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**PUBLIC USE PLAN FOR FEDERAL PARTICIPATION IN SHORE  
PROTECTION**

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**COLLIER COUNTY COASTAL STORM RISK MANAGEMENT  
FEASIBILITY STUDY**

**COLLIER COUNTY, FLORIDA**

**APPENDIX F**

**July 2020**



**U.S. Army Corps  
of Engineers  
Norfolk District**

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## Definitions

<b>Term</b>	<b>Definition</b>
Accessways	Public pathways or corridors which provide access from a public road to the beach. These access ways shall include dune walkover structures and related improvements.
Conservation Areas	Locations where human uses are generally excluded because of resource sensitivity. These areas include habitat for Federally or state listed endangered or threatened species, bird nesting habitat, sand dunes, and beach and dune vegetation.
High Use Areas	Places which provide for intensive recreational activities designed to accommodate large groups of people. These areas provide activities such as water related recreation uses, facilities and services such as bathing, bath houses, toilet facilities, automobile parking, concession outlets, and storage and maintenance facilities.
Intermediate Use Areas	Locations which provide moderately intense recreational use in an area that is designed to accommodate a low concentration of people. For the purpose of this plan, facilities associated with intermediate use areas are limited to the public accessways and the improvements related thereto.
Low Use Areas	Locations which provide for low intensity recreational experiences such as beach combing, nature study, walking, running and similar transient uses. No facilities are provided within these areas.
Public Access	The right and ability of the public to physically reach and use public coastal lands and water.
Public Lands	Lands held by the State, County, or local government in fee or less than fee simple ownership to which the public has access, including underwater lands and the foreshore.

# 1 PROPOSED COLLIER COUNTY PUBLIC USE PLAN

## 1.1 PURPOSE

The purpose of this public use plan is to describe how the public will access areas where sand will be placed, or future renourishment will take place, as a result of implementation of the plan proposed in the final report for the Collier County Coastal Storm Risk Management Integrated Feasibility Study and Environmental Impact Statement. These descriptions will address common public use issues such as user fees, parking, access, and considerations for privately owned shores. By addressing the aforementioned issues related to public use, this plan will demonstrate compliance with applicable public laws, USACE policy set forth in ER 1165-2-130-Federal Participation in Shore Protection, dated June 1989, and requirements of the State of Florida.

## 1.2 SCOPE

Geographically, the scope of the public use plan is limited to the area which lies south of Bonita Beach Road (Collier County line, shared with Lee County immediately to the north) and north of Gordon Pass Inlet. There are several existing local shoreline stabilization projects within the Collier County CSRSM project area that have been constructed and maintained by the County since 1996. These projects include Vanderbilt Beach (R22-R30), Park Shore Beach (R42-R54), and Naples Beach from R58A-R79. There are no Federal beach projects within Collier County. All of the existing County renourishment projects have approved public access plans which meet the requirements of the State of Florida.

The reaches of shoreline recommended for a Federal project in the Collier County CSRSM study final report are part of an integrated system containing both beach and inland bay area measures. The beach reaches span completely the Gulf-facing shorelines of two planning areas: Planning Area 1 (PA1) and Planning Area 3 (PA3). PA1 includes beach nourishment from the Collier County line in the north (R1) through Vanderbilt Beach to R29. PA3 includes sand placement from Park Shore (R46) through North Naples Beach to R68. Since much of the recommended beach fill from this CSRSM study overlaps with existing local beach project reaches, few public use issues were anticipated. There are no areas recommended for sand placement under this feasibility study that are excluded from this plan.

## 1.3 PUBLIC USE CONSIDERATIONS

Public use is a condition for Federal participation in shoreline protection projects with measures such as beach fill and/or renourishment activities with the purpose of reducing risk from coastal storms, abnormal tides, or flooding. Shore protection erosion control law provides that only shorelines with benefit such that arising from public use will be eligible for Federal assistance. In the case of beach used for recreation, public use means by all on equal terms, which means project beaches will not be limited to a segment of the public. Rather they must be open to all visitors regardless of origin or home area, or provide protection to nearby public property to be eligible for Federal assistance. In developing a public use plan for the project area, the following considerations were used to define the type and level of use for the area.

