



DEPARTMENT OF THE ARMY  
U.S. ARMY CORPS OF ENGINEERS  
SAVANNAH DISTRICT  
100 WEST OGLETHORPE AVENUE  
SAVANNAH, GEORGIA 31401-3604

October 26, 2023

Regulatory Division  
SAS-2013-00406

**JOINT PUBLIC NOTICE**  
**Savannah District/State of Georgia**

The Savannah District has received an application for a Department of the Army Permit, pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. § 403) and Section 404 of the Clean Water Act (33 U.S.C. § 1344), as follows:

Application Number: SAS-2013-00406

Applicant: Mr. Christopher Novack  
Georgia Ports Authority  
Post Office Box 2406  
Savannah, Georgia 31402

Agent: Mr. Brandon Wall  
Sligh Environmental Consultants, Inc. (SECI)  
31 Park of Commerce Way, Suite 200B  
Savannah, Georgia 31405

Project Purpose as Proposed by Applicant: The applicant's stated project purpose is "to increase the Port of Savannah capacity."

Location of Proposed Work: The project site is located in the Savannah Harbor, on Hutchinson Island, west of U.S. Highway 17, in Savannah, Chatham County, Georgia (latitude 32.09681, longitude -81.10229).

Description of Work Subject to the Jurisdiction of the U.S. Army Corps of Engineers:  
To impact aquatic resources associated with the construction of a new deepwater container terminal in the Savannah Harbor. Specifically, the proposed project would be developed in three phases as described below:

- Phase 1: Development of all berths and wharves  
Development of gates, infrastructure, parking, and other support services  
Development of Berth 3 container yard
- Phase 2: Development of Berth 2 container yard  
Development of the first phase of the intermodal yard

- Phase 3: Development of Berth 1 container yard  
Development of the second (final) phase of the intermodal yard

During Phase 1, in-water dredging would be completed, and construction of the wharf would start at the upstream end of the project site (Berth 3) and progress downstream toward the Talmadge Bridge (Berth 1). The development plan for the wharf includes the construction of all waterside infrastructure during Phase 1. Also included in Phase 1 is the construction of all terminal support areas (e.g., gates, empty storage, maintenance & employee parking), which would be located downstream of the Talmadge Bridge. The container yard located behind the wharf (upriver from the Talmadge Bridge) would be developed in approximate thirds, with the first portion built in the backlands behind Berth 3 during Phase 1. The second and third portions of the container yard would be constructed behind Berth 2 during Phase 2, and behind Berth 1 during Phase 3. Also included in Phases 2 and 3 would be construction of the intermodal yard.

To provide the necessary channel clearance for container vessels utilizing the terminal, the design of the facility requires dredging the existing shoreline and excavating adjacent upland. Berth construction would require a staged removal of an approximately 150-foot wide strip of upland across the length of the wharf (approximately 4,800 linear feet). The first stage would be completed by mechanically excavating the uplands. It is expected that excavated soil would be placed in the backlands and utilized to surcharge the backlands, or if necessary, disposed of off-site at an appropriate permitted landfill or disposal area. The berth's king pile wall would then be installed along the full length of the wharf. Upland excavation on the river side of the wall would continue to the Mean High Water elevation (3.08 NAVD88). The relieving platform piles would be installed next (in upland areas) for all three berths.

Once completed, the area between the king pile wall and the Federal Navigation Channel would be hydraulically or clamshell dredged to a depth of -50 feet MLLW with 2 feet of allowable overdredge. This dredged area would tie into the Federal Channel at the approved SHEP depth. The maintained depth of -50 feet MLLW was designed to accommodate the design draft of 14K TEU vessels (+/- 48') and would allow these (and larger) vessels to access the berths at all tidal stages. Dredged sediments would be hydraulically pumped to either an on-site DMCA or DMCA Cell 12, 13A, or 13B. The specific DMCA would be determined closer in time to the actual dredging activities based on available containment capacities and dredged material properties. Disposal activities would be coordinated with the Corps and Georgia Department of Transportation. With dredging complete, the remaining elements of the wharves (Berths 1, 2, and 3) and the container yard behind Berth 3 would be constructed. For example, concrete piles would be placed in front of the bulkhead to support the wharf and crane beam, and piles would be placed behind the bulkhead to support the relieving platform and the associated structural concrete work.

Because all waterside work would be completed during Phase 1, the backlands (container storage yard) would be developed as required by demand. It is expected that Phase 2 backlands would need to be operational within two years of Phase 1 completion, and Phase 3 backlands would need to be operational within two years of Phase 2 completion.

Overall, a total of 2,522,500 cubic yards (CYs) of material would be dredged from existing jurisdictional waters (26.96 acres of open water, 8.63 acres of intertidal frontage, and 0.1 acre of freshwater wetland) including two feet of allowable overdredge. Based on sedimentation rates in the area, the applicant estimates that 250,000 CYs of annual maintenance dredging would be required in the future, but this estimate would be confirmed by a sedimentation model. An estimated 42 silt suspension units would be installed on guide piles along the wharf face every 114 (+/-) feet to minimize the need for future maintenance dredging. Maintenance dredging would be conducted by hydraulic cutterhead, clamshell, or agitation dredging.

For landside development, the project requires impacts to 26.58 acres of freshwater wetland, 5.59 acres of saltmarsh, and 0.44 acre of tidal canal in order to provide enough yard capacity and support services to meet the Purpose and Need for the project while avoiding impacts to 9.52 acres of freshwater wetland and 119.6 acres of saltmarsh. The site plan utilizes bridging for internal road crossings and gabion walls along fill slopes to minimize impacts.

Table 1. Impacts

Impact Type	Habitat	Purpose	Acreage
Dredging	Intertidal Flat	Berth	6.01
Dredging	Rock/Rip-Rap/Rubble	Berth	0.76
Dredging	Saltmarsh	Berth	1.86
Dredging	Freshwater Wetland	Berth	0.10
<b>Total Dredging Impact in Jurisdiction</b> (excluding 26.96 ac. of existing open water dredging)			<b>8.73</b>
Fill	Freshwater Wetland	Landside Facilities	26.58
Fill	Saltmarsh	Landside Facilities	5.59
Fill/Culvert	Tidal Canal	Roads/Truck Gate	0.44
<b>Total Fill in Jurisdiction</b>			<b>32.61</b>

To offset the loss in aquatic function associated with the above freshwater impacts, the applicant has proposed the purchase of 159.2 wetland credits from a freshwater wetland mitigation bank within the project's Primary Service Area (PSA), if available. Though there are currently no banks available in the PSA, according to the Regulatory In-Lieu Fee and Bank Information Tracking System (RIBITS) website, there are several mitigation banks listed as pending approval. If credits are not available, the applicant would look to the Secondary Service Area (SSA) (Lower Ogeechee River Basin) for credits. In the absence of any credits, the applicant would purchase the required credits from an in-lieu fee program. To offset the loss in aquatic function associated with the tidal impacts, the applicant has proposed the purchase of 43.6 tidal wetland credits from a saltwater wetland mitigation bank within the project's PSA.

## **BACKGROUND**

The GPA was created by the Georgia legislature in 1945 to foster commerce, both foreign and domestic, and encourage economic growth. Today, the GPA operates two major deepwater seaports on the coast of Georgia in Savannah and Brunswick consisting of six terminals in addition to inland facilities in Bainbridge and Chatsworth. A variety of cargos move through the ports each day from containerized and ro-ro (wheeled) cargo to liquid bulk and breakbulk cargos. There are three terminals in Brunswick and three facilities in Savannah. Though all cargo sectors are vital to Georgia's ports, it is the containerized cargo which makes up the largest sector and is in highest demand. Containerized cargo moves through Ocean Terminal (OT) and the Garden City Terminal (GCT) in Savannah. The GCT has become GPA's dedicated container port and has grown to the third busiest container port complex in the United States and America's largest and busiest single-terminal container port. Both loaded and empty containers arrive and depart each day from GCT and OT by different modes of transportation including ship, truck, rail, community, and internal strip moves. The port is serviced by the Savannah Federal Navigation Channel which is maintained at a depth of -47 feet MLLW to provide access for today's large ocean-going vessels. From the landside, access to two interstates is vital to truck transportation, and additional roadway improvements are being made to make truck traffic safer and more efficient. Rail moves have also increased from both of GPA's Class I rail providers (Norfolk Southern and CSX) due to the completion of the Mason Megarail Project at GCT which provides access for unit trains from the nation's interior. Whole-sale wharf and backlands improvements were recently permitted at OT which, upon completion, would provide additional berths for the largest container vessels that can call on Savannah. All of these regional infrastructure assets along with highly efficient and effective operations on-terminal have led to the Port of Savannah's success over the past decades and have made the GPA the #1 export port in the United States.

This Joint Public Notice announces a request for authorizations from both the Corps and the State of Georgia. The applicant's proposed work may also require local governmental approval.

## **STATE OF GEORGIA**

Water Quality Certification: The Georgia Department of Natural Resources, Environmental Protection Division will review the proposed project for Water Quality Certification, in accordance with the provisions of Section 401 of the Clean Water Act. The applicant has requested a Water Quality Certification from the State of Georgia. Prior to issuance of a Department of the Army Permit for a project located in, on, or adjacent to the waters of the State of Georgia, review for Water Quality Certification in accordance with Section 401 of the Clean Water Act is required. A reasonable period of time, which shall not exceed one year, is established under the Clean Water Act for the State to act on a request for Water Quality Certification, after which, issuance of such a Department of the Army Permit may proceed. This public notice serves as notification to the Administrator of the U.S. Environmental Protection Agency (USEPA) pursuant to section 401(a)(2) of the Clean Water Act for neighboring jurisdiction review and begins the 30-day clock for USEPA to notify affected states.

State-owned Property and Resources: The applicant may also require assent from the State of Georgia, which may be in the form of a license, easement, lease, permit or other appropriate instrument.

Marshland Protection: This notice also serves as notification of a request to alter coastal marshlands (under the provision of the Coastal Marshlands Protection Act, Georgia Laws, 1970, p. 939 and as amended), if required. Comments concerning this action should be submitted to the Marsh and Shore Management Section, Coastal Resources Division, Georgia Department of Natural Resources, 1 Conservation Way, Brunswick, Georgia 31523-8600 (Telephone 912-264-7218).

