



**US Army Corps  
of Engineers®**

# **Charleston Peninsula, South Carolina: Coastal Storm Risk Management Study**

Charleston, South Carolina

## **APPENDIX E: FINAL REAL ESTATE PLAN**

February 2022

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# THE REAL ESTATE PLAN

## 1.1 Study Information

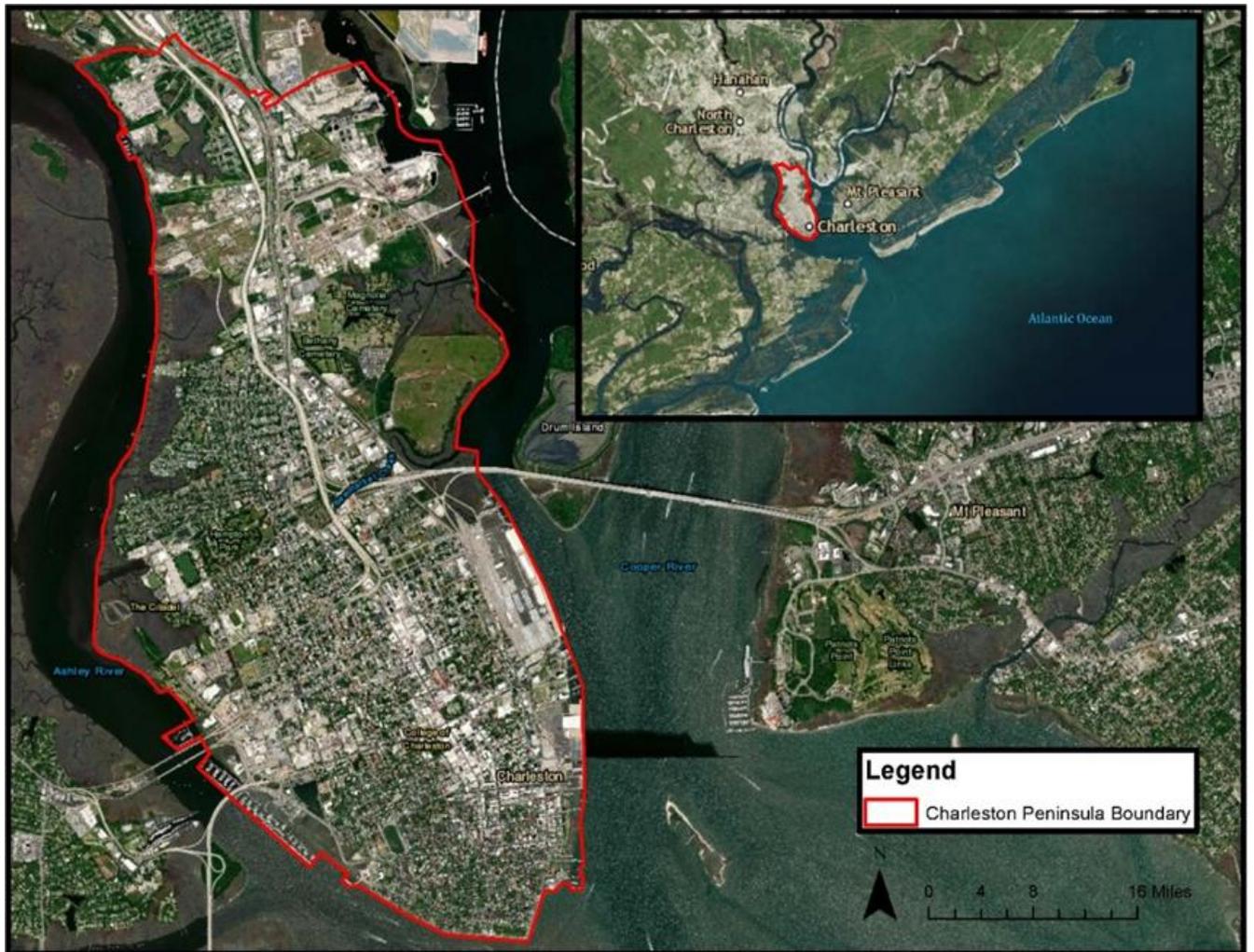
The City of Charleston is the non-Federal sponsor for this Coastal Storm Risk Management Feasibility Study. The City and the United States Army Corps of Engineers (USACE) signed a Feasibility Cost-Sharing Agreement on October 10, 2018. The USACE Coastal Storm Risk Planning Center of Expertise will oversee technical review of the study.

This report is tentative in nature, focuses on Alternative 2 after optimization, the Recommended Plan and is to be used for planning purposes only. There may be modifications to the plans that occur during Project Engineering and Design Phase (PED), thus changing the final acquisition area(s) and/or administrative and land cost. The author of this Appendix is familiar with the study area.

## 1.2 Study Area

In 2018, USACE initiated the Charleston Peninsula Coastal Flood Risk Management Study at the request of the City of Charleston. The Charleston Peninsula was identified as the study area due to the focus on coastal areas in the legal authorities referenced in the previous section, the March 7, 2018 request from the City of Charleston for a flood risk management study of the Charleston Peninsula, and the peninsula's significant vulnerability to storm surge inundation (as described in Section 2.1 of the Main Feasibility Report).

Located between the Ashley and Cooper Rivers, the Charleston Peninsula is approximately 8 square miles (Figure 1.2-1). The two rivers join off the southern end of the peninsula to form the Charleston Harbor before discharging into the Atlantic Ocean. The Charleston Harbor is a natural tidal estuary sheltered by barrier islands. The Charleston Peninsula is the historic core and urban center of the City of Charleston and is home to approximately 40,000 people. The peninsula city has undergone dramatic shoreline changes over the course of its history, predominantly driven by landfilling of the intertidal zone. Early maps show that over one-third of the present-day peninsula has been "reclaimed." Much of the landfilling occurred on the southern and western side of the peninsula. Figure 1.2-2 depicts the Charleston shoreline in 1849 after construction of a bulkhead seawall and promenade known as the High (East) Battery.



**Figure 1.2-1 – Study Area**



Figure 1.2-2 – The shoreline of Charleston, South Carolina in 1849. Source Wikimedia Commons

### 1.3 Study Authority

The authority to study all coastal South Carolina, including the Charleston Peninsula, was provided in the Rivers and Harbors Act of 1962, P.L. 87- 874, Section 110, and Senate Committee Resolution. Section 110 reads:

*The Secretary of the Army is hereby authorized and directed to cause surveys to be made at the following named localities and subject to all applicable provisions of section 110 of the River and Harbor Act of 1950:*

*Surveys of the coastal areas of the United States and its possessions, including the shores of the Great Lakes, in the interest of beach erosion control, hurricane protection and related purposes: Provided, that surveys of particular areas shall be authorized by appropriate resolutions of either the Committee on Public Works of the United States Senate or the Committee on Public Works of the House of Representatives.*

On 22 April 1988, a Senate Committee Resolution authorized the Secretary of the Army to study the entire coast of South Carolina pursuant to Section 110:

*“Resolved by the Committee on Environment and Public Works of the United States Senate, that the Secretary of the Army in accordance with the provisions of Section 110 of the River and Harbor Act of 1962, is hereby authorized to study, in cooperation with the State of South Carolina, its political subdivisions and agencies and instrumentalities thereof, the entire Coast of South Carolina in the interests of beach erosion control, hurricane protection and related purposes. Included in this study will be the development of a comprehensive body of knowledge, information, and data on coastal area changes and processes for such entire coast.”*

The Bipartisan Budget Act of 2018 (Public Law 115-123), Division B, Subdivision 1, Title IV, appropriates funding for the study at full Federal expense. As identified under this “Supplemental Appropriation” bill, the study is subject to additional reporting requirements and is expected to be completed within three years and for \$3 million dollars:

*FLOOD CONTROL AND COASTAL EMERGENCIES For an additional amount for “Flood Control and Coastal Emergencies”, as authorized by section 5 of the Act of August 18, 1941 (33 U.S.C. 701n), for necessary expenses to prepare for flood, hurricane and other natural disasters and support emergency operations, repairs, and other activities in response to such disasters, as authorized by law, \$810,000,000, to remain available until expended: Provided, That funding utilized for authorized shore protection projects shall restore such projects to the full project profile at full Federal expense: Provided further, That such amount is designated by the Congress as being for an emergency requirement pursuant to section 251(b)(2)(A)(i) of the Balanced Budget and Emergency Deficit Control Act of 1985: Provided further, That the Assistant Secretary of the Army for Civil Works shall provide a monthly report to the Committees on Appropriations of the House of Representatives and the Senate detailing the allocation and obligation of these funds, beginning not later than 60 days after the enactment of this subdivision.*

## **1.4 Significance of the Study Area**

Charleston, South Carolina is important to the Nation because 1) the history of the community reflects the history of the Nation; 2) strategic military bases in Charleston are critical to national security; and 3) Charleston's ports support the Nation's economy.

