



City of Sanibel

2009 SHARED USE PATH MASTER PLAN

Approved and Adopted by
City Council Resolution 09-043
April 21, 2009



City of Sanibel

2009 SHARED USE PATH MASTER PLAN

As adopted by City Council, on April 21, 2009, the Shared Use Path Master Plan represents a **living document** which may be edited, evaluated and updated, as needed, to support its guiding Vision Statement and Goals and Objectives.

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- C. Synopsis of City and State Traffic, Pedestrian and Bicycle Regulations
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- F. Shared Use Path Safety Awareness Program
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- G. Shared Use Path Users and Summary of 2006 Shared Use Path Intercept Survey and Community Outreach Program
- H. Examples of Potential Shared Use Path Public Safety Campaign Material
- I. Samples of Potential Shared Use Path Safety Training Lessons
- J. Examples of Shared Use Path Safety Guides
- K. Overview of Manual for Uniform Traffic Control Devices (MUTCD) for Way Finding Signage
- L. Potential Description, Organization and Objectives for a Shared Use Path Ambassador Program
- M. Potential Alternative Strategies and Sources of Funding

Glossary of Terms

Arterial Road

A two lane, two way road, designed to carry medium speed (30 – 35 mph) and medium capacity traffic volumes. An arterial roadway provides intra-community motor vehicle access and connections to a metropolitan wide road system.

Collector Road

A two lane, two way road, designed to carry relatively low speed (25 – 30 mph) and lower traffic volumes than an arterial road. A collector road provides connections between neighborhoods and to arterial roads.

Shared Use Path

A paved path that serves pedestrians, bicyclists and other compatible forms of non-motorized transportation. A Shared Use Path serves two way pedestrian and bicycle travel and is physically separated from a road and motor vehicle traffic by either open space, striping, signage, flexible delineators or a physical barrier. The Shared Use Path may be located within a right of way that also serves a road.

Swale

A shallow linear ditch either naturally formed or constructed at a lower contour and parallel to a road or Shared Use Path to detain, filter and transports storm water run off.

Striping, Hatching and Markings

Single or multiple broken or unbroken lines applied as paint or as a thermoplastic treatment in white or yellow colors to delineate either a center line to separate travel lanes or outside edges of travel lanes along a Shared Use Path. Also applied as either solid unbroken lines across a road or as a series of closely spaced parallel lines to delineate a crosswalk. Applications also include stop bars at crosswalks or the delineation of obstructions along a Shared use Path.

Stop Bars

A single line either applied as white paint or as a thermoplastic treatment that defines an approach to a road or Shared Use Path intersection.

Buffer

A buffer is a strip of land situated between a Shared Use Path and a parallel roadway. A buffer may be either vegetated or open and can provide a contoured area that serves as a swale for storm water drainage purposes. The buffer provides not only physical separation between the Shared Use Path and motor vehicle traffic, but also provides visual screening.

Manual on Uniform Traffic Control Devices

The Manual on Uniform Traffic Control Devices defines the standards used by states, counties, cities and towns to install and maintain all forms of traffic control signage, pavement markings and other devices on roads and Shared Use Paths. The Manual is published by the Federal Highway Administration pursuant to Code of Federal regulations (CFR), Part 655, Subpart F.

Way Finding Signage

A comprehensive and uniform signage system designed and located to provide directions, orientation and information to both Shared Use Path users and motorists.

Way Finding Signage also is graphically and structurally designed in a manner that is consistent with the community's unique identity and responsive to the natural and built environments.

Geographic Information System (GIS)

A computerized based method of collecting, storing and analyzing spatial information. A GIS can generate maps and reports that can effectively illustrate and communicate conditions associated with a community's physical and environmental conditions and facilities.

Management, maintenance and capital improvement decisions can be supported by a GIS system that can coordinate and schedule activities and investments in a timely and cost effective manner.

Sight Lines (or Sight Distance Triangle)

The triangular area formed by a diagonal line connecting two points located on intersecting road right of way lines or a road and drive way intersection. Within this area the visibility of pedestrians, bicyclists and motorists is paramount to insure safe crossings at road and driveway intersections.

Stewardship

Stewardship can be defined as an ethic or commitment formed by citizens to voluntarily and cooperatively pursue specific goals, policies, projects and programs designed to achieve specific and sustainable outcomes that will benefit the environmental and fiscal conditions of a community.

T Signs

Small signs fabricated in the shape of a T with a yellow background and black letters that are located at Shared Use Path driveway and road intersections. The signs are oriented to be observed by pedestrians, bicyclists and motorists on their approach to a Shared Use Path, driveway or intersection to “look both ways”.

Delineators

A vertically installed flat or circular post that defines the outside limits of a vehicular travel lane and separates that lane from a Shared use Path where the road and the Path may share a common paved surface. A delineator is normally composed of a polymer material that is highly visible, flexible and durable and can withstand impacts.

1. Introduction and Purpose of the 2009 Shared Use Path Master Plan

The City of Sanibel has a historical and ongoing commitment to providing residents and visitors with a variety of transportation and recreation options. One of the most visible ways in which this commitment is manifested is through the City's extensive Shared Use Path system. Per capita and per area, the City of Sanibel has one of the most extensive Shared Use Path systems in Florida and even in the country. Many residents and frequent visitors to Sanibel cite the Paths as one of their primary reasons for being here.

The Sanibel Plan (See *Appendix A*), the City's comprehensive land use plan, states as a policy that Sanibel should continue to be a "walkable and bikeable community" and that the City's Shared Use Path system should be "expanded in a fiscally sound manner" and "compatible with surrounding land uses".

The City of Sanibel's 2002 Parks and Recreation System Master Plan (See *Appendix A*), which has been incorporated as part of the Sanibel Plan, also notes the importance of "A central corridor of community parks, bikeways and gathering spaces – all sensitively woven into the Island's existing environmental fabric".

The purpose of the Shared Use Path Master Plan can be summarized as follows:

- Pursue implementation of the Sanibel Plan and the Parks and Recreation System Master Plan.
- Serve as the Sanibel community's long term vision for the future of the Shared Use Path system.
- Establish a base-line of information, in a Geographic Information System (GIS) format, that defines existing Shared Use Path conditions and relationships to Sanibel land uses, destinations, natural resources and other features.
- Define potential best management and design practices.
- Provide a resource that will support both public and private fund raising efforts.



"It is by riding a bicycle that you learn the contours of a country best, since you have to sweat up the hills and coast down them. Thus you remember them as they actually are, while in a motor car only a high hill impresses you and you have no such accurate remembrance of country you have driven through as you gain by riding a bicycle"

Ernest Hemmingway

The following Shared Use Path Master Plan is composed of the following essential elements.

- Vision statement and supporting Goals and Objectives that will guide Plan implementation.
- History of the Shared Use Path system's origin, extension and improvement.
- Existing Shared Use Path Conditions and Challenges.
- Overview of Shared Use Path Uses and Users.
- Recommendations for Public Safety, Maintenance and Management, Improvement and Extension and Stewardship.
- Implementation Program defining a basic schedule and responsibilities.

2. VISION, GOALS and OBJECTIVES

The following vision statement and supporting goals and objectives have been defined to guide the implementation of the Shared Use Path Master Plan.

Vision for the Sanibel Shared Use Path System

Sanibel's Shared Use Path system is and will continue to be an invaluable resource, one of the "crown jewels" of the island. Sanibel's Shared Use Path system will serve as a means for residents and visitors to move about the Island safely and easily under human power, reducing the need for using motorized vehicles on City streets and roads. The Path system will be designed and maintained in a manner that provides maximum access to frequently visited island destinations and is attractive and consistent with Sanibel's unique character as a barrier island sanctuary and small town community.

Goal: The safety of Sanibel's Shared Use Path system and its users shall be of the highest priority.

Objectives:

- Design the Path system's physical structure and signage to meet up-to-date standards so that Path users are safe and feel comfortable.
- Improve daytime and evening bicycle, pedestrian and motorist visibility along the Path system, particularly at intersections and commercial and residential driveways.
- Enforce City ordinances and State statutes to maximize Path safety and minimize crashes.
- Conduct an on-going safety awareness program for Path users and motorists, using the widest possible range of educational and outreach initiatives.



"People need immediate places to refresh, reinvent themselves. Our surroundings, built and natural alike, have an immediate and a continuing effect on the way we feel and act, and on our health and intelligence. These places have an impact on our sense of self, our sense of safety; the kind of work we get done, the ways we interact with people, even our ability to function as citizens in a democracy. In short, the places where we spend our time affect the people we are and can become . . ."

Tony Hiss, The Experience of Place

Goal: The Shared Use Path system will be managed and maintained in a quality manner, to support the full range of current and projected future user demands.

Objectives:

- Maintain the Path system in accordance with appropriate engineering and design practices and with State standards wherever possible, consistent with the City's unique right of way and land use conditions.
- Manage the Path system in a manner that protects the fragile nature of our island's environment.
- Implement a Shared Use Path monitoring and maintenance program that will both proactively and systematically locate, schedule and prioritize pavement, vegetation trimming and related improvements.
- Insure that Path rest areas, support facilities and signage are attractive and in keeping with the character of Sanibel.

Goal: Improvements and extensions to the Shared Use Path system will be done for the purpose of connecting residents and visitors with frequently visited island destinations and activity centers and to correspondingly reduce vehicular trips and energy consumption.

Objectives:

- Maintain a five year capital improvement schedule for the Shared Use Path system, programmed and updated on an annual basis.
- Insure that any proposed new Path improvement or extension addresses existing and future user demands and is consistent with the Sanibel Plan, the City's land use conditions and the recommendations and priorities of the Shared Use Path Master Plan.
- Design Path improvements and extensions to meet up-to-date standards whenever possible

- Insure that Path improvements and extensions are attractive and in keeping with the character of Sanibel.

Goal: The City will build a sense of stewardship for the Shared Use Path system within the greater Sanibel Community.

Objectives:

- City Council will establish policies and priorities that will both support implementation of the Shared Use Path Master Plan and engage the entire Sanibel community throughout the implementation process.
- The City Manager will continue to lead and coordinate implementation of the Shared Use Path Master Plan and oversight of the Shared Use Path system within the City administration, insuring that the Path system receives focused attention on an on-going basis.
- Initiate a communications program to inform the public on the importance of the Path system to Sanibel. This communication program will:
 - Reinforce the Path system's role as a convenient means of non-motorized transportation that will help to: reduce automobile trips, road congestion and parking demands.
 - Underscore the impact the Path system can have in protecting the natural environment.
 - Encourage use of the Path system to promote health, wellness and increased mobility.
- Encourage public-private partnerships to support the Path system.
 - Consider opportunities for volunteers and City staff to work together on a wide range of programs and projects associated with Path system safety, education, conditions and public information.

- Explore the formation of innovative public, private and not-for-profit partnerships that will have the capacity to pursue fund raising and financing strategies to support implementation of the Shared Use Path Master Plan.

3. History of the Shared Use Path System



In 1974, prior to the City's incorporation and the introduction of the first segments of the Shared Use Path system, Sanibel bicyclists rode from the Chamber of Commerce to Bailey's store to demonstrate to Lee County Commissioners the need for safe and separate Paths on the island.

Sanibel residents working with Lee County officials and the Project Bike Path Committee also completed in 1974 a County-wide eight-point plan to establish a network of Paths and a funding strategy for both County and State financial participation necessary to partially support construction costs.

In 1975, three citizens (Grace Whitehead, Muriel Goss and Starr Thomas) spearheaded a project to raise "seed money" (\$10,000) that was matched by the State of Florida's Department of Transportation (DOT) to build the first segment of the Shared Use Path system along Periwinkle Way from Lindgren Boulevard to Bailey's General Store.

Between 1975 and 1996 the 23 mile Shared Use Path system that exists today was constructed (See *Figures 1 and 2*).

In 2002 the City of Sanibel completed a Parks and Recreation System Master Plan which defined the importance of a unified park, recreation and Path system.

In 2003, the City of Sanibel's Parks and Recreation Advisory Committee recommended that the term "Bike Path" be changed to the current "Shared Use Path" classification for the following reasons: recognize the wide variety of non-motorized users and the separation of Paths from vehicular traffic; indicate that both recreation and transportation services are provided; and enable the City to successfully apply for federal and state grants and funding.

In 2003, the City's Department of Public Works also completed a Master Plan primarily for future Path extensions. *Appendix B* identifies the 2003 Plan's potential long term Path extensions.

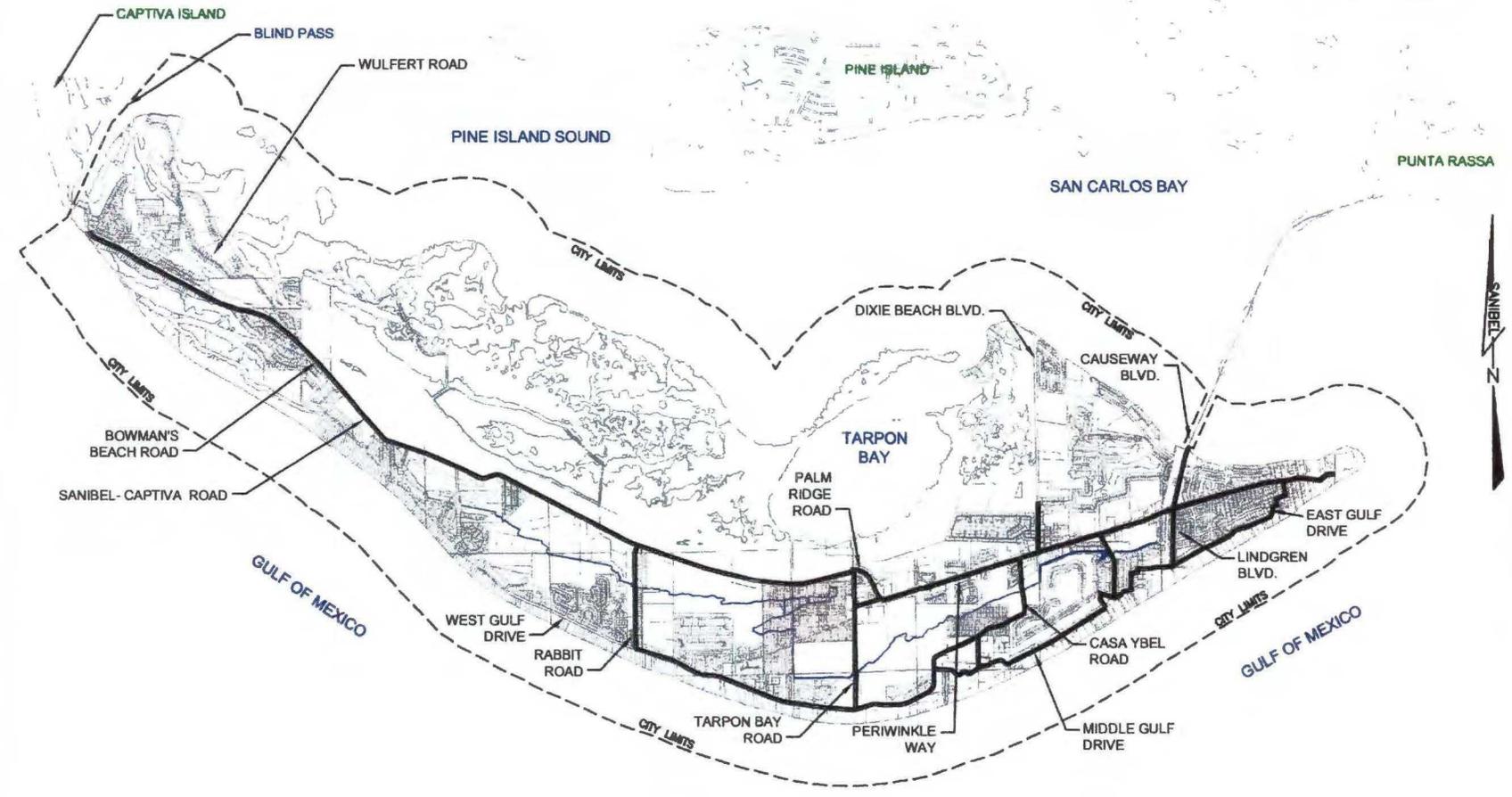
"Of all the exercises, walking is the best."

Thomas Jefferson

"The sum of the whole is this: walk and be happy; walk and be healthy. The best way to lengthen out our days is to walk steadily and with a purpose."

Charles Dickens

0 3500 7000



LEGEND

———— SHARED USE PATHS

Source: This graphic was redrawn from the 1997 *Sanibel Plan*. Existing shared use paths are shown. The principle source of the base map used in this illustration is from the Lee County Property Appraiser's Office. Prepared by the Planning Department.

Date: March 2009



EXISTING SHARED USE PATHS

Figure No. 1

Since 2003, the City of Sanibel has completed \$2,031,000 in Shared Use Path relocations, widenings, bridge replacements, drainage and related improvements that have been financed primarily through the City's capital improvement program.

In 2005, City Council and the Sanibel Bicycle Club, Inc. discussed the need for alternative sources of funding to support implementation of Shared Use Path improvements. From these discussions emerged the necessity of preparing a more comprehensive Shared Use Path Master Plan and the essential role that such a Plan could play in securing future public and private funding.

In 2006, residents of the City of Sanibel approved a mail ballot referendum, consistent with the City Charter, to construct improvements to Periwinkle Way and the section of the Shared Use Path between 500 feet west of Casa Ybel Road and 1200 feet east of Dixie Beach Boulevard. The project included separating the Path from the road and associated road, drainage and related improvements.

In 2006, based on funding committed by City Council and "Trails in Motion", formed by the Sanibel Bicycle Club, Inc., a scope of work and objectives were defined to guide the preparation of this 2009 Shared Use Path Master Plan.

4. Existing Conditions and Challenges



“I thought of that while riding my bike.”

Albert Einstein, on the Theory of Relativity

“Nothing compares to the simple pleasure of a bike ride.”

John F. Kennedy

The Shared Use Path Master Plan is based upon the consideration and analysis of not only the existing physical locations and conditions of the current Shared Use Path system but, most importantly, the relationships between the system and Sanibel’s natural environment, land uses, roadways, activities and destinations.