- Value of the resource for recreational purposes;
- Sensitivity of the resource to human use and disturbance;
- Compatibility of the intended use with surrounding development;
- Ability to protect resources for their habitat, erosion protection, and other values;
- Availability of on-site management and control;
- Conveniently located public accessways; and
- Opportunity for diverse recreational activities.

### 1.4 ITEMS AFFECTING PUBLIC USE

A short description of the tentative project is included in section 1.2 of this appendix, and detailed discussion of the work associated with the project may be found in Appendix B and Chapter 7 of the main report. Table 1 below presents the pertinent shoreline information in tabular form which served as the basis for this public use analysis.

Table 1. Shoreline Information for Reaches Included in the Plan.

Planning Area	No. of Structures in PA	Reach Names	Ownership/L and Use	Monument Range
PA1	14,327	Barefoot Beach	Public	R0-R1.5
		The Club at Barefoot Beach	Private	R1.5-R9
		Barefoot Beach Preserve	Conservation	R9-R16
		Wiggins Pass State Park	Conservation	R17-R22
		Vanderbilt Beach	Public	R22-R29
PA3	2,831	Park Shore Beach	Public	R46-R57
		North Naples Beach	Public	R57A-R68

#### 1.4.1 User Fees

A reasonable beach fee, uniformly applied to all, for use in recovery of the local share of the project costs is allowable. Normal charges made by concessionaires and municipalities for use of public facilities such as bridges, parking areas, bathhouses, and umbrellas are not construed as a charge for the use of the Federal beach project, if they are commensurate with the value of the service they provide and return only a reasonable profit.

Across Collier County there aren't any beach fees, per se, assessed against visitors that explicitly allow access to, or use of the sandy beach areas. There is however a consistent \$8 parking fee at any of the County's beach parking facilities. Collier County maintains parking facilities in five of the seven reaches within the project area. The State of Florida also maintains parking facilities as part of Wiggins Pass State Park. Table 2 lists the beach reaches that are part of the tentative project and the associated parking fees at facilities within those reaches. The fee for parking is, and will remain, the same for non-residents of the State or County as it is for local residents. These fees have been determined to be reasonable, nominal in cost, and therefore acceptable. All policy and guidelines regarding user fees have been met, and there are no residual issues to be addressed in this study.

Table 2. Parking Fees for Existing Facilities.

Planning Area	Reach Name	Parking Fee <sup>1,2</sup>
PA1	Barefoot Beach	\$8
	The Club at Barefoot Beach	No parking available
	Barefoot Beach Preserve	\$8
	Wiggins Pass State Park	\$6
	Vanderbilt Beach	\$8
PA3	Park Shore Beach	\$8
	North Naples Beach	\$8 or \$2.50/ hr <sup>3</sup>

<sup>1</sup>Parking fees assessed daily per vehicle.

<sup>2</sup>Collier County residents may purchase an annual parking pass for \$50.

<sup>3</sup>Hourly rate charged at Lowdermilk Park which is owned and operated by the City of Naples.

### 1.4.2 Parking

Lack of sufficient parking facilities for the general public (including non-resident users) located reasonably nearby, and with reasonable public access to the project beaches, may constitute a restriction on public access and use, thereby precluding eligibility for Federal participation. Parking on free or reasonable terms should be available within a reasonable walking distance of a pedestrian access to the beach. A reasonable walking distance is generally considered to be ¼ mile. Public transportation may be used to augment parking facilities provided there is supporting evidence the public transportation system is adequate for the needs of beach users. Street parking is not considered acceptable in lieu of parking lots unless the curbside capacity will accommodate the projected demands. Street parking may however also augment parking facilities if ancillary and located within the distance threshold. Consideration was also given in this study to more modern means of transportation like ride-sharing, made popular by several companies, whereby passengers travel in private vehicles driven by their owners.

ER 1165-2-130 also states, parking should be sufficient to accommodate the lesser of the peak hour demand or the beach capacity. The parking capacity, measured by the number of available spaces, of all existing parking facilities in Collier County have been determined to be sufficient. The rationale for this determination is described below.