### **1.4.1 Historic Charleston**

The history of Charleston is one of the longest and most diverse of any community in the United States. In 2020, the city celebrated 350 years since Europeans established the town as a seaport community. The Charleston Peninsula has a long history of Native American occupation, and the city played an important role in Colonial, Revolutionary, antebellum, and Civil War America. Early in its history, as the capital of the Carolina colony, the city was fortified with walls, cannons, and moats to protect its habitants from attack. Later, key battles of the Revolutionary and Civil War were fought within and surrounding the peninsula. Today, Charleston contains numerous buildings dating from the late-eighteenth century to the mid-nineteenth century that document the city's unique and rich history. Refer to the Section 4.10 of the Main Feasibility Report for an overview of the historical development of Charleston.

### **1.4.2 Charleston Military Strategic Significance**

The Charleston area is home to Joint Base Charleston, one of 12 Department of Defense Joint Bases. Joint Base Charleston hosts over 60 Department of Defense and Federal agencies, and supports a total force of over 90,000 Airmen, sailors, soldiers, Marines, Coast Guardsmen, civilians, dependents, and retirees across four installations including Charleston Air Force Base. Even though these facilities are not situated on the peninsula, the medical facilities and educational facilities on the peninsula directly support those bases.

The Joint Base is home to the largest C-17 Globemaster III Air Force base. The aircraft is the most flexible cargo aircraft to enter the airlift force. The C-17 is capable of rapid strategic delivery of troops and all types of cargo to main operating bases or directly to forward bases in the deployment area. The aircraft can perform tactical airlift and air drop missions and can transport litters and ambulatory patients during aeromedical evacuations. The inherent flexibility and performance of the C-17 force improves the ability of the total airlift system to fulfill the worldwide air mobility requirements of the United States. According to historian Stan Gohl, due to threats to the U.S. in recent years, the size and weight of U.S.-mechanized firepower and equipment have grown in response to the improved capabilities of potential adversaries. This trend has increased air mobility requirements and the C-17 meets the Air Force's needs (Trimarchi, 2013).

Recently, the U.S. Coast Guard announced its plans to build a new superbase in the Charleston area. Charleston is already home to a large concentration of Coast Guard assets and personnel. Considered an enjoyable duty station, and one of only a few strategically located seaports in America that still boasts a low cost of living, the area is an ideal place for additional Coast Guard investment. And, as the Port of Charleston is expected to become the deepest harbor on the East Coast by 2021, the maritime importance of the region for the U.S. Coast Guard is set to grow (Forbes, 20 Feb 2020).

### **1.4.3 Union Pier and Columbus Street Ports**

The South Carolina Ports Authority (SCPA) is the 4<sup>th</sup> largest container seaport on the East Coast with two of the six port terminals located on the Charleston Peninsula. The SCPA generates an annual total economic impact of \$63.4 billion in South Carolina and another \$12 billion in neighboring states. After completion of the Charleston Harbor Post 45 Deepening Project, the Charleston Harbor will be the deepest harbor on the U.S. East Coast.

## **1.5 Purpose and Scope**

The purpose of the Charleston Peninsula Coastal Flood Risk Management Study is to investigate and recommend potential structural and nonstructural solution sets to reduce damages from coastal storm surge

inundation. The Charleston Peninsula, South Carolina is highly vulnerable to coastal storms which will be further exacerbated by a combination of sea level rise and climate change over the period of analysis. Without a plan to reduce damages from coastal storm surge inundation, the peninsula's vulnerability to coastal storms is expected to increase over time.

The primary focus of this study is storm surge inundation. According to the National Oceanic and Atmospheric Administration (NOAA), storm surge is produced by water being pushed toward the shore by the force of the winds moving cyclonically around a storm. The storm may be a hurricane, tropical storm, tropical depression, or nor'easter that approaches and passes the Charleston vicinity or moves on shore at or near the Charleston Peninsula. While the Charleston Peninsula also experiences flooding from rainfall, USACE has not been authorized to specifically address that issue, although it is included in inundation analyses. USACE Engineering Regulation (ER) 1105-2-100, Section 3-3.b.(6) specifies that in urban and urbanizing areas, provision of a basic drainage system to collect and convey local runoff is a non-Federal responsibility. However, mitigation for adverse impacts to stormwater runoff will be investigated and recommended as appropriate per ER 1105-2-100, Section 3-3.b.(5).

## 1.6 Optimization

Numerous alternatives were considered throughout the planning process. Based on the screening criteria and after optimization, Alternative 2 was selected as the Recommended Plan. The storm surge wall footprint was optimized moving combo wall in the marsh areas to T-wall on land wherever possible. The Optimized Alternative 2 measures are described below. See the Main Feasibility Report Chapter 8.1 for greater detail on these measures.

The management measures included in this optimized alternative are: (See Figure 1.6-1 Optimized Recommended Plan)

**Storm surge wall along the perimeter of the Peninsula:** The storm surge wall would be constructed along the perimeter of the peninsula to reduce damages from storm surge inundation. On land, the storm surge wall would be a T-wall with traditional concrete stem walls and pile supported bases. In the marsh, the storm surge wall would be a combination wall (combo-wall), which consists of continuous vertical piles on the storm surge side and battered piles on the other side, connected by a concrete cap. It would be strategically aligned to minimize impacts to existing wetland habitat, cultural and aesthetic resources, and private property while allowing continued operation of all ports, marinas, and the Coast Guard Station. The wall would tie into high ground as appropriate, including the shoreline at the Citadel and the existing Battery Wall. Due to its age and uncertainty about the integrity of the structure, the High Battery would be reconstructed to meet USACE construction standards and raised to provide a consistent level of performance. The proposed elevation of the storm surge wall is 12 feet North American Vertical Datum of 1988 (NAVD88).

The alignment of the wall displayed in Figure 1.6-1 has been optimized to minimize costs and impacts to the study area. Minor changes to the alignment may occur during the Pre-construction Engineering and Design (PED) phase. Drivers of the potential minor changes include, but are not limited to, new developments in technology or construction methodologies, results of additional engineering analyses, unforeseen cultural and historic resources, the presence of buried utilities not discovered during feasibility, and real estate acquisition challenges. Also, during the PED phase, changes will occur for the purpose of aesthetic and cultural mitigation that could not be identified during the feasibility study because they inherently relate to detailed designs.

The storm surge wall would include multiple pedestrian, vehicle, railroad, and storm (tidal flow) gates. Typically, the gates would remain open, and gate closure procedures would be initiated based on storm surge predictions from the National Weather Service. When major flooding is expected, storm gates would be closed at low tide, to keep the rising tide levels from taking storage needed for associated rainfall. For the vehicular, pedestrian, and railroad gate closings, timing of the closure would be dependent on evacuation needs and the anticipated arrival of rising water levels that close transportation arteries. Specific gate operation

procedures would be developed during the PED phase. Specific responsibilities of the non-Federal sponsor regarding execution of work will be described in the Project Partnership Agreement, a legally binding document between the Federal Government and the non-Federal sponsor, as well as the operations, maintenance, repair, replacement, and rehabilitation (OMRR&R) manual.

**Interior Drainage Facilities:** Preliminary interior hydrology analyses indicate that five temporary and five permanent small to medium hydraulic pump stations are justified per ER 1105-2-100, Section 3-3.b.(5). The pump facilities would mitigate interior flooding, or the bathtub effect, caused by the storm surge wall.

**Natural and Nature Based Features:** In association with the storm surge wall, oyster reef-based living shoreline sills would be constructed in some locations to reduce coastal storm impacts to natural shorelines and other resources seaward of the wall. The living shoreline sills would reduce erosion of existing wetland marsh, while reducing scour at the proposed storm surge wall. The living shorelines would also provide other environmental benefits. The reef-based living shoreline method/design would be determined during the PED Phase.

**Nonstructural measures:** In residential areas where construction of the storm surge wall would be impractical due to the topography of the peninsula or other existing constraints, nonstructural measures such as elevations and floodproofing could be applied. Neighborhoods that are largely equal to or higher than the proposed wall elevation, or separated from high-risk areas by high ground, have been identified for nonstructural measures. Those neighborhoods include Lowndes Point on the north-western edge of the peninsula, Bridgeview Village on the north-east edge of the peninsula, and the Rosemont community in the Neck Area of the peninsula. Wet floodproofing measures, such as elevation of utilities, would be applied in the Lowndes Point area because residential structures are already elevated above 12 feet NAVD88. Dry floodproofing measures would be applied to Bridgeview Village and elevation measures would be applied to the Rosemont neighborhood due to the nature of the construction materials and techniques used in these communities.