Public safety, current maintenance practices and applicable design standards have also been examined. Completed, committed and planned improvements to the Shared Use Path system have also been recognized, including the conclusions and recommendations from the 2003 Shared Use Path Master Plan.

The following is a summary of the existing environmental, land use and Shared Use Path conditions that have been examined during the preparation of the Shared Use Path Master Plan. Key challenges that will be addressed by the Master Plan’s recommendations and specific implementation strategies are also identified.

The Shared Use Path System Today

In its present condition, the City of Sanibel’s Shared Use Path system consists of 23 miles of paved Paths (See *Figure 1*). Most of the Paths are side Paths (Paths that are within the same right-of-way as an adjacent roadway). They are located along twelve of the City’s two lane roads which are primarily classified by the Sanibel Plan as arterial and collector roads. The width of the Shared Use Paths ranges from 5 feet to 10 feet.

Most of Sanibel’s Paths consist of asphalt on top of a shell/rock base. This construction is susceptible to raised humps and cracking due to root growth under the Paths. The nature of the base also causes a problem when the Paths are widened because the new part tends to break and separate from the earlier portions of the Paths.

The Island is heavily vegetated and has a year round growing season, which results in vegetation frequently encroaching on the Path if not kept under control. There are several types of problems: vegetation obstructing vision for Path users and motorists; trees with branches hanging low endangering Path users; and shrubbery and ground cover encroaching the Paths (less than 2 feet from Path).

In some sections of the Shared Use Path system, storm sewer and water utility lines run underneath the Path surface. Access to these lines is afforded within the Paths. Uneven Path surfaces are sometimes created by the utility covers which may be frequently accessed for inspections and repairs.

Relationship of Sanibel's Shared Use Path System and Lee County's Bicycle Routes

The Sanibel Bridge and Causeway connects the Island's Shared Use Path system with Lee County roads and designated bicycle routes.

The proximity of Sanibel's Shared Use Path system to designated bicycle routes located throughout Lee County is illustrated by *Figure 3*.

City Organization and Responsibilities for the Shared Use Paths

The City Charter, Sanibel Code and other applicable Florida State statutes and local laws and ordinances define the important responsibilities of City Council, the City Manager and all City departments that are responsible for the management, maintenance, safety and improvement of Sanibel's unique Shared Use Path system.

City Council is responsible for public policy, financing, budgeting and legislation associated with the Shared Use Path system including the approval of the Shared Use Path Master Plan and future amendments to the Plan.

Under the direction of City Council, the City Manager serves as the chief administrative officer of the City and is responsible for the administration, direction and supervision of all departments, staff, projects and programs associated with the Shared Use Paths.

The City's Department of Public Works has the primary responsibility for the overall maintenance, repair, engineering, design and construction associated with the City's Shared Use Path system.

The City's Police Department is responsible for enforcement of all state and local laws that address safety along the Shared Use Path system. The Police Department also conducts



SANIBEL SHARED USE PATHS AND LEE COUNTY BICYCLE ROUTES

Figure No. 3

outreach and educational programs designed to promote and increase safety along the Shared Use Paths.

The Department of Natural Resources reviews all plans for Shared Use Path design, improvement and extension to insure the protection of Sanibel's natural environment. The Department of Natural Resources also prepares and manages plans for vegetation planting and maintenance along the Shared Use Path system.

The Planning Department provides services associated with the planning and design of Shared Use Path improvements and extensions to insure compliance with the Sanibel Plan and the Land Development Code. The Planning Department also reviews applications for development permits to insure appropriate site planning and design of improvements to private property situated along the Shared Use Paths. The Planning Department also recommends amendments to the Land Development Code to address land use, design, site planning and environmental goals, objectives and policies associated with the implementation of the Sanibel Plan.

Figure 4 provides a basic organizational chart that depicts the City's various responsibilities for the Shared Use Path system.

Shared Use Paths and the Economic Assumptions of the *Sanibel Plan*

Since the *Sanibel Plan* was initially adopted (1976), the Economic Assumptions of the Plan have provided general guidance for the objectives and policies of the Plan. The Economic Assumptions of the Plan state that, "the most basic of all the economic assumptions of Sanibel's planning is that Sanibel's economic fortune is directly related to the viability of its natural systems".

The Economic Assumptions of the Plan also prescribe that "planning priority should be given to reducing the need to use more motor vehicles as residents and visitors go about their daily activities". The maintenance and improvement of the Shared Use Path system can be an effective means of attaining that end.

The quality of Sanibel's natural environment and the Island's economic base can both be sustained through the direct and indirect benefits derived from maintaining and enhancing the Shared Use Path system. Fostering Island-wide accessibility through enhanced



City of Sanibel

CITIZENS



CITY COUNCIL

- Public Policy
- Financing
- Budgeting
- Legislation



CITY MANAGER

• Chief Administrative Officer

Planning

- Planning
- Permitting
- Code Enforcement

Police

- Public Safety
- Enforcement of State and Local Laws
- Education

Public Works

- Maintenance
- Repair
- Engineering
- Design
- Construction

Natural Resources

- Environmental Protection
- Vegetation Planting

CITY ORGANIZATIONAL CHART RESPONSIBILITIES FOR SHARED USE PATH SYSTEM

pedestrian, bicycle and non-motorized forms of transportation will have many direct and indirect benefits, including reduced energy consumption, CO₂ emissions, automobile operating expenses and demand for multiple vehicle trips that contribute to congestion. The Island-wide condition and accessibility of the Shared Use Path system also enhances property values.

Shared Use Path System's Relationships to the Island's Environment and Land Uses

Environmentally Sensitive Land

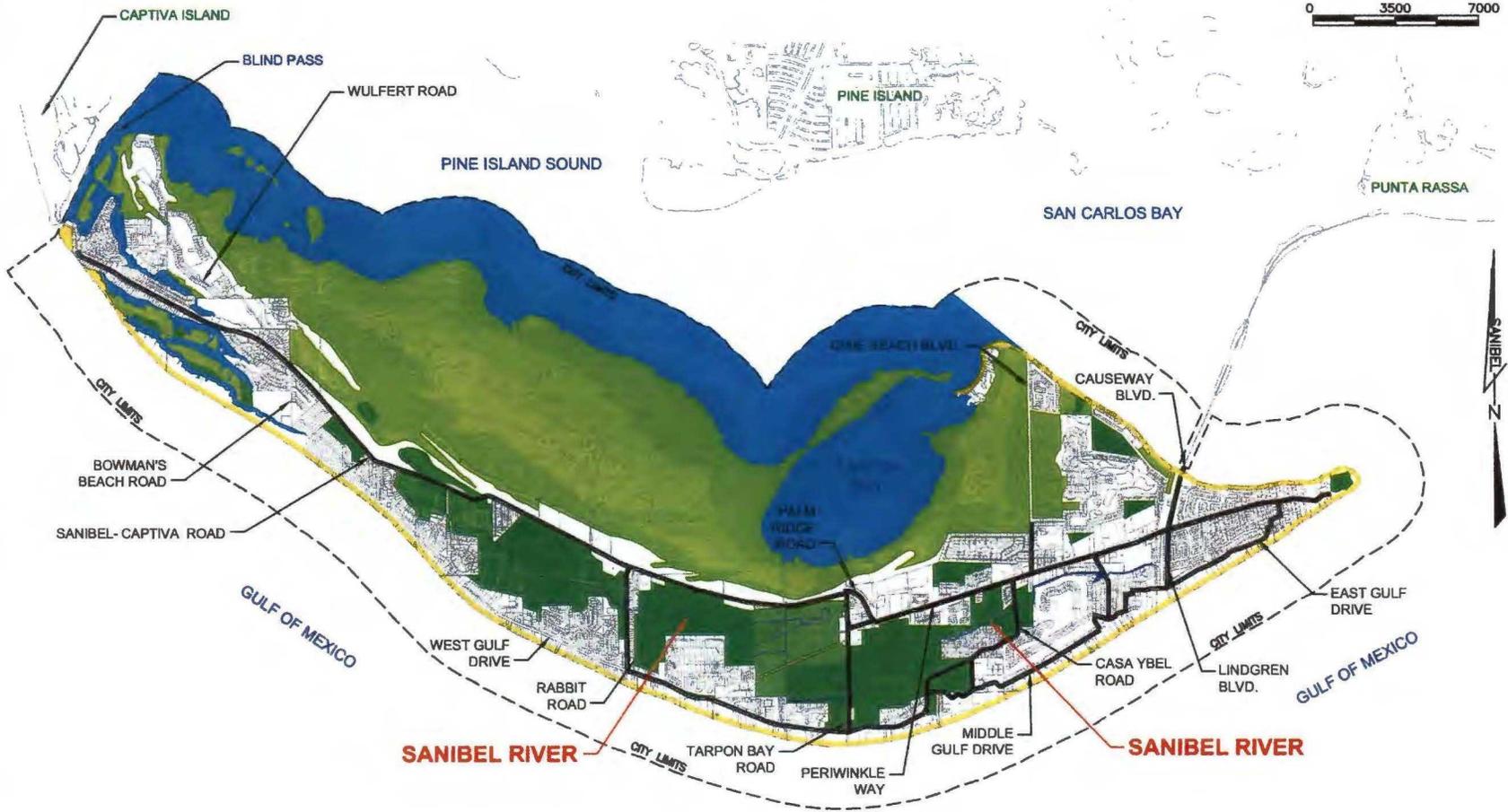
The highest priority of the City of Sanibel is the protection and enhancement of the Island's natural environment and unique sanctuary characteristics. Today, over 63% or 7300 acres of the Island is protected and preserved in its natural state. Sanibel's system of ecological zones includes Gulf and Bay beach frontage, aquatic preserves, interior wetlands and extensive mangrove forest areas. The relationship between the existing Shared Use Path system and the Island's environmentally sensitive land areas is illustrated by *Figure 5*.

Challenge

The proximity of the island's natural resources and unique wildlife habitats to the Shared Use Path system is a major resource that is enjoyed by island residents and visitors. However, this close proximity to environmentally sensitive lands and the commitment by the City to avoid human and land use impacts that may degrade natural areas and the island's ecological system also constrains the range of potential Shared Use Path improvements, particularly future widenings, extensions and locations for the introduction of rest areas and support facilities.

General Land Use Pattern

As previously indicated, over 63% of Sanibel consists of conservation land. Residential land uses today account for 22% (2625 acres); recreation and public facilities are approximately 6% (675 acres); commercial uses only comprise 1.5 % (175 acres); and road rights of way, many of which include the separated Shared Use Paths, comprise 4.5% of Sanibel's land area.



LEGEND

- SHARED USE PATHS
- AQUATIC PRESERVE
- MANGROVES
- INTERIOR WETLANDS
- BEACH ZONES

Source: This graphic was redrawn from the 1997 *Sanibel Plan*.
 The principle source of the base map used in this illustration is from the Lee County Property Appraiser's Office.
 Prepared by the Planning Department.

Date: March 2009



**SHARED USE PATHS
AND ENVIRONMENTALLY SENSITIVE LAND**

Figure No. 5

Figure 6 defines the relationship between Sanibel's existing land uses and the Shared Use Path system. The important alternative transportation role that the Shared Use Paths play on Sanibel is illustrated by this figure in terms of the connections provided between residential, resort, commercial, conservation, recreation, public and conservation land uses.

Challenge

While the City's residential neighborhoods, commercial districts, resort housing and recreational, civic, cultural and other land uses are generally well connected by the Shared Use Path system at this time, the challenge will be to insure that the Shared Use Path system evolves with the changing needs of the Community.

Conservation, Park, Recreation, Civic and Cultural Destinations

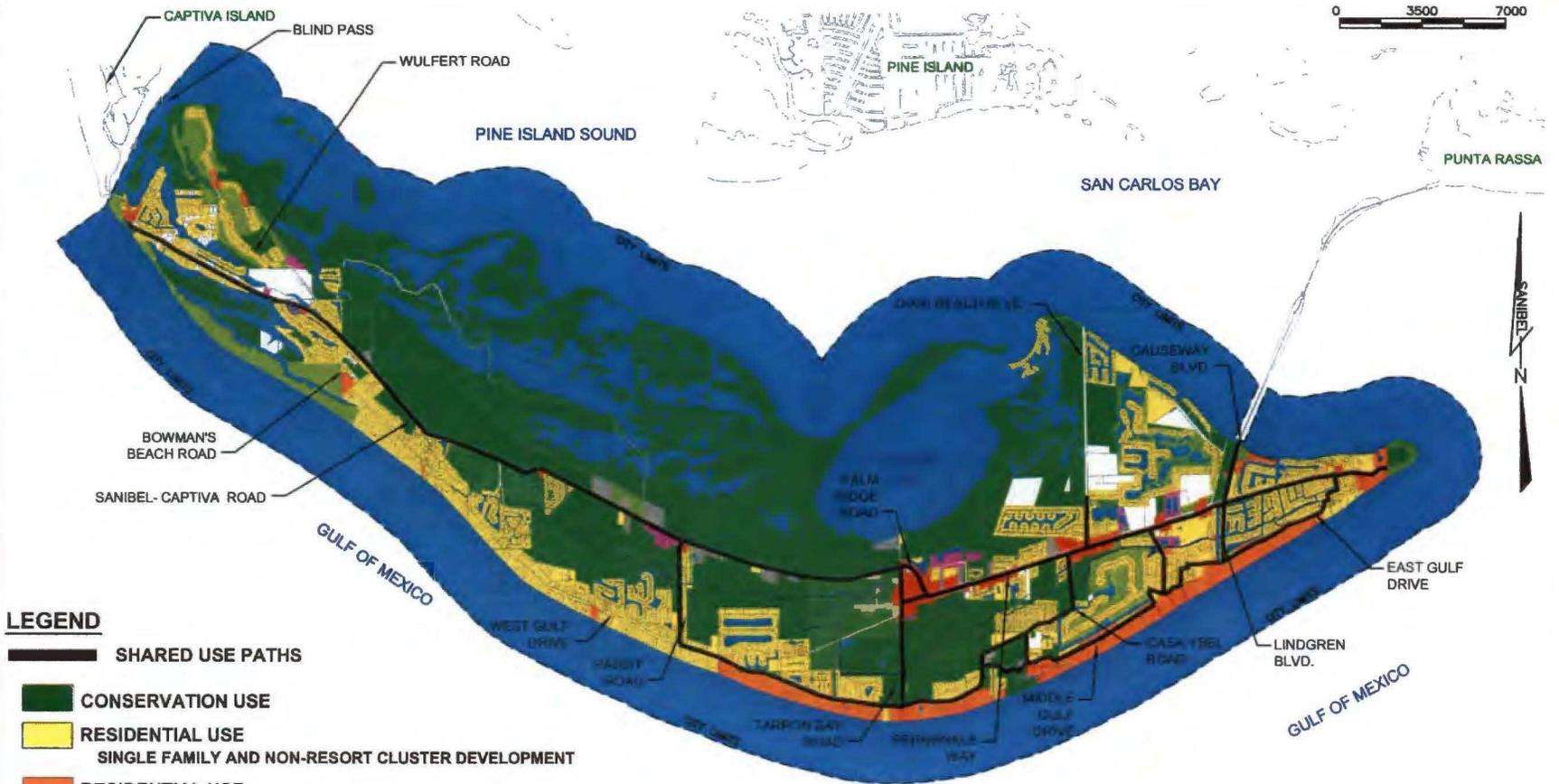
Sanibel's Shared Use Path system is both a recreational and transportation resource that serves a wide range of activities and destinations. *Figure 7* illustrates the relationships between the existing Shared Use Path system and the Island's specific conservation, park, recreation, civic and cultural activities and destinations.

Challenge

Today, the Shared Use Path system provides residents and visitors with direct connections to the majority of Sanibel's passive and active recreation facilities. The challenge will be to insure that any future park and recreation facilities are also connected by extending the existing Path system. Opportunities to improve or extend existing segments of the Shared Use Path system to current and future park and recreation facilities must be addressed.

Historic Sites and Structures

In addition to providing connections between Sanibel's residential, resort, commercial, conservation, park, recreation, cultural and civic land uses and activities, the Shared Use Path system also links residents and visitors to the Island's historic sites and structures. *Figure 8* defines the locations of Sanibel's sixteen historic landmarks, including the Historic Museum and Village, in relation to the Shared Use Path system. All of the historic sites and structures, including many historic sites which are designated by plaques, are accessible from the existing Shared Use Path system. A guide, which is available at the Historic



LEGEND

- SHARED USE PATHS**
- CONSERVATION USE**
- RESIDENTIAL USE**
SINGLE FAMILY AND NON-RESORT CLUSTER DEVELOPMENT
- RESIDENTIAL USE**
MULTI-FAMILY AND/OR RESORT CLUSTER DEVELOPMENT
- RECREATIONAL USE**
- COMMERCIAL USE**
- UTILITIES AND PUBLIC BUILDINGS AND GROUNDS**
- OTHER USE**
- ROADS**
- n/a AGRICULTURAL USE**
- n/a INDUSTRIAL USE**
- VACANT/UNDEVELOPED LANDS**
- WATER BODIES AND WATERWAYS**

NOTE: - The Single Family category includes duplexes and vacant lots in "platted" subdivisions. - The Multi-family category includes resort uses with single family and duplex structures.

Source: The Planning Department, using historical departmental records, City Business Tax records, Lee County Property Appraiser's On-line files and periodic site inspections. The principle source of the base map used in this illustration is from the Lee County Property Appraiser's Office.