Generally, the peak hour demand is less than the beach capacity and is based on visitation data. According to a report furnished by Research Data Services Inc., entitled *2017 Calendar Year Visitor Profile*, prepared for the Collier County Board of County Commissioners, the high visitation quarter is January-March of the given calendar year. Using the data from this report, the required parking accommodations were determined by the following equation:

$$No. Spaces Req. = \frac{Peak Season Visitors}{(miles of public beach/2)/(days in peak season)/(3 turns per day)/(No. people per vehicle)} ;$$

where peak season visitors equals 608,000, there are 16 miles of public beach within the county, 90 days in the peak season, and 2.6 people per party/vehicle. Additional facts and assumptions included:

- Parking spaces turn over every four hours with a maximum of three turns per day;
- Only 73% of visitors used the beach;
- Everyone who uses the beach does so every day;
- Beach use across the County is uniformly distributed; and
- All beach visitors drive to the beach (i.e. no walking, public transportation, or ride-sharing).

Substituting these terms into the provided equation yielded the following calculation.

$$\begin{aligned} No. Spaces Req. &= \frac{(608,000 visitors) * (0.73)}{\left(\frac{16 mi.}{2}\right) / (90 days) / \left(3 \frac{turns}{day}\right) / (2.6 people per vehicle)} \\ &= 20 parking spots / \frac{1}{2} mile / day \end{aligned}$$

The worst case scenario requires 20 parking spaces per ½ mile per day. In the low quarter the minimum number of spaces dropped to 12, and the annual average number of required spaces is 16. Given the conservative assumptions that everyone who uses the beach does so every day of their trip, and all beach visitors drive themselves, the peak hour demand will likely never be as high as 20 spaces per ½ mile per day. Therefore the peak hour parking space demand used to evaluate parking in this study was assumed to be 16 spaces/ ½ mile/ day. Table 3 below indicates the parking facilities and their capacities present in the project area.

Table 3. Existing Parking Facilities and Capacities.

Planning Area	Reach Name	Range	Public Access Point Location	No. of Parking Spaces	Within ¼ Mile?
PA 1	Barefoot Beach	R0-R1.5	Bonita Beach Rd	96	Yes
	The Club at Barefoot Beach	R1.5-R9	N/A <sup>1</sup>	-	-
	Barefoot Beach Preserve	R9-R16	Collier County Parks Department	67	Yes
			2530-2580 Barefoot Beach Blvd	44	Yes
			Barefoot Beach Preserve Parking	132	Yes
	Wiggins Pass State Park	R16-R22	Bluebill Ave	77	Yes
			Beach Adventures	106	Yes
			Park Drive Lot 1	58	Yes
			Park Drive Lot 2	58	Yes
	Vanderbilt Beach	R22-R29	Beach 1	54	Yes
Vanderbilt Beach Rd Garage			335	Yes	
PA3	Park Shore	R46-R57	Horizon Way	39	Yes
			North Gulf Shore Blvd	38	Yes
			2-98 Horizon Way	38	Yes
			Vedado Way	40	Yes
			Via Miramar	42	Yes
	North Naples Beach	R57A-R68	Lowdermilk Park	207	Yes
			South Golf Drive	21	Yes
			7th Ave N	14	Yes
			North Lake Dr	39	Yes
			6th Ave N	10	Yes
			4th Ave N	15	Yes
			3rd Ave N	14	Yes
			2nd Ave N	16	Yes
			1st Ave N	17	Yes
Central Ave	12	Yes			

<sup>1</sup>Access issue to be discussed in section 1.4.3.

As shown in Table 3, there is exceptional existing parking throughout Collier County. The project area averages over 90 parking spots per half mile. Every access point has sufficient parking within ¼ mile. Not listed in the table is an additional 158 parking spaces at Conner Park along Bluebill Avenue. This facility cannot count toward the already sufficient parking because it is 0.52 miles from the nearest access point, however it is a significant facility worth mentioning. Some of the lower volume parking lots in North Naples may appear to be deficient, but those facilities are only one or two blocks away from each other. Therefore there are at least two facilities within each ¼ mile segment, and when combined with modern ride-sharing modes of transportation, are more than sufficient according to planning policy and the guiding regulation. No residency restrictions exist or will be imposed on the availability of parking. Parking will continue to be provided on a first-come-first-serve basis.