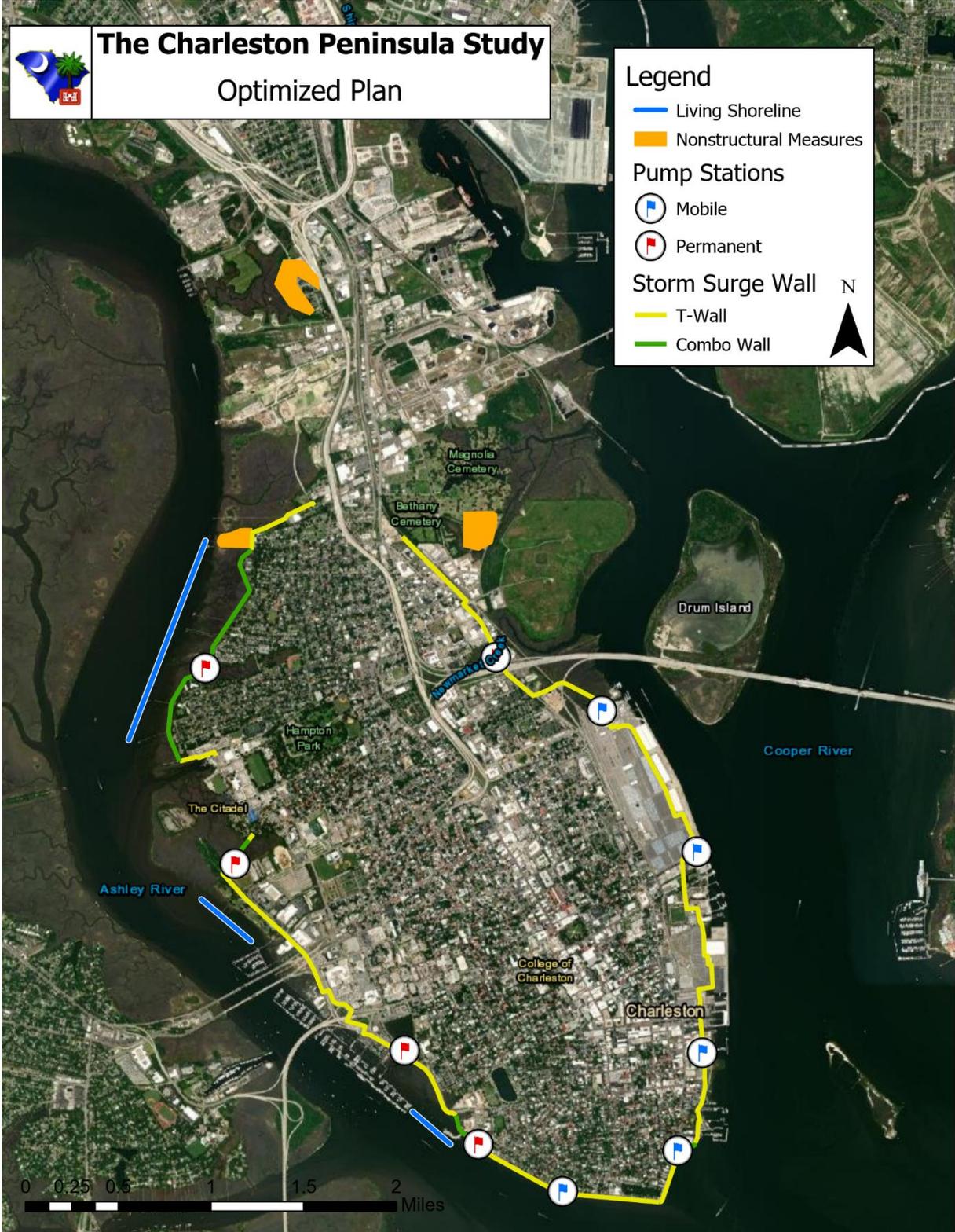


Figure 1.6-1 – Optimized Recommended Plan

## 1.7 Project Measures

Following is an array of Structural, Non-Structural and Mitigation measures.

**Table 1.7-1 – Project Measure Descriptions**

<b>STRUCTURAL MEASURES:</b>			
<b>Measure Type</b>	<b>Description</b>	<b>Estate Required</b>	<b>REP Real Estate Cost Formulation</b>
Storm Surge Wall	Wall onshore along the perimeter of Peninsula (elevation 12 ft. NAVD88). T-wall on land (7.1 miles).	Temporary Work Area Easement (TWAE) & Perpetual Flood Protection Levee Easement (PFPLE). Fee Acquisition to be determined.	PFPLE buffer is 25 ft. from the center of the wall on each side. TWAE buffer is plus 10 ft. on each side of the PFPLE. Total temporary and permanent buffer applied = 50' PRPLE + 20' TWAE = 70' total footprint.
Storm Surge Wall	Wall along the perimeter of Peninsula (elevation 12 ft. NAVD 88). Combo Wall in marsh (1.6 miles).	Temporary Work Area Easement (TWAE) & Perpetual Flood Protection Levee Easement (PFPLE)	PFPLE buffer is 25 ft. from the center of the wall on each side. TWAE buffer is plus 10 ft. on each side of the PFPLE. Total temporary and permanent buffer applied = 50' PRPLE + 20' TWAE = 70' total footprint.
Pump/Power Stations	Structure used to pump interior storm water and/or house power generation for tide gates. 5 Pump Station locations determined.	Fee Acquisition	Fee parcel is 60ft. X 60ft. pad sites. Total permanent area = 3,600 sq. ft. each pad.
Pump Stations with wells	Area used to locate mobile pumps to connect to drainage wells. 5 mobile pump stations determined.	Fee Acquisition	Fee parcel is 30ft X 30ft pad sites with inground drainage wells. Total permanent area = 900 sq. ft. each pad
Pedestrian, vehicle, railroad, boat, and storm (tidal) gates	Study estimates: On Land: 14 pedestrian, 59 vehicle, and 3 railroad crossings. In Marsh: 11 storm gates Actual #/type/location of gates to be determined during PED phase.	TWAE & PFPLE	Temporary construction and permanent access for gates included in estates for Storm Surge Wall.
High Battery Wall	Raising of existing High Battery Wall will be reconstructed to meet USACE construction standards.	City owned land	Lands needed for the reconstruction are owned by the Non-federal Sponsor. Wall is considered a facility for public protection and will be raised in place. No market value due to absence of a salable economic unit.

<b>STRUCTURAL MEASURES (CON'T):</b>			
<b>Measure Type</b>	<b>Description</b>	<b>Estate Required</b>	<b>REP Real Estate Cost Formulation</b>
Staging and Storage areas	Staging and storage during construction. Storage for gates to be determined for O&M during PED Phase.	City-owned land wherever possible on or off peninsula TWAE	Specific staging and storage areas will be deferred to PED. Estimate 5 acres per contract phase (4) = temporary use of 20 acres in total. Material delivery monthly to staging area and just in time delivery to work site. Pre-cast concrete and steel manufactured offsite and delivered as needed. No staging or storage anticipated for Nonstructural (voluntary) measures.
Disposal and Borrow areas	Necessary disposal of ground or marsh material to be determined later during PED phase.	Designated City or State Disposal and Borrow sites.	No value costs considered with this measure. Construction costs only.
<b>NONSTRUCTURAL MEASURES: Voluntary</b>			
Flood proofing	Dry flood proofing consists of exterior waterproofing the structure up to 3 feet above ground level and interior windows and doors.	Application, including Temporary ROE, Flood Proofing Agreement and Recorded Easement and Covenant.	Administration costs included in CE to support application and construction process. There is no temporary relocation compensation for voluntary measures.
Elevations	Involves lifting an existing structure to an elevation that is at least equal to or greater than the design flood elevation.	Application, including Temporary ROE, Flood Proofing Agreement and Recorded Easement and Covenant.	Administration costs included in CE to support application and construction process. There is no temporary relocation compensation for voluntary measures.
Buyout	If the cost to flood proof or elevate a structure costs more than the value of the structure, then the measure applied may be considered a potential buyout.	Fee Acquisition if needed.	Parcels to be surveyed and potential buyouts will be determined, including acquisition and relocation costs during PED Phase
<b>MITIGATION MEASURES:</b>			
Wetland Mitigation	Construction within saltmarsh wetlands expect to buy credits through mitigation bank.	Fee Acquisition, if needed. Mitigation Conceptual plan only.	No Fee Acquisition for Mitigation lands considered until final Mitigation Plan is developed during PED Phase.
Living Shoreline Mitigation	Construction in salt marsh or tidal wetlands of living shorelines	Fee Acquisition, if needed. Mitigation Conceptual plan only.	No Fee Acquisition for Mitigation lands considered until final Mitigation Plan is developed during PED Phase.