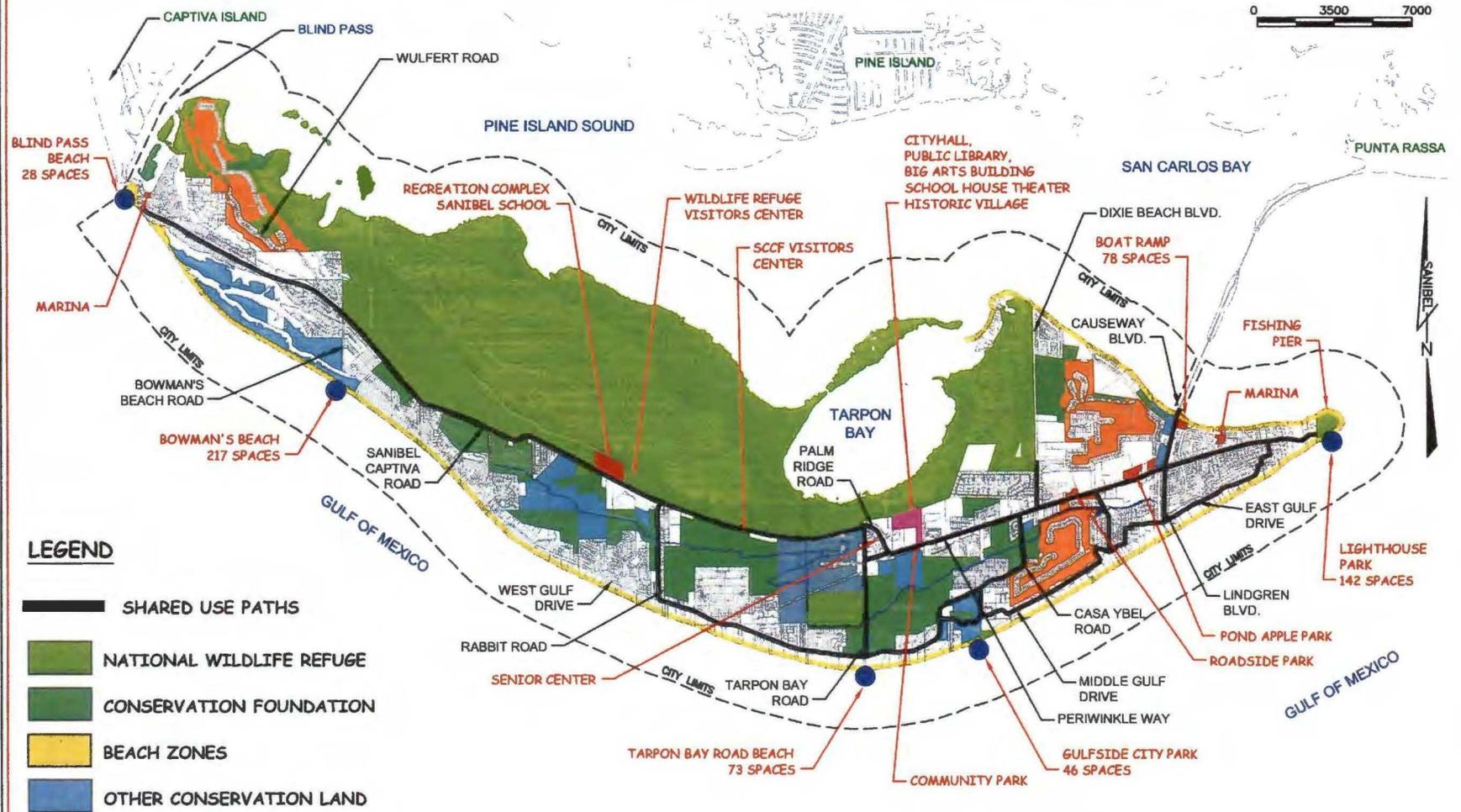
Date: March 2009



SHARED USE PATHS AND EXISTING LAND USE

Figure No. 6

0 3500 7000



LEGEND

- SHARED USE PATHS
- NATIONAL WILDLIFE REFUGE
- CONSERVATION FOUNDATION
- BEACH ZONES
- OTHER CONSERVATION LAND
- GOLF COURSES
- CITYHALL COMPLEX
- PARKS AND RECREATION SITES
- BEACH ACCESS PARKING
- 142 NUMBER OF PARKING SPACES

Source: This graphic was based on the Master Parks and Recreation Plan and redrawn from the 1997 *Sanibel Plan*.
 The principle source of the base map used in this illustration is from the Lee County Property Appraiser's Office.
 Prepared by the Planning Department.

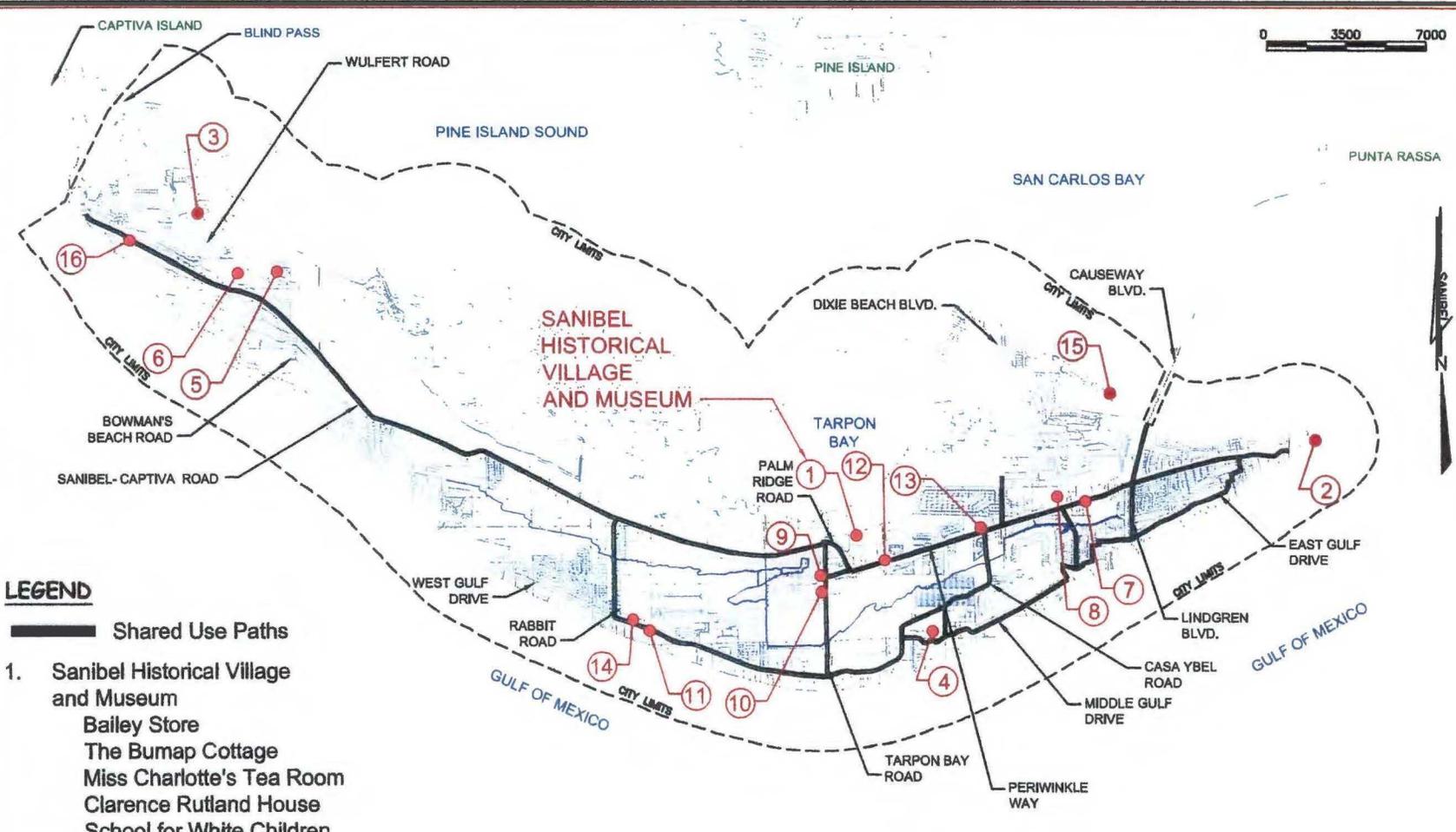
Date: March 2009



SHARED USE PATHS AND CONSERVATION, PARK, RECREATION, CIVIC AND CULTURAL DESTINATIONS

Figure No. 7

0 3500 7000



LEGEND

Shared Use Paths

- 1. Sanibel Historical Village and Museum
 - Bailey Store
 - The Bumap Cottage
 - Miss Charlotte's Tea Room
 - Clarence Rutland House
 - School for White Children
 - Morning Glories Cottage
 - Reed Homestead / 1910 Post Office
- 2. Sanibel Lighthouse
- 3. Wulfert Cemetary
- 4. Sanibel Cemetary
- 5. Indian Mound "A"
- 6. O. Bowen Grave
- 7. RUTLAND GRAVES
- 8. BAILEY HOUSE
- 9. COOPER HOMESTEAD
- 10. School for Black Children
- 11. Nutt House
- 12. Community House
- 13. Sanibel Community Church
- 14. The Beach House
- 15. Shore Haven
- 16. White Heron House

Source: This graphic was redrawn from the 1997 *Sanibel Plan*. The principle source of the base map used in this illustration is from the Lee County Property Appraiser's Office. Prepared by the Planning Department.

Date: Feb. 2009



SHARED USE PATHS AND HISTORIC SITES AND STRUCTURES

Figure No. 8

Museum and Village, provides pedestrians and bicyclists with a tour of Sanibel's historic landmarks, structures and sites along the Shared Use Paths.

Existing Rest Areas, Support Facilities and Signage

Situated along the Shared Use Path system are various rest areas, support facilities and signage to provide shade, seating, water, bicycle racks, directions and information to pedestrians and bicyclists. Existing rest areas and support facilities are primarily situated along Periwinkle Way. *Figure 9* provides an inventory of existing locations of the following: 4 rest areas with shade structures; 13 benches; 11 water fountains; and 19 bicycle racks. Public rest rooms are also located at 7 locations accessible from the Shared Use Path system. *Figure 10* provides examples of existing Shared Use Path rest area features.

Between FY2007-2008 and FY2008-2009, six additional rest areas were installed along the Periwinkle Way segments of the Shared Use Path system as part of the Periwinkle Way Restoration Project. These improvements, which included native landscaping, seating, bicycle racks and water fountains, were made possible through a public/private partnership between Sanibel Beautification, Inc., Lee County and the City of Sanibel.

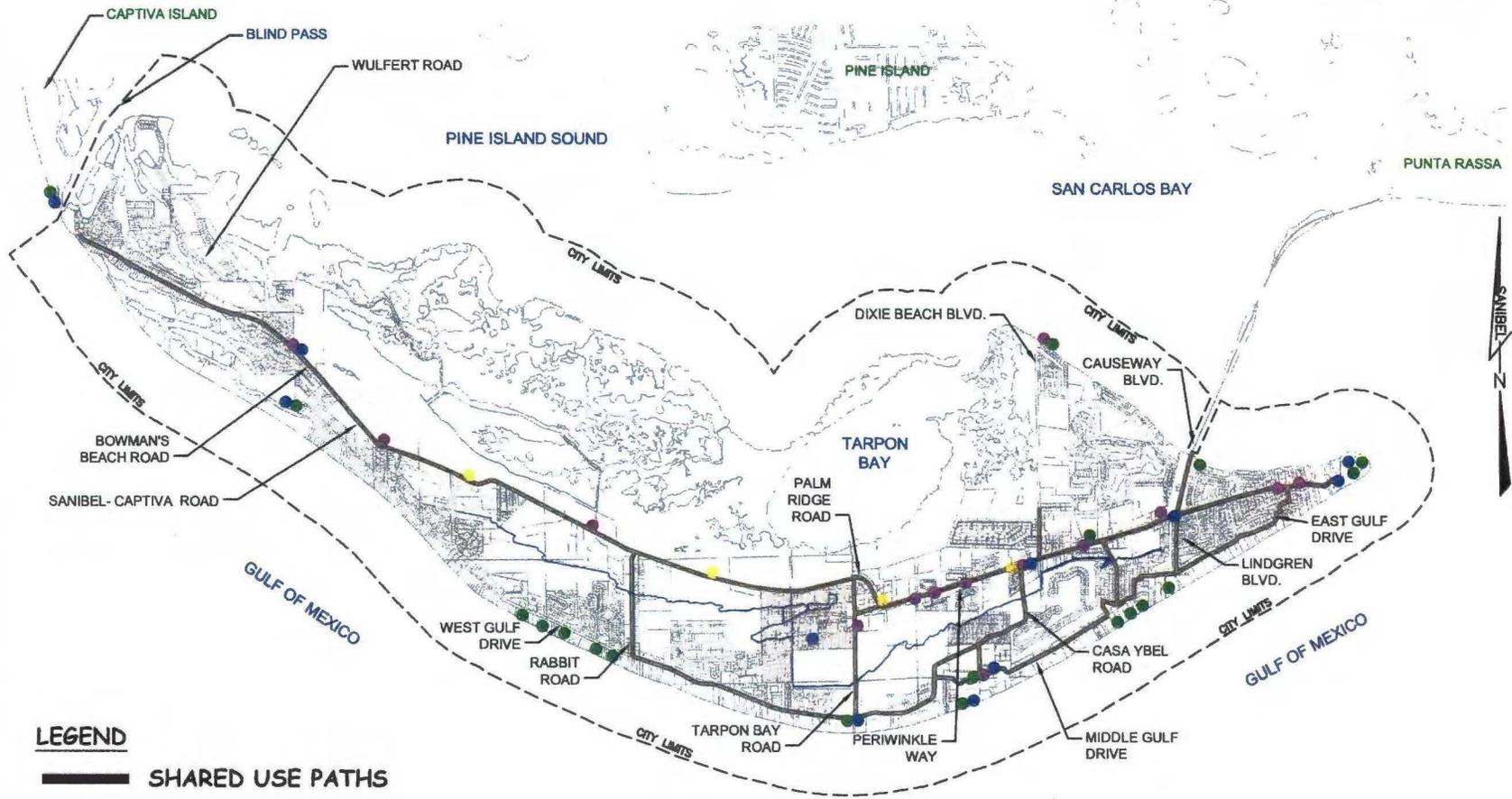
Additional rest rooms that will serve the Shared Use Paths are planned for construction at the City's boat launching ramp and the Historic Museum and Village during FY 2008-2009. The Department of Public Works also plans to install bicycle racks, water fountains and seating at several additional locations along the Shared Use Paths in FY 2008-2009.

Signage along the existing Shared Use Path system consists of both safety and limited way finding signage. *Figure 11* provides photographs that illustrate the wide range of individual types of existing Shared Use Path signage.

Challenges

Future rest areas, support facilities and signage will require careful planning and design due to environmental and right-of-way constraints and the importance of maintaining Sanibel's unique community character. Budget constraints and priorities at the local, State and Federal levels will require alternative funding approaches in conjunction with the not-for-profit and private sectors.

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LEGEND

-  SHARED USE PATHS
-  EXISTING BENCHES
-  EXISTING BIKE RACKS
-  EXISTING WATER FOUNTAINS
-  EXISTING REST AREAS

Source: This graphic was redrawn from the 1997 *Sanibel Plan*. Existing shared use paths are shown. The principle source of the base map used in this illustration is from the Lee County Property Appraiser's Office. Prepared by the Planning Department.

Date: March 2009



**SHARED USE PATHS
AND EXISTING REST AREAS AND SUPPORT FACILITIES**

Figure No. 9



**EXAMPLES OF EXISTING SHARED USE PATH
REST AREA FEATURES**

Figure No. 10



EXISTING SHARED USE PATH SIGNAGE

Figure No. 11

Roadway Network

Sanibel is one of Florida's most unique communities and the roadway network reflects the Island's environmental characteristics and influences the location, design and maintenance of the Shared Use Path system.

Public road right-of-ways on Sanibel range from 10 feet to 80 feet in width. Road surfaces, including shell and paved surfaces, range from 10 feet to 36 feet in width.

The maximum speed limit on Sanibel's streets is 35 miles per hour as defined by Chapter 66 of the Sanibel Code.

The Sanibel Plan defines the City's existing and future two lane roadway network and the arterial and collector road system. No additional lanes for arterial and collector roads are proposed by the Plan. The Sanibel Plan does not recommend any increases in roadway capacity. The City's Charter requires voter approval of any proposal that would introduce addition travel lanes, street lights and traffic signals to Highway 867 (Causeway Boulevard, Periwinkle Way, Palm Ridge Road and Sanibel-Captiva Road).

No major single roadway is continuous for the length of the island and the entire roadway network of Sanibel is isolated from the roadways in the rest of Lee County. Because of the restricted geography of Sanibel, many of the roads are short and curvilinear. Clearances to roadside vegetation or developments are fairly tight.

Challenges

Constraints presented by existing right-of-way widths and Sanibel's commitment to maintaining a scenic and limited capacity road system will continue to present challenges for future Shared Use Path improvements and extensions.

City and State Traffic, Pedestrian and Bicycle Regulations

Chapter 66 of the Sanibel Code defines the City's traffic regulations that pertain to the use of the Shared Use Path system and crosswalks by pedestrians, bicyclists and other non-motorized forms of transportation.

Florida's Uniform Traffic Control Law (Chapter 316) defines the rights and duties of bicyclists and pedestrians utilizing a Shared Use Path or crosswalk.

A synopsis of applicable City and State regulations appears in *Appendix C*.

Maintenance and Design Standards

Maintenance

The City of Sanibel, through the Department of Public Works, is responsible for the ongoing maintenance, design and improvement of the Shared Use Path system. Ongoing maintenance includes a wide range of responsibilities including: trash and debris removal; vegetation trimming; sweeping; mowing; and repair of Path surface cracks, bumps and depressions. These routine maintenance tasks do not include major improvements involving Path widenings and surface repaving and upgrades.

Today, various Path segments are not smooth or even surfaces. This is caused by the great amount of patching performed because of underground utility maintenance as well as the repairs caused by root damage.

While the City's ongoing and routine maintenance program relies on periodic inspections of Shared Use Path conditions, a proactive and goal oriented approach to Shared Use Path maintenance is also employed that responds to seasonal demands, past history and telephone calls or emails from citizens and Path users.