Georgia Coastal Management Program: Prior to the Savannah District Corps of Engineers making a final permit decision on this application, the project must be certified by the Georgia Department of Natural Resources, Coastal Resources Division, to be consistent with applicable provisions of the State of Georgia Coastal Management Program (15 CFR 930). Anyone wishing to comment on Coastal Management Program certification of this project should submit comments in writing within 30 days of the date of this notice to the Federal Consistency Coordinator, Coastal Management Program, Coastal Resources Division, Georgia Department of Natural Resources, One Conservation Way, Brunswick, Georgia 31523-8600 (Telephone 912-264-7218).

## **U.S. ARMY CORPS OF ENGINEERS**

The Savannah District must consider the purpose and the impacts of the applicant's proposed work, prior to a decision on issuance of a Department of the Army permit.

Cultural Resources: The applicant has submitted a Phase I cultural resource assessment that is currently under review by the Corps.

Essential Fish Habitat (EFH): This notice initiates the EFH consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. The applicant's proposal may result in the destruction or alteration of EFH utilized by various life stages of species comprising the shrimp, bluefish or snapper grouper management complexes. Our initial determination is that the proposed action would not have an individual or cumulatively substantial adverse impact on EFH or federally managed fisheries in the Atlantic Ocean. Our final determination relative to project impacts to EFH and the need for mitigation measures are subject to review by and coordination with the NMFS and the South Atlantic Fisheries Management Council.

Endangered Species: A preliminary review of the U.S. Fish and Wildlife Service (FWS) list of Endangered and Threatened Species (IPaC) indicates the following listed species may occur in the project area: Northern Long-eared bat (*Myotis septentrionalis*); West Indian manatee (*Trichechus manatus*); Eastern black rail (*Laterallus jamaicensis*); wood stork (*Mycteria americana*); Eastern indigo snake (*Drymarchon corais couperi*); gopher tortoise (*Gopherus polyphemus*); frosted flatwoods salamander (*Ambystoma cingulatum*); the Monarch butterfly (*Danaus plexippus*) and pondberry (*Lindera melissifolia*).

Further, a preliminary review of the National Marine Fisheries Service, ESA Section 7 Mapper indicates the following listed species may also occur in the project area: Green sea turtle (*Chelonia mydas*); Kemps Ridley sea turtle (*Lepidochelys kempii*); Loggerhead sea turtle (*Caretta caretta*); Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) and Shortnose sturgeon (*Acipenser brevirostrum*). The project site is also located within the boundary of the Atlantic sturgeon South Atlantic Unit 3 (SA3; Savannah River) designated critical habitat (DCH).

Pursuant to Section 7(c) of the Endangered Species Act of 1973, as amended (16 U.S.C. § 1531 et seq.), we request information from the U.S. Department of the Interior, Fish and Wildlife Service, the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service; or, any other interested party, on whether any species listed or proposed for listing may be present in the area.

Public Interest Review: The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors, which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and in general, the needs and welfare of the people.

Consideration of Public Comments: The Corps is soliciting comments from the public; federal, state, and local agencies and officials; Native American Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Application of Section 404(b)(1) Guidelines: The proposed activity involves the discharge of dredged or fill material into the waters of the United States. The Savannah District's evaluation of the impact of the activity on the public interest will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency, under the authority of Section 404(b) of the Clean Water Act.

Public Hearing: Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application for a Department of the Army permit. Requests for public hearings shall state, with particularity, the reasons for requesting a public hearing. The decision whether to hold a public hearing is at the discretion of the District Engineer, or his designated appointee, based on the need for additional substantial information necessary in evaluating the proposed project.

Section 408: The Corps is required to evaluate whether an activity also requires permission from the Corps pursuant to 33 U.S.C. 408 when it has the potential to "...take possession of or make use of for any purpose, or build upon, alter, deface, destroy, move, injure, obstruct by fastening vessels thereto or otherwise, or in any manner whatever impair the usefulness of..." a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a "USACE project"). The Corps is requesting any information on whether this project may so affect a USACE project. The decision on a Department of the Army permit application pursuant to Section 10 or Section 404 will not be rendered prior to the final determination regarding Section 408.

Comment Period: Anyone wishing to comment on this application for a Department of the Army permit should submit comments by email to [sarah.e.wise@usace.army.mil](mailto:sarah.e.wise@usace.army.mil). Alternatively, you may submit comments in writing to the Commander, U.S. Army Corps of Engineers, Savannah District, Attention: Mrs. Sarah Wise, 100 West Oglethorpe Avenue, Savannah, Georgia 31401, no later than 30 days from the date of this notice. Please refer to the applicant's name and the application number in your comments.

If you have any further questions concerning this matter, please contact Mrs. Sarah Wise, Lead Biologist, Coastal Branch at 912-652-5550 or by email at [sarah.e.wise@usace.army.mil](mailto:sarah.e.wise@usace.army.mil).

Enclosures

**Project Description and Supporting Documentation**  
**Savannah Container Terminal**  
**Chatham County, Georgia**

**I. INTRODUCTION:**

Georgia Ports Authority ("Applicant" or "GPA") is proposing the construction of a new deepwater container terminal on Hutchinson Island, Chatham County, Georgia. The project site is located on the north side of the Savannah River, west of U.S. Highway 17. Specifically, the center coordinates of the project site are latitude 32.09681°N and longitude -81.10229° W. Known as the Savannah Container Terminal (SCT), the project will provide an additional import/export facility for containerized cargo entering and leaving the Port of Savannah and will allow GPA to meet future demands for container volumes, to grow with the growing economy, and to accommodate the changing trends in the transportation and shipment of goods across the Southeast.

**Figure 1: Project Location Map**



**II. EXISTING SITE CONDITIONS:**

The project site is located on Hutchinson Island which is an approximately 2,000 acre developed island, seven miles long and roughly 1/2 mile wide. Much of the project site consists of old dredge material containment areas (DMCA's) that were used for dredging projects along the Savannah Harbor. The project site additionally contains several structures and man-made features including a barge dock on the northern half of the tract, a four-story modern office building, an inactive industrial facility, silos, several work docks, a railroad track, and other roads. The site is located along a heavily developed portion of the Savannah River with heavy industrial

facilities located up and down the river on the Savannah side of the river including GPA's Ocean Terminal (OT) directly opposite the project site. The site is bordered to the north by International Paper property which contains their large industrial treatment and sludge ponds. Heavy bank armoring is located on this site along portions of the river. South (downstream) of the subject site are several industrial construction yards, the Savannah Trade and Convention Center, and the Westin Golf and Spa Resort. Downstream properties, along with the project site, contain shoreline protection including concrete formwork liner, rip-rap/rubble, and sheetpile walls. Along the Back River side or northern side of Hutchinson Island are other developed properties including a residential/golf course community east of the project site.

**Figure 2: 2022 Aerial Photograph of Project Site**



Though much of the site is undeveloped, the highly disturbed and industrial land use of Hutchinson Island contributes to the background environmental condition of the property, and the low quality of the habitats on-site; however, habitats found throughout the project area are typical for Chatham County and the Georgia Coastal Plain. Based on the wetland delineation, the 503 acre survey area contains approximately 299 acres of upland, 127 acres of saltmarsh, 40.8 acres of intertidal/subtidal water bottoms, and 36.2 acres of freshwater wetland. Freshwater wetlands consist of isolated depressional pockets, freshwater marsh, and forested fringe wetlands adjacent to tidal marsh. Saltwater habitats consist of vegetated marsh, intertidal shoreline, rock/rip-rap area, and open water. Upland habitats have all been disturbed through previous and existing land uses, and vegetation is generally early successional and limited in biodiversity. Figure 3 below depicts the aquatic habitats found throughout the project site, and following are descriptions of each habitat type.

**Figure 3: Aquatic Habitats Found within the Project Site**



**A. Estuarine Waters:**

The Savannah River fronts the project on the south side, and the Back River borders the project's north side. This estuary habitat encompasses the open waters of the Savannah River along with the intertidal shoreline and vegetated saltmarsh adjacent to the Back River and internal feeder creeks/canals. The estuarine habitat can be broken down into the following categories:

Open Water

Much of the estuarine environment consists of the deep tidal waters of the Savannah River. This subtidal habitat, along with two small feeder creeks/ditches extending into the site, totals approximately 33.0 acres. The Savannah River at the project site ranges in width at mean low water (MLW) from approximately 810 feet to over 920 feet. The river is heavily utilized daily for the transport of goods by water borne vessels. Large container ships, bulk ships, barges, dredges, pilot boats, pleasure yachts, and personal/recreational watercraft use the river each day. To maintain international commerce, the 500-foot wide channel is continuously dredged by the U.S. Army Corps of Engineers (USACE) to maintain its permitted depth of -47 feet MLLW. Additionally, numerous berths and ship access channels along the federal shipping channel are routinely dredged to maintain adequate water depths which vary depending on the specific use. Approximately seven million cubic yards of sediments are removed each year from the federal navigation project alone in addition to the sediments dredged from each individual berth throughout the harbor. All of these land uses and ongoing activities in the harbor along with natural wind, currents, tides, and storms contribute to the ambient water quality and habitat conditions in the river.

The open water portion of the Savannah River at the location of the proposed project consists of murky and often turbulent water given the constant commerce activities and natural influences. Erosion along the shoreline from routine vessel traffic is on-going. The river bottom slopes down rather abruptly to the Federal channel depth of -47 feet MLLW, and the sediments are typically composed of fine silts, clays, and coarse sands. No submerged aquatic grass beds or oyster beds are located within this habitat type. The project proposes to deepen existing open water habitat to a depth of -50 feet MLLW (plus 2 feet of overdredge) for berth construction and to provide ship access between the proposed berths and the Federal Navigation Channel. The proposed depth will maintain access and berthing of large vessels during all tides and conditions.