## 1.8 Real Estate Requirements

The non-Federal sponsor is responsible for the acquisition of all lands, easements, rights of way, relocations, and disposal areas (LERRD) that are required for the construction, operation, and maintenance of the proposed project. Based on available information, the Real Estate Plan (REP) (Appendix E) considering 8.7 miles of storm surge wall, projects approximately 58 acres of land that may require real estate acquisition, relocation, permanent and temporary easements for construction of the structural and nonstructural measures of the recommended plan. The standard estates have been reviewed for sufficiency and were found to be acceptable for the project. The Real Estate Baseline Cost Estimate has been prepared estimating 134 parcel ownerships to include 11 parcels to be acquired in fee, 237 temporary and perpetual easements for construction of the storm surge wall, and 453 rights of entry/applications for the elevation or floodproofing of homes. A Gross Appraisal and Administrative Update were completed to support the overall Real Estate Base Cost Estimate and project approval authorization and funding. This Final REP (Appendix E) includes other relevant information on the non-Federal sponsor's ownership of land, proposed standard and nonstandard estates, existing federal projects, potential relocations under the Uniform Relocation Assistance and Real Property Acquisition Policies Act (P.L. 91-646, as amended), facility/utility relocations, a schedule for real estate acquisition activities, and other issues as required. Should it be determined that additional lands are required during the design phase, the NFS will be required to purchase these lands using the appropriate standard estate

Where possible, the PDT utilized public owned land to minimize take of private property. If a property must be acquired for the project, the non-Federal sponsor will need to acquire all property rights and interest up to and including fee acquisitions. Most of the structural measures for the storm surge wall would require both perpetual maintenance easements and temporary construction easements, including gate access. Some properties would be acquired in fee title due to the amount of land remaining after the taking (an uneconomic remnant), access needs, and habitat mitigation sites, and where navigational servitude is not sufficient.

## 1.9 Recommended Estates

If a property must be acquired for the project, the NFS will need to acquire all needed property rights and interest up to and including fee acquisitions. Most of the structural measures for the storm surge wall will require perpetual and temporary construction easements. At this feasibility stage, only 11 properties will require fee acquisitions. The NFS and Federal administrative costs associated with obtaining all real estate is included in the Administrative Review.

Standard Estates that may be needed for this project are identified and set out below. This is a preliminary list due to the feasibility stage of the project and sufficient information is not available to provide more accurate identification of potential property rights, interest and estates that may be required or the value of such property rights, interest, and estates.

### **Fee:**

The fee simple title to (the and described in Schedule A) 1/

(Tracts Nos. \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_), Subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

### **Temporary Work Area Easement:**

A temporary easement and right-of-way in, on, over and across (the land described in Schedule A) (Tracts Nos. \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_), for a period not to exceed \_\_\_\_\_, beginning with date possession of the land is granted to the United States, for use by the United States, its representatives, agents, and contractors as a (borrow area) (work area), including the right to (borrow and/or deposit fill, spoil and waste material thereon) (move, store and remove equipment and supplies,

and erect and remove temporary structures on the land and to perform any other work necessary and incident to the construction of the \_\_\_\_\_ Project, together with the right to trim, cut, fell and remove therefrom all trees, underbrush, obstructions, and any other vegetation, structures, or obstacles within the limits of the right-of-way; reserving, however, to the landowners, their heirs and assigns, all such rights and privileges as may be used without interfering with or abridging the rights and easement hereby acquired; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

**Perpetual Flood Protection Levee Easement:**

A perpetual and assignable right and easement in (the land described in Schedule A) (Tracts Nos, \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_) to construct, maintain, repair, operate, patrol and replace a flood protection (levee) (floodwall)(gate closure) (sandbag closure), including all appurtenances thereto; reserving, however, to the owners, their heirs and assigns, all such rights and privileges in the land as may be used without interfering with or abridging the rights and easement hereby acquired; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

**Road Easement:**

A (perpetual [exclusive] [non-exclusive]and assignable) (temporary) easement and right-of-way in, on, over and across (the land described in Schedule A) (Tracts Nos. \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_) for the location, construction, operation, maintenance, alteration replacement of (a) road(s) and appurtenances thereto; together with the right to trim, cut, fell and remove therefrom all trees, underbrush, obstructions and other vegetation, structures, or obstacles within the limits of the right-of-way; (reserving, however, to the owners, their heirs and assigns, the right to cross over or under the right-of-way as access to their adjoining land at the locations indicated in Schedule B); 5/ subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

If sand and gravel or other quarriable material is in the easement area and the excavation thereof will not interfere with the operation of the project, the following clause will be added: "excepting that excavation for the purpose of quarrying (sand) (gravel) (etc.) shall be permitted, subject only to such approval as to the placement of overburden, if any, in connection with such excavation;"

**Utility and/or Pipeline Easement:**

A perpetual and assignable easement and right-of-way in, on, over and across (the land described in Schedule A) (Tracts Nos. \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_), for the location, construction, operation, maintenance, alteration; repair and patrol of (overhead) (underground) (specifically name type of utility or pipeline); together with the right to trim, cut, fell and remove therefrom all trees, underbrush, obstructions and other vegetation, structures, or obstacles within the limits of the right-of-way; reserving, however, to the land owners, their heirs and assigns, all such rights and privileges as may be used without interfering with or abridging the rights and easement hereby acquired; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

**Right of Entry for Survey and Exploration:**

An assignable easement, in, on, over and across the land described in Exhibit "A" for a period of ( ) months beginning with the date possession of the land is granted to the United States, consisting of the right of the United States, its representative, agents, contractors and assigns to enter upon said land to survey, stake out, appraise, make borings; and conduct tests and other exploratory work necessary to the design of a public works project; together with the right to trim, cut, fell, and remove therefrom all trees, underbrush, obstructions, and any other vegetation, structures, or obstacles as required in connection with said work; subject to existing easements for public

roads and highways, public utilities, railroads and pipelines; reserving, however, to the landowner(s), their heirs, executors, administrators, successors and assigns, all such right, title, interest and privilege as may be used and enjoyed without interfering with or abridging the rights and easement hereby acquired.

### **Non-Standard Estates**

There are no non-standard estates required at this time. If it is determined that a non-standard estate is needed during the planning and design phase, the District Real Estate Office will seek waiver of standard estates and approval or non-standard estates or measures through the USACE South Atlantic Division (SAD) to HQ USACE.

### **1.10 Real Estate Cost Analysis and Assumptions**

This REP summarizes progress to date on the Charleston Peninsula feasibility study and identifies the alternative measures based upon the optimization of the Recommended Plan and prepared a final budgetary estimate of Real Estate costs based on the Gross Appraisal dated May 18, 2021 and Administrative Update on November 23, 2021 due to wall realignment on the eastern ports. Prior to the completion of the Gross Appraisal, Real Estate utilized Rough Order of Magnitude (ROM) for cost estimates developed during the early stage of this study in accordance with the ER 405-1-12, Chapter 12 (including Change 31) and Real Estate Policy Guidance Letter No. 31.

Gross appraisals are used to support advanced studies and or reports such as feasibility studies for project approval authorization and funding and provides support for the overall real estate base cost estimate. The gross appraisal is a cost analysis assignment and the ER 405-1-04 exempts these types of planning studies from compliance with the uniform standards of professional appraisal practice (USPAP). The estimated acquisition costs provided are not intended to reflect the market value of any particular parcel of land located in the project footprint. The estimates reflect the probable cost of acquiring land similar to that depicted on the project maps provided. The estimates provided are subject to and contingent upon certain general assumptions and limiting conditions outlined within the gross appraisal and this report.

The footprint of the storm surge wall was identified using geospatial information system tool on an ArcGIS web platform that identified impacted parcels and calculated areas of impact by the required rights-of-way, including the Assessor's Parcel information. Properties were identified and grouped by Model Areas (1-5) Wagener Terrace, Marina, Cruise Terminal (Port), Battery and Newmarket. See Figure 1.10-1.

Real Estate Impacted by Project for the footprint of the 12-foot storm surge wall and parcels and buildings impacted by the construction buffer around the peninsula. No acquisition parcels are located within the Battery area of the footprint and therefore, no costs are included in this study.

Structural footprints were based on USACE Storm Surge Wall optimized design criteria as provided by Engineering. To prepare preliminary costs of real estate, each parcel was placed in a classification based on residential and nonresidential properties. The Real Estate assumptions were estimated based upon acquisition of perpetual easements and fee title. Temporary work area and permanent easements were calculated based on wall height and width of the footprint within all model areas of the peninsula. The degree of property rights, utility relocations or railroad intersections have not been determined. Due to the complexity of the underground and aerial utilities an assumption was made that 50% of all parcels would require some relocation of utilities. For feasibility planning purposes the last assessed value of improvements at the City Assessor's office was used to determine cost of improvements on land. Cost assumptions included walls located on land and in the marshlands, intersecting parcels, and structures, along roadways, including pump house locations and gates. For those parcels with the wall located within the Marshlands were assumed no compensation due to State navigational servitude. Preliminary federal and nonfederal administration costs were calculated based on the number of parcels that would be required for construction of the project.

