safety and logistical challenges that may or may not be resolvable. The option with the highest public value appears to be a new barge landing that allows exclusive use of the site for emergency response when needed, then transitioning back to berths for public safety vessels (and potentially other public uses during typical (non-emergency) periods.





Focus Area:

Making Existing Canal Seawall More Resilient and Habitat Friendly



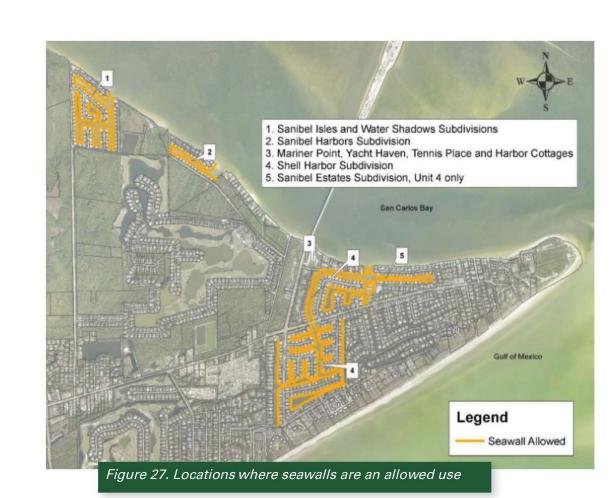
Analyzed Sanibel Ordinance, Federal Requirements, Typical Geometry/Conditions, and Major Hurdles

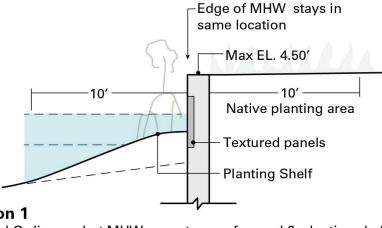
CHALLENGES for creating greener seawalls:

- Wall and canal geometry
- Potential for Smalltooth Sawfish Critical Habitat
- Very lengthy permitting and NMFS review

GOALS of this report:

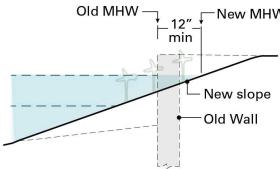
 Help the City to initiate a 'Programmatic Consultation' with Army Corps & NMFS for blanket approval of Sanibel Ordinance standards for green enhancements to seawalls.





Option 1

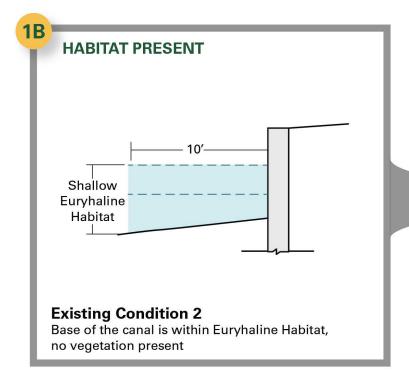
Sanibel Ordinance but MHW cannot move forward & planting shelf can incorporate mangrove.



Option 2

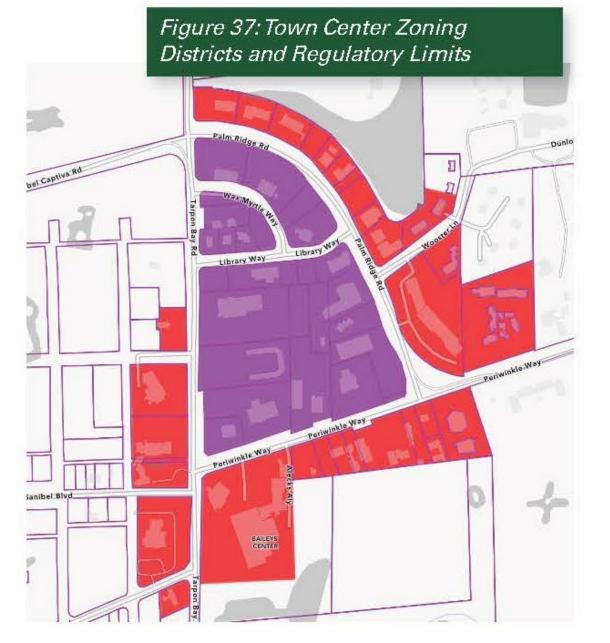
New slope that moves MHW a Minimum of 12" to add more habitat area. Slope is planted with mangrove.

The options presented in 2B address conditions where there is habitat present directly in front of the seawall. Because the canal is shallower in this condition, the geometry is more favorable to these greener shoreline approaches. A planting shelf at the proper slope can be installed in the canal without the need for stabilization at the base of the shelf (option 1), and the seawall can be shortened and the yard cut back only minimally to meet the slope requirements for stabilization.



