

ATTACHMENT NO. 7

PURPOSE AND NEED FOR THE PROJECT

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Introduction

Lido Key is a relatively short stretch of barrier island beach located in Sarasota County, within the City of Sarasota. The beaches of Lido Key are primarily influenced by the tidal inlets at New Pass and Big Sarasota Pass, storms, seasonally varying wave energy, dredging and other anthropogenic impacts.

The erosion levels along Lido Key were evaluated by the State of Florida and resulted in classification of the shoreline as “critically eroded.” Since 1964, the USACE has conducted periodic dredging of the New Pass channel bordering Lido Key to the north, with sediment transferred onto the northern portion of Lido Key. However, this sand from the New Pass channel maintenance and ebb shoal dredging has not been sufficient to completely address the erosion and to maintain a storm protective and recreational beach over the long term.

Lido Key Beach Project History

In response to the continued erosion problems, the initial Lido Key Beach Nourishment Project was constructed in 1998 by the City of Sarasota with the placement of approximately 285,000 cubic yards of sand between FDEP monuments R-35 and R-40. In 2001, the Lido Key Beach Renourishment Project was constructed with the placement of 360,000 cubic yards of sand between FDEP monuments R-36.5 and R-44.2. In 2002/2003 the Lido Key Interim Beach Renourishment Project was constructed between R-36.5 and R-43.2. In 2009 the Lido Key Beach Renourishment Project placed approximately 470,000 cy along 1.5 miles from FDEP monument R-35.5 to R-44.2. The 2009 project also included the removal of a rock groin near R-38 that was no longer effective in controlling beach erosion. The rock groin between R-38 and R-39 remains in place.

The 2015 Lido Key Beach Nourishment Project commenced January 2015 to replace storm losses from Tropical Storm Debby which impacted the island in 2012. Approximately 197,000 cubic yards of material will replace storm damages and background erosion since 2012. Sediment from the project is being obtained from the New Pass ebb shoal, located off the northern end of the island. The expected completion date is March 2015.

Proposed Project

The proposed federally-authorized Lido Key Hurricane and Storm Damage Reduction (HSDR) Project consists of the placement of approximately 950,000 cubic yards (cy) of sand along a 1.6 mile segment of the Lido Key coastline between FDEP monuments R-34.5 and R-44. The initial project will utilize the Big Sarasota Pass as a borrow source, and New Pass as a supplemental source. The design beach is 80-ft wide (extension of the

May 2000 MHW line according to the 2002/2004 USACE Feasibility Report) at +4-ft NAVD (+5-ft NGVD). Additionally, this project will include the placement of two groin structures between R-42 and R-44. The intent of the groin features is to stabilize sand placed on Lido Key and lengthen the time required between sand placement events (USACE, 2014). The proposed project has been optimized from the design presented in the original Feasibility Report. The groin field has been reduced from three to two shorter more porous groins that maintain the minimum design beach and allow bypassing to the downdrift beach. The option of constructing a third, terminal groin will be based on the performance of the project determined by the physical monitoring results.

The Engineering Analysis of the Lido Key Groin Field (USACE, 2014) is included as Attachment No. 38.

Public Benefits

The Lido Key area provides significant public recreational opportunities, and is important to the State and local tourist economy. Approximately 3,200 feet of the shoreline within the project area is developed beachfront park and represents a multi- million dollar public investment. The public beachfront parks include North Lido Public Beach, Lido Public Beach and South Lido Public Beach & Park which provide major recreational amenities to the residents of the region, as well as important enhancement to the tourism based economy. The three parks provide tourists and residents with major recreational amenities, including: a pavilion, bathrooms, swimming pool, lifeguards, concession stand, sheltered picnic areas, and approximately 780 public parking spaces.

The beach nourishment and groin construction project will result in storm protection for both public and private interests. Several hotels and large condominium residences lie within the project limits and will derive storm protection from the beach nourishment project, particularly in the severely eroded areas of the beach. The groin construction is intended maintain the sand placed as part of the beach nourishment project. The proposed beach project will protect the properties which are major contributors to the local tax base.