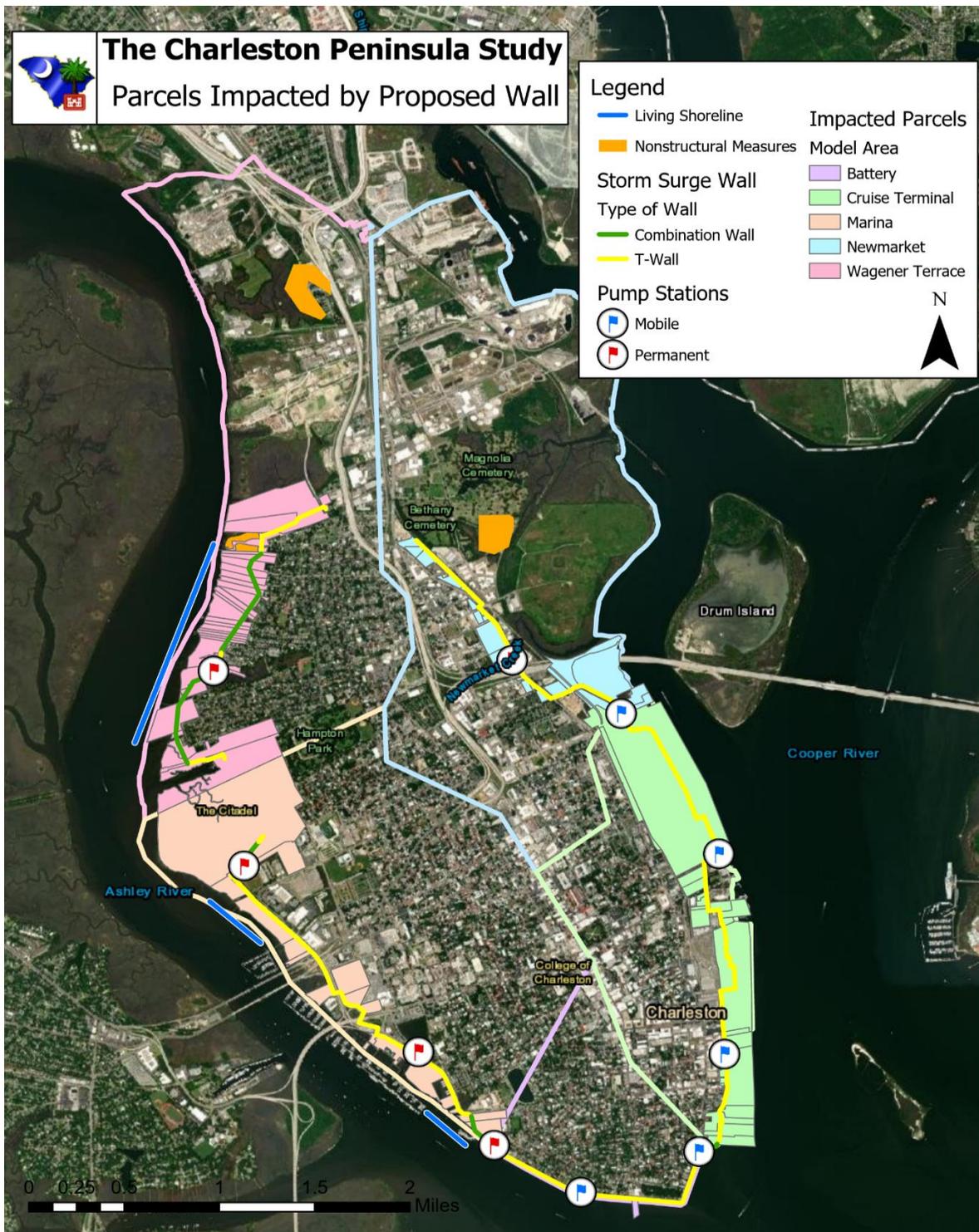


Figure 1.10-1 – Parcels Impacted by Proposed Wall

THE FOLLOWING ASSUMPTIONS APPLY DUE TO THE PRELIMINARY/LOW LEVEL OF PROJECT DESIGN AND DETAILS THAT ARE CRITICAL TO DETERMINING MORE ACCURATE ESTIMATES FOR THE REAL ESTATE PROJECT COSTS.

**General Study Assumptions:**

- Extraordinary Assumption: 10% Design Maps, Gross Appraisal Cost Estimates (CE) based on combined ArcGIS maps are correct and best data available; mapping 70 ft. footprint for storm surge wall (including a 20-foot temporary and 50 foot permanent), along the perimeter of Peninsula (8.7 miles), parcel locations by model areas, estates, square footage, acreage, and ownerships.
- Extraordinary Assumption: Most of parcel structures that were intercepted by the wall footprint were considered avoidable. Due to high cost of real estate in the Cruise Terminal (Port) and New Market areas, several high-cost properties have been excluded as they more than double the Real Estate costs and it is assumed that such impacts will be avoided and addressed later during design and feasibility study.
- Extraordinary Assumption: That the proposed study design will not cause additional and/or a typical flooding damage due to pumping/power stations, developed and maintained for the project construction use and perpetual year-round project Operation and Maintenance O&M.
- General Assumption: When the property remaining after the storm surge wall easement acquisition and the remaining parcel is of little value (uneconomic remnant), then the property owner would be bought out. No parcels have been identified during the feasibility stage. Parcels impacted by the storm surge wall footprint will need to be assessed during design phase.
- Hypothetical Condition: Based on an “As Clean” condition with no significant hazardous materials/contamination being present. No adverse soil or environmental conditions exist that would negatively influence value or marketability.
- Most Temporary Work Area Easements (TWAE) are for a 3 yr. term. Once determined for project Staging and Storage areas a 5yr. term for TWAE will be assumed. Estimated costs for Staging and Storage area are included in the Real Estate Baseline Cost Estimates.

**1.11 Navigational Servitude and South Carolina Title to Tidelands**

The Commerce Clause of the Constitution confers upon the Government a dominant right to use, control and regulate the navigable waters of the United States for various commerce-related purposes, including navigation and flood control. USACE policy is to use navigational servitude whenever possible.

A preliminary review of South Carolina ownership rights and navigational servitude was conducted by Office of Counsel resulting in the determination that the Ashley and Cooper Rivers and Charleston Harbor surrounding the peninsula have been identified as navigable and can extend to marshland. The State of South Carolina has “prima facie title” to Tidelands, Submerged Lands and Navigable Waters in trust for the subject to the public purposes and rights of navigation, commerce, fishing, bathing, recreation or enjoyment and other public and useful purposes.

Adding to the complexity of ownership rights in the marshlands, there is King’s Grant right which predates the independence of the United States and explicitly conveyed rights to tidal marshlands to several owners from Lords Proprietors. Since the State holds title to marshlands, a private party would need strong evidence in

favor of a King’s Grant to assert ownership. Except for one parcel in Waggener Terrace with a defensible King’s Grant, Real Estate cost analysis assumptions were made in consideration that Navigational Servitude and State title to Tidelands will suffice to absolve the NFS from any responsibility to compensate landowners for the use of marshland that becomes the site of the storm surge wall footprint.

### 1.12 Public Law 91-646, Relocation Assistance Benefits

The Federal Relocation Assistance Program, Public Law 91-646 applies to NFS acquisitions. A meeting was held with the NFS on 1/29/2020 to review real estate requirements for the project including Relocation Assistance. The NFS has completed the assessment questionnaire to confirm their role and responsibilities to fulfill the Federal Acquisition requirements, including P.L. 91-646 (Exhibit A).

Preliminary real estate costs included the assumption of potential acquisitions with relocation benefits. Following Optimization of the Recommended Plan the number of potential buyouts were reduced to only 5 fee acquisitions and 34 perpetual easements requiring relocation assistance. (The cost to prepare and administer Federal Relocation Assistance Program benefits resulting from the possible taking of property (8 residential and commercial parcels) were considered. NFS costs includes acquisition and replacement costs including, appraisal, survey, title, legal, business relocation and moving expenses. The Relocation Plan will be developed during the PED phase to document estimated number of relocations and comparable commercial/residential structures for adequate replacement within the greater Charleston area. Following is a summary of estimated costs for relocation considered in the Real Estate Baseline Cost Estimate for a 12-foot Storm Surge Wall. (Table 1.25-1)

#### Preliminary Relocation Costs Optimized and Realigned

Location	Parcels	Estimated Cost
Wagener Terrace	1	\$105,000
Marina	1	\$220,000
Cruise Terminal (Port)	0	0
Newmarket	1	\$110,000
Battery	0	0
Pump Stations (Permanent)	5	\$150,000
Total	8	\$585,000

The Recommended Plan recommends nonstructural measures of *floodproofing* for the Bridgeview Village apartments and *elevation* of single-family homes in the Rosemont Neighborhood (See Main Report 6.20.2). The nonstructural measures of elevation and flood-proofing will be undertaken solely on a voluntary basis, and voluntary property owners are considered to receive benefits from such voluntary measures, and no relocation benefits are paid for voluntary measures. Under the P.L 91-646 Uniform Relocation Assistance, only tenants would be considered displaced persons for voluntary measures. Temporary relocation of tenants will not be required during floodproofing installation.

Thus, it appears that no payment will be required for property owners receiving voluntary benefits under the nonstructural measures of elevation and floodproofing. However, an exception is if there is a tenant in the property, and the tenant (rather than the property owner) receives the voluntary benefit. In this case, such tenants may receive relocation benefits. For purposes of this study, which is only at a 10% design level, no data was provided that identified which properties have tenants. Therefore, no relocation benefits were assessed for potential renters of property. There is insufficient information provided to Real Estate at this time to determine whether individual properties have tenants.