Focus Area: Town Center



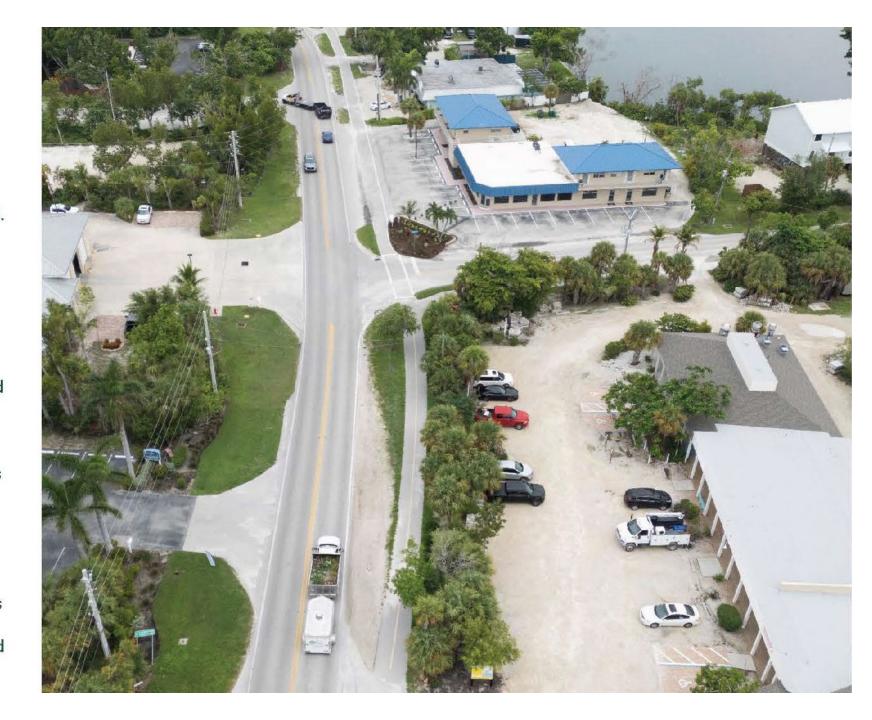


TOWN CENTER REGULATORY LIMITS				
Lot Coverage, maximum	45%			
Floor Area Ratio (FAR), maximum	10% (Town Center General) 12% (Town Center Limited) 25% (mixed use w/ below market rate housing)			
Setbacks, minimum	20' (front) 15' (side and rear)			
Building Height, maximum	45' above mean sea level			
Vegetation Removal, maximum	50% of developed area			
Flood Hazard Zone / Elevation	Zone AE / Base Flood Elevation (BFE) 8' to 9'			

Town Center

Challenge

Sanibel's Town Center is a centrally-located commercial district bounded by Periwinkle Way, Palm Ridge Road, and Tarpon Bay Road. It is a small part of the overall island but serves an important purpose, providing a place for workplace and dining destinations and commercial services for residents and visitors. The island's network of shared use paths connects the Town Center to surrounding areas; yet, frequent curb cuts and shared use path crossings, auto-oriented street design details, and lack of landscape and shade in the right-of-way create less than ideal conditions for pedestrians and cyclists. Buildings are generally 1 to 2 stories in height and often set back from the street behind parking lots and landscape buffers. Following the storm many businesses have reopened, while others continue with needed building repairs. Bailey's General Store, a longtime hub of community life, was demolished and will be rebuilt on its same site (near the intersection of Tarpon Bay Road and Periwinkle Way).









USEFUL PRECEDENTS:

Sullivan's Island, SC Micanopy, FL

Palmetto Bluff, SC

Bluffton, SC

What ideas illustrated in draft sketches for the Town Center area are exciting to you? (check all that apply) [N = 458]

