Manasota & Sandpiper Key Master Plan

Final Report
December 2013

The Weiler Engineering Corporation
WEC xcellence in engineering

Tindale-Oliver & Associates, Inc.
Planning and Engineering

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Chapter 1: History of Manasota and Sandpiper

Manasota Key is an outer island that is shared by Charlotte and Sarasota County. The island is known for its beautiful public beaches, shark tooth hunting, and as a must-see location for visitors and residents of Charlotte County. The beaches on the south end of the island include Charlotte County's Englewood Beach and the State of Florida's Stump Pass Beach Park.

Manasota and Sandpiper Key may serve as a popular tourist destination, but they also boast a seasonal and year-round population of residents that are passionate about their little slice of paradise. Most residents feel they know their neighbors, which is evident when experiencing a morning walk along one of the three roadways spawning from the round-about located at the intersection of North Beach Road, Beach Road, and Gulf Boulevard. Residents and visitors of all ages can be seen walking alongside the road and enjoying a peaceful sunrise and a wave to their neighbors.

During the weekends, the beaches are packed with tourists who can be seen walking and biking around the Key and visiting the selection of locally owned restaurants and stores. However, those living on and visiting this island get a sense of remoteness and small town charm when they cross over Tom Adams Bridge from the mainland. There is lush vegetation along each stretch of the island that ranges from welcoming palm trees to thick mangroves marking environmentally sensitive areas.

Today's Manasota and Sandpiper Key have a long history of being a destination. The Calusa Indians once called this area home. Over 100 members of a 17th Century Calusa Tribe were unearthed by the Smithsonian along the Key. The Charlotte County Historical Center displays artifacts and a historical time-line dating to thousands of years ago. Some evidence even suggests a relationship with Charlotte Harbor and the Calusa dating back before 3500 B.C.

The area is rich in history and charm. Modern day Manasota has developed from its Calusa heritage into an artist destination and retreat. On the Sarasota side of Manasota Key, the Hermitage Retreat pays homage to historic buildings located along the beach that were saved in the early 1990's from demolition and has served as a place of inspiration and catalyst for creativity. The impacts of art and culture can be seen throughout Manasota Key on both the Sarasota and Charlotte County side. This includes a large metal shell centered at the round-about as you travel to Manasota Key from the mainland on Beach Road. Upon arriving, you are greeted with a vista of swaying sea grasses, a white sand beach, aqua blue Gulf of Mexico, and a unique piece of public art. As a note, the Shell was donated by David Dignam and his family, who have also been recognized for their efforts to support the preservation of the Hermitage Artist Retreat just north on North Beach Road.

A picture of a wood carving of a boy fishing that is located on Sandpiper Key (Left). An image of a Calusa Indian wood carving, date unknown (Right).

Chapter 2: The Need for a Master Plan

The Manasota/Sandpiper Key Community Master Plan was a project born from the local Municipal Service Tax Unit Advisory (MSTU) Committee. The committee of appointed volunteers is comprised of the local residents who oversee a work program to maintain and improve infrastructure. Typical types of infrastructure the MSTU is responsible for includes roads, traffic signs, road striping, sidewalks, drainage pipes and swales, stormwater management, brush removal, bicycle paths, and landscaping. Funding for the MSTU work program is produced by ad valorem taxes on individual properties within the MSTU boundary.

The committee members recognized that infrastructure improvements, such as lighting and stormwater management, were a priority to maintain a pleasant and livable community. However, they had concerns that any infrastructure improvements may have drastic impacts or produce barriers to additional work, such as the addition of sidewalks or bicycle lanes. Each of these facilities requires room within limited rights-of-way and should be taken into account prior to spending any money on improvements. Their primary goal was to consider all options for the future safety and well being of residents and visitors to Manasota and Sandpiper Key while saving money by reducing conflicts and potential costs of relocating built facilities.

Map 1: Study Area

In addition to the need for a long-range plan, several users of the roadways had complained about safety and facility accessibility. Bicyclists from a local bicycle club identified the existing 18 inch curb as a safety issue that was hazardous to their desire of riding on-road instead of using sidewalks that were regularly filled with walkers. Several community members identified speed as a serious issue throughout both Manasota and Sandpiper.

The MSTU set out to develop a long-range planning tool that the MSTU could use to prioritize and identify projects as part of their work program. A goal of the long-range plan was to identify several critical features:

- Critical/Necessary improvements (ex. Failing/Regulatory compliance)
- Community preference of facility types
- Permitability and reasonable presumption of constructability for facilities
- Priority of improvements to use as a budget planning tool
- Costs and potential outside funding sources for the identified improvements

From the onset, the committee's goals were clear: analyze a way to make their community safer and accessible for all users. Not only were they interested in improving American Disabilities Act (ADA) compliance, but to ensure that their community was open and available to all age groups and types of users. With one of the regions more popular beaches located at the center of the community, there is a broad spectrum of demographics that serve as a target audience. This includes families with children, retirees, walkers, joggers, and bicycle club riders, to name just a few.

Each of the projects identified within this plan have been reviewed to ensure that, based on their general scope, there is a high likelihood that they can be permitted through state and federal agencies, if required. While the plan is a long-range plan to serve as a general framework for improvements, pre-application meetings were held with Florida Department of Environment (FDEP) and Southwest Florida Water Management (SWFWMD) to determine the appropriate agency for permitting and to discuss various techniques for treating stormwater within constrained right-of-ways and how to handle projects which meander on both sides of the Coastal Construction Line. Ultimately, the two agencies agreed that based on an interlocal between them and the community goals and location, any projects within the right-of-way on Manasota Key and Sandpiper Key would be directed to SWFWMD for permitting.

Map 2: Corridor Character Areas

Unique Locations and Key Features

Manasota Key and Sandpiper Key are a unique community. They are a tourist destination, yet residents feel like they live in a quiet, small town. Furthermore, there are areas along Manasota Key's main corridor, North Beach Road and Gulf Boulevard, that even differ from each other (See Map 2). Heading from the circle and commercial center of Manasota Key to the north transitions into a high density, residentially dominated area where condos greater than three stories are the primary style (Red). As you approach the Sarasota County line, the intensity of development decreases with a combination of less density and larger setbacks (Green). Then as you travel south of the round-about and head towards Stump Pass State Park, you are greeted with a mixture of bungalows and small single-family residences among a handful of resorts and commercial operations (Aqua blue). And finally, Sandpiper Key is primarily condos surrounded by environmentally sensitive land (Dark blue).

Each of these sub-areas in Manasota Key are unique and special. They each deserve a treatment unique to them, while still tying the community together. It is due to these features that our recommendations reflect what many in the community stated throughout the public input process: provide safe and convenient access but do so in a less impactful and not overly burdensome manner.

Implementation

It is important to remember that this Master Plan is a long-range plan. Each project identified can be carried out in a variety of ways. There is a direct savings by combining certain projects, especially those that impact the same area and right-of-way space. However, there is ample opportunity to complete engineering design and permitting for a larger scope and construction phases as funds become available.

Manasota Key is not part of the Charlotte County bicycle and pedestrian sidewalk network. In fact, most literature that shows bike/pedestrian infrastructure around the County do not provide any data about this community. As a huge draw for tourists and residents of Charlotte

County, it is critical that the MSTU work with County staff to have their planning efforts recognized and incorporated as part of the overall priority list of County projects. In order to compete for various state and local funds, the Community Master Plan and specific projects within it should be submitted to the County and MPO for consideration and inclusion with those agencies' long-range plans.

Inclusion as part of the overall County plan for bicycle and pedestrian safety and access will allow the MSTU to gain access to future grants, such as those provided through the Florida Department of Transportation (FDOT). One resource is the Local Agency Program (LAP), which is used for transportation enhancement projects. This is a commonly used resource for sidewalk and landscape design and construction, but requires significant lead time and consensus to make it into the annually updated 5-year project list submitted to FDOT.

Another source of funding for projects includes the 1 cent infrastructure surtax. This tax is up for citizen approval in 2014. This tax collection has been a significant source of funding for sidewalks and other transportation-related infrastructure improvements. The County collects approximately $14 million a year for capital projects from this additional one cent on local sales tax. It is critical that the MSTU play a role in letting County staff, Commissioners, and their fellow citizens know that your community has high value projects that enhance and benefit all of the Charlotte County community. The plan that follows identifies existing conditions, outlines constraints and opportunities, and summarizes the public input and consensus choices for each area of the Manasota and Sandpiper Key community.

Chapter 3: Existing Conditions

Manasota and Sandpiper Key have recently undergone some infrastructure improvements. Several years ago, an eight (8) foot sidewalk was installed from Sandpiper Key and Beach Road to the northern end of Englewood Beach along North Beach Road in the commercial area. Within the past two years, stormwater infrastructure was constructed to alleviate flooding of the roadways along the southern part of the island and the Gulf Boulevard corridor. Each of these improvements have provided benefits for the community, but each was done without the benefit of a master plan and an understanding of how these types of improvements will impact future projects. For example, the stormwater structures built along the Gulf Boulevard area occasionally create a challenge to placement of a sidewalk or path within the existing infrastructure.