### **1.13 Nonstructural Flood Proofing and Elevation of Structures – Voluntary Owner Participation**

Residential property owners of structures eligible for elevation as part of the recommended plan who wish to participate in the project must complete and submit an application. A property owner may withdraw the application at any time prior to the execution of a Flood Proofing Agreement by the property owner and USACE. The NFS and USACE will work together to verify eligibility for participation in the project. Applications will be submitted to USACE, but processing/verifying tasks may be split between USACE and the NFS depending on the NFS's capability. Incomplete applications or applications which contain false or misleading information or substantial errors will not be processed. The application and approval process includes the following steps:

The application includes an authorization for temporary right-of-entry to USACE and the NFS to enter upon the property. This is required for USACE and the NFS to enter in and upon the structure and land for purposes of investigating, inspecting, surveying, performing required environmental surveys, testing, and site assessments, evaluating the condition of the structure, determining elevation requirements, verifying the current elevation, and conducting other activities necessary for USACE to make a determination of structure eligibility.

The property owner must submit satisfactory proof of ownership. Proof of ownership shall require a Certificate of Title and a Certificate of Mortgage that identifies the names of all the owners of the property, as well as any holders of a lease interest, third party interest holders and any holders of a lien or encumbrance against the property. Additionally, the property owner shall provide written verification from the tax assessor that no taxes are due and payable on the property, as well as documentation from any holder of a mortgage, lien, or encumbrance, that the mortgage, lien, or encumbrance is in good standing or has been satisfied and released.

Inspection of the property is completed to determine eligibility of structure flood proofing or elevation.

After the Government confirms that the property owner has adequately documented clear title to the property, such documentation to include but not be limited to the subordination or release of any interests held by leaseholders, third parties and holders of liens, mortgages, judgments and encumbrances, a Flood Proofing Agreement containing a "Residential Structure Elevation Covenant Running with The Land" in favor of the NFS shall be executed by the property owner and the NFS. The Agreement will authorize the NFS, USACE, or their contractors to enter the property for purposes of implementing the flood proofing action and for inspection and enforcement purposes and will include the agreement of the property owners to hold harmless the NFS and USACE for any damages arising from the flood proofing work, and a covenant running with the land shall be executed by all owners of the property. These agreements shall be recorded by the NFS in the appropriate public records of the County and if applicable, municipality, in which the property is located and shall be binding upon all the owners, their heirs, assigns and successors in interest, as well as upon all tenants, third party interest holders and holders of any liens, mortgages, judgments, and encumbrances in the property. The covenant shall prohibit the conversion or occupancy of any part of the structure located below the lowest habitable finished floor for human habitation and the alteration of the structure in any way to impede the movement of flood waters under the structure, as well as prohibiting the construction of any other structure in a manner that would impede the movement of floodwaters under the structure.

The Flood Proofing Agreement, together with the covenant running with the land, as well as any required release or subordination agreements, shall be recorded by the NFS in the appropriate public records of the county in which the property is located. The Agreement will state the property owner is willing to expend any costs that may be necessary in connection with the elevation of the structure which are not eligible costs.

After the Flood Proofing Agreement together with the covenant and any required subordination agreements are recorded in the public records, the elevation of the structure will be commenced, completed, inspected, and after final approval by the District Engineer, a notice of construction completion will be issued to the NFS and the individual elevation project will be closed out as complete. A schedule for voluntary floodproofing and

elevation is dependent on the percentage of ownership participation, estimating 12-24 months to complete following signing of the Project Partnership Agreement.

#### **1.14 Project Sponsor Responsibilities and Capabilities**

The City of Charleston, South Carolina will be the non-Federal Project Sponsor (NFS). The NFS has the responsibility to acquire all real estate interests required for the project. The NFS shall accomplish all alterations and relocations of facilities and utilities, structures and improvements determined by the government to be necessary for construction of the project. The sponsor will have all operation and maintenance responsibility for the project after construction is completed.

Title to any acquired real estate will be retained by the NFS and will not be conveyed to the United States Government. Prior to advertisement of any construction contract, the NFS shall furnish to the government an Authorization for Entry for Construction (Exhibit B) to all lands, easements, and rights-of-way, as necessary. The NFS will also furnish to the government evidence supporting their legal authority to grant rights-of-way to such lands. The NFS shall comply with applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, approved 2 January 1971, and amended by Title IV of the Surface Transportation Uniform Relocation Assistance Act of 1987, Public Law 100-17, effective 2 April 1989, in acquiring real estate interests for the Project, and inform all affected persons of applicable benefits, policies, and procedures in connection with said Act(s). An Assessment of the Non-Federal Sponsor's Capability to Acquire Real Estate is at Exhibit "A" to the Real Estate Appendix.

The non-Federal sponsor is entitled to receive credit against its share of project costs for the value of lands it provides and the value of the relocations that are required for the project. Generally, for the purpose of determining the amount of credit to be afforded, the value of the LER is the fair market value of the real property interest, plus certain incidental costs of acquiring those interests, that the non-federal sponsor provided for the project as required by the Government.

The NFS should not acquire lands required for the project prior to execution of the Project Partnership Agreement (PPA). Should the NFS proceed with acquisition of lands prior to execution of the PPA, it is at the risk of not receiving credit or reimbursement for any costs incurred in the connection with the acquisition process should the project not be approved, appropriated and PPA not be signed. There is also risk in acquiring lands either not needed for the project or not acquired in compliance with requirements for crediting purposes in accordance with 49 CFR Part 24, dated March 2, 1989. (Exhibit C NFS Risk Letter)

#### **1.15 Government Owned Property**

The City of Charleston is assumed to be the owner of all lands proposed for staging and storage areas for the project. The U.S. Coast Guard Station USCG is located within the study area (Marina) and included within the footprint of the storm surge wall. Later in the design phase, when the impacted area is confirmed, the impacted area property may require an out grant or easement with the USCG. There are several Federal owned properties within the peninsula study area, however, not located with the wall footprint. Close coordination will be conducted during the acquisition phase of the project to ensure no mission disturbance for the USCG.

There is one Federal Project nearby the study area:

Charleston Harbor (Post 45) – extend and deepening of harbor entrance channel and deepening and widening of inner harbor channels. Construction began in March 2018 and currently ongoing.

#### **1.16 National Historic Preservation Act (NHPA)**

Charles Town, originally settled in the late 1600's by English colonists on the west bank of the Ashley River, but moved shortly thereafter to the peninsula and officially became known as *Charleston in 1783*. The Charleston peninsula contains the heart of the city's historic areas, and its diverse architecture and

archeological sites reflects the historical and cultural development of the city. See the Cultural Section of the Main Feasibility Report.

A preliminary historical site-impact analysis was conducted by a USACE Archeologist. The analysis consists of costs associated with the survey and mitigation of architecture and archaeology of various properties. It was determined that the study as it is currently designed, does include structural measures that would have a physical impact on two parcels which contain property that is eligible for or listed in the National Register of Historic Places (NRHP). However, some measures of the Feasibility Study are in NRHP listed historic districts, and there may be visual or view-scape effects.

Additionally, some buildings designated and protected as “historic” may be included in the Non-Structural measure category. If a property owner voluntarily chooses to alter his/her property through a Project Non-Structural measure, then the property may lose its historic designation. Approximately 453 parcels are eligible for Non-Structural measures with only one historic structure in the City Marina area, the Rice Mill Building, will be eligible for flood proofing.

See Cultural Resources in the Main Feasibility Report for further detail.

### **1.17 Mineral/Timber Rights**

Based on current design level, there are no future mineral/timber activities or other subsurface minerals identified within the scope of the study area.

### **1.18 Hazardous, Toxic, and Radioactive Waste (HTRW)**

Hazardous, Toxic and Radioactive Waste (HTRW) is addressed in the Main Feasibility Report. Based on current design level, there are no known HTRW located within the scope of the study area.

### **1.19 National Environmental Policy Act (NEPA)**

NEPA is addressed in the Environmental Impact Statement that is integrated into the Main Feasibility Report. Based on the feasibility-level of design, the recommended plan includes construction of living shorelines and structural measures that could potentially impact saltmarsh wetlands, aesthetics, and cultural resources. Mitigation for cultural and aesthetic resources requires additional analysis and will be further defined during the PED phase so mitigation lands for these purposes are not included in the RE Baseline Cost at this time. Impacts to wetlands at the feasibility level of design are estimated to be 35 acres. Compensatory mitigation is assumed at this time to be through the purchase of wetland credits from a mitigation bank for a total cost ranging from \$7.6M to \$9.4M, depending on the mitigation bank used. Therefore, no mitigation land costs for wetlands are included in the RE Baseline Cost at this time. If Permittee Responsible Mitigation for wetlands is identified as the selected mitigation alternative instead of mitigation banking during the remainder of feasibility study or in PED, then costs for mitigation lands for wetlands will be added to the RE Baseline Cost. The cost for mitigation banking would be removed from the estimated project cost, which is assumed at this time to be the higher mitigation cost alternative.