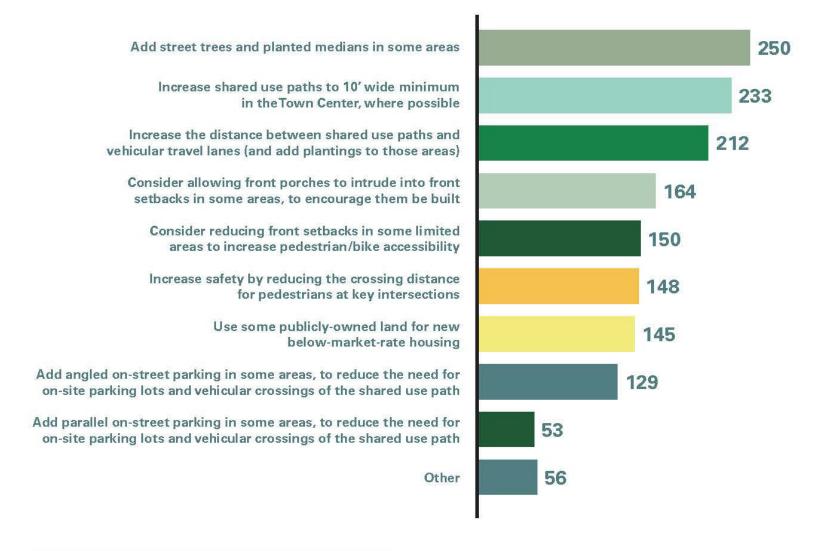




Figure 40: Community participants at Design Workshop discuss ideas for the Town Center.

Figure 39: Community feedback about Town Center design concepts from Online Survey; additional input can be found in the Appendix.

Recovery and Resilience Options: Palm Ridge Road



Figure 41: Palm Ridge Road, existing conditions looking northwest, north of Library Way.

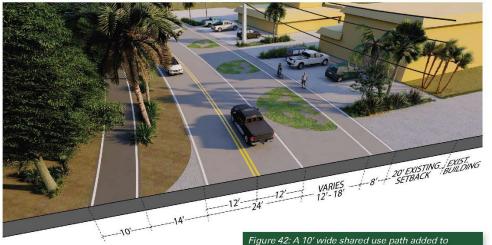
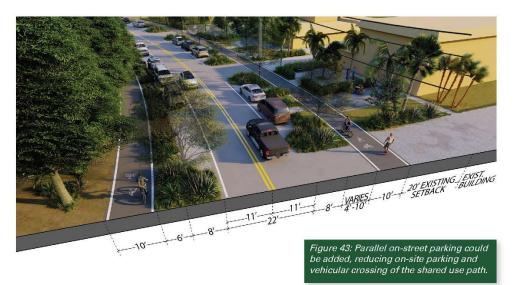


Figure 42: A 10' wide shared use path added to provide for connectivity on both sides of the street (note: this additional path is in the process of being constructed at 8 feet wide as of November 2024)



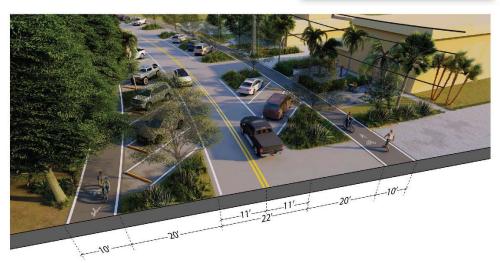


Figure 44: Add Angled On-Street Parking and Shade Trees with Landscaping. In this alternative, angled parking is added instead of parallel. This increases the amount of parking provided on-street, but does reduce some of the space for plantings. This option slightly increases the overall width of the street paving and impervious ground cover, and the shared use paths would need to be relocated closer to the edge of the right-of-way.

Recovery and Resilience Options: Intersection Design





Figure 51: Option 2, protected intersection alternative with turn lanes replaced by medians, reducing unnecessary pavement and providing a refuge space for pedestrians.





surface and increasing planting areas.



Recovery and Resilience Options:

Library Way Infill



Figure 53: Existing conditions, City-owned vacant parcels on Library Way. The City owns four parcels in this area (outlined in yellow in the aerial photo at right), which include two vacant parcels at the intersection of Library Way and Palm Ridge Road, a parcel with the existing City office building on Library Way, and a parcel with a midblock gravel parking lot.





ESTIMATED QUANTITIES:				
Housing Units:	8 to 12			
Parking Spaces:	48			
Commercial Area:	10,000 sq. ft.			
Avg. Unit Area:	700 to 1000 sq. ft.			
Commercial FAR:	20%			



Figure 54: Option 1, Mixed-use Building. This alternative shows a new mixed-use building on the site; the ground floor is a commercial use and a second story includes below-market-rate housing units. This scenario utilized an FAR bonus in the existing regulations, which was adopted to incentivize housing in mixed-use buildings in the Town Center.

This design adheres to existing 20 feet deep street setbacks for buildings, but does have porches and balconies that encroach into the setback.

Parking is provided to the side and rear; by formalizing the rear mid-block parking and extending it through the parcel, it is possible to connect to parking to the rear of the current F.I.S.H. of Sanibel-Captiva building (which faces Periwinkle Way), providing another means of pedestrian and vehicular circulation.

This plan accommodates approximately 10,000 square feet of commercial space on the ground floor, and 8 to 12 housing units on the second floor.