Typical items found within Manasota Key right-of-way:

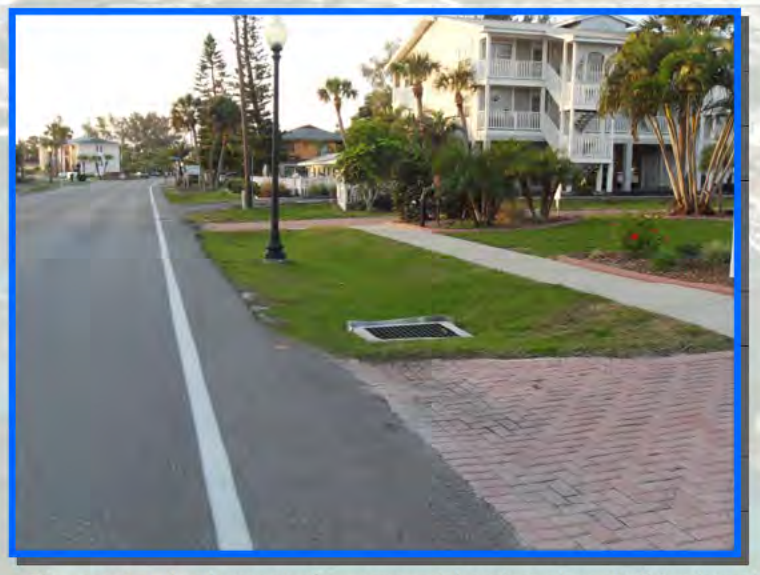
- Above ground and overhead utilities
- Stormwater structures and conveyance systems
- Grandfathered parking spaces or driveways
- Encroachment of private structures and landscaping
- 12 feet wide travel lanes with 18 inch curbing at edge
- Mailboxes serving multiple addresses

Gulf Boulevard

The right-of-way varies in with depending on the roadway. Gulf Boulevard is considered a local street and has a wide range of right-of-way widths. From north (round-about) to south (Stump Pass Park), the right-of-way is 60-70-75-50 feet, respectively, at points along the roadway. These types of conditions make it challenging to provide a consistent design of any pedestrian or bicycle facility.

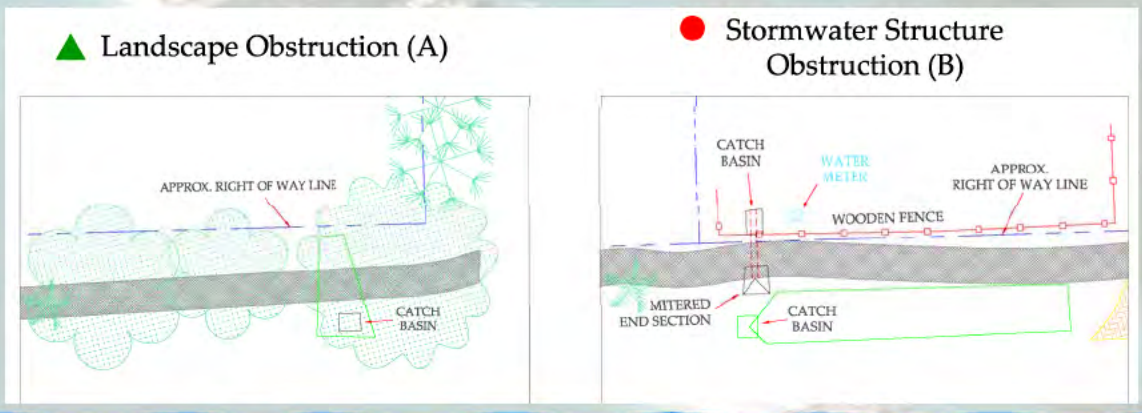
Any proposed pedestrian facility along Gulf Boulevard is going to encounter two types of obstructions, as can be seen in Figure 1 below. Landscaping and stormwater structures are the two most prevalent obstructions which limit new facilities and would have to be moved or replaced. Dependent on the type and size of a facility, the impacts can be minimized. These options are further discussed in Chapter 5.

Tight right-of-way and wide travel lanes leave little room for a useable shoulder along Gulf Boulevard. Residents and visitors must avoid conflicts with numerous driveways and vehicles parked along side of the road.

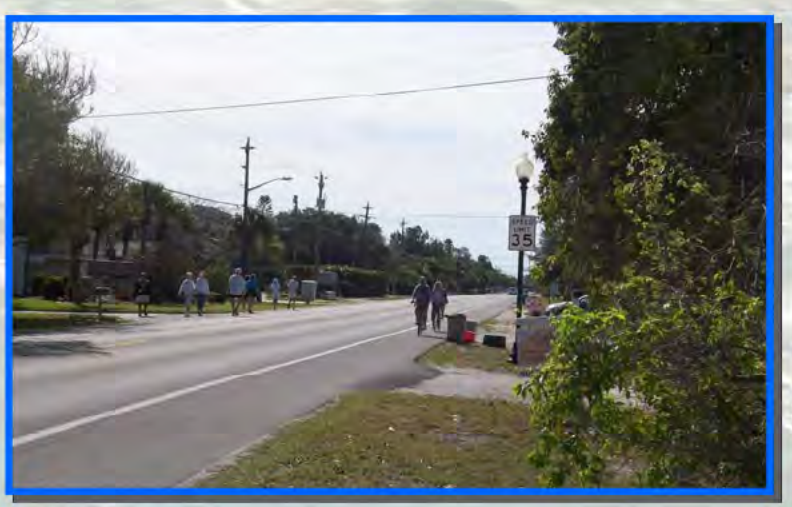


The recent redevelopment of a commercial project along Gulf Boulevard has provided this example of efficient use of the available right-of-way, where sufficient room exists.

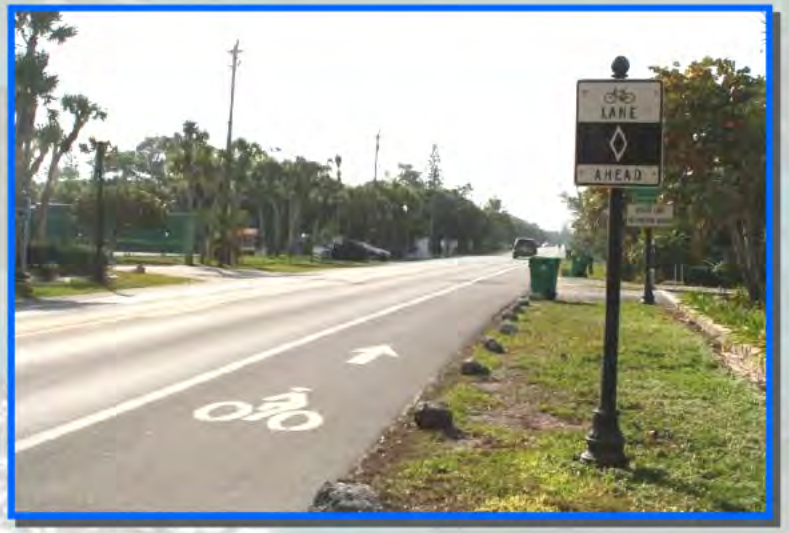
Figure 1: Obstructions



North Beach Road



North Beach Road starts at the round-about and heads north towards the Sarasota County line. This corridor is unique in that it transitions between three different types of built environments. At the intersection with the round-about and along the Englewood Beach frontage is considered the primary commercial core (Yellow on Map 1). Once past the beach area, the corridor transitions into a high density residential area that is primarily comprised of condominiums. The housing stock covers the full spectrum of construction throughout the past thirty or more years (Red on Map 1). This area is consistently a higher density and style of residential developments until your reach the Tamarind Gulf and Bay Condominiums.



The area clearly transitions into a lower density and more prevalent single-family or low to mid-rise condominiums once past the center turn lane on North Beach Road. The remainder of this corridor consists of lower intensity of development with larger setbacks and smaller buildings. A substantial amount of vegetation and ground cover has been preserved to date in this portion of the corridor, as it transitions into Sarasota County and a tree canopy preservation road.