#### Intertidal Flat

The intertidal zone at the project site includes both vegetated and non-vegetated habitats, but for the purposes of this document, the "intertidal zone" is limited to the Savannah River shoreline. The saltmarsh habitat is further defined as its own habitat below. The intertidal zone, including sandy shoreline, small marsh patches, and rock/rip-rap area at the SCT site is exposed daily at low tide and submerged at high tide with up to 7 feet of water on a normal tide and over 9.5 feet on spring tides. The intertidal flat habitat is the portion of the intertidal zone that is generally non-vegetated and consists of either a coarse sand or silt/clay substrate. Within this habitat are a variety of objects that have either washed ashore over the years including dredge pipelines, timbers, ropes, cables, hardhats, trash, wrack, and a variety of other objects lost in the river. This area also contains a variety of shells, rocks, and miscellaneous rubble. It provides foraging habitat for a variety of species but is subject to constant erosion and daily disturbance from passing ships, current velocity, and runoff/seepage from the upland. The entire intertidal zone ranges from 60 to 100 feet wide, but averages 65 to 70 feet wide in most places. The intertidal flat habitat (non-vegetated shoreline) totals approximately 7.0 acres. Stabilized areas of the intertidal zone, covered with rock, rip-rap, and other rubble totals an additional 0.8 acre.

#### Saltmarsh

Vegetated saltmarsh habitat can be found on the project site throughout small patches in the intertidal zone along the Savannah River, along two tidal canals extending through the middle/downstream portion of the site, and along the Back River. In all, the vegetated saltmarsh habitat is estimated to cover approximately 127 acres of the project site. Within the Savannah River intertidal marsh patchwork, the small areas of marsh generally consist of smooth cordgrass (*Spartina alterniflora*) and Palmer's amaranth (*Amaranthus palmeri*). Areas along the tidal creeks are typically dominated by big cordgrass (*Spartina cynosuroides*) with salt grass (*Distichlis spicata*) and false willow (*Baccharis halimifolia*) along the marsh edge. Along the Back River, vegetated marsh is typically composed of big cordgrass, spike rush (*Juncus roemerianus*), and smooth cordgrass. Hydrology and soils within this habitat are typical for saltmarsh and brackish marsh habitats in coastal Georgia. Soils consist of heavy silty loam and clay soils with gleyed and reduced matrices as well as low chroma and value. Hydrology indicators include oxidized rhizospheres, saturation, regular inundation, drainage patterns, and water marks.

#### **B. Freshwater Marsh:**

Throughout the project site, adjacent to the saltmarsh, are areas of freshwater marsh located above the high tide line. This habitat only gets tidal exchange during the highest of spring tides, but hydrology is influenced by the tidal head in the adjacent waters/saltmarsh and by freshwater from precipitation and groundwater. This habitat is dominated by cattail (*Typha latifolia* and *Typha angustifolia*), common reed (*Phragmites australis*), dock (*Rumex spp.*), false willow, wax myrtle (*Myrica cerifera*), red cedar (*Juniperus virginiana*), three-cornered sedge (*Bolboschoenus robustus*), and big cordgrass.

**C. Freshwater Forested Wetland:**

Freshwater forested wetland within the project area occurs both in isolated depressional pockets internal to the property and in depressional fringes along the marshline throughout the site. This habitat is typically forested with Chinese tallow (*Sapium sebiferum*), sugarberry (*Celtis laevigata*), sweetgum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), black willow (*Salix nigra*), red cedar (*Juniperus virginiana*), buttonbush (*Cephalanthus occidentalis*), privet (*Ligustrum sinense*), and wax myrtle (*Myrica cerifera*). This habitat is relatively natural along the marsh edge, but inner pockets have been affected or even created by nearby land use such as dredge disposal, roadway/bridge construction, etc. Impounded areas on the project's interior contain obligate species such as black willow (*Salix nigra*), soft rush (*Juncus effusus*), and buttonbush. Generally, the value and functionality of this habitat throughout the site is low.

**D. Mixed Hardwood Upland:**

The mixed hardwood upland habitat type varies in age throughout the project site with some areas of dense, early successional vegetation and some areas with mature trees. This habitat can be found along the majority of the Savannah River frontage and throughout the remainder of the property. Depending on the amount of recent activities and successional age, the quality and condition of this habitat varies. Chinaberry (*Melia azedarach*) is the most prevalent species in the overstory, but some areas contain more oak species including live oak (*Quercus virginiana*) and water oak (*Quercus nigra*). Other areas along the river are dominated by black cherry (*Prunus serotina*), Chinese tallow, and hackberry (*Celtis occidentalis*). Other understory and/or less prevalent species in this habitat include red maple, sweetgum, and Carolina laurel cherry (*Prunus caroliniana*).

**E. Dredge Disposal Areas:**

The project site contains at least three DMCA's totaling approximately 122 acres (see Figure 3 above). The upstream DMCA has been used within the last several years and is permitted for use in at least two other dredging projects. The vegetation is early successional and low in diversity. The ground is comprised of compacted and barren dried silt. The most prevalent species is salt cedar (*Tamarix spp.*). Other vegetation includes false willow, sesbania (*Sesbania spp.*), pokeweed (*Phytolacca americana*), dog fennel (*Eupatorium capillifolium*), Chinese tallow, and wax myrtle. This habitat is highly disturbed by the current and previous dredging events. The two downstream DMCA's have not been used in approximately 15-20 years and contain a mixture of openings, dikes, and depressions. Within forested areas, the sparse overstory vegetation is dominated by chinaberry, sycamore (*Platanus occidentalis*), Chinese tallow, and sugarberry. The understory consists of blackberry, ragweed (*Ambrosia artemisifolia*), and false willow. Open areas and old dikes are generally thick and dominated by lantana (*Lantana camera*), blackberry, sesbania, Johnson grass (*Sorghum halepense*), and lemon balm (*Melissa officianales*) with scattered white mulberry (*Morus alba*), chinaberry, and Chinese tallow. The maintained roads and dikes around the DMCA's are vegetated with bahia grass (*Paspalum notatum*), Brazilian verbane (*Verbena bonariensis*), ragweed, blackberry, Johnson grass, dog fennel, and bitter sneezeweed (*Helenium amaram*).

**III. DESCRIPTION OF EXISTING PORT OPERATIONS:**

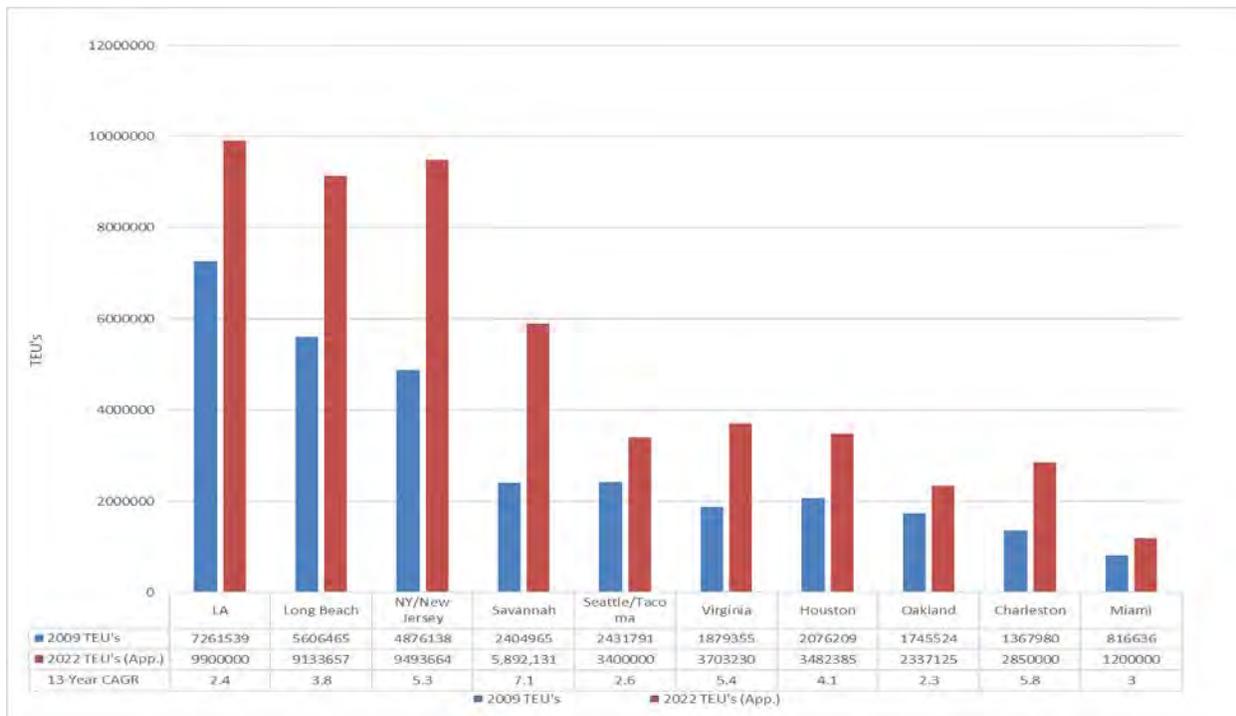
The GPA was created by the Georgia legislature in 1945 to foster commerce, both foreign and domestic, and encourage economic growth. Today, the GPA operations, together with private sector operations, account for more than 561,000 jobs statewide, \$140 billion dollars in revenue, and income exceeding \$33 billion annually. The GPA operates two major deepwater seaports on the coast of Georgia in Savannah and Brunswick consisting of six terminals in addition to inland facilities in Bainbridge and Chatsworth. A variety of cargos move through the ports each day from containerized and ro-ro (wheeled) cargo to liquid bulk and breakbulk cargos. There are three terminals in Brunswick and three facilities in Savannah. Though all cargo sectors are vital to Georgia's ports, it is the containerized cargo which makes up the largest sector and is in highest demand. Containerized cargo moves through OT and the Garden City Terminal (GCT) in Savannah. The GCT has become GPA's dedicated container port and has grown to the third busiest container port complex in the United States and

America’s largest and busiest single-terminal container port. Both loaded and empty containers arrive and depart each day from GCT and OT by different modes of transportation including ship, truck, rail, community, and internal strip moves. The port is serviced by the Savannah Federal Navigation Channel which is maintained at a depth of -47 feet MLLW to provide access for today’s large ocean-going vessels. From the landside, access to two interstates is vital to truck transportation, and additional roadway improvements are being made to make truck traffic safer and more efficient. Rail moves have also increased from both of GPA’s Class I rail providers (Norfolk Southern and CSX) due to the completion of the Mason Megarail Project at GCT which provides access for unit trains from the nation’s interior. Whole-sale wharf and backlands improvements were recently permitted at OT which, upon completion, will provide additional berths for the largest container vessels that can call on Savannah. All of these regional infrastructure assets along with highly efficient and effective operations on-terminal have led to the Port of Savannah’s success over the past decades and have made the GPA the #1 export port in the United States.