Challenges

A number of challenges will continue to face the ongoing maintenance of the Shared Use Path system including: limited funding and competing budget priorities; lack of exclusive crews dedicated to Path maintenance; aggressive nature of Island vegetation that continues to grow over and under the Paths and obscure visibility or present obstructions for Path users; and adjoining private property vegetation maintenance. A way needs to be found to maintain/upgrade longer sections of the Path to minimize the problems caused by repetitive surface patching.



Examples of Shared Use Path Vegetation, Surface and Utility Maintenance Challenges.

Path Safety Signage, Striping and Markings

Sanibel's Shared Use Path system has evolved over three decades and, as a result, the types of signage and markings vary due to evolving standards and management practices.

Several examples are as follows:

- Yellow centerline markings and edge of Path markings are not consistently applied.
- Not all sections of the Path system include "warn to pass" or "keep right markings".
- Bike designation markings appear in various sizes.

Today, for signing, striping and marking specifications, Sanibel's primary reference is the Federal Highway Administration's (FHWA) Manual on Uniform Traffic Control Devices. The City's Department of Public Works continues to strive to meet these standards.

The City of Sanibel installs and maintains a number of signs to insure Path user safety, including NO MOTOR VEHICLE signs to discourage motor vehicle use of the Shared Use Path system (See *Figure 12*).

"T" signs are installed to encourage drivers of motor vehicles to look both ways to avoid crashes with Path users at road and driveway intersections (See *Figure 11*).

Striping and markings, consisting of NO MOTOR VEHICLE legends, stop bars (12 inches), crosswalks consisting of either enhanced (hatched) or standard (parallel lines) markings and center line striping, are also installed along the Paths and roadways to insure user safety during both the day time and evening.

Challenges

Due to Sanibel's early commitment to constructing an Island-wide Shared Use Path system, there is no uniformity in signage, striping and marking throughout the Path system. Achieving consistency in Path signage and markings will be a long term challenge.



EXISTING NO MOTOR VEHICLE SIGNS

Figure No. 12

Right-of-way and environmental conditions and constraints will limit Sanibel's implementation of FHWA specifications for signage, striping and markings in many locations.

Therefore, the challenge is for Sanibel to create a policy that provides clear direction for how, when, and why the City will apply striping or Path markings for both day time and evening Path safety. This is needed to provide consistent implementation throughout Sanibel's Path system.

Width

The existing Paths are two-way and vary from five feet to ten feet in width (See *Figure 13*) and are utilized by a larger and more diverse number of users when compared to similar Paths in other similar sized communities.

Challenge

Right of way, environmental and land use constraints will continue to limit the City's ability to implement optimum Path width in many situations. In the absence of a policy or the ability to uniformly apply State or Federal standards for Path width and design, the City will need to look at each path segment carefully to insure that everything possible is done to meet the safety needs of Path users, especially during seasonal high-traffic periods.

Crosswalks

The State of Florida requires that motorists yield the right-of-way to pedestrians. Today, there are 100 marked and signed crosswalks and 14 mid-block marked and signed crosswalks that connect with the Shared Use Path system. *Figure 14* provides several examples of existing marked and signed crosswalks. City of Sanibel Resolution No. 96 – 230 establishes procedures, standards and factors for the consideration and establishment of marked crosswalks (See *Appendix D*). The City Resolution does not currently establish specific locational criteria for mid-block crosswalks.

Challenge

*Pedestrians and bicyclists traveling along Sanibel's Shared Use Paths frequently cross streets outside of existing marked and signed mid-block crosswalks (See *Figure 15*) due to*



Example of Mid-Block Crossing outside of Marked and Signed Crosswalks



EXISTING SHARED USE PATH WIDTHS

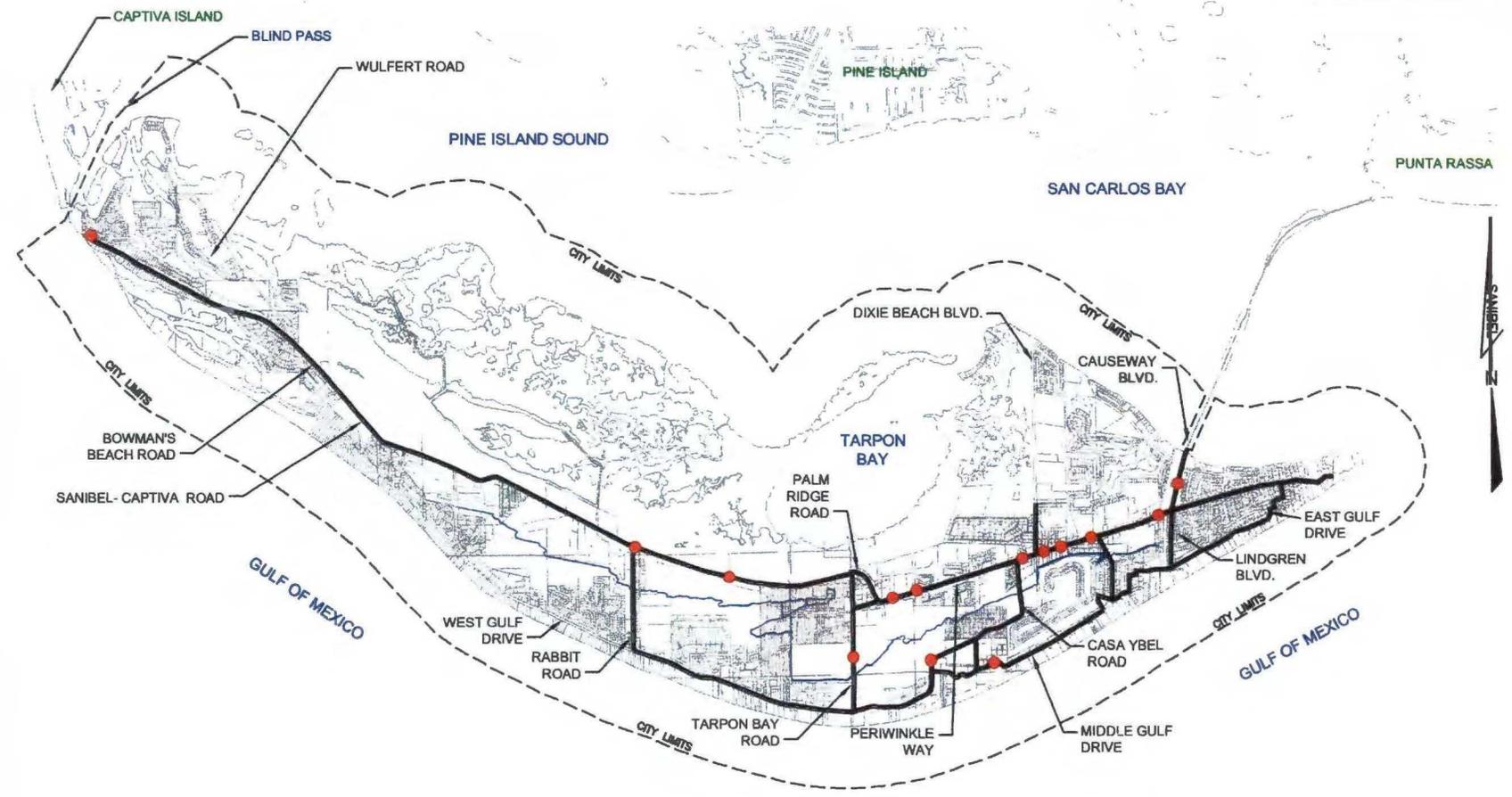
Figure No. 13



EXISTING MARKED AND SIGNED CROSSWALKS

Figure No. 14

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LEGEND

-  SHARED USE PATHS
-  MARKED AND SIGNED MID BLOCK CROSSWALKS

Source: This graphic was redrawn from the 1997 *Sanibel Plan*. Existing shared use paths are shown. The principle source of the base map used in this illustration is from the Lee County Property Appraiser's Office. Prepared by the Planning Department.

Date: March 2009



EXISTING MARKED AND SIGNED MID BLOCK CROSSWALKS

Figure No. 15

many land use and locational factors. Providing appropriately located crosswalks, particularly mid-block crosswalks, will be challenging given: right-of-way limitations; dispersion of land uses that generate crossing demands; seasonal visitor populations unfamiliar with the Island; and the locations of existing single Shared Use Paths within the road right-of-way.

Speed

The City of Sanibel currently has no posted speed limit signs on the Shared Use Path system.

Preventing Motor Vehicle Access

At some locations in Sanibel, drivers unfamiliar with the roadways may perceive a Shared Use Path adjacent to the roadway as a motor vehicle lane and drive on to the Path. Other drivers may use the Path as a right turn lane to avoid waiting at an intersection. The City of Sanibel has employed “NO MOTOR VEHICLE” signs, flexible delineators and sod or vegetated buffers as countermeasures to address motor vehicle access to Shared Use Paths. *Figure 16* provides photographic examples of current signage, buffers and delineator installations.

Challenge

The City of Sanibel has made significant progress in separating Shared Use Paths from direct contact with roadways and the reduction of motor vehicle access to the Paths through signage and other measures. Right-of-way, utility, capital improvement priorities and other constraints will continue to challenge this important effort necessary for Shared Use Path safety.



**EXISTING MEASURES TO SEPARATE
MOTOR VEHICLES FROM SHARED USE PATHS**

Figure No. 16

Way Finding Signage

The City has installed a limited number of signs along the Island's road and Shared Use Path system to provide directions and information to motorists and Path users. Currently, a common or cohesive design theme and program for way finding signage has not been defined or funded.

Figure 17 provides photographic examples of current way finding signage along Sanibel's roads and Shared Use Paths.

Challenge

Appropriately located and designed way finding signage will be important to insure motorist and Path user orientation and education. Sign design and messages must address the multi-lingual nature of Sanibel visitors. Traditional sources of funding for design, fabrication, installation and maintenance may not be available to support a comprehensive way finding signage program.

Sight Lines

The Shared Use Path system intersects with numerous public and private roads and residential and commercial driveways, particularly along Periwinkle Way. This 3.5 mile corridor involves 35 road intersections and approximately 100 driveways. Extensive vegetation and landscaping also borders many segments of the Shared Use Path system.

Sections 126-934 and 935 of the Land Development Code (See *Appendix E*) defines standards for new development to insure adequate sight lines are provided to observe traffic and Path users when vegetation is installed and ingress and egress driveways are constructed.

The City of Sanibel, through ongoing Path maintenance and the review of site plans for new development and permit applications for vegetation, landscaping and signage improvements, continues to consider opportunities to maintain and improve sight lines for Path user safety and visibility.



EXISTING WAY FINDING SIGNAGE

Figure No.17

Challenge

The Sanibel Plan and the Land Development Code place a high priority on the installation of dense native landscaping along road way frontages to maintain and enhance community character. These important goals will continue to present a challenge in balancing vegetation requirements with site planning and design that will insure Path safety and visibility. The City's commitment to restore the tree canopy and vegetation understory along Periwinkle Way provides an important opportunity to educate property owners regarding vegetation maintenance practices essential to providing visibility along the Paths.

Safety and Education

The Sanibel Police Department focuses on enforcement of applicable laws governing public safety along the Shared Use Paths, particularly along highly utilized segments of the Shared Use Path system and at locations where there is the potential exposure or reported incidence of crashes.

An average of six Shared Use Path crashes were reported annually for the three year period between 2006 and 2008. The number of Shared Use Path crashes is approximately 3% of the total number of traffic related crashes reported annually to the Sanibel Police Department. Historically, the highest incidence of crashes occurs adjacent to Periwinkle Way due to the number of road and driveway intersections and potential points of conflict.

In addition to enforcement, the Sanibel Police Department also conducts ongoing education and safety awareness programs, including a number of training programs for students at The Sanibel School and peak season safety seminars for residents and visitors. The PE teacher at the Sanibel School also provides bicycle safety information to students.

In 2008, the Sanibel Bicycle Club, Inc., through grant funding, designed and created a Shared Use Path Safety Awareness Program primarily for cyclists (See *Appendix F*).

It will be imperative that the City of Sanibel continue to pursue Shared Use Path safety as a primary goal through enforcement measures, Path design improvements and broad based education and public safety outreach programs.

Challenges

Providing a broad array of ongoing Shared Use Path Safety and Education programs will require advocacy and the initiation of partnerships between the City, The Sanibel School, and the Sanibel Bicycle Club, Inc. Limited staffing and funding resources available to the Sanibel Police Department and other essential partners may, in the short range period, limit the delivery of both existing and new programs that could significantly enhance Shared Use Path safety.

Another important challenge will be the delivery of safety and educational programs to new Shared Use Path users and motorists who visit Sanibel and may be unfamiliar with the Island's unique environment and character. The multi-lingual nature of Sanibel's visitors must also be addressed.

5. Shared Use Path System Uses and Users



“When I see an adult on a bicycle, I don’t despair for the future of the human race.”

H. G. Wells

“An early morning walk is a blessing for the whole day.”

Henry David Thoreau

The following is a summary of the historical diversity of Shared Use Path Users and Usage as noted by the Sanibel Bicycle Club, Inc. and the City of Sanibel. The summary is intended to provide a snapshot or profile of the existing daily and seasonal composition of users and uses that can be encountered along Sanibel’s Shared Use Path system. Together with existing Path and Island conditions, the summary also provides an important basis for the Shared Use Path Master Plan’s recommendations and implementation strategies.

In addition to the summary of Shared Use Path users and usage, a survey of Shared Use Path users was conducted as part of the planning process. The Sanibel community was also invited to provide ideas and comments regarding the Shared Use Path system. The results of the survey and community outreach efforts are also summarized below.

The diversity of Path users is highly unusual and unique for a city of Sanibel’s size, yet all users share a common interest in having the Path system be safe, functional and well maintained.

Profile of Shared Use Path Users and Usage

The following outlines the range of current Shared Use Path users on Sanibel.

- **Bicycle Users**
 - Novice and first-time bike riders
 - Recreational cyclists
 - Experienced, hard-core cyclists
 - Children on tricycles or two wheelers with training wheels
 - Children on bikes that are too big and hard to control
 - Parents carrying children in front or rear bicycle seats
 - Children being pulled in bike trailers
 - Recumbent cyclists
 - Three wheel cyclists
 - Tandem cyclists (two riders on one bike)



- Cyclists pulling cargo trailers or kayak trailers
- Cyclists using I-pods which restrict hearing
- Cyclists who have hearing, vision or other physical challenges
- Solo riders traveling independently
- Groups riding together and talking as they ride, often side by side

- **Pedestrians**

- Single walkers
- Groups of walkers who are side by side
- Joggers
- Dog walkers with one or multiple dogs on leashes
- Parents pushing strollers (single and double-wide)
- People using wheelchairs
- Walkers who have hearing, vision or other physical challenges
- Walkers and joggers using I-pods which restrict hearing



- **Other Non-Motorized Users**

- Surreys
- Kick scooters (Razor)
- Roller bladers
- Roller skaters
- Skate boarders
- Trikes (operator propels device by weaving back and forth on path)

- **Limited Motorized Users**

- Segway Tours along limited Path segments (pursuant to Conditional Use Permit)
- Motorized wheel chairs and similar vehicles



These diverse users employ the Shared Use Path for a variety of purposes:

- Sight seeing
- Exercise
- Recreation
- Shopping
- Travel to and from beach
- Travel to and from park, recreation, library and conservation areas and facilities

Examples of Shared Use Path Users



- Birding and wildlife observation
- Health and rehabilitation
- Travel to and from special events and meetings

A more complete outline of current Shared Use Path users is provided in *Appendix G*.

Summary of Shared Use Path User Survey and Community Outreach

In April 2006 several forms of outreach were conducted during the preparation of the Shared Use Path Master Plan to identify ideas, issues and opportunities as expressed by Path users and the Sanibel community.

The following primary activities were conducted to obtain user and community ideas and comments:

- An intercept survey of Path users;
- A community open house workshop; and
- Public e-mail comment period.



The methodologies and approaches associated with the intercept survey, community open house and e-mail comment period as well as a complete compilation of the ideas and comments expressed are described in *Appendix G*. A summary of the intercept survey, open house results and public comments is as follows.

The intercept survey was conducted at six strategic locations along the Shared Use Path system on Thursday, April 20, 2006, from 12:30 PM to 4:30 PM, and on Saturday, April 22, 2006, from 8:00 AM to 12:00 Noon. A total of 4007 Path users were observed crossing the six intercept locations. A total of 442 questionnaires were completed. Characteristics of survey respondents are as follows:

- 36% named Sanibel as their primary residence, 4% Lee County outside Sanibel, 1% Florida outside Lee County, 53% United States outside Florida, and 6% international;



Examples of Shared Use Path Users



Examples of Shared Use Path Users

- Among residents, the average number of months residing on the island is 9.67;
- Among visitors, the majority were visiting Sanibel for longer than one week but less than one month;
- For those riding a bicycle or other conveyance, 62% owned the conveyance while the remainder were rented or provided by a rental property;
- The most common trip purpose was recreation (45%), followed by fitness (29%), shopping/errands (19%), commuting to or from work (3%), walking the dog (1%), and school (1%); the remaining 2% of trip purposes did not fit into these categories;
- Among bicyclists, 37% were wearing helmets;
- The average group size was 1.97;
- The average daily miles of travel on the days of the survey, regardless of mode, was 10.95;
- The average distance of a bicycling trip (including recumbents and tandems) was 22.1 miles; the average walking trip was 3.6 miles; and
- The respondents were 59% male; 41% female.

Figure 18 compares the results of the 2007 user counts that were performed on Sanibel with similar counts performed for other Shared Use Paths around the State of Florida.

A total of 242 of the completed questionnaires included comments regarding the existing Shared Use Path system and recommendations for future improvements. Over 250 unique comments and over 1000 total comments were provided by respondents. These comments and recommendations are broken down into fourteen general categories and presented in a pie chart format in *Figure 19*. The most commonly cited comment types were focused on maintenance issues, resurfacing, vegetation trimming and Path widening needs.