Existing parking information was verified by site visits, Google Earth, high resolution aerial photos, County and City website and provided information, and the FEDP Florida Coastal Access Guide which shows public access locations and provides the number of parking spaces available. The number of parking spaces was estimated as closely as possible. Images from the Google Earth parking analysis are shown below in Figures 1-3.

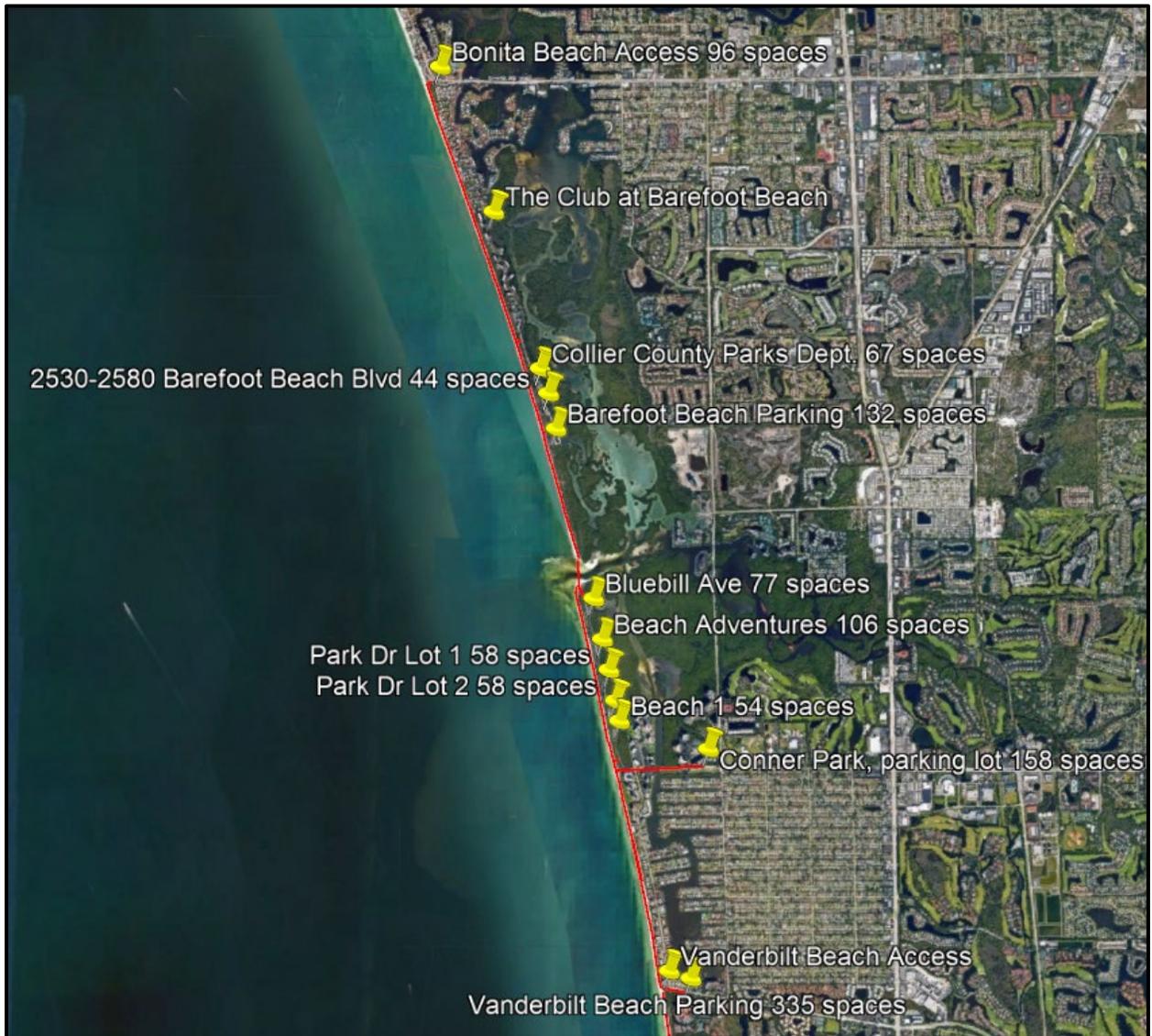


Figure 1. Parking facilities in Planning Area 1.