The plan identifies each of the three corridors with unique constraints and opportunities. It was also obvious during the two public input meetings that many of the residents wanted to treat these areas differently. Some opportunities and existing conditions that exist within this corridor are:

- Approximately 76 feet of right-of-way
- Fewer above ground utilities and other mechanical/electrical equipment obstructions
- Wide drainage areas with gentle slopes
- Existing sidewalk infrastructure
- Close proximity for walking to the commercial core and beach area from the most intense residential development

Commercial/Beach Area

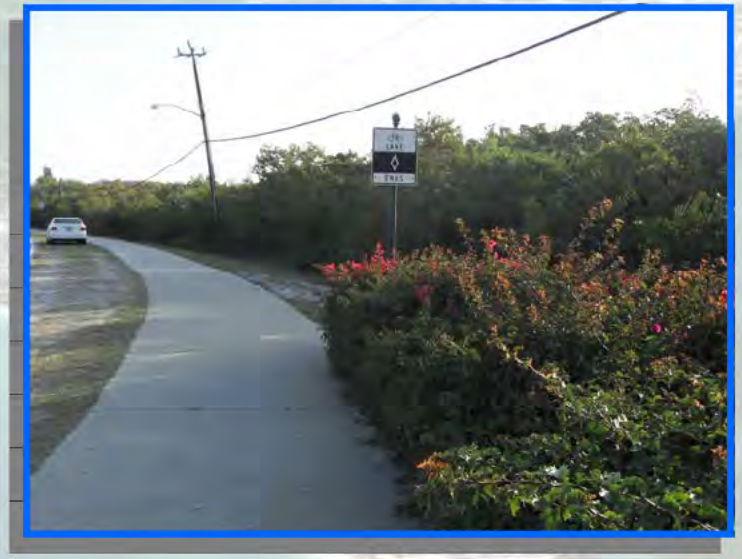
The roadways have 12 foot lanes with a substantial five foot shoulder. There is inconsistent signage and pavement markings along this corridor. As you can see by the pictures above, The dedicated bicycle lane in the shoulder is marked on the asphalt, but the sign indicates in begins ahead. In addition, this dedicated bicycle lane is the most utilized facility by pedestrians in the busiest and most intensely developed part of the corridor.

One of the most noted concerns by the attendants of the March public input meeting was the concern over safety related to high speed traffic throughout the community and from the existing 18 inch curbing that separates the sidewalk from the travel lane. The round-about was designed with wide radii and allow for cars traveling into the area to speed through. Crosswalks are poorly marked and an insufficient amount of crossings are available..

An 18 inch curb was constructed to separate the sidewalk from the travel lanes because they are on the same grade. This creates a dangerous conflict for bicyclists trying to utilize the street.

It is recommended to provide at least 10 feet for a multiuse path; or 6 feet for sidewalk with 3 to 5 feet for on-street bicycle lanes. The existing conditions provide a substandard mix of both. The picture to the left shows the challenges pedestrians face when navigating the commercial core of Manasota Key. Existing driveway access and blind vehicle movements make it challenging for those on foot, bike, and within vehicles. There is no substantial delineation of which area is for pedestrians. As is a common condition in Manasota Key, many of the parking spaces for local businesses actually encroach the public right-of-way and make for very wide driveways onto Beach Road and North Beach Road.

A mailbox serving multiple addresses is inconveniently located at the confluence of a variety of users and facilities, such as, walkers, drivers, and lighting. The MSTU requested relocation and better planning.



Sandpiper Key

Sandpiper Key offers unique challenges. It is a residential island which is flanked by two bridges, one to the mainland and one to Manasota Key. Part of the existing infrastructure includes the typical 8 foot sidewalk with separating 18 inch curb that can be found throughout the area. Sandpiper Key is also surrounded by mangroves and other environmentally sensitive and protected vegetation. The road through Sandpiper is elevated with a substantial drop-off into the mangroves. While there is sufficient right-of-way on paper, the physical constraints and lack of room to provide a gradual slope within the right-of-way, makes construction of on-surface facilities nearly impossible.

Within this corridor, there is also a sidewalk along the eastern side. This allows pedestrian traffic on both sides of the roadway. However, there is inconsistent signs and markings that have lead to user confusion. These conflicts are evident in the pictures to the left.

The top picture on the left shows a sign that states the "Bicycle Lane Ends," after coming over the bridge from Manasota Key and heading north towards the Tom Adams bridge. However, the only bicycle lane that is designated between this point and the round-about is on the bridge.

Despite the bridge offering the only designated and marked bicycle lane along Beach Road, and can be seen in the bottom picture on the left, the sign instructs users to "Walk Bicycle Across Bridge."

Community Lighting

Lighting is a key component of this Master Plan. For several years, the committee has struggled to find ways to reduce the annual costs of maintenance for lighting throughout the MSTU area. In addition, there are on-going challenges maintaining compliance with local and state ordinances related to Sea Turtles. This beloved creature is a protected species and is highly sensitive during the main nesting months, which runs from May until October.

There are three main types of lighting existing and maintained by the MSTU. Overhead street lights provided by FPL can be found throughout Manasota and Sandpiper Key. This lighting type can be seen in the top picture on the right. The second most prevalent are the residential style globe street lights which are powder coated black and can be seen in the bottom picture on the right.

These residential lights have provided the most concern throughout the community. Based on the technology and electrical design when they were installed, they must be individually managed when turtle nesting season requires reduced light pollution. These lights have also been expensive to maintain. The MSTU was forced to contract out light maintenance in order to keep up with the outages and sea turtle season requirements. As you can see by the picture to the lower right, several lights have aluminum caps in order to limit the light exposure at the beach. However, this type of shielding is not sufficient and is not compliant with local Charlotte County Ordinances for sea turtle lighting.

The third main type of lights are shown on the left. These overhead handing lights are located within the commercial core and round-about of Manasota Key. With the bulbs recessed, they provided sufficient shielding during sea turtle nesting season and do not have to be turned off. Therefore, they are able to provide lighting for safe travel throughout the year.

Map 3: Traffic Control Conflicts

PAINTED BICYCLE LANE MARKING ON SOUTHBOUND OF BEACH ROAD CONFLICT WITH 'WALK BICYCLE ACROSS BRIDGE' TRAFFIC SIGN
DOES NOT INDICATE BEGINNING OF BIKE LANE ALONG NORTHBOUND OF BEACH ROAD
DOES NOT INDICATE END OF BIKE LANE ALONG SOUTHBOUND OF BEACH ROAD
DOES NOT INDICATE PROPER TRANSITION FROM BIKE LANE TO SHARED ROADWAY ALONG NORTH AND SOUTHBOUND OF NORTH BEACH ROAD
DOES NOT INDICATE PROPER TRAFFIC SIGN WARNINGS ON UPCOMING PEDESTRIAN CROSSING ALONG SOUTHBOUND OF BEACH ROAD
DOES NOT INDICATE SHARED ROADWAY SIGNS ALONG NORTHBOUND OF GULF BOULEVARD
DOES NOT INDICATE PROPER TRAFFIC SIGN WARNINGS ON UPCOMING PEDESTRIAN CROSSING ALONG NORTHBOUND OF GULF BOULEVARD
DOES NOT INDICATE PROPER WHITE SKIP LINE PATTERN OF THE BIKE LANE AS IT CROSSES MOCKINGBIRD STREET & HOLIDAY DRIVE ALONG NORTHBOUND OF GULF BOULEVARD
DOES NOT INDICATE BEGINNING OF BIKE LANE ALONG NORTHBOUND OF GULF BOULEVARD
BIKE LANE ENDS
WALK BICYCLE ACROSS BRIDGE
15 M.P.H.
BIKE LANE AHEAD
N

Chapter 4: Public Input Efforts

Public outreach is a critical component to the development of a Master Plan. On March 26, 2013, Charlotte County and the Weiler Engineering (WEC) team hosted a public workshop open to anyone in the Manasota and Sandpiper Key community in order to identify short and long-term goals for infrastructure improvements within the community. The workshop was attended by over 30 people of diverse backgrounds and interests.

The workshop format consisted of a presentation of findings and example projects completed in other communities similar to Manasota Key. Weiler Engineering answered project questions from the audience and addressed the scope of work as assigned to them by the County.

The majority of attendees wished to maintain and enhance the community appearance. There was substantial support for additional landscaping in coordination with any proposed projects. Most residents felt that the cost to maintain additional landscaped areas was worth the annual cost increase. It was clear from this initial meeting that residents felt strongly about fixing the lighting issues that had plagued the MSTU and would further protect the sea turtle. Managed lighting has become a way of life on the Key.

During the workshop, the attendees participated in table exercises to identify constraints and opportunities within the community. They were also asked to complete a preference survey for the key areas of focus, which were:

- Lighting
- Bike and Pedestrian Safety
- Parking
- Infrastructure Improvements
- Aesthetics
- Signage

Parking was a hot topic. The idea that additional parking could be provided in the area was of great interest. There was substantial discussion related to this issue, but most comments during the meeting steered towards the positive when context sensitive design examples from other communities were presented as potential options. The challenge of providing on-street parking was going to be redesigning the road in a constrained right-of-way

while improving appearance and water quality that ultimately ends up in the surrounding waters.

Results from this public meeting identified the following items in order of ranking:

- Additional bike lanes/trails
- Reducing the number of cars that park improperly on the sidewalk
- Improve design of community signage
- Increase shade for walking
- Redesign parts of North Beach and Beach Road to make it more attractive
- Reduce automobile speeds

A second public input meeting was held in Englewood on November 6, 2013 to obtain community input and provide a project update. For this meeting, the County staff and the MSTU sent post card notifications to nearly all residents in the area served by the MSTU. It was important to the community to have a large turnout and receive valuable input on these critical decisions.