**IV. PROJECT NEED:**

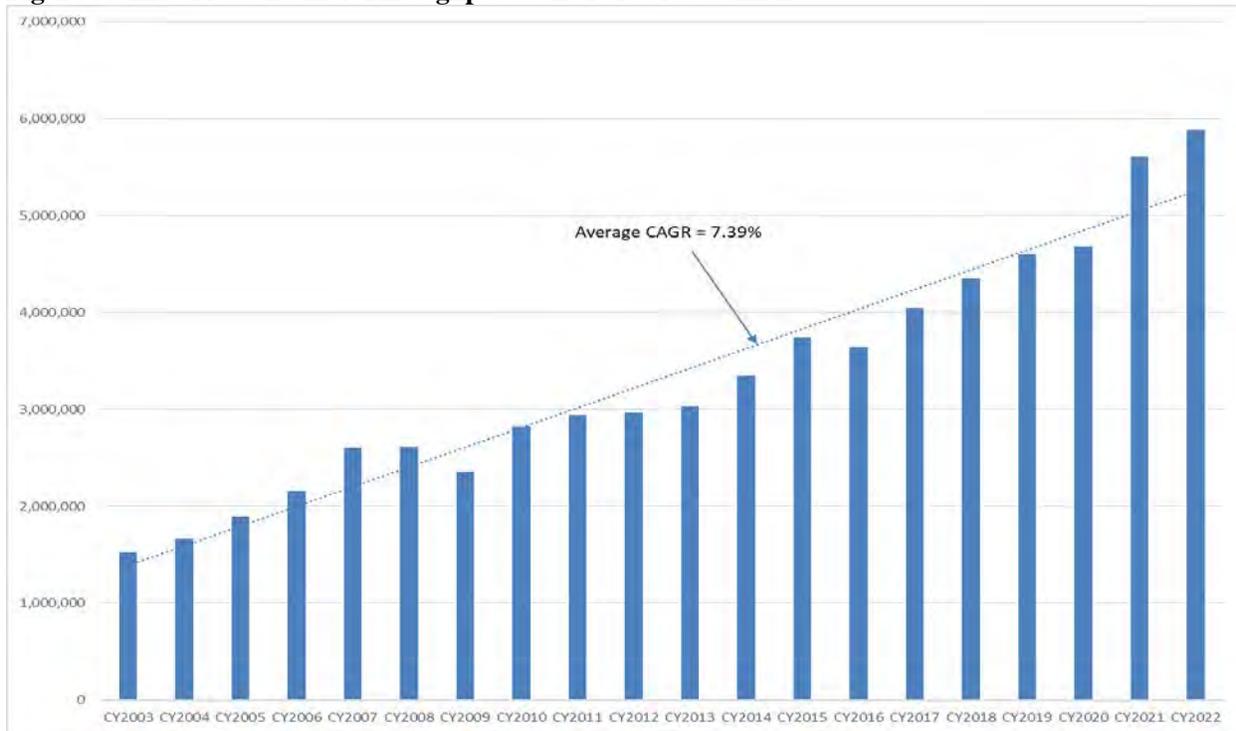
According to data from the American Association of Port Authorities included in a GPA publication titled “Delivering Creative Solutions,” the Port of Savannah has grown at a higher rate over the last decade than any other major container port in the US. In fact, container throughput has grown every year since 2003 with the exception of the recession year of 2009 and a minor correction in 2016 representing a compound annual growth rate (CAGR) of 7.39% per year. Today, the Port of Savannah is one of the busiest ports in the nation ranking behind only the Ports of Los Angeles, Long Beach, and New York/New Jersey in TEU throughput.

**Figure 4: Comparison of the Top-Ten Ports in the U.S**



Source: AAPA; throughput excluding domestic (via GPA “Delivering Creative Solutions” publication); Supply Chain Drive (Top 12 U S Container Ports as of 2022, ranked by Annual TEU’s)

**Figure 5: Historic Container Throughput at the Port of Savannah**



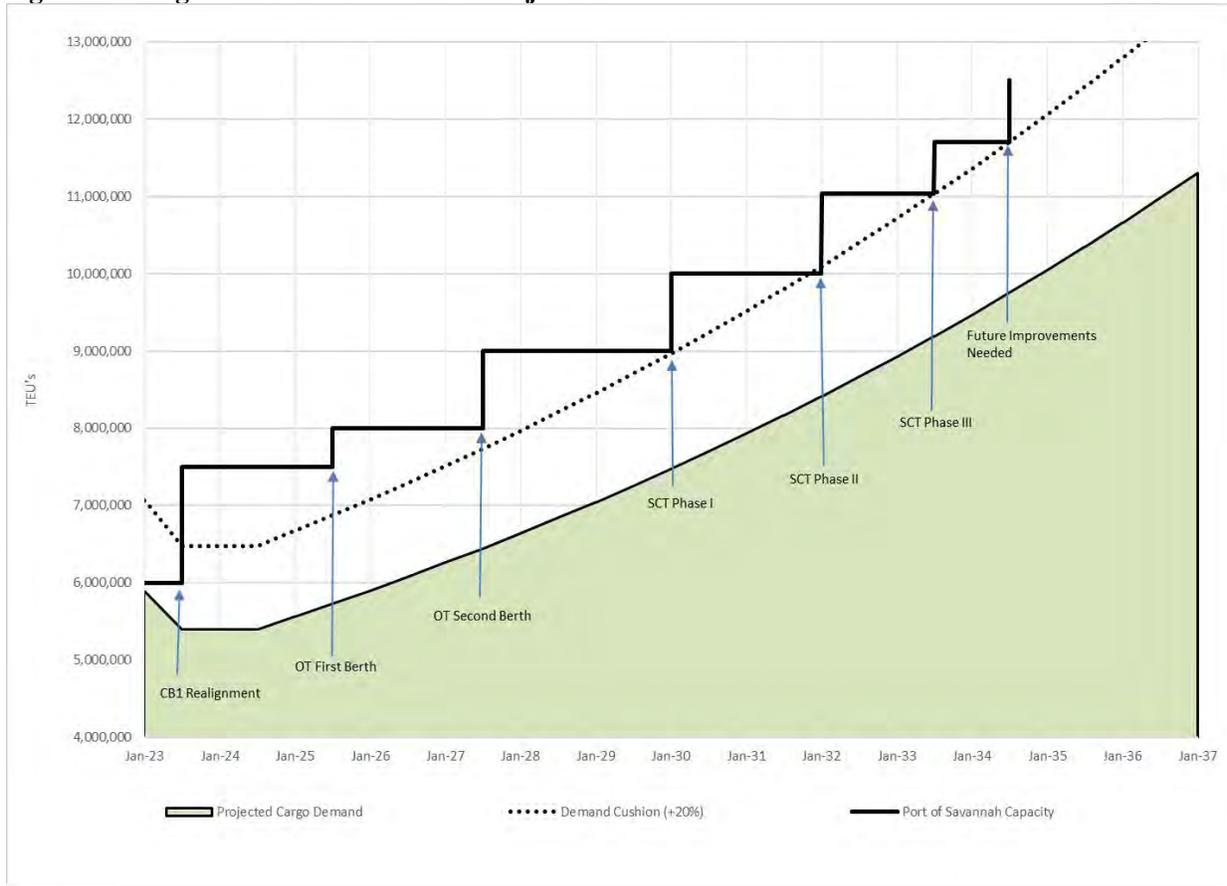
Source: Internal Data from GPA Trade Development

This consistent growth over the past two decades can be attributed to many factors including the GPA’s willingness to improve facilities and develop new property to accommodate customer needs, the support of local, state, and federal partners to provide the necessary off-site infrastructure, and a variety of national and global market factors including shifts from west coast to east coast ports, consumer patterns, population shifts, etc. Another vital factor in Savannah’s growth has been GPA’s business model of maintaining the port’s capacity 20% ahead of the projected demand. Maintaining a 20% cushion provides operational flexibility on-terminal making everything run efficiently through the peaks and valleys of the shipping season. It allows components of the terminal to be temporarily taken out of commission while repairs/improvements are made. It allows vessels to discharge cargo and get back to sea quickly. It allows trucks to access stored containers and leave with them for distribution in a timely manner. It provides a safer environment for dock workers. While it is acceptable for throughput demand to encroach into the 20% cushion, prolonged or significant encroachments can cause inefficiency issues including longer wait times for ships, trucks, and trains, slower movement of goods, traffic congestion on and off-terminal, and unsafe working conditions.

Until recently, GPA has been successful in maintaining the 20% above-demand cushion, but above average growth and longer dwell times over the past three to four years has put container throughput very close to the port’s 6 million TEU capacity. After seeing 26% growth from 2020 to 2022, steady growth in the range of 6% annually is expected over the long term based on current shipping trends, consumer trends, and other market factors. Over the next several years, operational improvements projects at GPA’s existing terminals such as the realignment of CB1 (completed in July 2023) and OT Improvements (July 2027) will restore the 20% cushion that has contributed to GPA’s success over the years. These projects will increase overall capacity to around 9 million TEU's. Based on expected growth trends, the Port of Savannah is expected to approach 9 million TEU’s of throughput in 2033, but will surpass the 20% above-demand threshold in 2030. Therefore, the CB1 project and OT Improvements should satisfy the need for capacity until 2030. However, there is a need to identify a

solution for the next five year planning period starting in 2030. The development of SCT was the solution that was chosen after an evaluation of all potential alternatives (see Section VII).

**Figure 6: Long Term Port of Savannah Projections**



Source: GPA Trade Development;

**V. PROJECT PURPOSE:**

Short-term solutions to capacity shortages and inefficiencies are being satisfied through various improvements at GCT and OT, and other improvements will be implemented at these facilities where possible to ensure the Port of Savannah is able to always accommodate customer needs and provide the best facilities possible; however, the terminals are bound by existing development and infrastructure, and major capacity expansion opportunities are limited at the existing facilities.