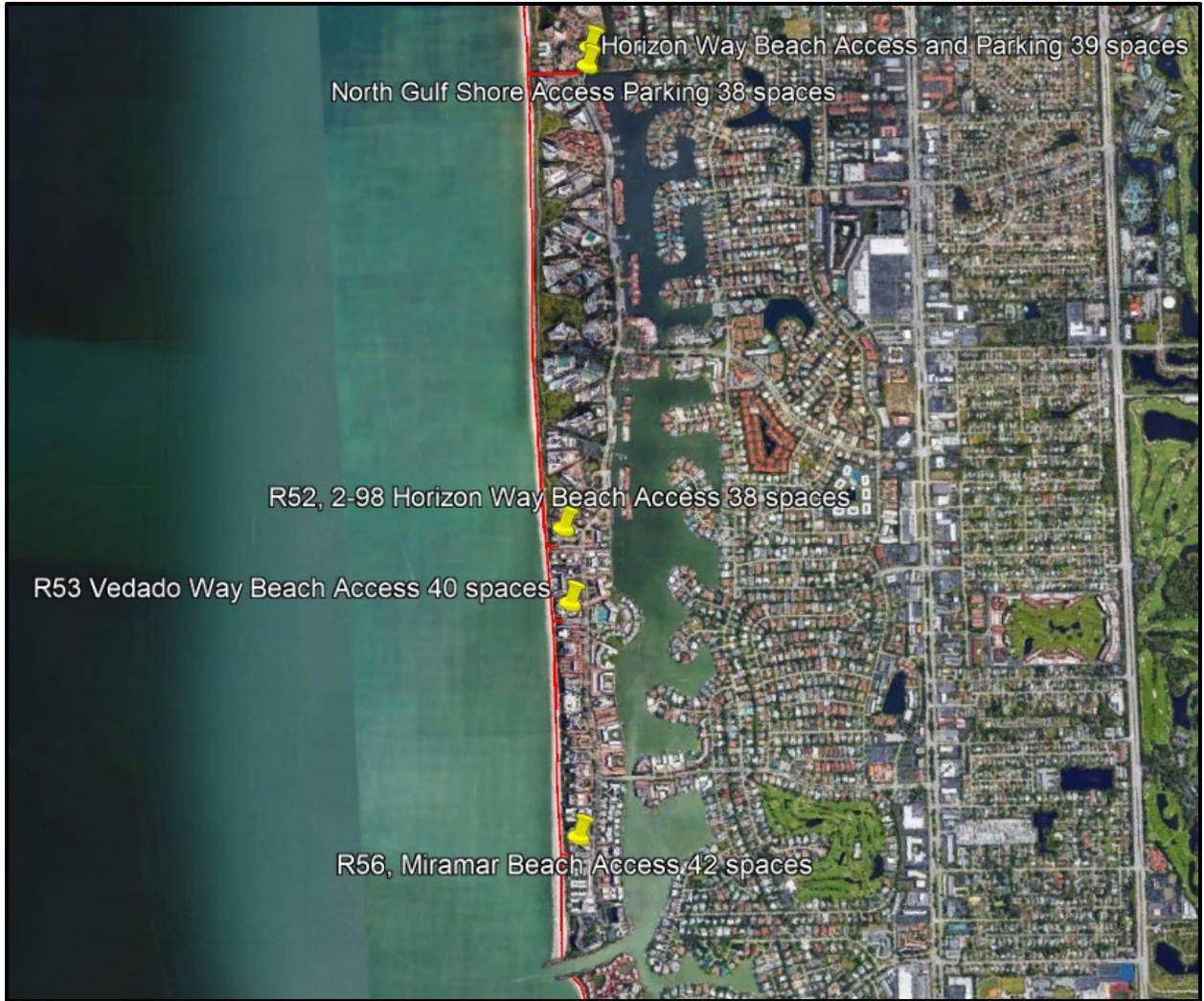


Figure 2. Parking facilities in Park Shore Reach, Planning Area 3.