Sign-in sheets provided at the meeting indicate 56 people were in attendance. During the meeting, WEC, MSTU members and County staff presented a project summary, the scope of work, and the role of the MSTU moving forward. As part of the presentation, WEC handed out a follow up preference and prioritization survey discussions about what WEC received up to 42 votes on the preference ballots. While responses were varied and many voters did not complete the ballot per the instructions, there was still sufficient comments and voting to identify community preference for both facility type and prioritization of improvements.

The results identified the commercial core area of North Beach Road (Figure 1, Yellow) as a priority area for improvements. This is the heart of the community and serves as the welcoming and primary stopping point for visitors. With the proximity to Englewood Beach, local restaurants and nightlife, and shopping, this area serves a variety of users. The Second priority identified was to add facilities to the south side of the Key, from the roundabout to Stump Pass Beach State Park. This corridor boasts a tremendous concentration of walkers, but also has some of the highest conflict points. Those who provided comments generally want to see this corrected for safety and convenience purposes.

Two improvement options were clear to those who attended. By a wide margin, they selected two six foot sidewalks and on-street bike lanes for the section north of the commercial area to the condominiums; and would like the FPL lighting removed if photometrics can be met with the recommended street light change.

Chapter 5: Proposed Improvements

Through public input, research, and preliminary engineering review, our team has been able to identify several projects that will improve safety and accessibility throughout Manasota and Sandpiper Key. The goal was to take a long-range outlook and develop potential projects that achieve two things: 1) correct deficiencies and reduce maintenance costs; and 2) make the community a better place to live, work, and play.

Our primary focus was on safety. After multiple site visits and interviews of beach goers and residents, it was clear their biggest concern was the speed of vehicles. Traffic calming in the round-about and along the entire roadway network is essentially non-existent. Based on our professional experience and on-site investigations, we attribute the speed to following three items:

- Wide lanes of 12 feet and asphalt widths that are overdesigned for current 35 and 25 MPH speed limits. The land widths are a change from the traditional 10-11 feet lane widths that the community previously experienced. Recent resurfacing projects changed the striping pattern throughout the roadway network.
- Limited street trees or other landscaping to provide shade, but also serve as a traffic calming and beautification of the community
- Poorly marked pedestrian crossing and use areas, limited defined bicycle use areas, and wide radii around the round-about.

These items can be readily corrected with some short-term improvements, but can also be wrapped into larger projects which expand the pedestrian and bicycle network. The level of use throughout Manasota and Sandpiper Key is impressive. Hundreds of people are walking about their neighborhood and along the main corridors at any one time. During tourist season, these numbers are exponentially larger. As the weather cools and more seasonal residents and tourists return to the area, the roadways and sidewalks are at capacity. But gaps in the network and a failure to connect residential areas with the commercial core are glaring failures of the current network. The following recommended projects meet the most important principles of a safe and convenient community:

- Design context-sensitive facilities to meet the population's needs
- Understand pedestrians and types of users, how they circulate and what is important to them
- Create an environment that clearly focuses on pedestrians and allows drivers to understand their intent
- Speed, speed and speed. Reducing speed by a mere five miles an hour can turn an accident into a close call.

The following lists of projects are organized from north to south and consistent with Map 2 on Page 4. The color coded areas serve as a key to the geographic area studied and as a basis for how these improvements were developed.

Figure 2: North of Beach (Red)

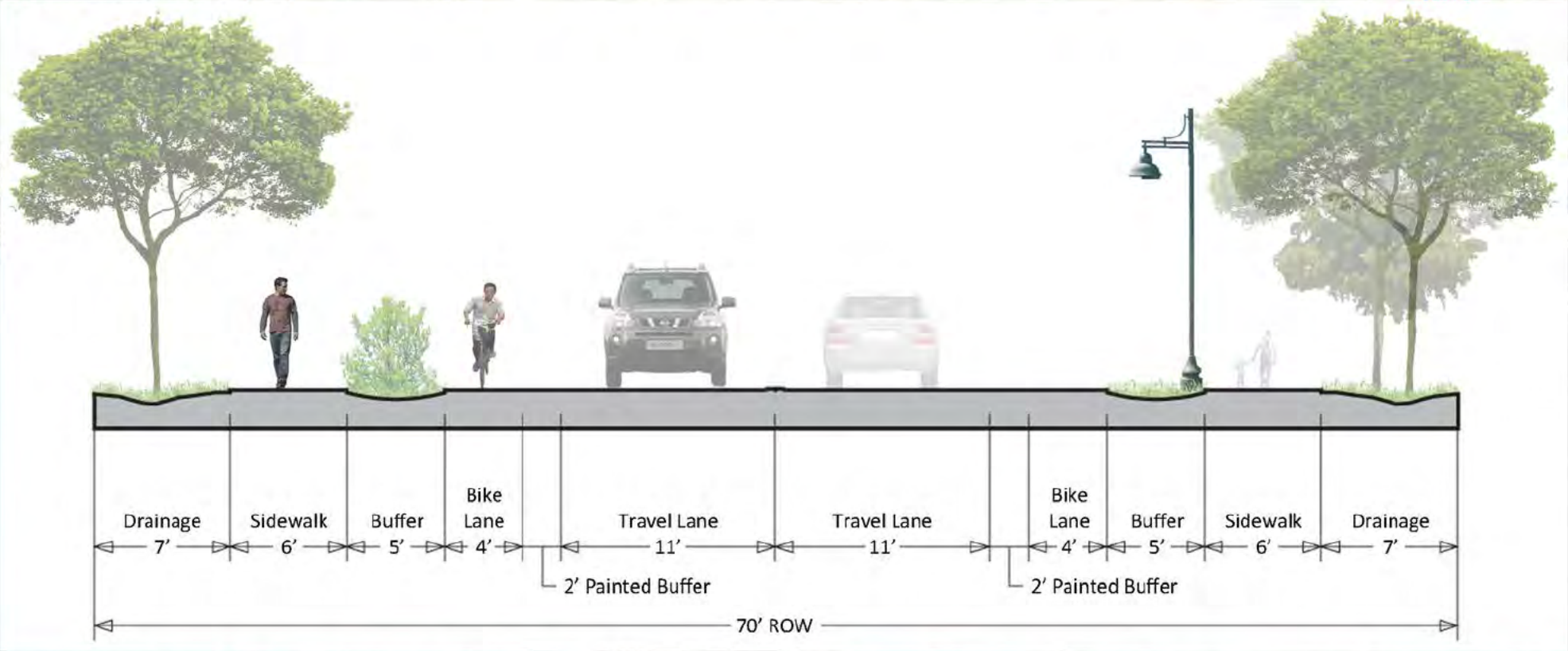


Figure 2 shown above, was the preference of 33 out of 39 respondents during the second public input polling. These improvements would start north of the commercial area and Englewood Beach and continue for over a mile north. This improvement includes two 6 foot sidewalks, one on each side of the roadway, and a dedicated and marked bicycle lane within the existing pavement area. This can be accomplished by restriping the road to narrow lane widths to 11 or perhaps as narrow as 10 feet. Accessory components of the proposed improvement include intermediate buffers to provide separation from traffic and additional stormwater runoff treatment. This plan also includes substantial landscaping to be included along the entire corridor. Canopy trees close to the roadway will help invoke traffic calming and develop a road canopy that will provide shade to users. This format also always users to avoid crossing the street unless necessary.

The alternative option, a 10 foot multiuse trail along one side of the roadway, gathered little interest by the attendants. The alternative multiuse trail is estimated to be more expensive than the preferred option. In addition, it would have required users along one side to cross the busy street in order to benefit from the facilities.