### **1.20 Zoning Ordinances**

Zoning ordinances are not an issue with this project. Application or enactments of zoning ordinances is not to be used in lieu of acquisition.

### **1.21 Induced Flooding**

Current project plan indicates there will be no flooding induced by the construction or the operation and maintenance of the project. Ten (10) Pump/ Power Stations will be constructed located throughout the footprint of the project to manage any flooding due to operation of pedestrian, vehicle, railroad, boat, and storm (tidal flow) gates. While the storm drainage system is not a Federal responsibility, any impacts to the

interior hydrology due to the proposed project will be evaluated and mitigated to the extent justified under USACE policy, if necessary.

### 1.22 Public Support or Opposition

The first public meeting was held at the start of the feasibility study in January 2019 and was well attended. At this point in the study, there has been no significant opposition from the public. However, due to the high value of real estate on the peninsula, owner opposition is expected. As a result of public scoping, stakeholder engagement, and conduct of the environmental review, visual impacts of the wall, property acquisition and construction related effects are a concern of the public.

### 1.23 Acquisition Schedule

The NFS is responsible for acquiring real estate interests required for the project. It is anticipated that phases will be preliminarily determined and are expected to be revised as the design progresses. Upon completion of the design phase and the execution of the Project Partnership Agreement, the Government will provide the NFS with a written notice (ER 405-1-12 Para 30-31) to proceed with Real Estate acquisition. The acquisition of all property rights and interest, including fee and acquisition through negotiation and condemnation, will be accomplished over several years with the acquisition of all the real estate interest required for each respective phase completed in advance of contracting for construction of that phase. The following estimated acquisition schedule indicates the length of time required for each step in the standard acquisition process.

**Table 1.23-1. – Real Estate Acquisition Schedule**

Project Partnership Agreement	Start Date
Maps and General Descriptions of LERRD to NFS	Within 2 weeks of start date
Plat and Owner Verification	Within 6 months of NFS map receipt
Negotiations (Utilities & Facilities)	Within 6 months of Plat and Owner Verification
Appraisal of Property	Within 6 months of NFS of Plat receipt
Review Value Estimates	Within 6 months of Estimate receipt
Negotiations (Private Owners)	Within 3 months after Value Estimate
Closings	Within 2 months of Negotiations*
Possession	Within 1 day of closing
Certification of Chief of Real Estate	Within 2 weeks of possession
Process Total	2 years 6 months
<i>Condemnation/Eminent Domain</i>	<i>Within 1 year of failure of negotiations</i>

### 1.24 Utility and Facility Relocations

Public Facility Relocations have two components—the cost to relocate the actual infrastructure itself (construction relocation costs) and the relocation administrative costs for preparing or reviewing real estate documents including Relocation Agreements, with utilities—all of which are LERRD. The estimated relocation costs are \$15,535,000 and are 100% the responsibility of the NFS. All cost found to be reasonable, allowable, and allocable will be credited in accordance with the PPA.

All costs associated with public facility relocations, during this 10% design phase are considered preliminary and tentative. These estimated administrative costs will be reassessed as the design is refined. During this study an estimate for relocation of utilities facilities will not exceed 30% of estimated total project costs.

The cost estimate to relocate the remaining utilities and facilities in the REP footprint will be completed when the Study is at the 35% design phase in accordance with Real Estate Policy Guidance Letter (PGL) No. 31. In accordance with that guidance, at the 35% design phase, a real estate assessment will be conducted, and it will address whether identified utilities/facilities are generally of the type eligible for compensation under the substitute facilities doctrine and will also consider data or evidence that demonstrates that an owner has been identified with a compensable interest in the affected property.

The compensability of all utilities that are impacted by the various measures will need to be determined prior to construction. Currently, at this 10% design phase, additional relocation costs could also be covered under “contingency” if the current estimates are low, until further identified in the Preconstruction Engineering and Design (“PED”) phase. An Attorney’s Opinion of Compensability will be performed during PED on all utility facility relocations validated. Estimated costs to relocate the compensable lines will be determined after the design has been refined to include utility impacts.

**High battery wall** – the storm surge wall would tie into the existing battery wall on the southern tip of the peninsula. Due to its age and uncertainty about the integrity of the structure, the high battery wall would be reconstructed to meet USACE construction standards and raised to provide a consistent level of performance. The raising of the high battery wall is considered a public facility relocation and will be captured as a NFS facility relocation. Lands for reconstruction are owned by the NFS. The high battery wall is considered a facility for public protection and will be raised in place. Based upon the appraiser’s opinion there is no market value to the battery wall. Given the absence of a salable economic unit, there are no transferrable rights/interests within the bundle of rights that could be valued.

**ANY CONCLUSION OR CATEGORIZATION CONTAINED IN THIS REPORT THAT AN ITEM IS A UTILITY OR FACILITY RELOCATION TO BE PERFORMED BY THE NON-FEDERAL SPONSOR AS PART OF ITS LERRD RESPONSIBILITIES IS PRELIMINARY ONLY. THE GOVERNMENT WILL MAKE A FINAL DETERMINATION OF THE RELOCATIONS AND ASSOCIATED COSTS NECESSARY FOR THE CONSTRUCTION, OPERATION, OR MAINTENANCE OF THE PROJECT AFTER FURTHER ANALYSIS, UPDATED DESIGN, AND COMPLETION AND APPROVAL OF FINAL ATTORNEYS’ OPINIONS OF COMPENSABILITY FOR EACH OF THE IMPACTED UTILITIES AND FACILITIES.**

## **1.25 Administrative Review Costs**

The estimated administrative costs for the Recommended Plan are included in the Real Estate Baseline and Cost Estimate (Table 1.25.1) as follows.

### **12-foot Storm Surge Wall**

- Cost to prepare and review *temporary and permanent easements* that will be required for the construction of the storm surge wall footprint and floodgates where required for each impacted parcel and estimating 134 ownerships with 237 easements. NFS cost includes acquisition costs of appraisal, survey, title and legal for each easement.

NFS \$15,000 per easement X 237 = \$3,540,000.

FED Support \$5,000 per easement X 237 = \$1,180,000.

- Parcel structures that were intersected by the 12-foot storm surge wall footprint were considered potential buyouts with relocation and acquisition costs in fee were included in the CE. NFS potential *buyout* cost includes costs to prepare and review acquisition including appraisal, survey, title and legal. There are approximately 11 potential buyouts. 1 Private parcel plus 10 pump station parcels (5 permanent/5 mobile pump wells).

NFS \$15,000 per parcel X 11 = \$165,000.

FED Support \$ 5,000 per parcel X 11 = \$55,000.

### **Non-Structural Benefits**

- Cost to prepare and review *temporary rights of entry* required for application process, survey, inspection, and construction of nonstructural measures, including home raising or flood proofing. Estimating 149 residential/commercial (plus 304 tenants) structures below 12 ft. NAVD88 for a total of 453 ROE will be impacted by the project.

NFS \$1,000 per parcel X 453= \$ 453,000.

FED Support \$ 500 per parcel X 453 = \$226,500.

## 1.26 Real Estate Baseline Cost Estimates

Following are the estimated acquisition and administrative real estate costs required for the construction of the project.

**Table 1.26-1 - Real Estate Baseline Cost Estimate**

a. Lands				Acres	
Ownerships - Fee			11	0.99	\$4,770,000
Temporary Work Area Easement			130	31.04	\$10,268,832
Permanent Easement			107	26.43	\$67,910,888
		Total Easements	237		
		Total Acreage		58	
b. Improvements					\$0
					\$82,949,720
Gross Appraisal Contingency (45%)					\$37,327,374
Subtotal					\$120,277,094
c. Mineral Rights					\$0
d. Damages					\$0
e. Utility/Facility Relocations			10		\$14,762,000
Non-federal		\$14,762,000			
f. P.L. 91-646 Relocation Costs			8		\$585,000
g. Acquisition Cost - Admin (134 ownerships)					\$5,619,500
11 Parcels in Fee, 237 easements, and 453 ROE					
Federal		\$1,461,500			
Non-federal		\$4,158,000			
		\$5,619,500			
Subtotal					\$141,243,594
Acq (f, and g)Contingency (25%)					\$1,551,125
<b>TOTAL</b>					\$142,794,719
<b>ROUNDED TO</b>					<b>\$142,795,000</b>

## 1.27 Chart of Accounts

The cost estimate for all Federal and non-Federal real estate activities necessary for implementation of the project after completion of the feasibility study for land acquisition, construction, LERRD, and other items are coded as delineated in the Cost Work Breakdown Structure (CWBS). This real estate cost estimate is then incorporated into the Total Current Working Estimate utilizing the Microcomputer Aided Cost Engineering System (MCACES).