Figure 3. Parking facilities in North Naples Reach, Planning Area 3.

The Club at Barefoot Beach is currently a privately owned reach without public access and associated public parking. The access issue will be discussed later in section 1.4.3. As far as parking is concerned, the Norfolk District and the North Atlantic Division are of the opinion that the spirit and intent of the law has been met in The Club at Barefoot Beach reach. This position is based on consideration of the existing adjacent parking facilities and modern alternative methods of beach transportation provided by companies like *Uber* and *Lyft*. The parking requirements set forth in ER 1165-2-130 do not give consideration to ride-sharing services as they did not exist when the regulation was published. All policy and guidelines regarding the prevalence and proximate location of parking have been met, and there are no residual issues to be addressed in this study.

### **1.4.3 Access**

Reasonable public access rights of way must be provided in accordance with the recreational use objectives of the particular area. Public use is construed to be effectively limited to within  $\frac{1}{4}$  mile from points of public access to any particular shore. Points of public access, or accessways, are considered pedestrian pathways or corridors that provide access from publicly held property to the beach. If small lengths of beach are not accessible, the length may be included in the recommended project if the length is incidental to the whole project and cannot be avoided without jeopardizing the integrity of the plan or incurring extra costs. In the event public access points are not within  $\frac{1}{2}$  mile of each other, either an item of local cooperation specifying such a requirement and public use throughout the project life must be included in the study recommendations, or an adjustment will be included in the cost allocation to remove that portion of the beach from Federal participation.

#### ***Vehicle, Bicycle, and Pedestrian Traffic***

No vehicular access will be provided to the beach, except for emergency vehicles, for authorized maintenance and management activities, and for other authorized users. Bicycle and pedestrian traffic shall be accommodated throughout the project area. In addition, directional and informative signage will be placed at the public accessways to identify the availability of public access and provide general information regarding direction to the beach and hours of use.

#### ***Use of Existing Public Parks***

Under this public access plan, the levels of use at given areas are characterized as either high, intermediate, or low level. The beach areas of Barefoot Beach Park, Barefoot Beach Preserve, Wiggins Pass State Park, and Lowdermilk Park will accommodate high public use, while the public accessways and other park lands will provide intermediate to low level use. Conservation areas will be managed for protection of sensitive natural resources and may include exclusion of human uses. All lands located in Barefoot Beach Preserve and Wiggins Pass State Park that are not currently beach, accessways, parking areas, maintenance facilities, storage structures, public restrooms, or designated for concession outlets are anticipated to be managed as conservation lands. Similar existing ancillary use facilities, like public restrooms and concession outlets, in Barefoot Beach Park and Lowdermilk Park will also be assumed to be maintained in the future.

#### ***Conservation Areas***

Areas providing habitat for federally or state endangered or threatened species, dune areas, and areas supporting dune or beach vegetation are considered conservation areas. Access to these areas may be temporarily limited based on nesting and growth seasons. Conservation areas, such as those existing in Barefoot Beach Preserve, Wiggins Pass State Park, and existing dune features running the length of Collier County beaches, will be managed for protection of sensitive natural resources and may include temporal exclusion of human uses. In order to protect the integrity, erosion protection, and upland structure values of the dunes or beach vegetation, access through the dune or beach vegetation conservation areas is limited to public or private boardwalk and dune walk-over structures. Conservation areas providing habitat for federally or state endangered or threatened species are to be protected and managed for the welfare of said species.

### ***Accessway Improvements***

It is anticipated, because the tentative plan includes measures for constructing a taller dune system, existing accessways, boardwalks, and dune walk-over structures will have to be upgraded to continue providing sufficient access to beaches in Planning Areas 1 and 3, from R0-R29 and R46-R68.