Shared Use Path User Counts in Florida

Path Facility	County	Count Date	Bicyclists	Pedestrians
Archer Rd.	Alachua	3/3/2004	9	5
Black Creek Trail	Clay	3/10/2004	25	3
Six-Mile Cypress Pkwy.	Lee	3/11/2004	14	2
U.S. 98	Walton	3/17/2004	31	32
Suncoast Trail	Pasco	3/18/2004	71	31
S.R. 84	Broward	3/24/2004	5	0
Bruce B. Downs Blvd.	Hillsborough	5/17/2006	10	3
Pinellas Trail	Pinellas	5/23/2006	92	108
St. Marks Trail	Wakulla	11/13/2006	15	8
Spring-to-Spring Trail	Volusia	11/14/2006	3	1
20 th St.	Hillsborough	11/15/2006	21	3
Upper Tampa Bay Trail	Hillsborough	11/16/2006	22	24
M-Path	Miami-Dade	11/16/2006	32	46
West Orange Trail	Orange	11/20/2006	16	6
Average	N/A	N/A	26	19
Sanibel average	Lee	4/20/2007	274	68

COMPARISON OF 2006 SANIBEL SHARED USE PATH COUNTS WITH OTHER FLORIDA CITIES



Figure No. 18

Sanibel Path Survey Comment Types

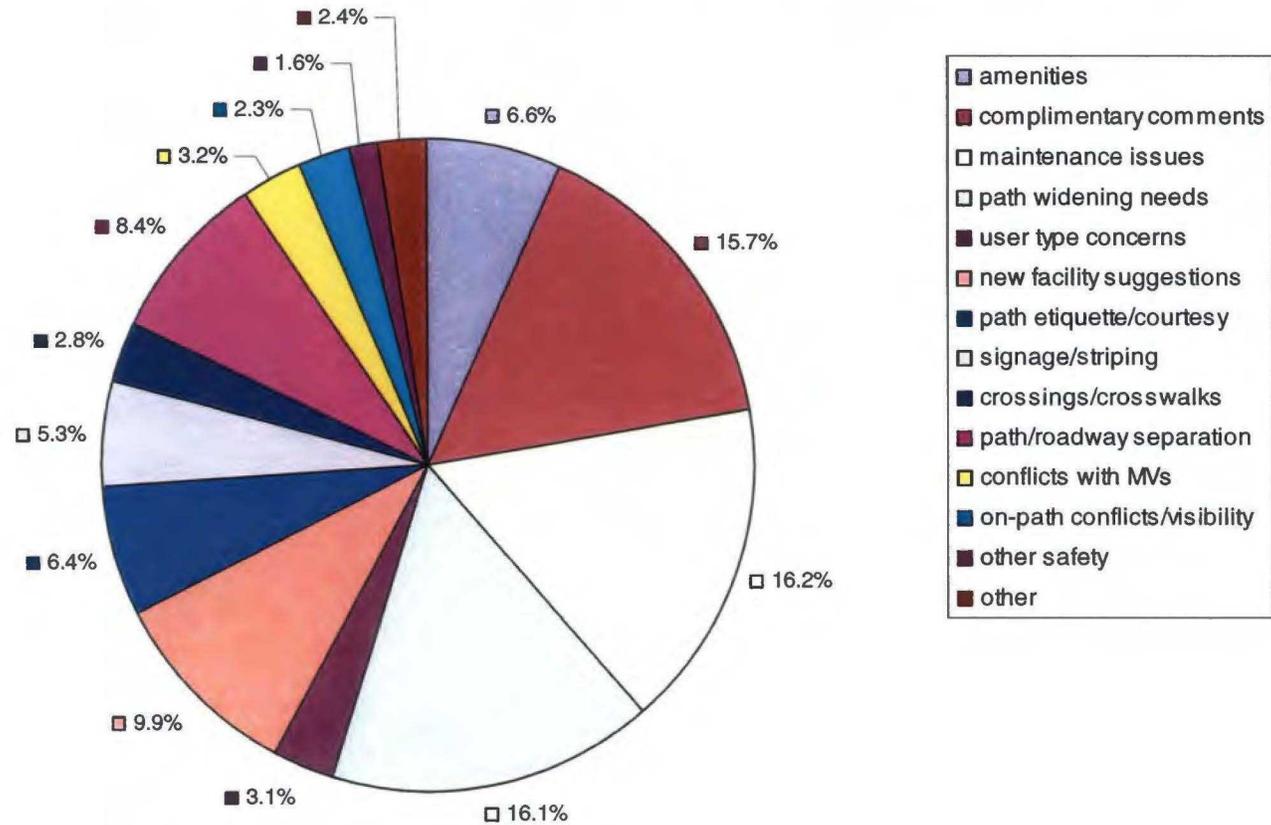


Figure H.4 Relative Prevalence of Comment Types

SUMMARY OF SHARED USE PATH QUESTIONNAIRE RESULTS



In addition to the intercept survey, a day long community open house was conducted at BIG Arts. Participants interacted with both consultant and City staff at a series of topic stations that were structured as follows: consider and comment on the results of the intercept survey; expand upon the assessment of existing conditions; define potential Shared Use Path improvement and expansion areas; and review draft conceptual plans for specific Shared Use Paths.

As a follow-up to the intercept survey and open house, the City established an e-mail address to enable the submission of additional comments. The e-mail address appeared on the City's web site and in local Island newspapers.

6. RECOMMENDATIONS

Introduction



“An engineer designing from scratch could hardly concoct a better device to unclog modern roads – cheap, nonpolluting, small and silent.”

Author Unknown

The Shared Use Path Master Plan’s recommendations are based upon the following:

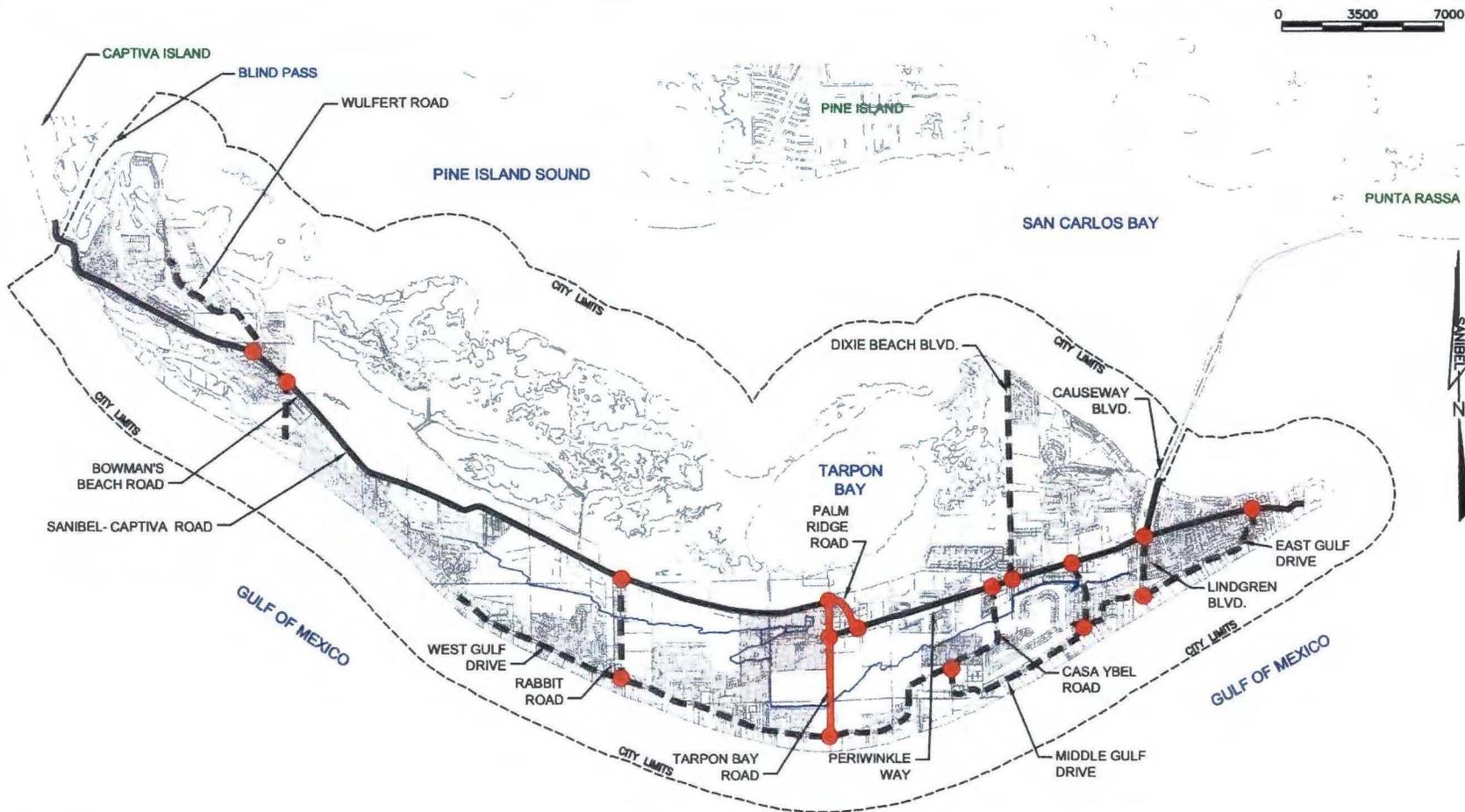
- Goals, Objectives and Policies of the Sanibel Plan as adopted on September 18, 2007 and the vision and recommendations of the 2002 City of Sanibel Parks and Recreation System Master Plan;
- Evaluation of the November 2003 Shared Use Path Master Plan which focused solely on potential extensions or additions to the existing Shared Use Path system;
- Consideration of the historical development of the Shared Use Path system;
- Identification of existing conditions and challenges related to the Shared Use Path system;
- Review of current Shared Use Path design, maintenance and management;
- Identification of the range of current Shared Use Path users and uses;
- Summary of the 2006 intercept survey of Shared Use Path users;
- A community open house to obtain public input regarding existing conditions and potential future improvements and a corresponding public email comment period;
- Review and comments from City departments on the preliminary and final draft Plans;
- Research, analysis and recommendations submitted by Sprinkle Consulting; and
- Work sessions involving City staff and representatives of the Sanibel Bicycle Club, Inc. to review the preliminary and final draft Plans.

The following recommendations are organized and reported based on the four goals defined for the Shared Use Path Master Plan: Public Safety; Maintenance and Management; Improvement and Extension; and Stewardship.

6.1. Public Safety

6.1.1. Road Segments and Intersections for Improvement

Three road segments and sixteen Shared Use Path and arterial or collector road intersections (See *Figure 20*) will be evaluated. The evaluation shall include the following



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LEGEND

- TWO LANE COLLECTOR ROADS
- TWO LANE ARTERIAL ROADS
- INTERSECTIONS TO BE EVALUATED
- ROAD SEGMENTS TO BE EVALUATED

Source: This graphic was redrawn from the 1997 *Sanibel Plan*. Existing shared use paths are shown.
 The principle source of the base map used in this illustration is from the Lee County Property Appraiser's Office.
 Prepared by the Planning Department.

Date: March 2009



EXISTING ROAD SEGMENTS AND SHARED USE PATH AND ROAD INTERSECTIONS TO BE EVALUATED

Figure No. 20

conditions and factors: geometric characteristics of the Shared Use Paths and intersecting roads; adjacent land use and environmental conditions; accident and enforcement history; pedestrian and bicyclist behavioral characteristics; and traffic volume and other relevant vehicular conditions.

The intersection of Periwinkle Way and Casa Ybel Road will be the highest priority due to traffic volumes, turning movements and pedestrian and bicycle crossings.

The intersection of Periwinkle Way, Lindgren and Causeway Boulevard should also be a high priority if substantial intersection improvements are proposed in the future.

Additional intersections may also warrant future evaluations based on, but not limited to, the following conditions: user volume changes; relocation or modification of existing road pavement; and drainage conditions.

6.1.2. Shared Use Path Safety Awareness and Education

The Sanibel Bicycle Club, Inc.'s 2008 Shared Use Path Safety Education Program (See *Appendix F*) will be evaluated in 2009 with the City of Sanibel to determine how and whether the program should be continued. *Appendix H* provides several examples of comparable and potentially applicable public safety campaigns.

6.1.3. Shared Use Path Safety Training and Seminars

Annually the Sanibel Police Department, in conjunction with the Lee County School District, will jointly conduct a bicycle safety course to elementary and middle school students at The Sanibel School. Bicycle safety principles are based on standards from the Lee County School District and the Polk County Florida Bicycle Safety Program. This program will consist of six, thirty minutes lessons to be conducted during the student's physical education component. Several sample lesson plans are provided by *Appendix I*.

The Sanibel Police Department will conduct annual public forums on Shared Use Path safety for island residents and visitors. Included will be topics for Shared Use Path users and automobile drivers. They will be promoted, advertised and conducted during the peak season to insure maximum resident and visitor participation. The opportunity for joint sponsorship of these seminars with the Sanibel Bicycle Club, Inc. and other potential public and private interests will be considered.

Other potential programs for future consideration may include:

- Walk to School Day – a national program that takes place the first week in October (<http://www.walktoschool.org>);
- Bicycle Safety Course for adults, possibly the League of American Bicyclist Road 1 Course (<http://bikeleague.org/programs/education/courses.php>);
- “Safe Routes to School” national initiative (<http://www.saferoutesinfo.org>);
- Actively and regularly promote the use of helmets by all cyclists. Create a “Helmet Usage” campaign (www.helmets.org/guide.htm);
- Due to the daily and seasonal arrival of new visitors and residents to Sanibel, the focus and delivery of Shared Use Path safety programs will need to be structured and scheduled to insure broad and effective outreach. In addition, the design of all aspects of the Shared Use Path system including related signage, rest area facilities and publications must recognize the diversity of users.
- Provide public awareness for the “3 Foot Law” (Florida Statute 316.083) for Motorists that requires a driver overtaking a bicyclist to maintain a safe distance of no less than 3 feet. In addition, the responsibilities of both motorists and cyclists to “share the road” could also be addressed;
- The Florida Bicycle Association (www.floridabicycle.org) has several resources that are available such as Florida Bicycle & Pedestrian Law Enforcement Guide (small yellow books) and they could be made available at special events, public forums, City Hall, the Rec. Center and Senior Center; and
- Promote evening Path user safety practices that encourage bicycle headlights, tail lights, reflective clothing and reflective devices. Active and ongoing outreach to Sanibel’s bicycle rental businesses regarding evening safety practices should be a high priority.

6.1.4. Shared Use Path Safety Guide in Print and Electronic Formats

The City of Sanibel will produce and distribute a Shared Use Path safety guide to bicycle rental companies, resort properties, the Chamber of Commerce and other locations. The City will pursue alternative sources of funding to produce and distribute the guide. The guide will be formatted to facilitate publication in an electronic format as part of the City's official web site. *Appendix J* provides several preliminary examples of potential Shared Use Path safety guides.

6.1.5. Enforcement

The City of Sanibel's Police Department will continue to enforce traffic laws for cyclists and cars by giving warnings and/or tickets to motorists and Shared Use Path users who fail to obey applicable laws governing public safety. Enforcement should be aimed at education and compliance.

The City of Sanibel's Police Department will continue to train both experienced and new officers and intersection crossing guards on the uniqueness of Sanibel's Shared Use Path system users and all applicable Florida laws.

The Police Department will establish a comprehensive Shared Use Path Safety Reporting System that will facilitate tracking of warnings, tickets, collisions, crashes and other incidents and where they occur along the Shared Use Path system. An Annual Report with a map to show locations will be presented to City Council to assist with the ongoing assessment of public safety along the Shared Use Path system and the determination of appropriate enforcement measures and programs to be deployed.

Implementation of enforcement and public safety programs may be accomplished using several methods: redeployment of current staff as available to the Shared Use Path system; or, establishment of a volunteer citizen's patrol or Ambassador Program (See Recommendation 6.4.1. on Page 49).

6.1.6. Sight Distances

Sections 126-934 and 935 of the Land Development Code establish standards for insuring adequate visibility and safety at all intersections and driveways with a Shared Use Path or

roadway. The current standards adequately specify the appropriate location of vegetation, signage and structures to insure that no visual obstruction to and from the Shared Use Path and intersecting driveway or road is created particularly from road markings for stop signs. The City of Sanibel will continue to apply these standards as applications for development permits are submitted to insure safe sight distances for both Shared Use Path users and motorists are established and maintained. Code Enforcement will conduct periodic inspections along the Shared Use Path system to ensure ongoing compliance.

6.2 Maintenance and Management

6.2.1. Proactive and Goal Oriented Maintenance

The Department of Public Works shall continue to conduct a proactive and goal oriented maintenance program that will:

- Respond to peak and off-peak seasonal demands;
- Insure that users are afforded a safe and well maintained Path system;
- Maintain and enhance compatibility, through design and engineering, with Sanibel's unique environment; and
- Connect Path users with desired destinations.

In this regard, the City will conduct maintenance through programs that will be both proactive and responsive to prevailing conditions. Specifically, a maintenance program goal for the Shared Use Path system will be to perform periodic inspections to maintain 3-foot clear shoulders and 8-foot height clearances. The annual Shared Use Path system pavement condition inspection will determine, based upon Path safety conditions, which Path heaves need to be addressed as a part of the Shared Use Path repair contract.

Periodic inspections to determine where maintenance is required is a critical component of this program and is more effective on Sanibel than merely following a rigid maintenance schedule regardless of prevailing conditions. In addition to periodic inspections, the City will provide various means that will enable Path users to contact the Public Works Department

through the City's website, e-mail, and by telephone to report any Path conditions that require attention.

6.2.2. Shared Use Path Resurfacing and Reconstruction Practices

The City will implement a 20-year schedule for Path resurfacing, subject to funding availability.

The City shall continue to apply root barriers and evaluate their effectiveness in conjunction with Shared Use Path construction.

The City will also continue to identify and employ best practices associated with alternative forms of Island appropriate Path surfaces and construction standards.

6.2.3. Crosswalks

The establishment of marked crosswalks within the City of Sanibel shall be consistent with City Council Resolution No. 96-230 (See *Appendix D*).