**Table 1.27-1 – Chart of Accounts**

01A	PROJECT PLANNING	FEDERAL	NON-FEDERAL	TOTALS
	Other			
	Project Cooperation Agreement	\$ -	\$ -	\$ -
01AX	Contingencies (45%)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
	Subtotal	\$ -	\$ -	\$ -
01B	LANDS AND DAMAGES			
01B40	Acq/Review of PS	\$ 1,461,500.00	\$ -	\$ 1,461,500.00
01B20	Acquisition by PS	\$ -	\$ 4,158,000.00	\$ 4,158,000.00
01BX	Contingencies (25%)	<u>\$ 365,375.00</u>	<u>\$ 1,039,500.00</u>	<u>\$ 1,404,875.00</u>
	Subtotal	\$ 1,826,875.00	\$ 5,197,500.00	\$ 7,024,375.00
01H	AUDIT			
01H10	Real Estate Audit	\$ -	\$ -	\$ -
01HX	Contingencies (45%)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
	Subtotal	\$ -	\$ -	\$ -
01R	REAL ESTATE LAND PAYMENTS			
01R1B	Land Payments by PS (Inc. 45% )	\$ -	\$ 120,277,094.00	\$ 120,277,094.00
	Utility/Facility Relocations	\$ -	\$ 14,762,000.00	\$ 14,762,000.00
01R2B	PL91-646 Relocation Pymt by PS	\$ -	\$ 585,000.00	\$ 585,000.00
01R2D	Review of PS	\$ -	\$ -	\$ -
01RX	Contingencies (25% Util/Fac/91-646)	<u>\$ -</u>	<u>\$ 146,250.00</u>	<u>\$ 146,250.00</u>
	Subtotal	\$ -	\$ 135,770,344.00	\$ 135,770,344.00
	<b>TOTALS</b>			
	(1)	<u>\$ 1,826,875.00</u>	<u>\$ 140,967,844.00</u>	<u>\$ 142,794,719.00</u>
	<b>ROUNDED TO</b>			<b>\$ 142,795,000.00</b>
Note:	<b>(1) Include Federal Administrative costs in 30 PED Account.</b>			

This Real Estate Appendix has been prepared in accordance with policy and guidance set forth in ER 405-1-12, Chapter 12, Real Estate Planning and Acquisition Responsibilities for Civil Works Projects.

Prepared by:

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Dorothy Steinbeiser  
Senior Realty Specialist

Reviewed and approved by:

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Ralph J. Werthmann  
Chief, Real Estate Division  
Savannah District

## **EXHIBITS**

Exhibit A - Assessment of Non-Federal Sponsor's Real Estate Acquisition Capability

Exhibit B – Authorization for Entry for Construction and Attorney's Certificate of Authority

Exhibit C – Non-Federal Sponsor Risk Letter

## Exhibit A - Assessment of Non-Federal Sponsor's Real Estate Acquisition Capability

**City of Charleston, South Carolina**  
**Assessment of Non-Federal Sponsor's**  
**Real Estate Acquisition Capability**

### I. Legal Authority:

- a. Does the sponsor have legal authority to acquire and hold title to real property for project purposes? **YES, S. C. Code Sec. 28-2-10 as amended and S.C. Code Sec. 5-7-40.**
- b. Does the sponsor have the power to eminent domain for this project? **YES, S.C. Code Subsection 5-7-50.**
- c. Does the sponsor have "quick-take" authority for this project? **YES, S.C. Code 28-2-10 and 28-2-20 and S.C. Code 5-7-50.**
- d. Are any of the land/interests in the land required for this project located outside the sponsor's political boundary? **NO The City is not aware of any land located outside of the political boundary.**
- e. Are any of the lands/interests in land required for the project owned by an entity whose property the sponsor cannot condemn? **The City cannot answer this question at this time. If any of the land is owned by another government entity, they may not be able to condemn.**

### II. Human Resource Requirements:

- a. Will the sponsor's in-house staff require training to become familiar with the real estate requirements of Federal projects including P. L. 91-646, as amended? **YES**
- b. If the answer to II.a. is "yes", has a reasonable plan been developed to provide such training? (yes/no) **The City will communicate with the Realty Specialist about any training that is needed outside of the overview already provided.**
- c. Does the sponsor's in-house staff have sufficient real estate acquisition experience to meet its responsibilities for the project? **YES**
- d. Is the sponsor's projected in-house staffing level sufficient considering its other workload, if any, and the project schedule? **NO The City is aware that they will need to obtain additional staff.**
- e. Can the sponsor obtain contractor support, if required in a timely fashion? **YES**
- f. Will the sponsor likely request USACE assistance in acquiring real estate? **The City has not analyzed whether they would request USACE assistance at this time.**

III. Other Project Variables:

- a. Will the sponsor's staff be located within reasonable proximity to the project site? **YES**
- b. Has the sponsor approved the project/real estate schedule/milestones? **The City is in the process of approving the project in coordination with USACE.**

IV. Overall Assessment:

- a. Has the sponsor performed satisfactory on other USACE projects?  
**YES**
- b. With regard to the project, the sponsor is anticipated to be: **Highly capable**

V. Coordination:

- a. Has this assessment been coordinated with the sponsor? **YES**
- b. Does the sponsor concur with this assessment? **YES**

Prepared by:

\_\_\_\_\_  
Dorothy Steinbeiser  
Senior Realty Specialist

Reviewed and approved by:

\_\_\_\_\_  
John S. Hinely  
Chief, Real Estate Acquisition Branch

**Exhibit B. - Authorization for Entry for Construction**

I \_\_\_\_\_, \_\_\_\_\_ for the  
(Name of accountable official) (Title)

(Sponsor Name), do hereby certify that the \_\_\_\_\_ (Sponsor Name) has acquired the real property interest required by the Department of the Army, and otherwise is vested with sufficient title and interest in lands to support construction for (Project Name, Specifically identified project features, etc.). Further, I hereby authorize the Department of the Army, its agents, employees and contractors, to enter upon

\_\_\_\_\_ (identify tracts)

to construct (Project Name, specifically identified project features, etc.) as set forth in the plans and specifications held in the U. S. Army Corps of Engineers' (district, city, state)

WITNESS my signature as \_\_\_\_\_ for the  
(Title)

(Sponsor Name) this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

BY: \_\_\_\_\_  
(Name)  
\_\_\_\_\_  
(Title)

**ATTORNEY'S CERTIFICATE OF AUTHORITY**

I, \_\_\_\_\_, \_\_\_\_\_ for the  
(Name) (Title of legal officer)

(Sponsor Name), certify that \_\_\_\_\_ has  
(Name of accountable official)

authority to grant Authorization for Entry; that said Authorization for Entry is executed by the proper duly authorized officer; and that the Authorization for Entry is in sufficient form to grant the authorization therein stated.

WITNESS my signature as \_\_\_\_\_ for the  
(Title)

(Sponsor Name), this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

BY: \_\_\_\_\_  
(Name)  
\_\_\_\_\_  
(Title)

## **Exhibit C. – Non-Federal Sponsor Risk Letter**

Date

Real Estate Division

SUBJECT: Charleston Peninsula, SC – A Coastal Flood Risk Management Study

The Honorable John Tecklenburg  
Mayor, City of Charleston  
180 Lockwood Boulevard  
Charleston, South Carolina 29403

Dear Mayor,

The intent of this letter is to formally advise the City of Charleston, as the potential non-Federal sponsor for the proposed project, of the risks associated with land acquisition prior to the execution of the Project Partnership Agreement (PPA) or prior to the Government's formal notice to proceed with acquisition. If a non-Federal sponsor deems it necessary to commence acquisition prior to an executed PPA for whatever reason, the non-Federal sponsor assumes full and sole responsibility for any and all costs, responsibility, or liability arising out of the acquisition effort.

Generally, these risks include, but may not be limited to, the following:

- a. Congress may not appropriate funds to construct the proposed project;
- b. The proposed project may otherwise not be funded or approved for construction;
- c. A PPA mutually agreeable to the non-Federal sponsor and the Government may not be executed and implemented;
- d. The non-Federal sponsor may incur liability and expense by virtue of its ownership of contaminated lands, or interests therein, whether such liability should arise out of local, state, or Federal laws or regulations including liability arising out of CERCLA, as amended.
- e. The non-Federal sponsor may acquire interests or estates that are later determined by the Government to be inappropriate, insufficient, or otherwise not required for the project.

- f. The non-Federal sponsor may initially acquire insufficient or excessive real property acreage which may result in additional negotiations and/or benefit payments under P.L. 91-646 as well as the payment of additional fair market value to affected landowners which could have been avoided by delaying acquisition until after PPA execution and the Government's notice to commence acquisition and performance of LERRD; and
- g. The non-Federal sponsor may incur costs or expenses in connection with its decision to acquire or perform LERRD in advance of the executed PPA and the Government's notice to proceed which may not be creditable under the provisions of Public Law 99-662 or PPA.

We appreciate the City's participation in this project. Should you have questions or concerns pertaining to this letter please feel free to contact Ms. Dorothy Steinbeiser at (912) 652-5941.

Sincerely,

John S. Hinely  
Chief, Real Estate Acquisition Branch  
Savannah District

Cc: Mr. Dale Morris  
Chief, Resilience Officer  
City of Charleston