The accessways will vary in size depending on site characteristics and the need to control access, however, such accessways should be large enough to accommodate a dune walk-over structure that is at least six (6) feet in width. The improvements to the accessways will be limited to dune walk-over structures, bicycle racks, fencing, vegetation, trash receptacles, and informative signage which, at a minimum, will clearly indicate that the public accessways are available for public use without charge. All structures and improvements will be designed to minimize effects on the dune and adjacent residences. Access for the physically handicapped will be provided where feasible in accordance with standards prescribed by the Americans with Disabilities Act and any other applicable laws.

The owner or owners of the lands to be used for accessways will transfer ownership to properties comprising the public accessways to Collier County, but will reserve a right of access and use of the public accessways. Before commencement of the project, the property owners will convey title to the accessways to Collier County. The use of accessways shall be in accordance with County laws, but shall always be open to the public between sunrise and sunset.

Dune walk-over structures will be placed at the public accessways and oriented over the dune to protect and maintain the integrity and stability of the dune. The dimensions of the public dune walk-over structures will be commensurate with the capacity of the use area in which it is located, but shall be at least six (6) feet wide. The design of walk-over structures will encourage the use of the accessway and may include overlooks and other related size and characteristic improvements set forth in the second paragraph of this section.

Improvements to enhance the recreational value of shore protection projects such as bathhouses, access roads, toilet facilities, and parking areas remain a local responsibility. Provision of those facilities is not eligible for Federal assistance through USACE programs, and costs for those facilities are not included in the project costs.

### ***Access Issue to be Resolved***

The Club at Barefoot Beach is privately owned, and sufficient public access does not exist in this reach. Federal participation in private shores owned by beach clubs and hotels is incompatible with the intent of Public Law (P.L.) 84-826 if the beaches are limited to use by members or paying guests. Additionally, publicly-owned beaches which are limited to use by residents of the community or a group of communities are not considered to be open to the general public and will be treated as private beaches. Table 4 below describes the existing accessways within the project area and indicates whether or not sufficient public access exists.

Table 4. Existing Accessways in the Project Area.

Reach Name	Public Access Point Location	Within ½ Mile of Adjacent Accessways?	Sufficient?
Barefoot Beach	Bonita Beach Rd	Yes	Yes
The Club at Barefoot Beach	N/A – Access needs established	No	No
Barefoot Beach Preserve	Collier County Parks Department	Yes	Yes
	2530-2580 Barefoot Beach Blvd	Yes	Yes
	Barefoot Beach Preserve	No	Yes
Wiggins Pass State Park	Bluebill Ave	Yes	Yes
	Beach Adventures	Yes	Yes
	Park Drive Lot 1	Yes	Yes
	Park Drive Lot 2	Yes	Yes
	Beach 1	Yes	Yes
Vanderbilt Beach	Vanderbilt Beach Rd Garage	No	Yes
Park Shore	Horizon Way	Yes	Yes
	North Gulf Shore Blvd	No	Yes
	2-98 Horizon Way	Yes	Yes
	Vedado Way	Yes	Yes
	Via Miramar	Yes	Yes
North Naples Beach	Lowdermilk Park	No	Yes
	South Golf Drive	Yes	Yes
	7th Ave N	Yes	Yes
	North Lake Dr	Yes	Yes
	6th Ave N	Yes	Yes
	4th Ave N	Yes	Yes
	3rd Ave N	Yes	Yes
	2nd Ave N	Yes	Yes
	1st Ave N	Yes	Yes
	Central Ave	Yes	Yes

The Club at Barefoot Beach reach spans approximately 1.4 miles, but access is already established on either end. Figure 4 below shows the Bonita Beach accessway at Barefoot Beach and the pedestrian accessway established at the entrance to the Barefoot Beach Preserve. The red lines on the map represent the areas that are within walking distance of already established beach access and parking. The area in the middle, roughly 0.9 miles (R3-R7.5), without a red line is where access needs to be established in the future with project condition. Two accessways, evenly spaced, are recommended in this reach to establish sufficient public access. Collier County has indicated they will obtain the necessary lands to establish sufficient public access in fee through purchase of an easement, or through use of eminent domain. Vehicle pull-off areas will be provided at the end of the accessways along the Barefoot Beach Blvd right-of-way to allow individuals to be dropped off and picked up at the accessways. Each pull-off area shall have an east-west dimension of at least 20 feet and north-south dimension of 10 feet relative to the direction of travel on the adjacent roadway.