The goal of the proposed project is to increase the Port of Savannah capacity to stay ahead of the 20% operational demand cushion for GPA’s 2030 – 2035 planning period. As outlined above, capacity will be satisfied from 2023 to 2030 by the completion of CB1 and the OT expansion project (9M TEU total capacity); however, the cushion would be exceeded starting in 2030. Based on current projections, it is expected that the 20% above-demand cushion will approach 11.7 million TEU’s in 2034 and may exceed this amount by the start of 2035. As mentioned, it is acceptable to encroach into the cushion temporarily without significant disruptions to service. Therefore, the project needs to add a minimum of 2.7 million TEU’s to meet the project goals. As demonstrated in detail below (see Section VII), the development of a new terminal, though not immediately needed, will satisfy the future need for capacity improvements. The applicant’s stated purpose for this project is to **build a new container terminal serving the Port of Savannah that can accommodate projected throughput growth for containerized cargo from 2030 – 2035**. According to the Section 404(b)(1) Guidelines of the Clean Water Act, the U.S Army Corps of Engineers must also define the basic and overall purpose of the project, taking into consideration the applicant’s purpose statement. The basic purpose must be known to determine if a project is

water dependent. The basic purpose for the proposed project is to construct a deepwater container terminal which is a water dependent activity. The overall project purpose is used to evaluate practicable alternatives under the Section 404(b)(1) Guidelines. The overall project purpose is to construct a deepwater container terminal to accommodate the projected growth of containerized cargo at the Port of Savannah from 2030 to 2035.

## **VI. SITE PLAN DESCRIPTION & SCHEDULE:**

The project site is located immediately adjacent to the Federal Navigation Channel and will provide deepwater ship access through dredging the existing waterway. The applicant has owned a portion of the property for years but recently acquired several neighboring parcels to match landside capacity with the proposed waterside capacity in order to maximize the project's container throughput potential.

The preferred site plan represents the terminal's foreseeable masterplan resulting in a fully operational and sustainable container port with necessary support services. Landside access to the terminal will come from Wayne Shackleford Parkway via a new truck gate east of US Highway 17. On the far downstream side of the site will be the truck gate, TWIC/vendor gate, worker check-in station, privately-owned vehicle (POV) parking, maintenance building, equipment storage yard, and administration building, among other support services. Two internal roads will connect the gate/support services area on the east side of Highway 17 with the berths and container yards located on the upstream end of the site. The two internal roads will be bridged over tidal saltmarsh area and feeder creeks to minimize impacts. Siting the container operations upriver of the Talmadge Bridge will reduce the visual and noise effects to the City of Savannah's Riverfront Plaza. Three deepwater berths (4,800 linear feet total) will be constructed on the Savannah River and will be designed to accommodate container vessels. It is expected the proposed project will be developed in three phases as described below:

- Phase 1: Development of all berths and wharves  
Development of gates, infrastructure, parking, and other support services  
Development of Berth 3 container yard
- Phase 2: Development of Berth 2 container yard  
Development of the first phase of the intermodal yard
- Phase 3: Development of Berth 1 container yard  
Development of the second (final) phase of the intermodal yard

During Phase 1, in-water dredging would be completed and construction of the wharf would start at the upstream end of the project site (Berth 3) and progress downstream toward the Talmadge Bridge (Berth 1). The development plan for the wharf includes the construction of all waterside infrastructure during Phase 1. Also included in Phase 1 is the construction of all terminal support areas (e.g., gates, empty storage, maintenance & employee parking), which will be located downstream of the Talmadge Bridge. The container yard located behind the wharf (upriver from the Talmadge Bridge) will be developed in approximate thirds, with the first portion built in the backlands behind Berth 3 during Phase 1. The second and third portions of the container yard will be constructed behind Berth 2 during Phase 2, and behind Berth 1 during Phase 3. Also included in Phases 2 and 3 will be construction of the intermodal yard.

To provide the necessary channel clearance for container vessels utilizing the terminal, the design of the facility requires dredging the existing shoreline and excavating adjacent upland. Berth construction will require a staged removal of an approximately 150-foot wide strip of upland across the length of the wharf (approximately 4,800 linear feet). The first stage will be completed by mechanically excavating the uplands. It is expected that excavated soil will be placed in the backlands and utilized to surcharge the backlands, or if necessary, disposed of off-site at an appropriate permitted landfill or disposal area. The berth's king pile wall will then be installed along the full length of the wharf. Upland excavation on the river side of the wall will continue to the Mean High Water elevation (3.08 NAVD88). The relieving platform piles will be installed next (in upland areas) for all three berths. Once completed, the area between the king pile wall and the Federal Navigation Channel will be hydraulically or clamshell dredged to a depth of -50 feet MLLW with 2 feet of allowable overdredge. This

dredged area will tie into the Federal Channel at the approved SHEP depth. The maintained depth of -50 feet MLLW was designed to accommodate the design draft of 14K TEU vessels (+/- 48') and will allow these (and larger) vessels to access the berths at all tidal stages. Dredged sediments will be hydraulically pumped to either an on-site DMCA or DMCA Cell 12, 13A, or 13B. The specific DMCA will be determined closer in time to the actual dredging activities based on available containment capacities and dredged material properties. Disposal activities will be coordinated with USACE and Georgia Department of Transportation. With dredging complete, the remaining elements of the wharves (Berths 1, 2, and 3) and the container yard behind Berth 3 will be constructed. For example, concrete piles would be placed in front of the bulkhead to support the wharf and crane beam, and piles would be placed behind the bulkhead to support the relieving platform and the associated structural concrete work.

Because all waterside work would be completed during Phase 1, the backlands (container storage yard) will be developed as required by demand. It is expected, that Phase 2 backlands will need to be operational within two years of Phase 1 completion, and Phase 3 backlands will need to be operational within two years of Phase 2 completion. Due to the phased development schedule, the applicant is requesting a 10-year permit.

Overall, a total of 2,522,500 cubic yards of material will be dredged from existing jurisdictional waters (26.96 acres of open water, 8.63 acres of intertidal frontage, and 0.1 acre of freshwater wetland) including two feet of allowable overdredge. Effects would occur as a conversion of habitat from intertidal to deep open water. As a result of the proposed project, an estimated 5.43 acres of additional open water area will be created from excavating uplands which will serve as habitat for aquatic organisms. Based on sedimentation rates in the area, the applicant estimates that 250,000 cubic yards of annual maintenance dredging will be required in the future, but this estimate will be confirmed by a sedimentation model. An estimated 42 silt suspension units will be installed on guide piles along the wharf face every 114 (+/-) feet to minimize the need for future maintenance dredging. The exact number will be determined during final design of the project. Maintenance dredging will be conducted by hydraulic cutterhead, clamshell, or agitation dredging, similar to the GCT and OT facilities.

For landside development, the project requires impacts to 26.58 acres of freshwater wetland (including potentially non-jurisdictional wetlands following *Sackett v. EPA* guidance), 5.59 acres of saltmarsh, and 0.44 acre of tidal canal in order to provide enough yard capacity and support services to meet the Purpose and Need for the project while avoiding impacts to 9.52 acres of freshwater wetland and 119.6 acres of saltmarsh. The site plan utilizes bridging for internal road crossings and gabion walls along fill slopes to minimize impacts. Through a comprehensive on-site alternatives analysis effort, the applicant has reduced the overall footprint of the project to the maximum extent practicable with emphasis on avoiding the contiguous tidal wetlands within and adjacent to the project site. Based on all potential alternatives, the preferred site plan satisfies the project purpose and minimizes impacts to the greatest extent practicable. For this reason, it is considered the Least Environmentally Damaging Practicable Alternative (LEDPA).

**Table 1: Required Jurisdictional Impacts**

Impact Type	Habitat	Purpose	Acreage
Dredging	Intertidal Flat	Berth	6.01
Dredging	Rock/Rip-Rap/Rubble	Berth	0.76
Dredging	Saltmarsh	Berth	1.86
Dredging	Freshwater Wetland	Berth	0.10
<b>Total Dredging Impact in Jurisdiction</b> (excluding 26.96 ac of existing open water dredging)			<b>8.73</b>
Fill	Freshwater Wetland	Landside Facilities	26.58
Fill	Saltmarsh	Landside Facilities	5.59
Fill/Culvert	Tidal Canal	Roads/Truck Gate	0.44
<b>Total Fill in Jurisdiction</b>			<b>32.61</b>

## **VII. ALTERNATIVES ANALYSIS:**

The Section 404 (b)(1) Guidelines provide that the discharge of dredged or fill material into waters of the United States will not be permitted “if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.” 40 C.F.R. (230.10(a). The guidelines further provide that “[a]n alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.”

Considering factors such as site location, availability, site access, existing site permit limitations, wetland area, and a variety of economic concerns, the applicant evaluated four alternatives including the no-action alternative, GCT expansion, OT expansion, and new terminal development. For the new terminal concept, four potential sites were evaluated including the applicant’s preferred site. The on-site alternatives evaluation included four alternatives including the applicant’s preferred site plan. Through this process, the applicant chose the practicable alternative with the least amount of environmental impacts while still satisfying the purpose and need of the project. A detailed discussion of each off-site and on-site alternative is outlined in the following sections.

### **A. Alternatives Sites Evaluation:**

The port-planning process to satisfy the need for additional container capacity in Savannah started with evaluating all potential options to expand the port. Those included a variety of different ideas from the design team and the applicant that were analyzed over several years. The goal of the project is to provide additional container capacity which must be achieved through additional berths and landside support facilities. Construction of a new terminal or expansion of a terminal is, by definition, water dependent. Therefore, any alternative for the construction of the berths would require dredging of the shoreline and would include Section 10 impacts to tidal waters. The backlands portion of the project would not be considered water dependent. A variety of alternatives were considered to satisfy the project purpose and meet the need for additional container throughput capacity at the Port of Savannah.