Figure 3: Commercial Area (Yellow)

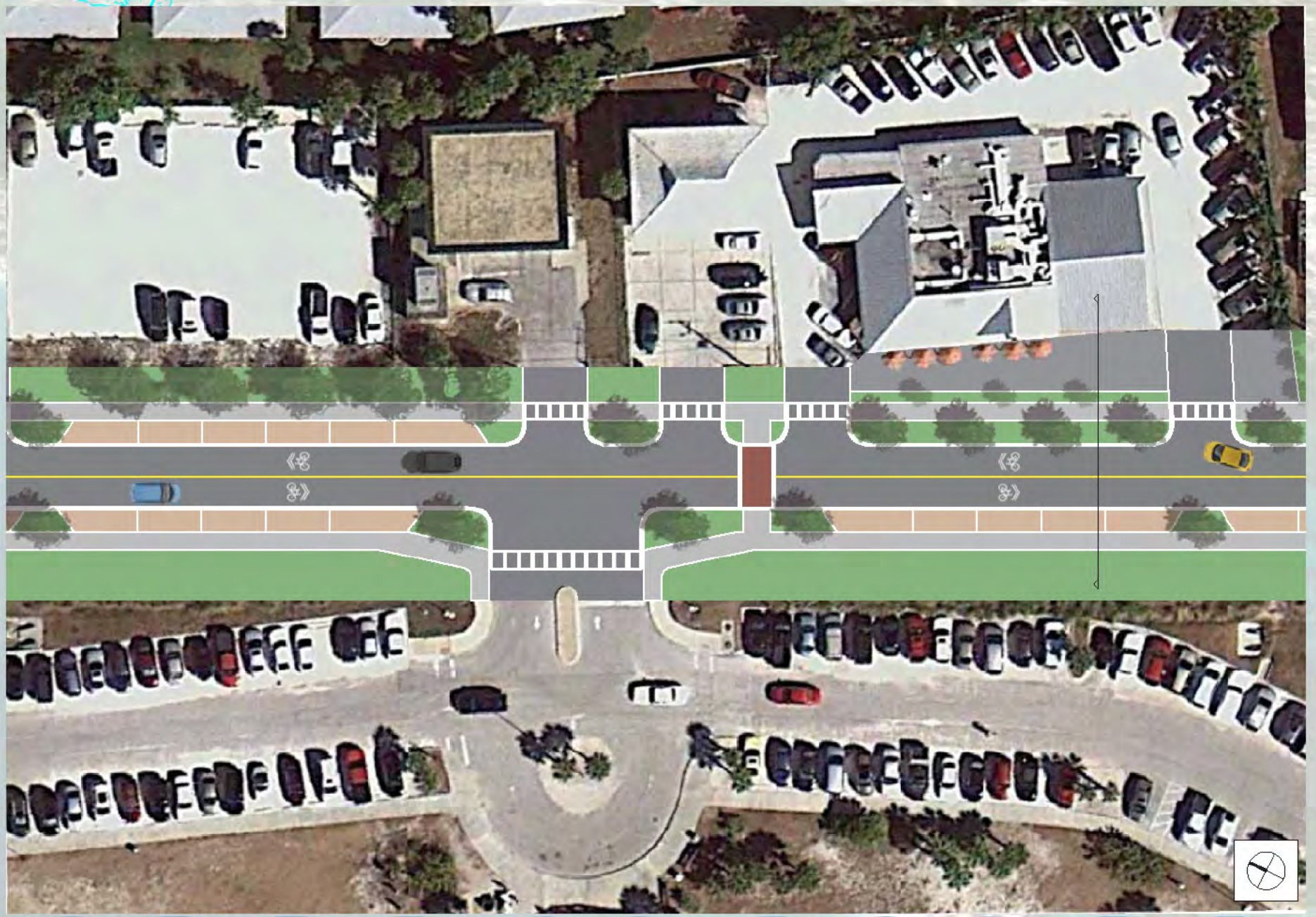
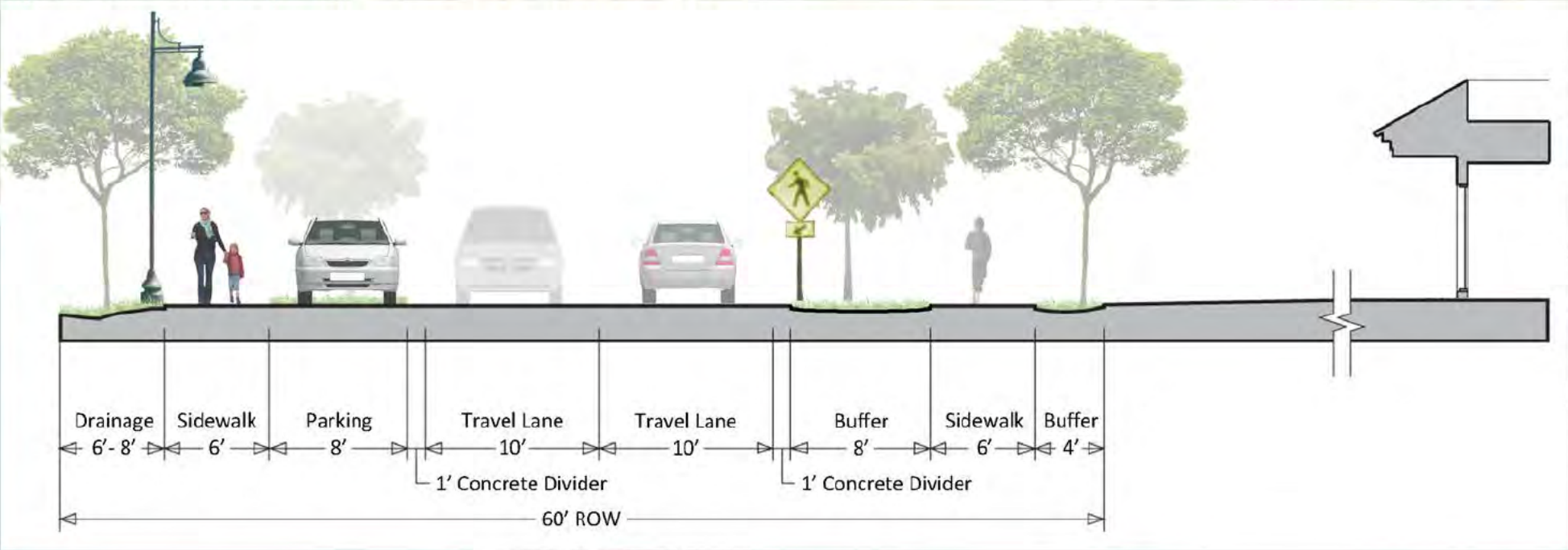


Figure 4: Commercial Area (Yellow)



Figures 3 and 4, shown on the previous page and above, respectively, show a major redesign and construction of the commercial section of North Beach Road. This area, just north of the round-about and along the Englewood Beach Park, draw the most pedestrians, bicyclists, and vehicles. Access to the park is across from several local restaurants. While there is a cross walk between the east side of the road and funneling pedestrian traffic to the park entrance, this area was identified by public input meeting attendees and on-site user interviews as a dangerous place to be. Most were concerned about the speed of the traffic.

To overcome the speed of the traffic and to address a key long-term issue, on-street parking was selected as part of the strategy to create a narrower vehicle use area, which would slow speeds down substantially. An additional benefit to the safety improvements is the addition of approximately 51 parking spaces within close proximity of restaurants and stores that are currently constrained by on-site limitations and cannot provide necessary parking to increase their business opportunities. Completing this project requires an amendment to the County Land Development Regulations (LDR) to call out on-street parking and to identify priority users, such as restaurant goers, in a manner that makes sense for the community as a whole. It is recommended that County staff coordinate with the MSTU during or prior to engineering design of this segment in order to update the LDR Ordinance.

The proposed improvements shown in Figures 5 and 6 on the following pages offers a two step approach. The first step is a cost effective solution to speeding through the round-about without taking on a major capital project.

This approach is recommended to create safety improvements, such as extending the landscaped median towards the center of the round-about. This will reduce the travel lane widths entering the circle. In addition, expansion of the outer curb edges towards the travel lanes and the middle of the round-about will create the need for a more dramatic turning movement by drivers; therefore, reducing speeds. This approach has been highly successful in other communities.

The two step process is not necessarily needed; however, it offers an opportunity to fine tune the design and changes before spending limited resources on design and construction. This type of improvement is typical of a safety improvement that qualifies for FDOT grants.

Figure 5: Round-about (Yellow)