The Department of Public Works will continue to consider "best practices" associated with crosswalk design, marking and striping that may be applicable to Sanibel.

The Department of Public Works shall establish a schedule to re-stripe all crosswalks on a two to five year cycle and will continue to evaluate other locations for mid block crosswalks.

A mid block crosswalk is currently planned for Tarpon Bay Road to connect the Post Office with the Shared Use Path.

As part of the safety evaluation to be performed for the intersection of Periwinkle Way and Casa Ybel Road, the location of the existing crosswalk will also be evaluated (See Recommendation 6.1.1.).

The location of the current crosswalk that connects the Community Park with the Periwinkle Way Shared Use Paths will also be evaluated as part of the future plan for the Dunlop Road/Wooster Lane Shared Use Path extension (See Recommendation 6.3.3.).

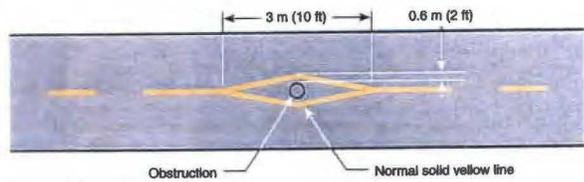
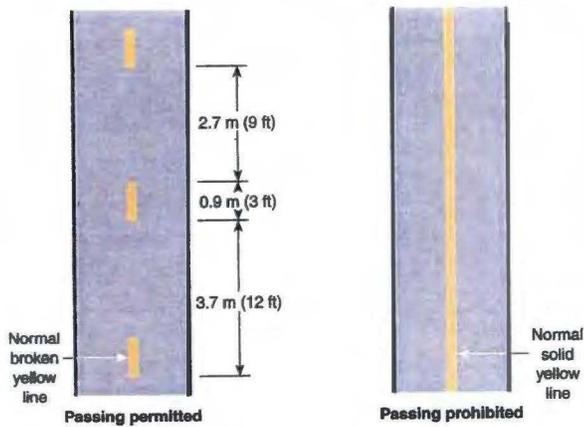
Other potential marked crosswalk locations will also be evaluated based on City Council Resolution No. 96-230.

6.2.4. Shared Use Path Markings and Signage

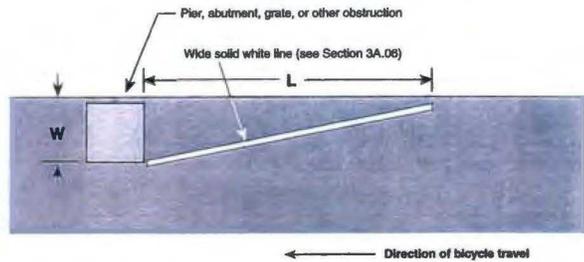
The Department of Public Works will employ the following design standards associated with Shared Use Path markings, buffers and signage as part of the ongoing maintenance program.

- On the approaches to tight curves with limited sight distances (less than 50 feet) and intersections, solid yellow 4 inch wide center striping will be applied at least 85 feet prior to the curve or intersection.
- Where vertical obstructions or dropoffs near the Paths (within two feet for vertical obstructions (utility poles, etc.) and within five feet for dropoffs (drainage swales, etc.)) exist, four inch wide white edge stripes should be considered.
- Hatching, stop bars, or yield lines would likely occur at some intersections, either on the road and/or Path, where the intersecting road is given priority over the Path. Modified stop signs permitted by Florida State Statute should also be considered. *Figure 21* provides examples of these potential improvements.
- A sodded/vegetated buffer between the roadway and a Shared Use Path should be provided as an effective, aesthetically pleasing (as opposed to a physical barrier, such as flexible delineators) means to define the Shared Use Path.
- To discourage automobiles from driving on Shared Use Paths, No Motor Vehicles (R5-3) signs will be installed and evaluated for effectiveness prior to pursuing more aggressive treatments. More unique signage should also be explored for Sanibel.
- As part of the annual inspection of Shared Use Path pavement conditions, the Department of Public Works will also inspect the condition of Path striping, markings and legends for both visibility and reflectivity.

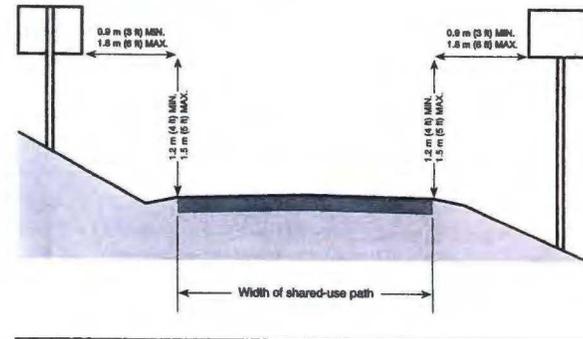
Centerline Markings for Shared-Use Paths



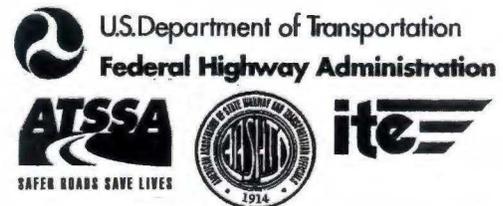
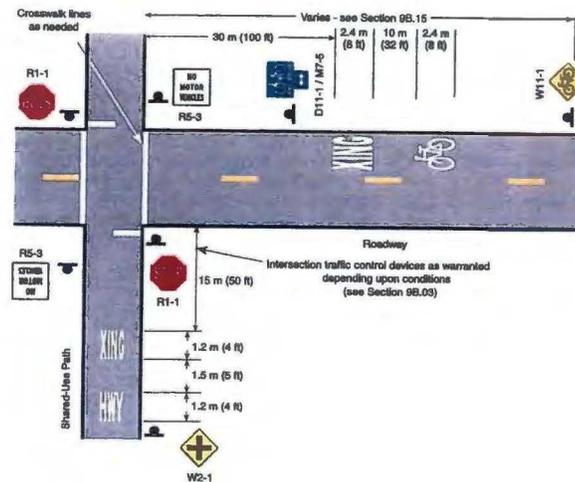
Typical Obstruction Pavement Marking



Sign Placement on Shared-Use Paths



Typical Signs and Markings for Shared-Use Paths



POTENTIAL SHARED USE PATH MARKINGS AND SIGNAGE Figure No. 21

6.3. Improvements and Extensions

6.3.1. Best Practices

The City of Sanibel will continue to investigate and evaluate appropriate best practices associated with future Shared Use Path improvements and extensions consistent with the Sanibel Plan and the Shared Use Path Master Plan. The City will evaluate potential best practices and strategies associated with:

- “Complete the Streets” strategies <http://www.completestreets.org/>;
- Livable Communities strategies <http://www.livable.com/>; and
- Walkable Community strategies <http://www.walkscore.com/>.

6.3.2. Shared Use Path Widenings

The Department of Public Works will complete an updated survey of existing Shared Use Path conditions and widths. The survey will be completed and maintained in a Geographic Information system (GIS) format when the GIS capability and capacity is introduced by the City. The GIS based survey will include a wide range of Shared Use Path conditions, including surface types, conditions and widths.

The City of Sanibel will continue to improve and widen the Shared Use Path system consistent with the following goals.

- All Shared Use Paths will be improved to a minimum of eight feet in width subject to right-of-way, drainage and environmental constraints.
- The minimum Shared Use Path width along Periwinkle Way, Tarpon Bay and other segments that experience high user volumes, as measured through user counts or surveys, shall be ten feet subject to right-of-way, drainage and environmental constraints.

A total of fifteen segments or approximately 9.3 miles or 40% of the Shared Use Path system have been identified for short and long term widening (See *Table 1* and *Figure 22*). These segments are currently 6 feet or less in width.

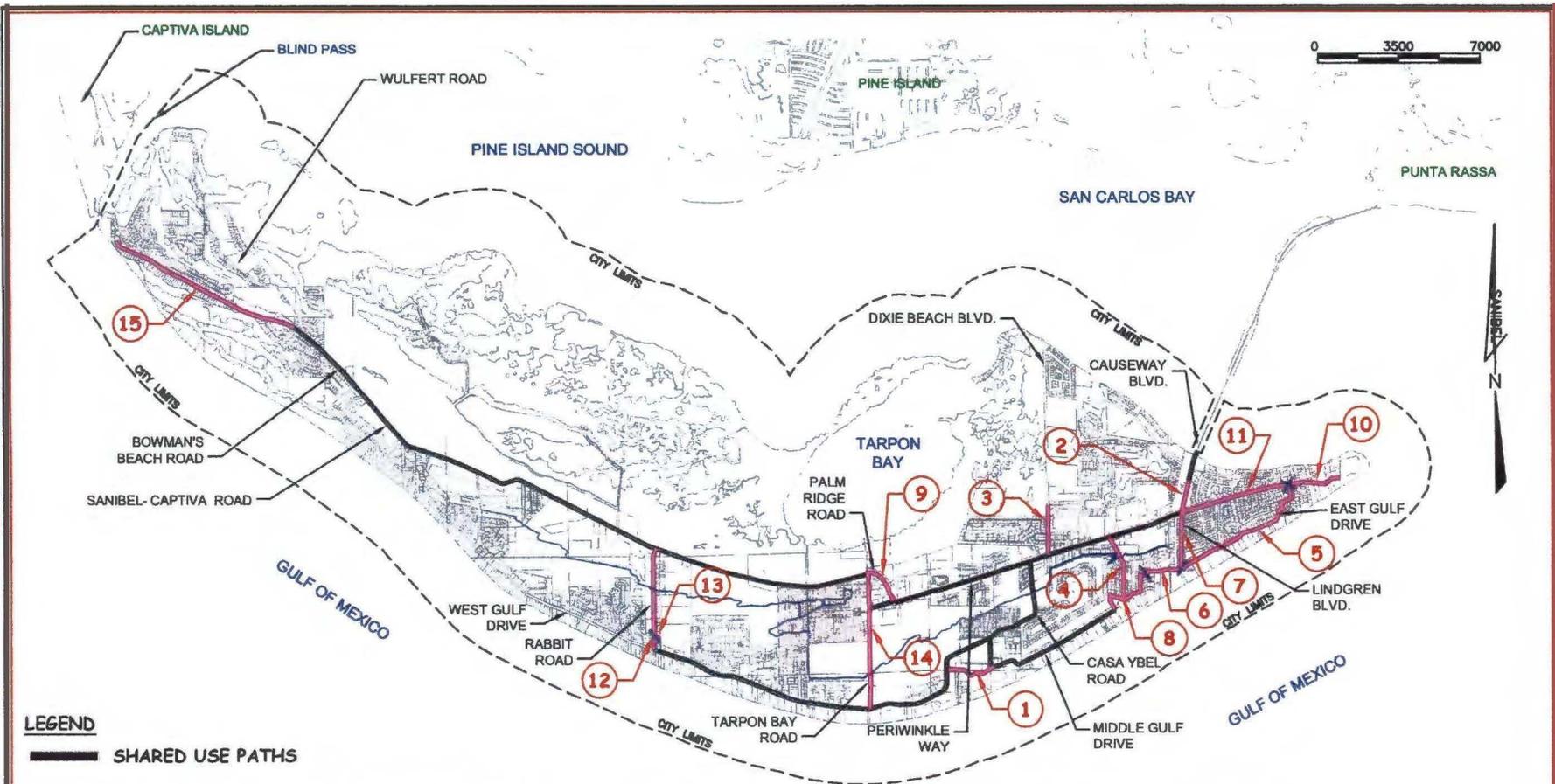
Figure 23 provides conceptual illustrations of the Palm Ridge Road, Shared Use Path and vegetation improvements (Source: Wallace Roberts and Todd, LLC, November 2007). The Sanibel Plan's recommendation for commercial redevelopment (Page 195) proposes that the "scenic appearance" of Palm Ridge Road should be enhanced. Palm Ridge Road provides a gateway to Periwinkle Way and the City's "Town Center" zoned commercial districts. A significant opportunity to improve the visual appearance and Shared Use Path environment could be pursued that would compliment the recently completed Periwinkle Way restoration project. A more human scaled corridor that provides extensive native vegetation and a safe Shared Use Path environment by establishing a 9.5 foot vegetation buffer along the edges of the road and 8 to 10 feet wide Shared Use Paths.

Based on an estimated cost of \$140,000/mile, the total cost of the Shared Use Path widenings is projected to be \$1.3 million. The City's five year capital improvement program, based on funding availability, will continue to support implementation of the Plan's recommended Path widenings.

TABLE 1
RECOMMENDED SHARED USE PATH WIDENINGS
 PATHS TO BE WIDENED TO A MINIMUM OF 8 OR 10 FEET
 SHARED USE PATH MASTER PLAN

Source: Department of Public Works, August 2008

SHARED USE PATH	FROM	TO	DISTANCE (MILES)	EXISTING WIDTH (FT)
Algiers Lane (Cemetery Path)	Middle Gulf Drive	Casa Ybel Road	0.44	6
Causeway Boulevard	Periwinkle Way	Chamber of Commerce	0.19	6
Dixie Beach Boulevard	Bunting Lane	Albatross Road	0.23	6
Donax Street	Periwinkle Way	Middle Gulf Drive	0.55	6
East Gulf Drive	Periwinkle Way	Lindgren Boulevard	1.18	6
East Gulf Drive	Lindgren Boulevard	Nerita Street	0.34	6
Lindgren Boulevard	Periwinkle Way	East Gulf Drive	0.49	6
Middle Gulf Drive	Fulgur Street	Nerita Street	0.49	6
Palm Ridge Road	San-Cap Road	Periwinkle Way	0.46	6/8
Periwinkle Way	Historic Lighthouse	Ferry Road	0.26	6
Periwinkle Way	Ferry Road	Lindgren Boulevard	1.04	6
San-Cap Road	Wulfert Road	Pine Avenue	1.67	6
Surfsound Court	West Gulf Drive	Cul-de-Sac	0.08	6
Surfsound Court/Rabbit Road	Cul-de-Sac	San-Cap Road	0.77	6
Tarpon Bay Road	San-Cap Road	West Gulf Drive	1.12	6
Total	15 Shared Use Path Segments		9.31 Miles (40%)	



LEGEND

— SHARED USE PATHS

— RECOMMENDED SHARED USE PATH WIDENINGS

- | | |
|--------------------------|--|
| 1. ALGIERS LANE | MIDDLE GULF DRIVE TO CASA YBEL ROAD |
| 2. CAUSEWAY BOULEVARD | PERIWINKLE WAY TO CHAMBER OF COMMERCE |
| 3. DIXIE BEACH BOULEVARD | BUNTING LANE TO ALBATROSS ROAD |
| 4. DONAX STREET | PERIWINKLE WAY TO MIDDLE GULF DRIVE |
| 5. EAST GULF DRIVE | PERIWINKLE WAY TO LINDGREN BOULEVARD |
| 6. EAST GULF DRIVE | LINDGREN BOULEVARD TO NERITA STREET |
| 7. LINDGREN BOULEVARD | PERIWINKLE WAY TO EAST GULF DRIVE |
| 8. MIDDLE GULF DRIVE | FULGUR STREET TO NERITA STREET |
| 9. PALM RIDGE ROAD | SAN-CAP ROAD TO PERIWINKLE WAY |
| 10. PERIWINKLE WAY | LIGHTHOUSE ROAD TO FERRY ROAD |
| 11. PERIWINKLE WAY | FERRY ROAD TO LINDGREN BOULEVARD |
| 12. SURFSOUND COURT | WEST GULF DRIVE TO CUL-DE-SAC |
| 13. RABBIT ROAD | SURFSOUND COURT CUL-DE-SAC TO SAN-CAP ROAD |
| 14. TARPON BAY ROAD | SAN-CAP ROAD TO WEST GULF DRIVE |
| 15. SAN-CAP ROAD | WULFERT ROAD TO PINE AVENUE |

Source: This graphic was redrawn from the 1997 *Sanibel Plan*. Existing shared use paths are shown. The principle source of the base map used in this illustration is from the Lee County Property Appraiser's Office. Prepared by the Planning Department.

Date: March 2009



RECOMMENDED SHARED USE PATH WIDENINGS

Figure No. 22

VIEW OF SHARED USE PATH ALONG EAST SIDE OF PALM RIDGE ROAD AT WOOSTER LANE INTERSECTION

Existing Conditions



Conceptual Improvements



VIEW OF PALM RIDGE ROAD NORTH OF PERIWINKLE WAY INTERSECTION

Existing Conditions



Conceptual Improvements



**CONCEPTUAL ILLUSTRATIONS FOR PALM RIDGE ROAD,
SHARED USE PATH AND VEGETATION IMPROVEMENTS**

SOURCE: Wallace Roberts & Todd, LLC November 2007

Figure No. 23

6.3.3. Shared Use Path Extensions

Seven extensions to the 23 mile Shared Use Path system are recommended. The extensions, which are identified by *Table 2* and *Figure 24*, will extend the system by approximately 4 miles. The recommended extensions are based upon the following: review of the Sanibel Plan and the 2003 Shared Use Path Master Plan; preliminary assessment of right-of-way, land use and environmental conditions; identification of potential connections necessary to improve accessibility to various activity centers; and the results of the public open houses and user intercept survey.

Each of the recommended extensions will require further detailed planning and design studies. Alternatives to the recommended extensions may also prove to be feasible based on more detailed right-of-way surveys and environmental reviews. The recommended extensions have not been prioritized. Subject to funding availability and further engineering and design analysis these extensions will be incorporated as part of the City's Capital Improvement Program.

Appendix B also defines the Shared Use Path extensions that were previously identified by the November 2003 Shared Use Path Master Plan.

As part of the exploration of possible Path extensions that resulted in the seven recommended extensions listed in *Table 2*, conceptual plans were developed for several of the alternatives as a way to further illustrate their possibilities and to evaluate in a preliminary way potential feasibility issues and obstacles to implementation.

One of these conceptual plans, outlining a Dunlop Road/Wooster Lane Path Extension, is included below as an example. This plan emerged from the evaluation as a very desirable candidate based on several factors: It advances the goals and objectives of the Shared Use Path Master Plan and the Sanibel Plan; it fills an obvious gap in the connectivity of the current path to major community activity venues; it has readily available right-of-way, and it appears to be feasible, subject to further evaluation.