#### Alternative 1 - No Action Alternative

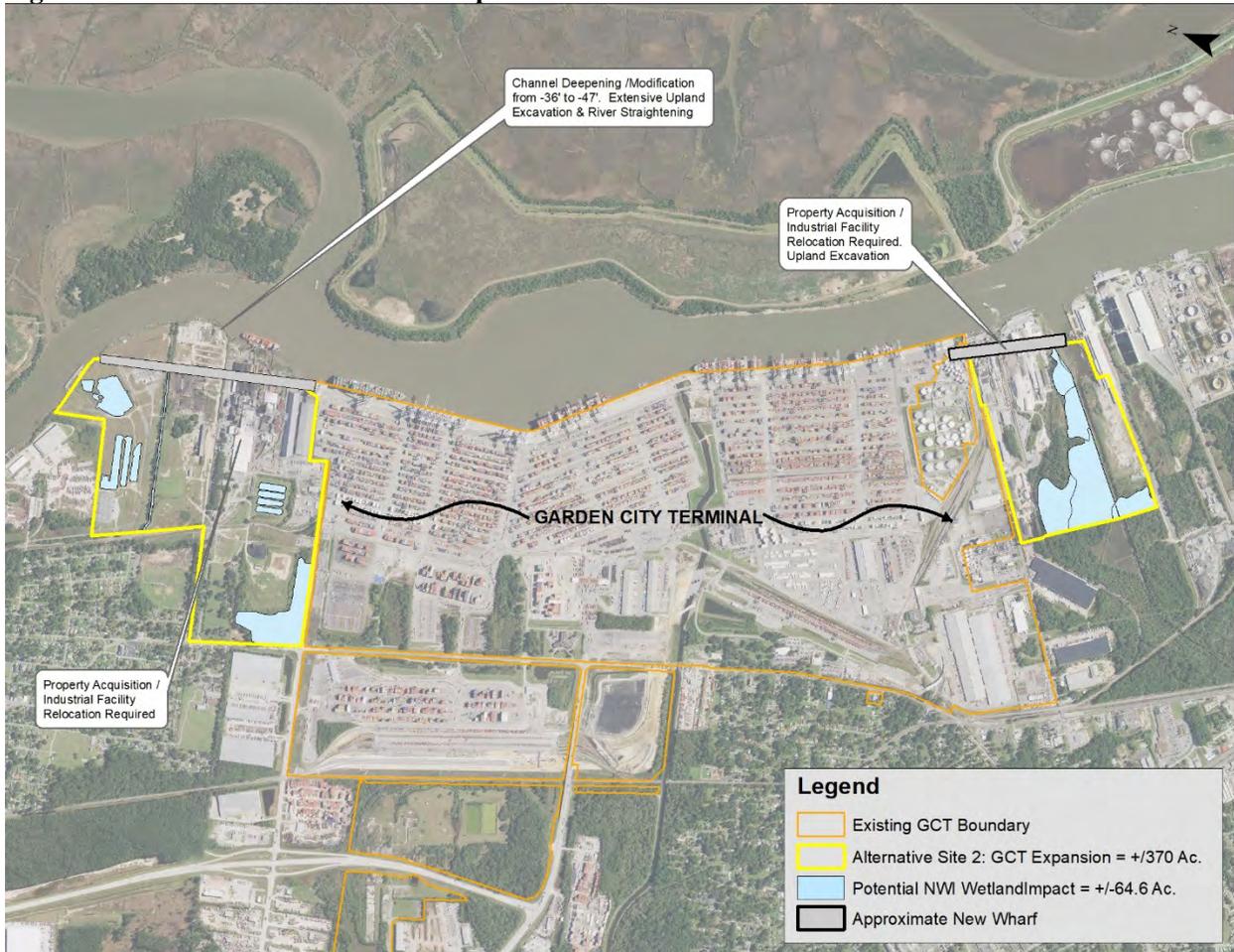
The no-action alternative would preclude the possibility of site development and dredging for berth construction. This alternative would result in no increase in throughput capacity at the Port of Savannah, and capacity would stay at 9M TEU’s (after scheduled improvements at OT and GCT). Based on the current growth projections, it is estimated that the port would surpass the 20% cushion in 2030 at which time operational inefficiencies would be expected. Demand would surpass actual capacity by 2033. Therefore, no action on the part of the applicant or a no-permit-issued decision from the USACE (e.g. providing no additional facilities to accommodate future container growth) would bring growth at the Port of Savannah and throughout the greater Savannah-Chatham County area to a halt in the future and could eventually lead to the loss of jobs and other detrimental impacts to the local, state, and national economies. As container volumes grow in the years to come, shipping lines shift to larger vessels, and more goods are imported and exported through the Southeastern United States, if Savannah does not keep up, deterioration of service will occur, the existing facilities will not be able to provide adequate capacity to suit the needs of its customers, and business will be lost. This degradation in the Port of Savannah, which has been the central economic growth force throughout the region, will severely impact the public. Even though this alternative avoids all aquatic resource impacts, it has a great and wide-reaching detrimental impact on the public through negative economic growth, loss of jobs, and loss of tax revenues. Because this alternative does not satisfy the project purpose and need and is averse to the public interest, it was discarded from further consideration.

#### Alternative 2: Expanding GCT

It is preferable that GCT could be expanded to accommodate the growing need for container throughput in Savannah, but expansion to meet the project purpose (enough capacity to satisfy the need from 2030 to 2035 or 2.7M TEUs) would require construction of three new berths and development of a corresponding acreage of backlands (typically, 1 berth = 0.95M TEUs). The most feasible solution for this alternative would be to construct two berths upstream and one berth downstream of the terminal.

Upstream expansion requires acquisition and relocation of several existing heavy industrial manufacturing facilities as well as a Georgia Power substation.

**Figure 7: Alternative 2 Potential Concept**



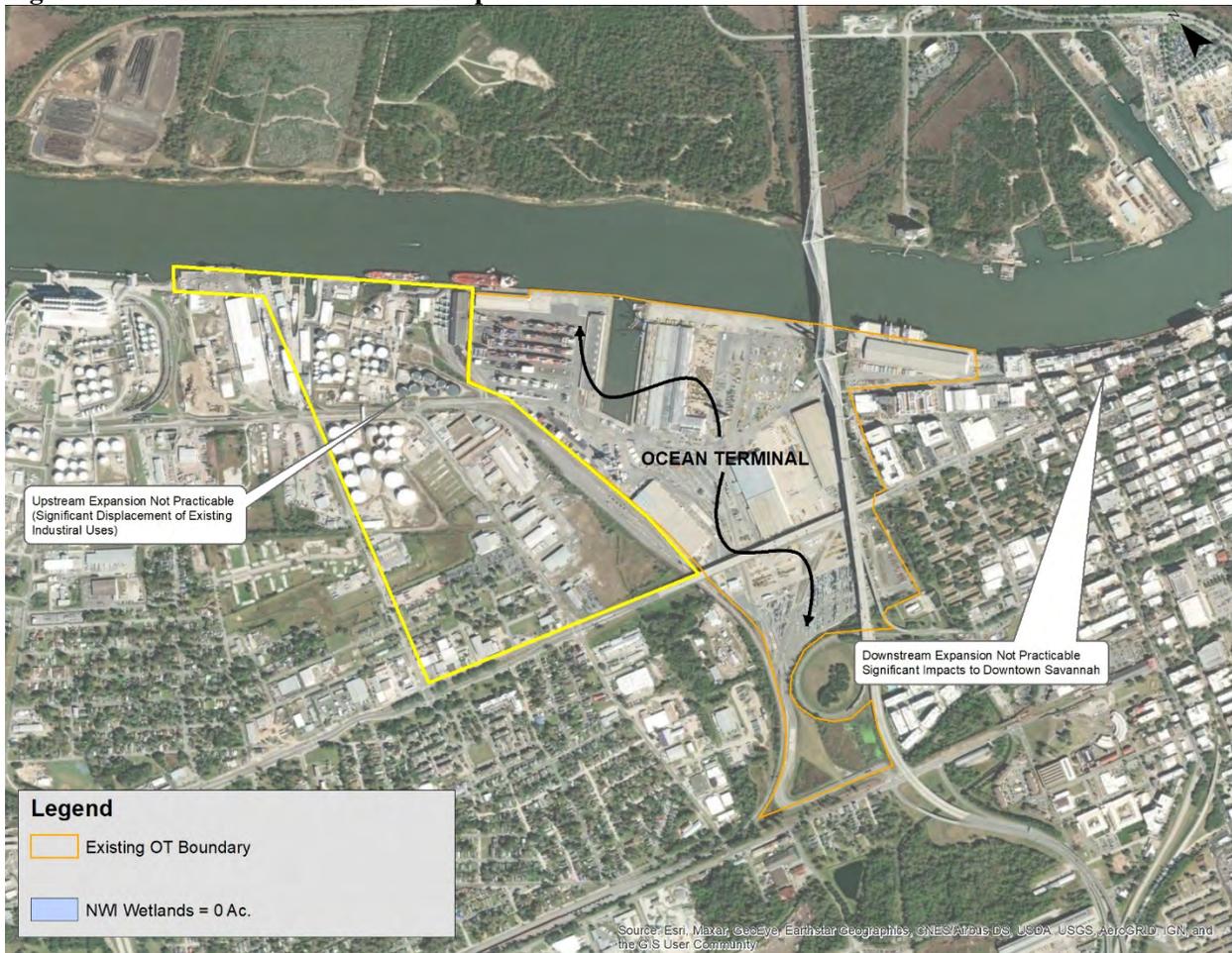
Assuming these properties could be acquired, extensive upland excavation (+/-34 acres) and river channel re-shaping would be necessary to construct the minimum 3,200' of berth space (typically, 1 berth = 1,600'). Deepwater access would require a major modification to nearly 4,300 feet of Federal channel including deepening the existing channel from its authorized depths (-30' MLLW and -36' MLLW) to -47' MLLW and straightening/relocating the channel/river to access the new berths. Such modifications could lead to water quality and protected species impact concerns. On the downstream side of GCT, construction of a new 1,600-foot long wharf section in-line with the proposed CB1 would likely displace Vopak, GAF, and National Gypsum – all heavy industrial facilities. Additionally, the downstream berth would require property acquisition from Norfolk Southern and could disrupt waterside operations at Colonial Oil's downstream kaolin terminal. Based on the Chatham County NWI, a large tidal/brackish/freshwater wetland system extends through the downstream expansion area, and there is an existing Chatham County drainage easement for a stormwater canal outfall to the Savannah River. Based on the NWI, it is estimated that total wetland impacts, including tidal wetland, associated with upstream and downstream berth expansions and container yard construction are 64.6 acres (not including intertidal, shallow water, and open water dredging impacts for the berths). Intertidal dredging would be similar to the preferred alternative, but extensive upland excavation, channel deepening and extension, and wetland impacts set this alternative apart from the preferred alternative. Relocation of the existing upstream and downstream industrial facilities would also result in additional cumulative

impacts as each facility requires a deepwater wharf and an adequate acreage of land capable of supporting the upland facilities. For this alternative, a minimum of three new deepwater commercial docks, with potential dredging impacts, would be necessary for the relocated facilities. The overall environmental impacts associated with this alternative, including the direct impacts associated with upstream and downstream expansion and modification of the Federal channel, wetland and open water fill, and the cumulative impacts associated with relocation of adjacent landowners would be greater than the preferred alternative. It was therefore concluded that Alternative 2 is not the LEDPA for the project.