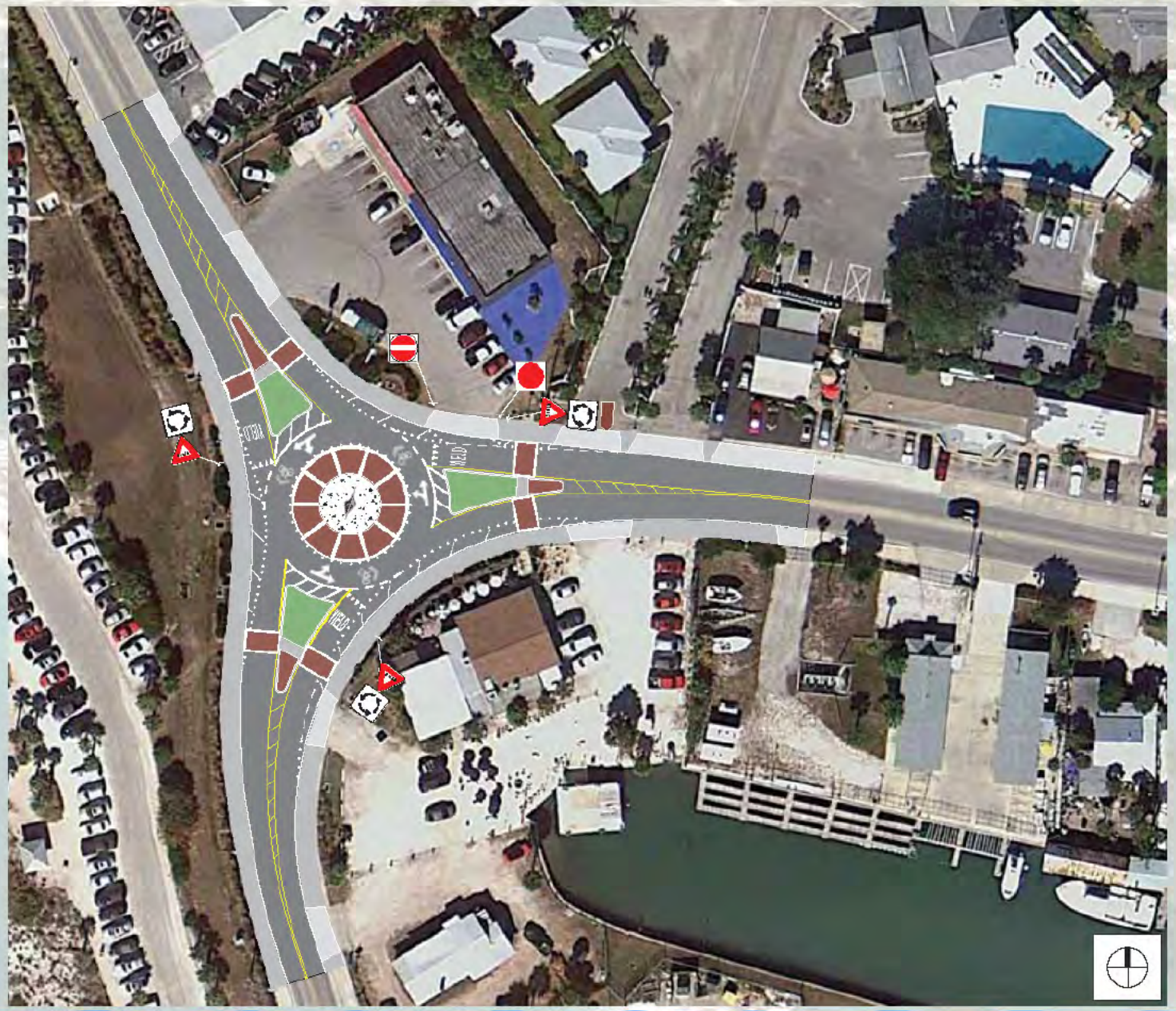
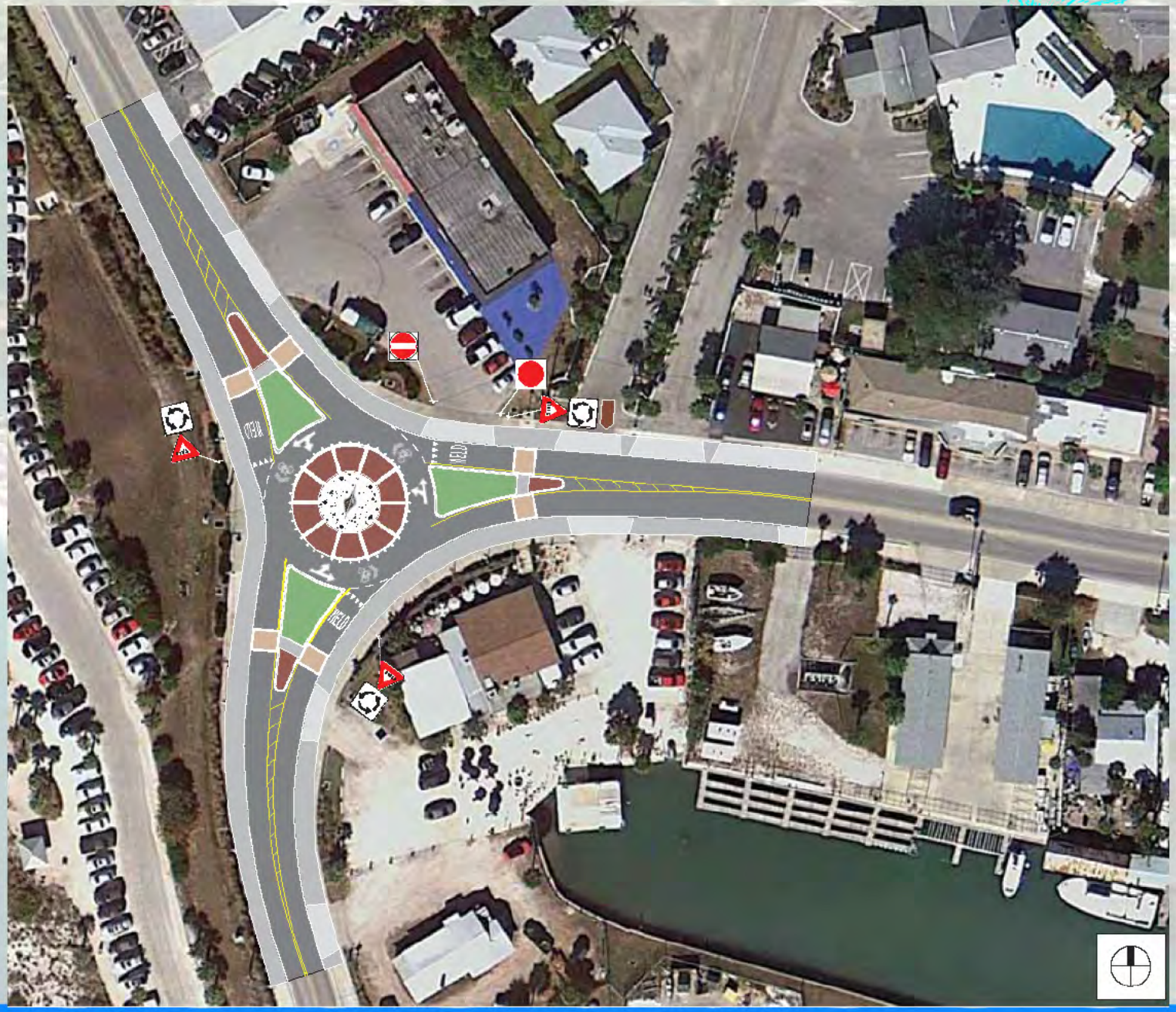


Figure 6: Round-about (Yellow)



Map 4: Gulf Boulevard (Aqua blue)

GULF BOULEVARD
MOCKINGBIRD LANE
HOLIDAY DRIVE
LITTLE COURT
GULF BOULEVARD
BEACHCOMBER LANE
SHORE VIEW DRIVE
SHORE VIEW DRIVE

Sandpiper Key presented challenges. The roadway is elevated with steep drop-offs into environmentally sensitive areas within close proximity to the edge of pavement. The County has cleared and maintained a minimal area for the existing 8 foot sidewalk and occasional landscape cluster. Figure 8 on the previous page and Figure 9 on this page, show a combination of options that are available for Sandpiper Key. The first priority is to develop a landscape plan that creates a gateway into Manasota Key. The existing dual left/right turn lane that starts just after the condominium entrances and extends towards Manasota Key does not serve any properties. Locals reported there was a boat ramp along this area, but it is not longer in use. After presenting some concepts to County Transportation Engineering staff, it was determined to be acceptable at this juncture to close the dual turn lane and create a landscaped median that can provide canopy coverage or a grand entrance through the community. This aesthetic improvement has the potential to provide a "wow" factor.

Also shown in Figure 8 and 9 is a proposed 10 foot boardwalk. Most of the study area faces constraints from encroachment of private property, landscaping and grandfathered parking or access. Sandpiper Key simply does not have full use of the public right-of-way due to elevations and environmental factors. This limits opportunities to revamp the roadway similar to the previous recommendations. The boardwalk would be elevated on pilings toovercome the dramatic elevation change at the outer edges of the right-of-way. It is questionable if the state permitting agencies would approve the impacts to the mangroves along this corridor necessary to construct such a structure. However, with restriping to narrow lane widths along this long straight stretch and reducing the width of the sidewalk, a dedicated bike lane can be added as a facility.

The primary recommendation for this area is to add midblock cross walks for safety, which also serve as a traffic calming device, and to add gateway landscaping and signage. Repetitive signage indicating that bicycles share the roadway are a critical safety feature that should be considered.