Potential improvements to Palm Ridge Road (a shared use path on both sides of the street, in the process of being constructed as of November 2024, and addition of on-street parking, and improved crosswalks) are also shown in the illustration.

Figure 57: Option 4, Separate Buildings (with smaller housing building types). This alternative shows development of three buildings: a small one-story commercial building oriented to Palm Ridge Road, and two residential buildings oriented to Library Way.

The commercial building is street-oriented, similar to what is shown for Option 2. The residential buildings have 4 units on the ground floor, and 2 to 4 units on upper floors. These could be designed to look like a large house rather than an apartment building, breaking down the scale of development along the road.

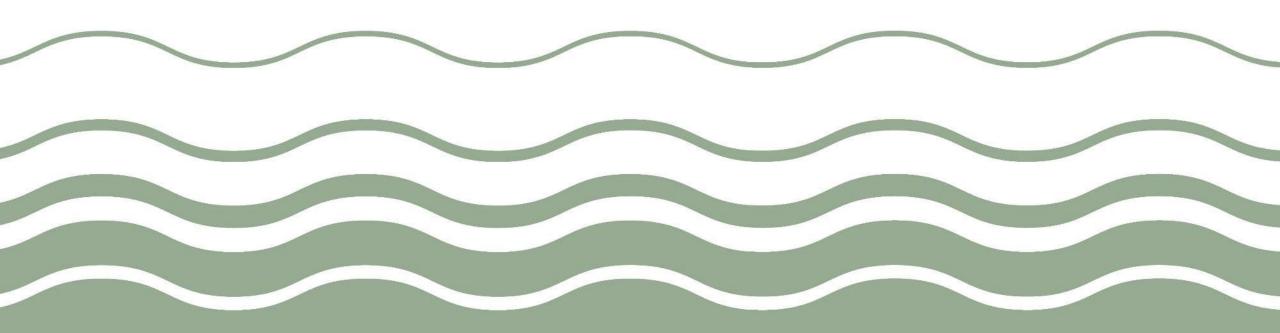
In this option, the parking lot is connected to parking at the adjacent City office building; parking could be a shared resource between the offices and residential uses.



ESTIMATED QUANTITIES:				
Housing Units:	12-16			
Parking Spaces:	68 (shared)			
Commercial Area:	4,000 sq. ft.			
Avg. Unit Area:	1,000 sq. ft.			
Commercial FAR:	7.5%			



Focus Area: Sanibel Island Golf Course



Sanibel Island Golf Course

Challenge

The privately-owned Sanibel Island Golf Course is located on the eastern side of the island, among almost 200 singlefamily residential lots between Casa Ybel Road and Donax Street (west and east) and Periwinkle Way and Middle Gulf Drive (north and south). The northern portion of the golf course was built across the Sanibel Slough, channelizing the slough's natural condition into artificial waterways. The Sanibel Slough is now designated by the state as impaired for nutrient enrichment, requiring the city to reduce nutrient loads to the system; the golf course contributes excess nutrients (from fertilizer and reclaimed water) to the Slough, making it more difficult to reach nutrient reduction targets. The various ponds on the golf course serve as either stormwater management ponds for runoff from the course and the adjacent residential properties or as storage ponds for treated wastewater from the nearby public treatment plant which is used for irrigation on the golf course.

Residents adjacent to the golf course do not have any ownership or other legal rights to the course, but many are golf course members and many residents that we heard from purchased their property with an expectation that the course would continue to function as such indefinitely. However, the golf course has been struggling financially in recent years.

The future of the golf course is uncertain. It has been listed for sale, and despite community discussions and public input received from immediate abutters seeking to keep the existing course, there is not a clear path forward at this point. This presents an opportunity for the community to explore alternative options for the site's future, including potential ecological enhancements. The golf course could remain in full operation if a private party acquires it and is willing to subsidize its financial losses. If such acquisition doesn't take place, the site could be acquired for different purposes that are consistent with the community's goals and the Sanibel Plan and which could add public and/or community uses.