Alternative 3: OT Expansion

OT is a smaller facility than GCT and is surrounded by commercial, residential, and public development/infrastructure. OT was recently permitted for a major rehabilitation within its existing footprint to increase container capacity at the Port of Savannah including wharf relocation/expansion and backlands improvements. Further expansion of OT downstream would impact the City of Savannah's Riverfront Plaza and is considered contrary to the public interest. Upstream expansion would encroach into many heavy industrial users including Colonial Oil and its subsidiaries. Additionally, the backlands acreage to support a large container terminal is not present behind the berths. Landward expansion would displace multiple commercial and industrial businesses and public roadways in addition to several disadvantaged (Environmental Justice) communities in the area. While some further improvements could be made at OT over time to improve overall Port of Savannah container capacity, large-scale expansion is not practicable to satisfy the project purpose and need.

**Figure 8: Alternative 3 Potential Concept**



#### Alternatives 4 - 7: New Terminal

Recognizing the challenges and limitations associated with expanding the existing GCT and OT, the applicant was required to consider developing a new terminal on the Savannah River. While improvements and potential future expansions at GCT and OT are certainly possible to further enhance overall operations and capacity, wide scale berth expansions at the existing facilities to satisfy the project purpose and need are not feasible at this time. For this reason, GPA initiated a search for a new terminal site that could be developed to satisfy the need.

#### Alternative Sites Search Criteria:

The search for a new terminal site was defined based on the following criteria.

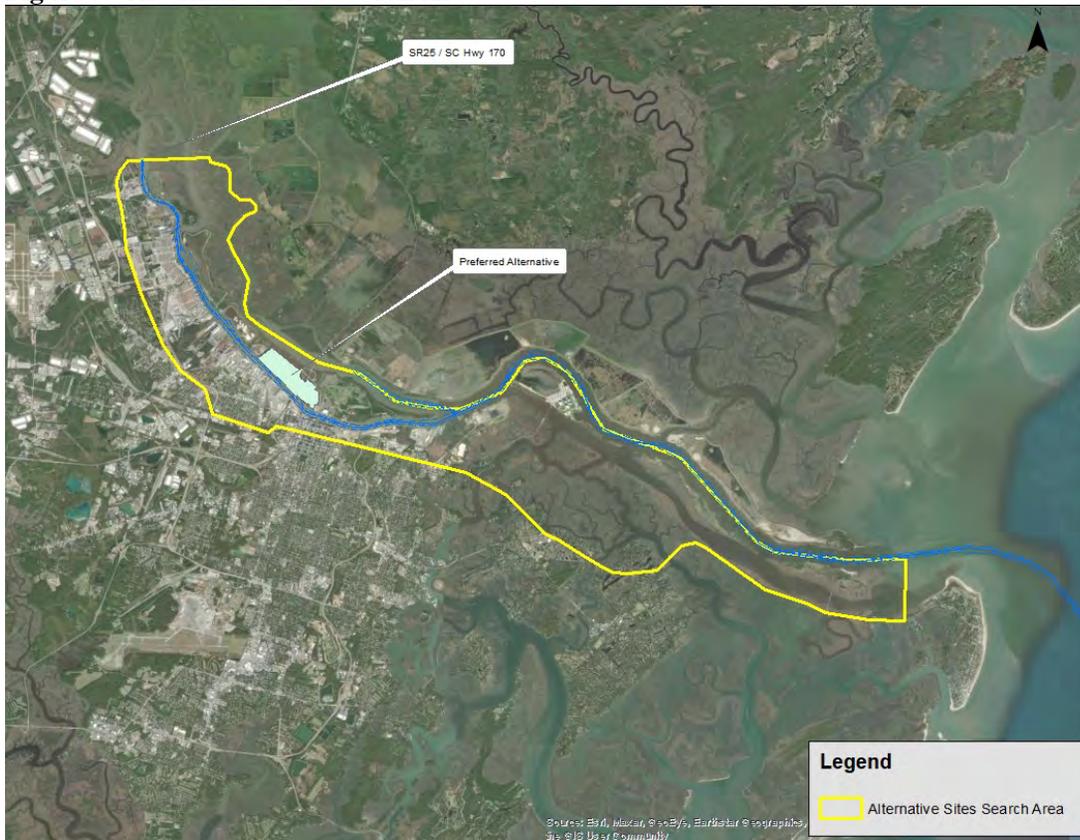
##### Location

- A suitable site must be located within the jurisdictional limits of Georgia. The GPA, as an instrument of the State of Georgia, cannot independently operate a facility in the State of South Carolina. Therefore, alternative sites in South Carolina, while they may be feasible, are not available for sole use by the GPA and are considered not practicable for the proposed project. This includes the Jasper Ocean Terminal (JOT) site.
- Within the State of Georgia, a suitable site must be located immediately adjacent to the Savannah Harbor. The proposed project is necessary to support growth in containerized trade, and the Savannah Harbor is the only harbor deep enough in Georgia to support deep-draft container vessels. The Brunswick Harbor is used by bulk and ro-ro ships primarily and is only maintained at a depth of -36 feet which cannot accommodate modern container vessels.
- On the Savannah Harbor, only sites between the ocean and GA Highway 25 (Houlihan Bridge) were considered. Sites located upstream of GA Highway 25 were not considered due to interference with the bridge, impacts to the Savannah National Wildlife Refuge, and impacts to known protected species and critical habitat (shortnose sturgeon). Deepening and extending the Federal channel could result in substantial environmental impacts. Also, locating a new terminal so far upstream results in longer steam times for vessels and is not as efficient as a container terminal located closer to the ocean.

##### Size

- As mentioned previously, it is expected that the port will have enough capacity to accommodate volumes until 2030. A minimum of 2.7 million TEU's of additional capacity will be needed to satisfy five years of growth starting in 2030. While encroachment into the 20% cushion may be experienced in 2034-2035, this is acceptable, temporarily. Based on the typical North American terminal operation, one acre of land equates to approximately 9,000 – 11,500 TEU's of capacity. Assuming longer dwell times along with the need for more empty container storage, GPA estimated a project size of 300 acres is the minimum to support the project purpose ( $2.7\text{M TEUs} / 9,000 = 300 \text{ Ac}$ ).
- A suitable site must also have enough river frontage to support at least three berths capable of simultaneously handling three 14,000 TEU or larger vessels. These vessels can be 1,300 feet long, and a 1,600-foot long wharf is needed to moor the vessel and maintain adequate clear distance upstream and downstream. Therefore, a minimum of 4,800' contiguous feet of river frontage is required for the project.

**Figure 9: Alternative Sites Search Area**



Based on the search criteria listed above, suitable terminal locations at the Port of Savannah, between the ocean and Houlihan Bridge, are limited. Sites of suitable size that could support multiple deepwater berths are rare, and much of the waterfront is already developed with existing waterside facilities. Alternatives in South Carolina such as the JOT site were discarded from further evaluation as mentioned above. Regardless of the challenges, GPA committed to identify the best alternative to ensure the chosen alternative minimized environmental impacts to the greatest extent practicable. Below is a description of each site considered by the applicant, and Figure 10 depicts the location of each site.

Alternative 4 – Fig Island:

The Fig Island site is located downstream of the Houlihan Bridge but is only 150 acres and does not meet the minimum size requirement. Additionally, it only has enough available river frontage to accommodate two deepwater berths (+/-4,000'). This alternative would therefore only be capable of handling approximately half of the required capacity needed to satisfy the project purpose and need. Therefore, this alternative was not considered a practicable alternative.

Alternative 5 – Kemira Road:

The Kemira Road site consists of 178 acres immediately landward of Fort Jackson – a National Historic Landmark. Based on a review of publicly available information on the USACE website, an existing mitigation bank could prohibit further landside expansion, and the land to the east was determined to be unavailable. Additionally, this alternative only provides enough river frontage for two berths (+/-3,200') and could impact Fort Jackson. It was therefore determined that Alternative 5 is not practicable.