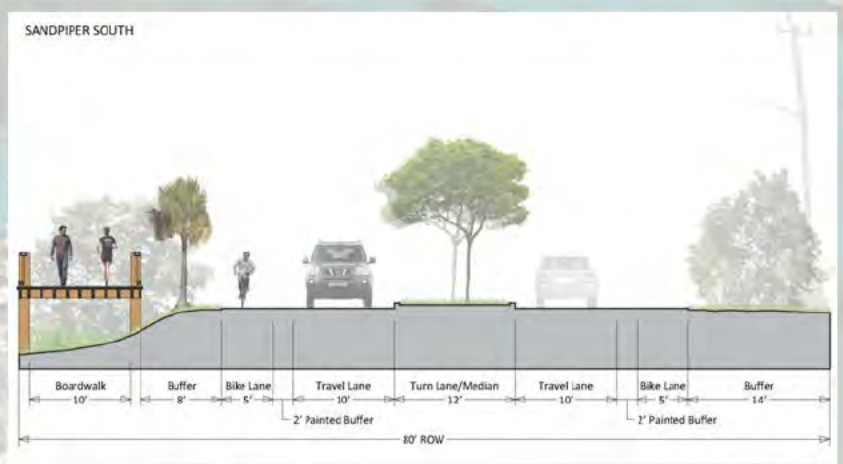


Figure 7: Sandpiper Key (Dark blue)

Figure 8: Sandpiper Key (Dark blue)

Street Lighting

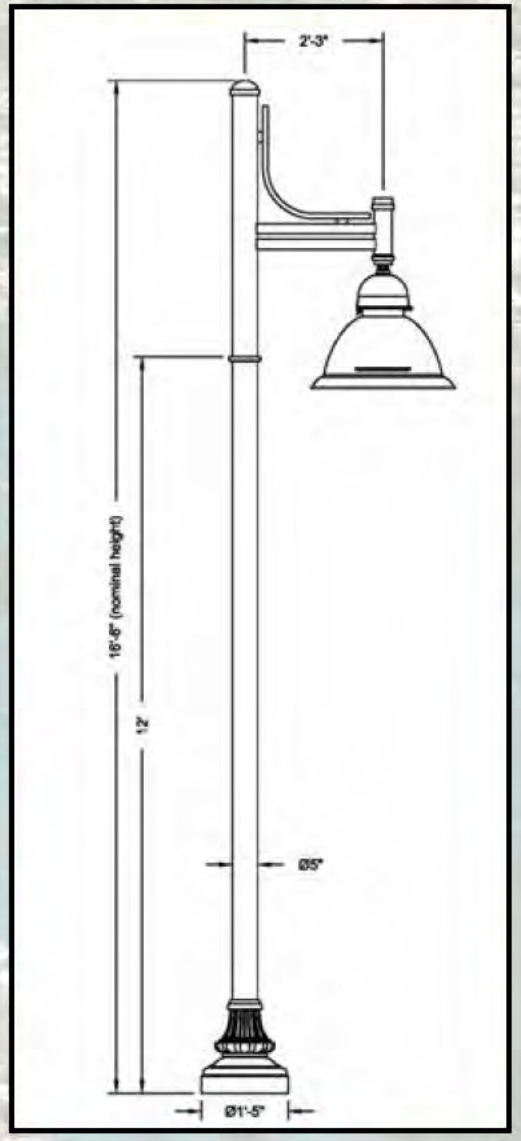
There several other areas which were identified as potential improvements. Lighting is one that has been discussed as a critical need. As mentioned in the Existing Conditions Chapter, the Manasota street light network needs upgrading and modernization. Figure 9 shows an overhead style of street light that is similar to the style within the commercial core of Manasota Key. Charlotte County has adopted technical specifications for street lights that are similar in nature. By trying to utilize the style and specifications approved by Charlotte County, costs for repairs and maintenance should be reduced. However, it is worth the effort to evaluate alternative manufacturers in order to get the best option available on the market.

As part of the study, our team evaluated multiple technologies and styles. Based on input from the MSTU committee and a cost-benefit analysis of available data, LED technology has finally reached a manageable Return on Investment. The new technology allows for a variety of light management systems, including remote and enterprise management systems. These systems cannot be integrated with Charlotte County's street and traffic control management system, but it can be made part of the MSTU maintenance responsibilities and handled by an off-site contractor. The service options range from standard, to enterprise system manager, to full concierge where the community doesn't have to worry about any technical details. The system manager will handle all monitoring and reporting for the entire system from a remote desktop.

By adding a lighting management system, the MSTU can monitor bulb hours and energy usage and life cycle. This puts full control at the communities hands and allows them to be quickly notified if equipment needs repair or replacement.

The most important part about selecting this style of lighting, is that it allows the MSTU committee to reduce the annual costs of turning off street lights. Not only will more safety lighting be provided for the community, but the recessed bulb and full shield are sea turtle friendly and approved for use during nesting season by the Florida Fish and Wildlife Conservation (FWC). Charlotte County Natural Resources Department was contacted and provided details of the proposed lighting changes. Funding opportunities were researched through FWC and are still unsecured. A small grant was previously used for lighting repair and replacement in the Manasota and Sandpiper Key area. FWC was the grant provider, but budget cuts over the past several years have left minimal funding available for new projects outside of research.

Figure 9: Lighting Fixture



Signage

There are two major components to signage. Way finding and safety work in conjunction with each other by directing residents and visitors by foot, bicycle, or vehicle, to the appropriate places. Manasota Key has two highly desirable destinations in Englewood Beach and Stump Pass State Park. These two beaches attract thousands of visitors every year who wish to enjoy the beauty and charm of the area. By providing the Key safe and enjoyable recreational options, everyone will be able to experience an increased quality of life.

Way finding signs, as shown in Figure 10 to the right, provides mile markers and trail identifiers for those using the network for recreational purposes. It also provides people a geographic reference point when identifying a place on the Key. These signs can be mounted on bollards or short posts along the pedestrian network.

As discussed in the Existing Conditions Chapter 3, conflicting signage is a problem in Manasota and Sandpiper Key. The traffic control signs are conflicting and inappropriately located. "Bike Lane Begins Ahead" signs are often located along an area that is already marked as a bike lane. Map 3 on Pages 12 and 13 has identified a handful of the most obvious conflicts. Future design of any project shall give careful consideration and evaluation to removal of conflicting signs and installation of those which are consistent with FDOT requirements. Additional sign needs have been identified in Figure 11 and Figure 12 on the following page.