TABLE 2

RECOMMENDED SHARED USE PATH EXTENSIONS

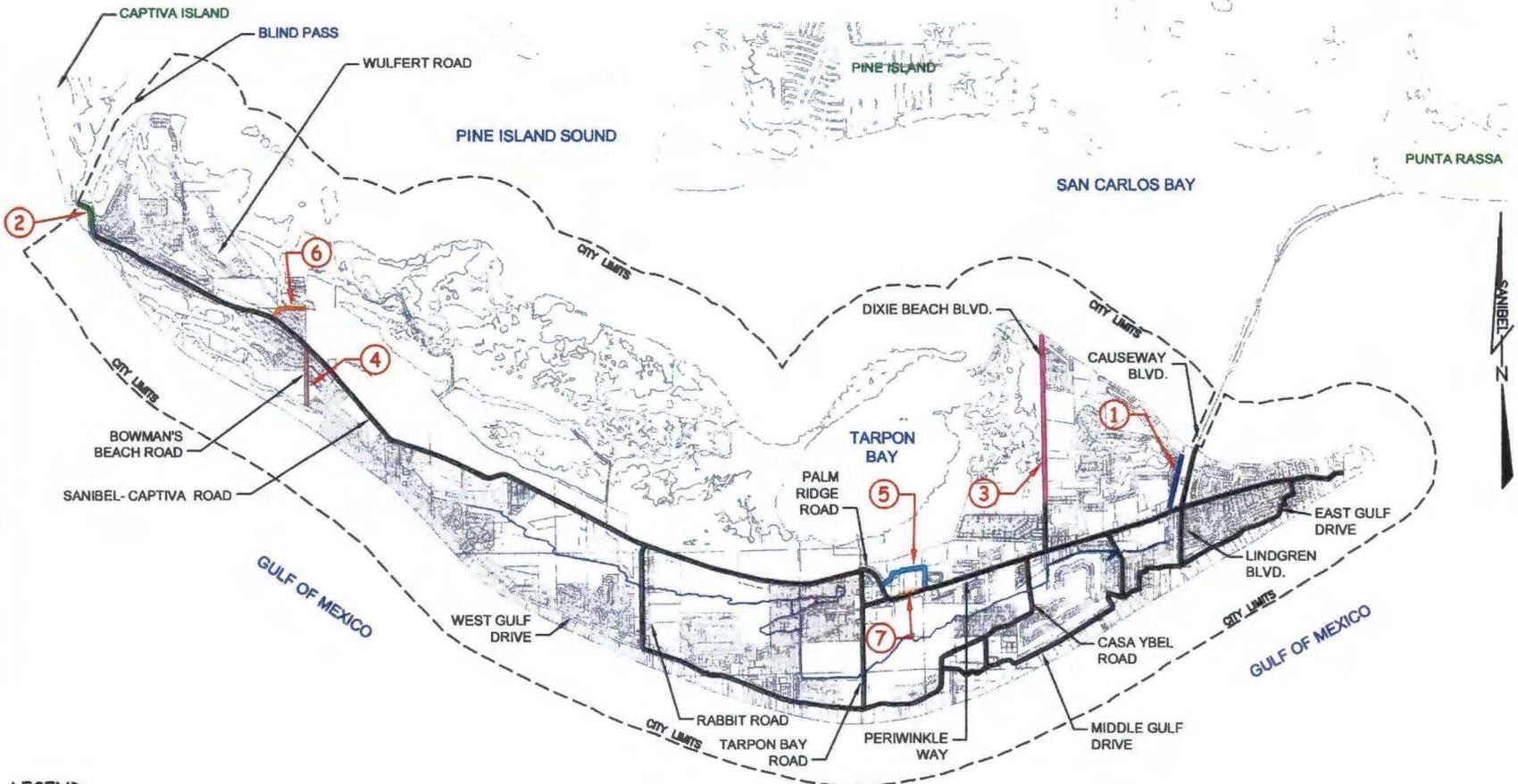
PATHS TO BE A MINIMUM OF 8 OR 10 FEET

SHARED USE PATH MASTER PLAN

Source: Sprinkle Consulting, November 1, 2007

EXTENSIONS	FROM	TO	DISTANCE (Miles)
Bailey Road	Periwinkle Way	Bay Drive	.50
Bowman's Beach Road	San-Cap Road	Bowman's Beach Park	.60
Dixie Beach Boulevard	Albatross Road	Bock Peace Park	1.30
Dunlop Road and Wooster Lane Loop	Periwinkle Way	Palm Ridge Road	.55
Periwinkle Way (North side)	St. Michael's Church	Sanibel Square	.14
San-Cap Road	Pine Avenue	Blind Pass Bridge	.30
Wulfert Road and Wildlife Drive	Refuge Exit	San-Cap Road	.62
Total	7 Shared Use Path Extensions		4 Miles

0 3500 7000



LEGEND

— SHARED USE PATHS

SHARED USE PATH EXTENSIONS

- 1. BAILEY ROAD (PERIWINKLE WAY TO BAY DRIVE)
- 2. SAN-CAP ROAD (PINE AVENUE TO BLIND PASS BRIDGE)
- 3. DIXIE BEACH ROAD (ALBATROSS ROAD TO BOCK PEACE PARK)
- 4. BOWMAN'S BEACH ROAD (SAN-CAP ROAD TO BOWMAN'S BEACH PARK)
- 5. DUNLOP ROAD AND WOOSTER LANE LOOP
- 6. WULFERT ROAD AND WILDLIFE DRIVE (REFUGE EXIT TO SAN-CAP ROAD)
- 7. PERIWINKLE WAY (NORTH SIDE, ST MICHAELS TO SANIBEL SQUARE)

Source: This graphic was redrawn from the 1997 *Sanibel Plan*. Existing shared use paths are shown. The principle source of the base map used in this illustration is from the Lee County Property Appraiser's Office. Prepared by the Planning Department.

Date: March 2009



RECOMMENDED SHARED USE PATH EXTENSIONS

Figure No. 24

Conceptual Plan for Dunlop Road/Wooster Lane Extension

Path Location and Right-of-Way

This recommended Path extension would begin at the intersection of Periwinkle Way and Dunlop Road, starting at the existing Path on the north side of Periwinkle that connects with the Sanibel Community House crosswalk. The Path would be located in an easement previously secured by the City on the west side of Dunlop Road until the road curves to the west (across from the Public Works Department driveway). From there, the Path would continue westward along the same side of Dunlop Road (the south side of Dunlop Road in this section) using the City-owned right-of-way.

A public crossing would be placed adjacent to the Sanibel Public Library to allow library patrons to safely cross to the library on the north side of Dunlop Road. From the library, Dunlop Road begins to bend to the south, and in this area the right-of-way is restrained in several small sections. These restrained areas should accommodate placement of the Path but may require some special design features (e.g. small boardwalks) to avoid thick vegetation, drainage facilities and wetland areas.

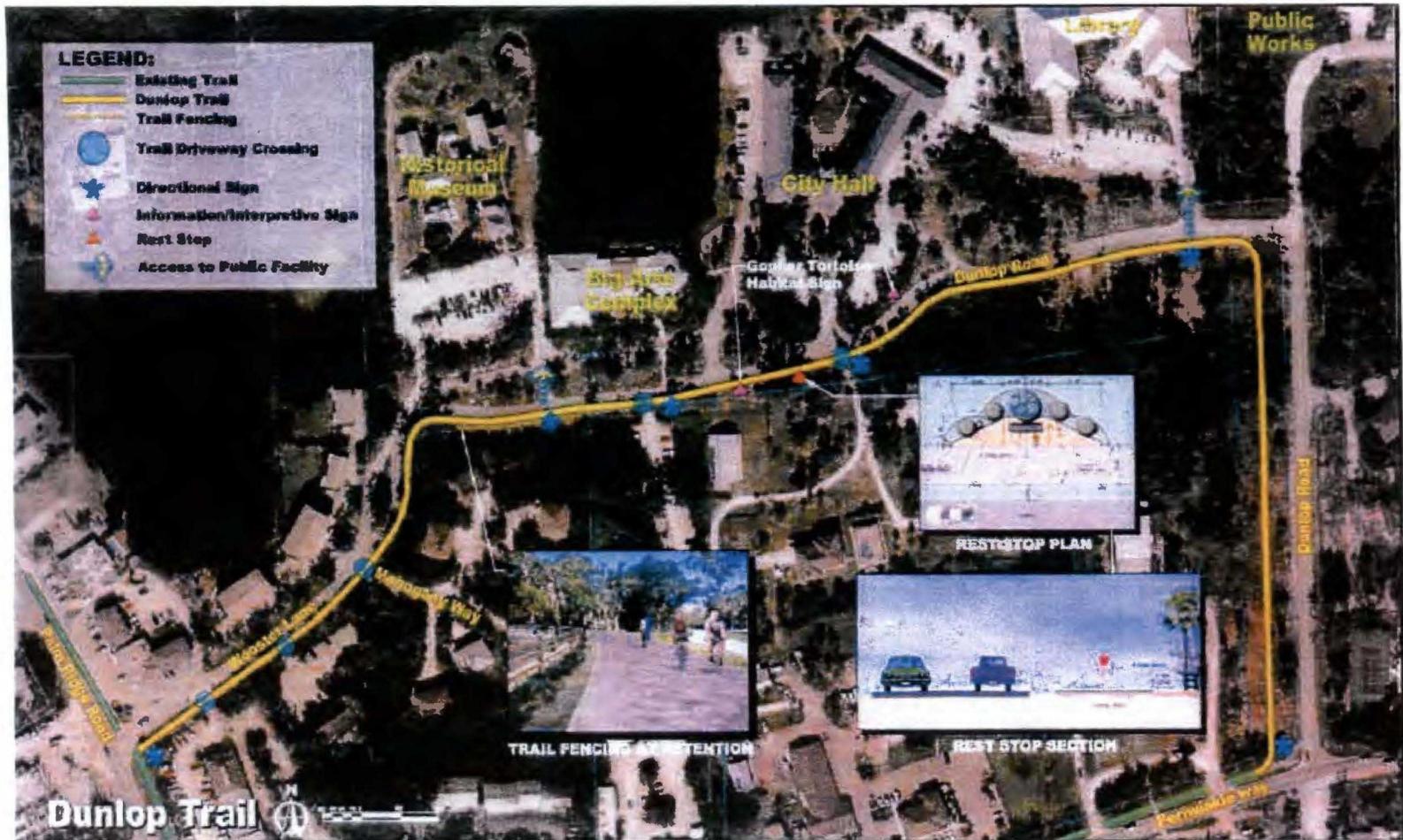
This Path extension would terminate on the south side of the intersection of Palm Ridge Road and Wooster Lane, by connecting to the existing Path that runs along Palm Ridge Road.

The proposed routing would not require any new easements or right-of-way to be acquired by the City.

Figure 25 provides a conceptual drawing of the proposed alignment.

Path Description

This extension would have an eight-foot wide asphalt surface and include, at minimum, a five-foot wide separation from Dunlop Road.



**CONCEPTUAL PLAN FOR
DUNLOP ROAD/WOOSTER LANE EXTENSION**



Figure No. 25

Advantages of the Path Extension

This Path extension would provide safe pedestrian and bicycle access to the City's civic, cultural, recreational, historic and governmental facilities located within the "Town Center", as defined by the Sanibel Plan and the Periwinkle Way West District planning study. Currently, these roads (Dunlop and Wooster) are very narrow. Parts are so narrow that a cyclist must "take the road" to feel safe since there is not room for an automobile to safely pass a cyclist or pedestrian.

The community facilities concentrated in this area are frequently visited by Island residents and visitors, and parking in this area is frequently a problem. The area is one of the most significant gaps in the current Path system. A Path extension along Dunlop Road/Wooster Lane would be a beautiful meandering path allowing for much easier and safer non-vehicle access, and would encourage more people/families to bike or walk safely to events/facilities rather than drive.

Environmental Considerations

A preliminary examination of the proposed extension route suggests that environmental impact would be minimal and can be successfully addressed. Specifically:

- Some wetland plants were observed in a low wet area near the point where the proposed Path curves south and merges with Wooster Lane. This area may require a short section of boardwalk.
- Existing drainage along the entire proposed route can be accomplished with simple swales. The Path shall be well drained and shall endeavor to utilize existing drainage facilities wherever possible.
- Topography along the entire Path extension route is generally flat, making the alignment opportunities numerous.
- Mixed native vegetation occurs along most of the route. Native vegetation must be preserved while maintaining safe and accessible routes. Low areas show evidence of wetland plants.

- The habitat is mixed along this segment of the proposed Path extension. The area is conducive to numerous types of wildlife, including protected species such as the gopher tortoise which are present. The habitat is conducive for wildlife viewing.

6.3.4. Way Finding

The City of Sanibel, based on funding availability, will initiate the preparation of a plan and designs for the phasing and installation of a way finding or guide signage system for the Shared Use Paths. *Appendix K* provides an overview of the Manual for Uniform Traffic Control Devices' (MUTCD) recommendations for way finding and related Shared Use Path guide signage. The signage system will be clear, easy to understand, take into account the multi-lingual nature of visitors and provide all Path users and motorists with uniform directions and orientation defining the various destinations served by the Shared Use Path system. The signage system may also be educational in terms of providing an introduction to the unique environment, landscape and history of Sanibel.

The design and installation of way finding signage presents an opportunity for innovative funding through public/private partnerships.

6.3.5. Shared Use Path Rest Areas

The Path system can also be enhanced through the addition of rest areas and related support facilities. Rest areas should be designed as functional improvements that make Sanibel's Shared Use Path experience more pleasant, not as attractions in and of themselves.

Path Rest Areas

Rest areas are an important element of Sanibel's Shared Use Paths. These areas will help to create a sense of place, identity, and, most importantly, provide users a safe place to rest and retreat. Rest area facilities associated with Paths generally vary in scale and in the level of services. Three "tiers" of rest areas are recommended: basic areas; moderate areas; and terminal areas. They are based upon findings related to the quantity of individuals using the Paths and the space available for them, and are defined by their size and purpose. In general, the design of these rest areas should include an access route that connects the Path to the designated rest area. This connection should be positioned safely away from the

Path users. The materials chosen for both hardscape and associated features should be ADA accessible, durable, and characteristic of the Sanibel character.

Furniture

It is recommended that all furniture used for rest areas and related support facilities match or complement existing Shared Use Path facilities in both style and color to enable the Paths to gain their own identity through theming.

Wayfinding for Rest Areas

Proper wayfinding signage (See Recommendation 6.3.4 on Page 42) should also be provided and located approximately $\frac{1}{4}$ mile prior to reaching all rest areas to inform users of the upcoming facilities along the Path. Signage within the rest areas can also provide Path users a map identifying their current location along the Path system. The design of “You are Here” signage should complement the other site features in both style and color and be utilized to further affirm the Path identity theme by its character and design.

Parking

Bicycle parking should be provided at all rest areas and civic, cultural, recreational, condominium, resort and commercial facilities such as shopping and dining establishments, and venues for community activities and events. *Figure 26* provides several examples of existing bicycle parking racks that currently serve Sanibel’s Shared Use Paths.

Sanibel has a significant number of non-traditional bicycle users. These include bikes with trailers, recumbent bikes and tandem bicycles. Allowances should be made for some of the bike parking to accommodate these longer users. Ten feet is a typical length for a bike with a trailer. This length can be accommodated by keeping the area adjacent to end aisles of parking areas clear of vertical obstructions such as vegetation, fences or walls.

Sheltered parking is probably not necessary for typical Path users, but might be considered for locations where cyclists may be parking for extended periods of time, perhaps near restaurants or other businesses to which some workers may be commuting by bicycle. If a



EXAMPLES OF EXISTING BICYCLE PARKING RACKS

Figure No. 26

parking area is intended to serve a specific building, that parking area should be visible from the building's primary entrance while allowing unimpeded pedestrian access to the entrance. Bicycle parking should be at least as close to the entrance as the nearest automobile parking, and preferably within 50 feet of the entrance.

The City may also wish to consider temporary bicycle parking facilities – sometimes called “bike corrals” (See *Figure 27*) – in association with special events that are likely to draw bicyclists in numbers greater than the capacity of the permanent bike racks at a given site. Corrals can be cordoned off with traffic barricades, where cyclists can “check” their bike with event staff or volunteers, just as they would check bags or clothing at a coat-check room.

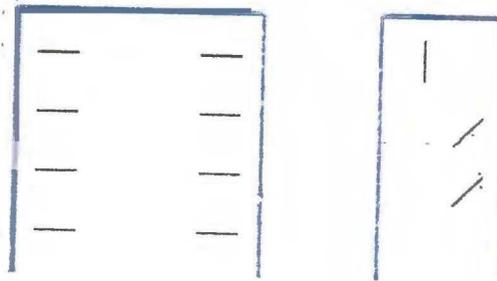
Basic Rest Area Facilities

Basic rest area facilities are useful at points along the Paths and should generally be provided at one mile intervals to allow Path users to take brief mid-trip respite. They are smaller in size (approximately 100 sq. ft.) and the elements of these facilities can be as simple as only including a shaded bench and a trash receptacle. The bench should be selected for its comfort, attractiveness, and durability and the trash receptacle the latter of these two. *Figure 28* provides several examples of facilities recently installed as part of the Periwinkle Way Restoration Project.

Benches should be situated in a shady spot, either by taking advantage of existing trees or planting new shade trees in a location to the south of the intended bench. If a certain location is not well suited for tree growth, an artificial shade structure should be considered. It is also important that the bench be situated slightly away from the edge of the Path – at least 10 feet to allow bicycles to pull clear of the Path surface – as people will tend to congregate and interact at these locations. If the bench is too close to the Path, these interactions could become hazardous obstructions to other Path users. They should be located at logical points: where adequate space is available, at an approach to an intersection at various destinations adjacent to the Path network, and where they are sufficiently screened from nearby residences so as not to be perceived as annoyances.