Legend Possible **Existing** Pedestrian & Bike Access Shared Use Path Foot Trails **Neighborhood Connectors** Site Amenities (E) Parking Kayak Launch Building / Structure Landuse Wetland Stormwater Management Feature Treated Effluent Irrigation Water Upland - Forest / Shrub / Meadow Upland - Open Space **Executive Golf Vegetated Buffers** Course Open Green Habitat **Enhancement Area** Space Adjacent Residences Golf Green Enhancement

Legend

Golf

Wetland Buffer Upland - Forest / Shrub / Meadow Minimized Mowing Area

Sustainable Golf Course

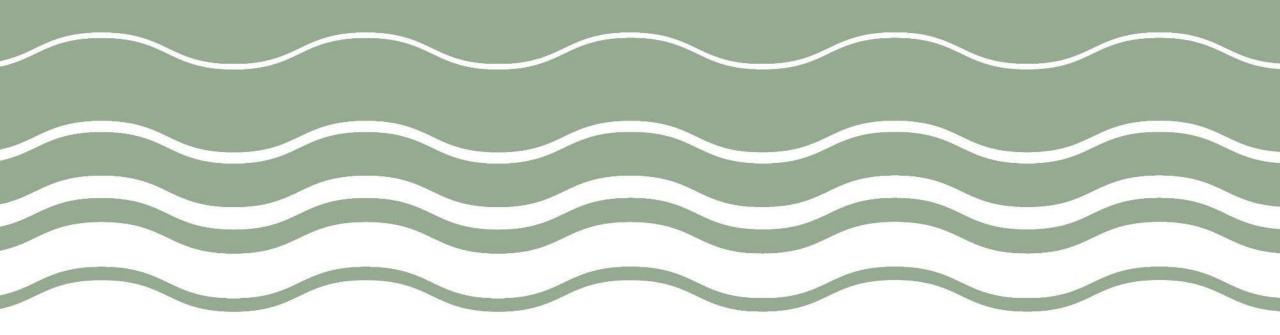
While golf remains, sustainability can be enhanced both with physical improvements to the course as well as adjustments to maintenance practices.

- Expand Buffers to Water The vegetated buffer areas to stormwater ponds and the Sanibel Slough can be expanded and softened to gentler slopes, and revegetated with appropriate native planting. This will provide an opportunity for plant communities to soak up additional nutrients and prevent other pollutants, such as sediment, from running into the water.
- Incorporate Native Vegetation Native vegetation can be planted around golf greens, fairways, and in other locations manicured turf is not required. The vegetation would provide a myriad of environmental and ecological benefits, as well as the added benefit of reduced water/irrigation demand.
- Strategic Mowing In spaces that do not need to stay perfectly maintained, a more strategic mowing schedule would allow some turf areas to grow taller and require less water/irrigation.
- Reduction in fertilizer and pesticide use Any reduction in the application of chemicals or additional nutrients will greatly benefit adjacent waters and wildlife.



Figure 65. Image credit USGA. Restoration of Pinehurst No.2 Golf Course

SANIBEL Implementation Framework



Sanibel Implementation Framework	Lead	Potential Funders & Partners	Timeframe
Island-Wide Mobility and Connections			
Identify highest-priority projects (e.g. new parallel bike/pedestrian paths; improved biking facilities; new kayak launches; etc.)	City Council	_	Immediate (1-2 years)
Assemble funding for highest priority projects	City Manager	Lee County MPO, Florida DOT, "Safe Streets and Roads for All" grant from U.S. DOT, Tourist Development Council (Lee County), Adjoining Property Owners	Immediate (1-2 years)
Initiate detailed design process and create construction drawings	City Manager	[project-dependent]	Mid-Term (3-4 years)
Select contractor and authorize construction	City Manager	[project-dependent]	Mid-Term (3-4 years)
Identify next tier of priority projects	City Council	_	Mid-Term (3-4 years)
Barge Landing			
Determine need for a barge landing on Sanibel and acceptability of the proposed location near the causeway	City Council	1=1	Immediate (1-2 years)
Assemble funding to study, design, and construct a barge landing on Sanibel	City Manager	FEMA, CDBG-DR (Lee County), West Coast Inland Navigation District	Immediate (1-2 years)

What are you most looking forward to as recovery continues?

"Return of favorite businesses and restaurants... Having the complete island experience with its unique personality of restaurants, grocery stores, pharmacy, residents, and we need the gas stations to return...Island life without the construction... Homeowners, businesses, recreation, visitors, mental health improvements...Previous businesses coming back, new businesses opening, more families... The start/completion of the condo restoration that will bring life back to Sanibel...Reuniting with friends and neighbors, walking on the beach, riding my bicycle to do errands...Seeing the silver lining with a more resilient and stunning Sanibel...The island looking green again - especially West Gulf Drive...The beachfront resorts becoming fully operational so our tourism base can return to support our local businesses...More green, fewer dead vegetation...Fewer construction vehicles on the roads...Normal traffic volumes, safer shared use paths...Peace, quiet living...Getting visitors back to the island...Business reopening to help promote and sustain residents and tourism"

THANK YOU!

Coastal Florida Partnership Project (R2P2)



Get the full report here:

coastalFLR2P2.com