Figure 4. Lack of Access at The Club at Barefoot Beach.

Additionally, perpetual easements for the lands residing between the landward toe of the dune and the waterline will have to be obtained. Figure 5 shows the private parcels that exist on the recreational portion of the beach in this reach and how they extend seaward to the waterline. Obtaining these easements is inherent to executing the construction phase of the project. However because the use of the recreational portion of the beach is required in order to fully establish sufficient access, it deserves mentioning here during discussion of public access to The Club at Barefoot Beach.



Figure 5. Extents of Private Parcels in The Club at Barefoot Beach reach.

Throughout the rest of Planning Areas 1 and 3, as indicated in Table 4, there were four other smaller segments of beach without perfect access as defined in ER 1165-2-130. In the Barefoot Beach Preserve reach, south of the Preserve accessway, there is approximately 0.32 miles of beach that is further than the recommended walking distance to the nearest access point. This 0.32-mile stretch of beach (R14.5-R16) is immediately north of, and abuts Wiggins Pass. The public access in this reach was determined to be sufficient and meet the intent of the law. This short segment is incidental to the project, and creating additional parking and accessways within the Barefoot Beach Preserve would be counter to its existence as a conservation area and should not be required.

There is also a 0.28-mile stretch of beach in the Vanderbilt reach (R24.5-R27.5), 0.20 miles in the Park Shore reach (R48-R50), and 0.26 miles in the North Naples reach (R57.5-R59.5) without access as defined in the ER. These segments were also determined to be incidental to the project. Specific consideration was given to the abundance of parking and public access throughout the rest of these reaches and the project area. The importance and value of these reaches to the integrity of the project as a whole, in providing a complete plan for reducing risk of future coastal storms far outweighs the incremental costs to the Federal government. It is the

position of the Norfolk District and the North Atlantic Division that by having less than 0.5 mile distance between the existing extents of public access meets the intent of the law and is therefore sufficient.

#### **1.4.4 Property Ownership**

Collier County will be required to obtain all lands required for the construction of the beach project and accompanying accessways in perpetuity and certify them available for use. Various parties will have to negotiate and resolve title and boundary issues concerning property ownership in the project area. The following ownership patterns are anticipated.

##### ***Upland to the Landward Toe of the Dune***

The private property upland of the landward toe of the constructed dune will remain in private ownership. This public use plan does not impose any restrictions on the ability of property owners adjacent to the restored beach to rebuild structures existing on their property. Furthermore, this public use plan does not prohibit a property owner adjacent to the restored beach from constructing a private dune walk-over structure oriented over the dune onto the beach. However State and local laws and ordinances will still apply to private construction near the dunes. All landowners and members of the public will only be permitted to obtain access by using private or public dune walk-over structures, except where accommodations are made for beach access at public beach facilities.

##### ***The Dune***

The dune created as a result of the project will become public lands by way of perpetual beach storm damage reduction easements. Aside from approved construction and accessway improvements previously discussed, constructing or building on the dune should be avoided so as to protect the dune from human development. Impacting the dune integrity and natural resources habitat created by natural and nature based vegetative plantings would be inconsistent with their intent. No uses will be allowed on the dune except for the construction of public and private dune walk-over structures. As protection for the dune, fencing may be installed along the landward toe.

##### ***The Restored Beach***

The beach and dune system created by the project extending from the landward toe of the dune to the Erosion Control Line (ECL), located at approximately the mean high water mark of the Gulf of Mexico, if not already publicly owned will become the property of Collier County. Such ownership shall also be subject to perpetual beach storm damage reduction easements in favor of Collier County and an obligation to remain a participant in the project. Lands seaward of the ECL have been declared public property by the State of Florida and through establishment of the ECL throughout Collier County. These lands have been permitted by the Florida Department of Environmental Protection (FDEP) for use by Collier County.