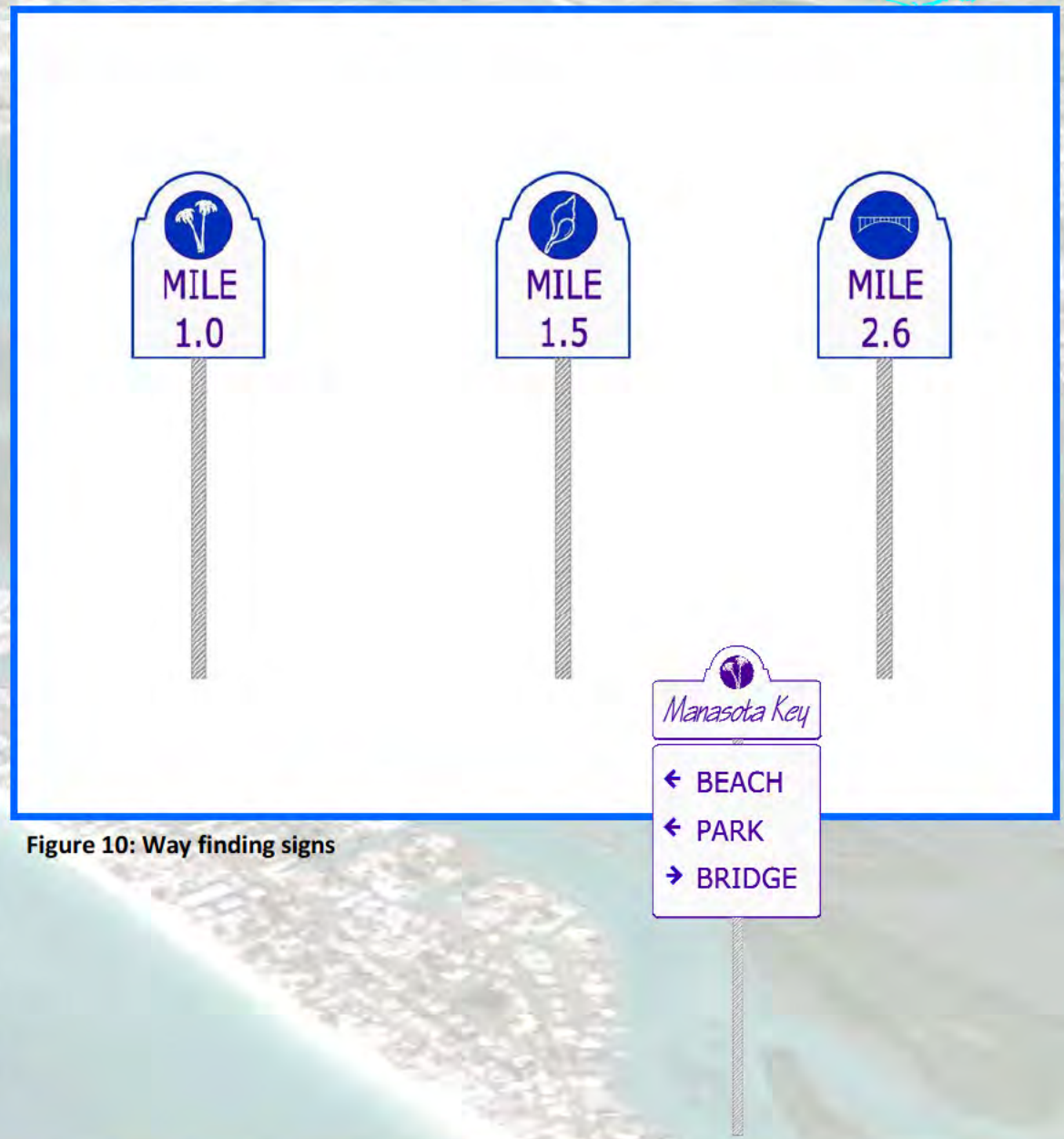
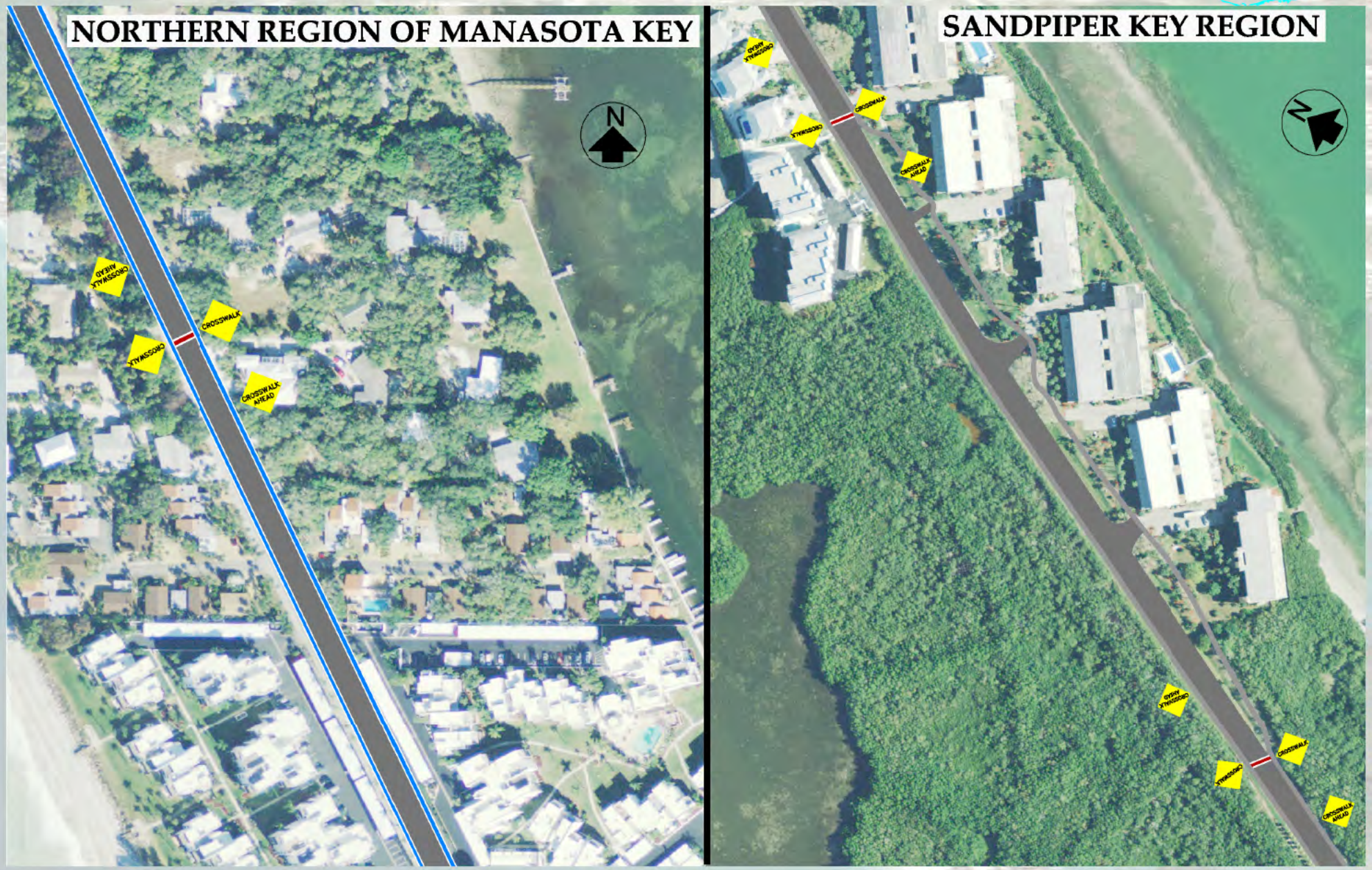


Figure 10: Way finding signs

Figure 11: Proposed Crosswalk Signs

Figure 12: Proposed Crosswalk Signs



Map 5: Public Art

LOCATION FOR BENCHES & INFORMATIONAL SIGNS (FLORA & FAUNA OF SOUTH FLORIDA)
ENHANCE THE CURRENT DISPLAYED ART WORK
LOCATION FOR PUBLIC ART & EDUCATION
LOCATION FOR BENCHES & DISPLAY OF LOCAL ART WORK
LOCATION FOR LOCAL ART WORK & INFORMATIONAL SIGNS (HISTORY OF MANASOTA KEY)
LOCATION FOR PUBLIC ART & EDUCATION
LOCATION FOR BENCHES, INFORMATIONAL SIGNS, BEACH SAFETY NOTIFICATIONS

Table 1: Area priorities as determined by polling at November 6th public input meeting (2nd meeting)

Priority	Location (Key Map Color)	Description
1	Commercial Area (Yellow)	Roundabout safety improvements On-street parking and drainage redesign
2	Gulf Boulevard (Aqua blue)	6 foot sidewalk on western side of road Restriping for bike lane, landscaping
3	North of Commercial/North Beach Road (Red)	6 foot sidewalk on both sides of road Restriping for bike lane, landscaping
4	Sandpiper Key (Dark blue)	Restriping and median landscaping gateway
5	North to County line (Green)	Restriping and marking shared shoulder

Table 2: Projects priorities based on MSTU approval and remaining future projects

Priority	Project Description	Estimated Cost*	Funding Sources	Time Frame**
1	Update and add mid-block crosswalks	$48,500	MSTU	2014
2a	Gulf Boulevard 6 foot sidewalk (west and partial east), lane/bike lane restriping	$308,715	MSTU	2014-15
2b	Gulf Boulevard Landscaping	$75,000	MSTU	2014-15
2c	Street Lighting Replacement	$154,943	MSTU, FWC	2014-15
3	Commercial Area On-street parking	$473,500	MSTU, SWFWMD, LAP	2014-15
4a	North Beach Road 6 foot sidewalk and restriping, both sides	$360,531	MSTU, LAP	2017
4b	North Beach Road Landscaping	$123,736	MSTU, LAP	2017
4c	North Beach Road Street Lighting	$123,888	MSTU, LAP, FWC	2017
5	Way finding and signage updates	$75,000	MSTU, LAP	2018
6	Roundabout Safety Improvements	$16,500	MSTU, LAP	2020

*Project costs are estimates for planning purposes only. They do not include Mobilization/demobilization, insurance, MOT, or other similar items regularly required as part of a bid or construction agreement.

**Time frame is based on MSTU direction given at the December 11, 2013 meeting to fund the design of the first three projects listed. Remaining projects are estimated.

Additional projects that can be completed separately from major projects identified on previous page:

Striping to narrow lanes and mark bicycle lanes: $14,322
Install and upgrade crosswalks for safety: $42,400
Lighting Improvements Only: $345,853
Way finding and signage replacement/updating: $75,000

However, based on MSTU input, the committee clearly preferred to combine projects within a geographic area to gain a better return on investment for design and construction.

Plan Implementation

Few grants are available at this time due to the lack of inclusion of community improvements on the County's priority funding list. With the adoption of this Master Plan, it is recommended that the MSTU request coordination with Charlotte County staff to include future projects on the County's priority list as submitted to FDOT and through the Charlotte County-Punta Gorda MPO. Furthermore, the MSTU should request the County to adopt this Plan by reference or incorporate into all documents that identify and prioritize bicycle/pedestrian facilities. This should include but not be limited to, the County-wide Bicycle and Pedestrian Plan, the Comprehensive Plan, and the MPO's Long-range Update for 2040.

Secondly and most importantly, the MSTU should request a meeting with County Planning/Zoning staff to develop a scope to modify the Manasota Key Overlay to include on-street parking and associated regulations. It is critical to provide nearby off-site parking as an economic driver. Multiple business owners in the community identified this issue as a priority to their ability to expand and maintain a strong customer base. A strong business community will equal a healthy and prosperous community.