Moderate Rest Area Facilities

Moderate rest area facilities will have an optimum size of 150 sq. ft. but could vary in size based on each location's environment and the types of support elements necessary to serve



Possible layout of bicycle parking,
Utilizing a double and single car
parking space.



EXAMPLES OF TEMPORARY BICYCLE PARKING FACILITIES

Figure No. 27



**EXAMPLES OF PERIWINKLE WAY
RESTORATION PROJECT FACILITIES**

Shared Use Path users. These facilities will include support elements utilized in the basic facilities and also include water fountains, bike racks, picnic tables, and/or additional benches. These will be considered at locations where demand will be higher. This size facility will provide enough room for a family, or a small group of friends to stop and rest or have conversations.

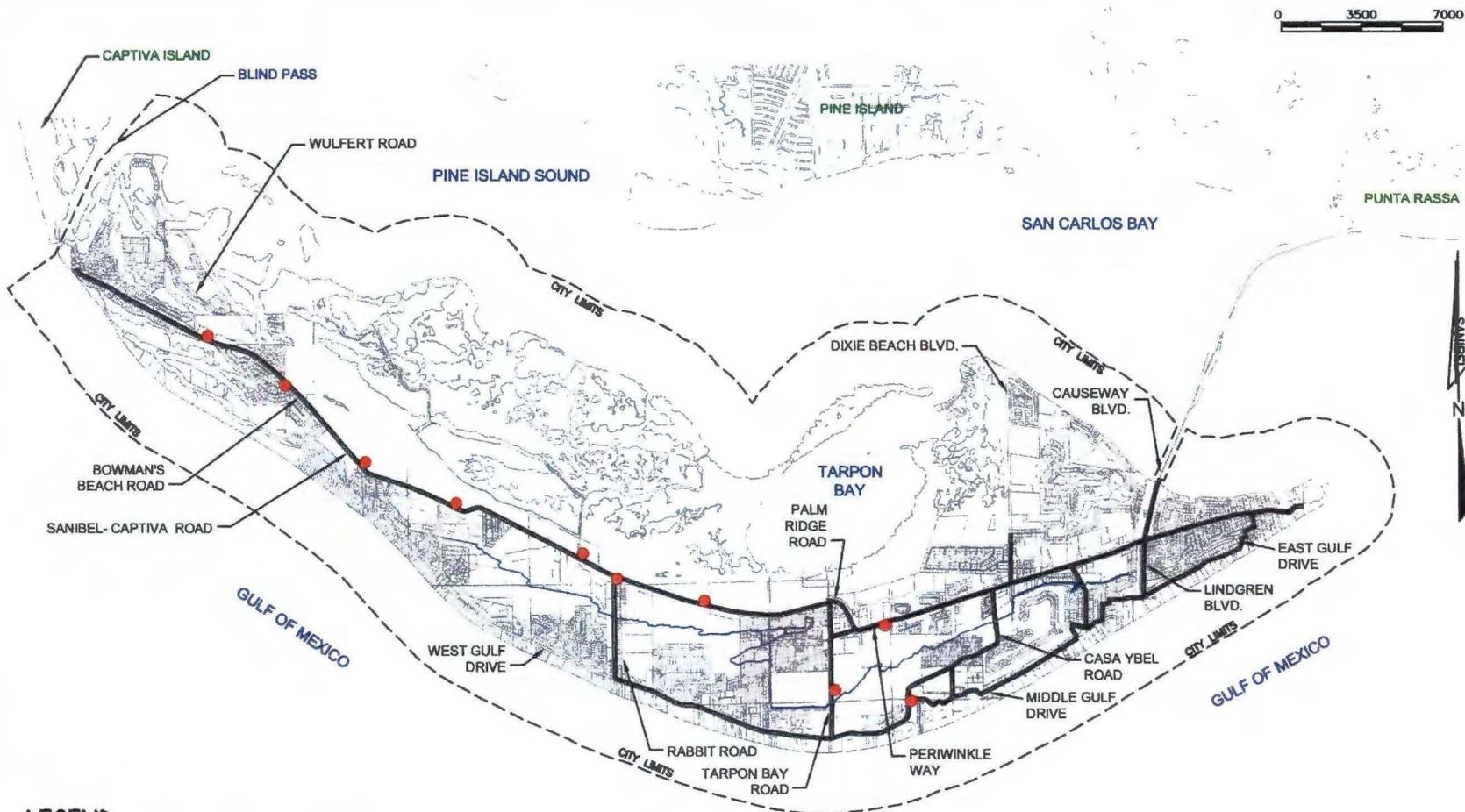
Additional shade should be provided via existing shade trees. This size of facility introduces the addition of native plantings to enhance the user's experience. These plantings would include various types of flora including shade trees, palm trees and groundcovers. All selections will be native Sanibel and blend with the surrounding feel of the Island. Additionally, the use of native plantings will require less maintenance and watering than traditional "Non-Native" landscape plantings.

Terminal Rest Area Facilities

Terminal rest area facilities could be larger than 150 sq. ft. and would typically be sited at major Shared Use Path destinations. Due to their visibility in the community, they will serve as terminal points for trips. Additional terminal facilities could be constructed at commercial areas along Periwinkle Way. At these locations, many people will get off their bikes to attend an event or visit a shop, and they may be doing so with several companions. These areas may well be serving as points of arrival or departure along the Shared Use Path system. These facilities should be sited in such a way that they allow room for Path users to pull clear of the Path to rest, thereby not obstructing other Path users who are continuing past the rest area. Facilities of this category should include benches, trash receptacles, drinking fountains, picnic tables, bike racks, and possibly a gazebo. As noted above, the selection of materials should be chosen for their consistency, comfort, attractiveness, and durability. All facilities should match and fit harmoniously with their surrounding landscape. The area should also include native plantings to create a "sense of arrival" that will help entice people to use it and define it as a terminal facility.

Recommended Locations

Recommended locations for the new Shared Use Path rest areas and support facilities are identified by *Figure 29*. These locations are based on a field review and will require more detailed environmental and operational analyses to determine if the locations are



LEGEND

-  SHARED USE PATHS
-  POTENTIAL LOCATIONS FOR REST AREAS AND SUPPORT FACILITIES

Source: This graphic was redrawn from the 1997 *Sanibel Plan*. Existing shared use paths are shown. The principle source of the base map used in this illustration is from the Lee County Property Appraiser's Office. Prepared by the Planning Department.

Date: March 2009



RECOMMENDED LOCATIONS FOR SHARED USE PATH REST AREAS AND SUPPORT FACILITIES

Figure No. 29

appropriate. Moving from west to east, the locations are as follows:

- Near Sanibel-Captiva Road and the culvert connecting Clam Bayou and Dinkins Bayou;
- Near the fire station property at the southeast corner of Sanibel-Captiva Road and Bowman's Beach Road;
- Roughly near the intersection of Sanibel-Captiva Road and Seaspray;
- On both sides of the entrance to the Ding Darling Wildlife Refuge, signs would be placed along the Path directing Path users to the Visitor Center, which includes places for rest and replenishment; by using the Visitor Center, the need for an additional rest area is eliminated;
- Rabbit Road and Sanibel-Captiva Road;
- The existing gazebo west of Mile Marker 1, which would be expanded to include other recommended amenities;
- Tarpon Bay Road near the midpoint between Sanibel-Captiva Road and West Gulf Drive;
- Community Park; and
- Middle Gulf Drive at Casa Ybel Road or Algiers Lane.

The recommended Shared Use Path rest areas and facilities will be located within existing and future right-of-ways and easements and subject to future funding availability and site, environmental and engineering analyses. Funding for Shared Use Path rest areas and related support facilities will be a high priority for the consideration of future public/private partnerships.

6.3.6. Land Development Code Amendments to Support Bicycle Parking

Amend Land Development Code Chapter 126 Zoning, Article XV. Off-Street Parking and Loading, Subdivision III. Non-Residential Uses to specify the number, type and location of bicycle parking spaces required as part of new commercial development.

6.3.7. Shared Use Path Survey Updates

On a schedule to be determined by the City of Sanibel and the Sanibel Bicycle Club, Inc., the April and November 2006 intercept surveys of Shared Use Path users will be updated as one means of measuring the results of Plan implementation and to assist with on-going Shared Use Path maintenance and management.



6.4. Stewardship

6.4.1. Shared Use Path Ambassador Program

Investigate the feasibility of creating a volunteer Shared Use Path Ambassador Program. This investigation should include developing a list of potential responsibilities and requirements for both the City and the volunteers. Additionally, training requirements should be evaluated for their appropriateness to perspective volunteers. *Appendix L* provides a description of the potential objectives and organization of a Shared Use Path Ambassador Program including several web sites that define examples of environmental and alternative transportation stewardship.

6.4.2. Volunteer Litter Control Program

Continue to utilize volunteers to help control litter along the Path system.

6.4.3. Innovative and Alternative Funding

It will be essential that the City of Sanibel identify and pursue all potential alternative strategies and sources of funding (See *Appendix M*) to implement the recommendations of the Shared Use Path Master Plan. The City of Sanibel, in conjunction with the Sanibel Bicycle Club, Inc., will explore the feasibility of innovative funding mechanisms, including the potential creation of a Friends of Sanibel's Shared Use Paths. This potential private and not-for-profit group could play a key role in supporting implementation of the Shared Use Path Master Plan, including the important fund raising efforts that will be necessary to support extensions and improvements to the system. The Sanibel Bicycle Club, Inc. has an established "Trails in Motion Fund" as a private not-for-profit that could also play an important role in supporting a centralized strategy to support implementation of the Shared Use Path Master Plan's recommendations.

6.4.4. Communication and Educational Projects and Programs

- Introduce a Shared Use Path page as part of the City's website that would provide periodic updates on the importance of the City's Shared Use Path system and the objectives of the Shared Use Path Master Plan.



Shared Use Path Volunteers

- Promote the use of alternative forms of transportation through City and privately sponsored special events and programs, including Shared Use Path based recreation and wellness programs.
- Create a Shared Use Path and nature educational program, particularly for children, as a means to build awareness and stewardship for the Island's environmental resources and the importance of alternative forms of Shared Use Path based transportation.
- Schedule an annual Shared Use Path Awareness Week that would include a wide range of events including:
 - Bike/walk to work week;
 - Island-wide Path cleanup; and
 - Special programs including sponsorships to raise funding for Shared Use Path improvements.
- Create and distribute a Shared Use Path map that will promote the use of the Path system.
- Apply for a "Bike Friendly Community" designation awarded by the League of American Bicyclists.

7. IMPLEMENTATION PROGRAM



“In every walk with nature one receives far more than he seeks.”

John Muir

The following Implementation Program (See *Tables 3 - 6*) lists immediate, short and long term, and ongoing projects and programs based on the goals, objectives and recommendations advanced by the Shared Use Path Master Plan. The Implementation Program is organized to reflect the four important goals of the Plan: Public Safety; Maintenance and Management; Improvement and Extension; and Stewardship.

Tables 3-6 include references to the Plan’s supporting existing conditions and recommendations that provide greater background information pertaining to each implementation project and program. The primary public and private implementation roles and responsibilities are also defined.

Immediate recommendations will be pursued within one or two years. Short term recommendations will span the five year period between FY2008 – 2009 and FY2012 – 2013 which coincides with the City of Sanibel’s Capital Improvement Plan. Long term recommendations extend to the year 2026 to coincide with the long range planning period defined by the Sanibel Plan. Ongoing recommendations include both current and future projects and programs that should be continued to support Plan implementation.

The Implementation Program should be viewed as both a strategic and dynamic planning tool that can respond to changing conditions and opportunities. It will be important that progress towards achieving implementation is examined and reported annually as part of the City of Sanibel’s budgeting process. In addition, the Shared Use Path Master Plan should be updated on a ten year cycle that will conform with the Evaluation and Appraisal Report period required for the Sanibel Plan which serves as the City’s Comprehensive Land Use Plan.

It will be essential that the City of Sanibel, in partnership with other public, private and not-for-profit interests, pursue all funding sources that are applicable to Sanibel’s unique community character, right-of-way constraints and environmental conditions. *Appendix M* defines potential Federal, State, County and private funding sources. Leveraging and blending of available funding sources for Plan implementation will also be essential.

While alternative funding sources will play a contributing role in achieving Plan implementation, the primary responsibility for Shared Use Path safety, maintenance,

improvements and extensions will require an ongoing commitment of capital and operating resources by the City. This Plan documents the City's significant past and current commitments to the Shared Use Path system that have defined Sanibel as one of this country's most walkable and bikeable communities. Maintaining this commitment will require the City to explore alternative locally based short and long term financing options that can be dedicated to maintaining, improving and extending the Shared Use Paths.

TABLE 3
IMPLEMENTATION PROGRAM
SHARED USE PATH MASTER PLAN

6.1 Public Safety

Goal: The safety of Sanibel's Shared Use Path system and its users shall be of the highest priority.

January 2009

<u>Projects and Programs</u>	<u>Immediate (1-2 Years)</u>	<u>Short Term (5 Years)</u>	<u>Long Term (10 Years)</u>	<u>Ongoing</u>	<u>Primary Responsibility</u>	<u>Supporting Master Plan Sections</u>	
						<u>Existing Conditions</u>	<u>Recommendations</u>
6.1 Public Safety							
6.1.1 Evaluate Road Segments and Intersection Safety		●			Dept. of Public Works Police Department	Pages 15 - 21	Pages 28 - 29
6.1.2 Shared Use Path Safety Awareness and Education	●			●	Sanibel Bicycle Club, Inc. Police Department	Pages 15, 21 - 22	Page 29
6.1.3 Shared Use Path Safety Training and Seminars	●			●	Police Department	Pages 15, 21 - 22	Pages 29 - 30
6.1.4 Shared Use Path Safety Guide in Print and Electronic Formats		●		●	Police Department	Pages 21 - 22	Page 31
6.1.5 Enforcement	●			●	Police Department	Pages 15, 21 - 22	Page 31
6.1.6 Sight Distances		●		●	Planning Department Dept. of Public Works	Pages 20 - 21	Pages 31 - 32

TABLE 4
IMPLEMENTATION PROGRAM
SHARED USE PATH MASTER PLAN

6.2 Maintenance and Management

Goal: The Shared Use Path system will be managed and maintained in a quality manner, to support the full range of current and projected future user demands.

January 2009

<u>Projects and Programs</u>	<u>Immediate (1-2 Years)</u>	<u>Short Term (5 Years)</u>	<u>Long Term (10 Years)</u>	<u>Ongoing</u>	<u>Primary Responsibility</u>	<u>Supporting Master Plan Sections</u>	
						<u>Existing Conditions</u>	<u>Recommendations</u>
6.2 Maintenance and Management							
6.2.1 Proactive and Goal Oriented Maintenance				●	Dept. of Public Works	Pages 16 - 19	Page 32
6.2.2 Shared Use Path Resurfacing and Reconstruction Practices			●	●	Dept. of Public Works	Pages 16 - 19	Page 33
6.2.3 Crosswalks		●		●	Dept. of Public Works	Pages 18 - 19	Pages 33 - 34
6.2.4 Shared Use Path Markings and Signage				●	Dept. of Public Works	Pages 17 - 19	Page 34

TABLE 5
IMPLEMENTATION PROGRAM
SHARED USE PATH MASTER PLAN

6.3 Improvements and Extensions

Goal: Improvements and extensions to the Shared Use Path system will be done for the purpose of connecting residents and visitors with frequently visited island destinations and activity centers and to correspondingly reduce vehicular trips and energy consumption.

January 2009

<u>Projects and Programs</u>	<u>Immediate (1-2 Years)</u>	<u>Short Term (5 Years)</u>	<u>Long Term (10 Years)</u>	<u>Ongoing</u>	<u>Primary Responsibility</u>	<u>Supporting Master Plan Sections</u>	
						<u>Existing Conditions</u>	<u>Recommendations</u>
6.3 Improvements and Extensions							
6.3.1 Best Practices				●	Dept. of Public Works Police Department Planning Department	Pages 16 - 20	Page 35
6.3.2 Shared Use Path Widening	●	●	●		Dept. of Public Works	Page 18	Pages 35 - 37
6.3.3 Shared Use Path Extensions			●		Dept. of Public Works	Pages 12 - 14	Pages 38 - 42
6.3.4 Way Finding			●		Dept. of Public Works Police Department Planning Department	Pages 14, 20	Page 42
6.3.5 Shared Use Path Rest Areas		●			Dept. of Public Works Planning Department Dept. of Natural Resources	Page 14	Pages 42 - 46
6.3.6 Land Development Code Amendments to Support Bicycle Parking	●				Planning Department	Pages 14	Page 46
6.3.7 Shared Use Path Survey Updates	●			●	Dept. of Public Works Planning Department Sanibel Bicycle Club, Inc.	Pages 23 - 27	Page 46

TABLE 6
IMPLEMENTATION PROGRAM
SHARED USE PATH MASTER PLAN

6.4 Stewardship

Goal: The City will build a sense of stewardship for the Shared Use Path system within the greater Sanibel Community.

January 2009

<u>Projects and Programs</u>	<u>Immediate (1-2 Years)</u>	<u>Short Term (5 Years)</u>	<u>Long Term (10 Years)</u>	<u>Ongoing</u>	<u>Primary Responsibility</u>	<u>Supporting Master Plan Sections</u>	
						<u>Existing Conditions</u>	<u>Recommendations</u>
6.4 Stewardship							
6.4.1 Shared Use Path Ambassador Program	●			●	City Manager Police Department Dept. of Public Works Sanibel Bicycle Club, Inc.	Pages 10 - 11, 15 - 16, 21 - 22	Page 47
6.4.2 Volunteer Litter Control Program				●	Dept. of Public Works	Page 16	Page 47
6.4.3 Innovative and Alternative Funding Sources	●			●	City Manager Sanibel Bicycle Club, Inc.	Pages 10, 14, 18,, 20, 21 - 22	Page 47
6.4.4 Communication and Educational Projects and Programs	●	●		●	Dept. of Public Works Police Department Planning Department	Pages 21 - 22	Pages 47 - 48