Alternative 6 – Dredge Disposal Area:

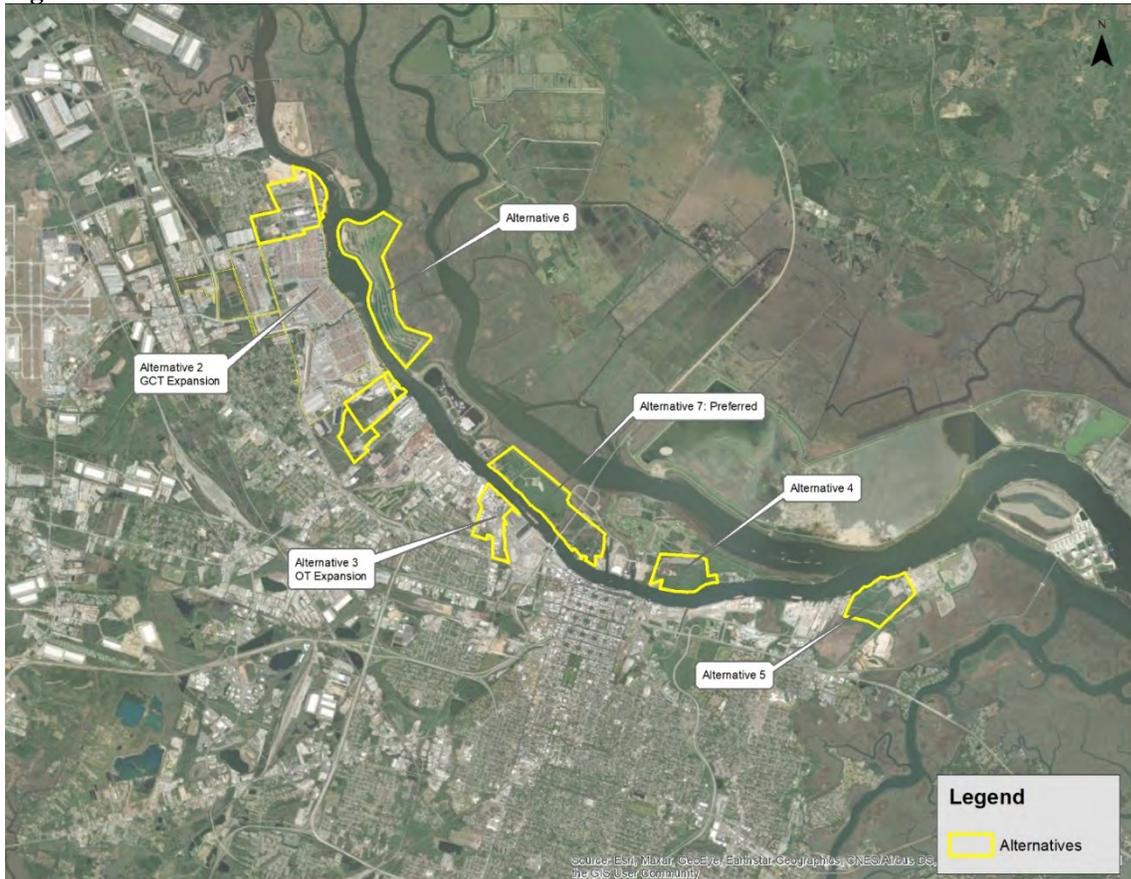
This alternative consists of the existing dredge disposal cell located across the river from GCT (DMCA 2A). This 400-acre cell is large enough to accommodate a new terminal with six berths (+/-9,600'), but

it is an active disposal area for dredged sediments from the Savannah Harbor. According to Chatham County parcel data, the site consists of three parcels; two owned by GDOT and one owned by the United States of America as part of the Savannah National Wildlife Refuge. Zoning for the upstream-most parcel is listed as C-M (Marsh Conservation). Additionally, berth development would impact the Kings Island turning basin, so it is assumed the basin would have to be re-located/re-constructed elsewhere. Regardless, because the site is owned by GDOT and the USA, is used for dredged material containment, and loss of that storage capacity could negatively affect navigation and commerce along the harbor, it was determined this parcel is not available for development and is not a practicable alternative.

Alternative 7 – Preferred Site:

The applicant's preferred site consists of property that the applicant owns on Hutchinson Island, downstream of the Houlihan Bridge, within the boundaries of the State of Georgia, and immediately adjacent to the maintained Savannah shipping channel. The site contains approximately 395 acres of land (including marsh and wetlands) and over 7,100 feet of contiguous river frontage, long enough to potentially support four deepwater berths. The site is primarily rural consisting of disturbed but undeveloped land, and the only existing facilities are commercial work docks used primarily for waterside access for construction projects in the Savannah Harbor. The site is located along the maintained Federal channel, and no channel deepening or extension is required for this alternative. According to the NWI, the site contains an estimated 118 acres of wetland, but based on the previous delineation that was verified by the USACE in 2014 for over half of the property and an existing jurisdictional determination for one of the newly-acquired parcels, the NWI acreage is overstated. Based on all of these factors, it was determined that Alternative 7 is considered the most practicable site that satisfies the project purpose and minimizes impacts.

**Figure 10: Alternative Sites Evaluation Exhibit**



**Table 2: Off-Site Alternatives Comparison Table**

Site	Suitable Location (Savannah Harbor)	Suitable Acreage	Available River Frontage (4,800')	NWI Acreage	Dredging Impacts	Other Impacts	Practicable Alternative
Alt. 1 – No Action	N	N	N	N/A	None	None	N
Alt. 2 – GCT Expansion	Y	Y	Y	132 Acres	High – Deepening and Extension of Federal Channel, Intertidal and Open Water Impacts, Water Quality Impacts, Impacts for Relocation of Existing Facilities	High – Displacement of Industrial Facilities. Impacts to Protected Species	Y
Alt. 3 – OT Expansion	Y	N	N	N/A	Low – Adjacent to Existing Navigation Channel	High – Unacceptable Displacement of Residential, Commercial, and Industrial Facilities.	N
Alt. 4 – Fig Island	Y	N	N	N/A	Moderate – Development of New Berths and Access to Existing Channel	Moderate – Impacts of Truck Traffic on Local Streets	N
Alt. 5 – Kemira Road	Y	N	N	N/A	Moderate – Development of New Berths and Access to Existing Channel	High – Impacts to Fort Jackson National Monument	N
Alt. 6 – Dredge Disposal Site	Y	Y	Y	N/A	Moderate – Development of New Berths and Access to Existing Channel	High – Impacts to SNWR and Marsh Conservation. Unacceptable Loss of DMCA Capacity.	N
Alt. 7 – Applicant's Preferred	Y	Y	Y	118 Acres	Moderate – Development of New Berths and Access to Existing Channel	Low – Effects from Truck/Ship Traffic, No Displacement of Residential, Commercial or Industrial Users.	Y

**B. On-Site Alternatives:**

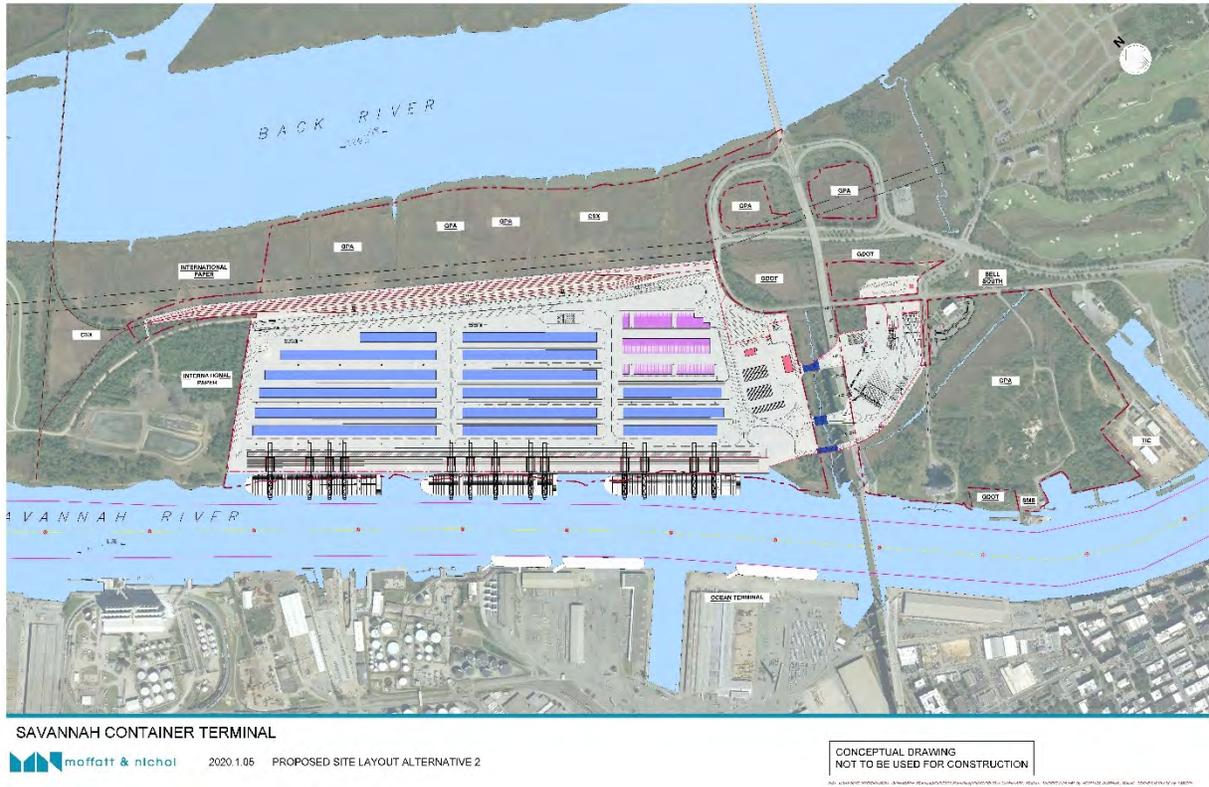
With the decision made to develop a new terminal on the Hutchinson Island site, the applicant evaluated potential on-site alternatives including various concepts and designs, parcel configurations, project sizes, phasing options, etc. Numerous scenarios were evaluated during the long planning phase of the project from alternatives with only two berths and less than 1.5M TEU capacity to a four berth 4M TEU alternative. The on-site alternatives analysis also included talks with adjacent property owners to evaluate expanding the landside operation to extend the capacity lift even further. Preliminary concepts that were compiled for property not included in the final project area were not considered practicable alternatives under this analysis because the land was not available for sale. Four potential on-site alternatives were evaluated including the preferred alternative. Below is a discussion of each alternative.

On-Site Alternative 1:

On-Site Alternative 1 was the likely alternative for much of the planning phase of the project. This alternative provided three berths, and totaled approximately 289 acres. It incorporates an intermodal yard on the northern end of the site to accommodate future rail moves. This is a significant operational and strategic advantage for the terminal as it offers customers options for the movement of goods and reduces overall truck traffic on the roads. The truck gate and support services were located on the

downstream end of the site and the loaded container yards were sited behind the berths. Alternative 1, however, was bound by the total yard capacity. Due to the smaller project footprint, part of the container yard behind Berth 3 had to be dedicated to empty container storage. At 2.0M TEU's, the yard capacity lagged the berth capacity by over 30%. Alternative 1 showed the design team that yard capacity was going to be the limiting factor for the project, so the team started evaluating ways to increase yard capacity through design revisions and parcel acquisition. Alternative 1 was discarded from further consideration because it did not meet the Purpose and Need of the project.

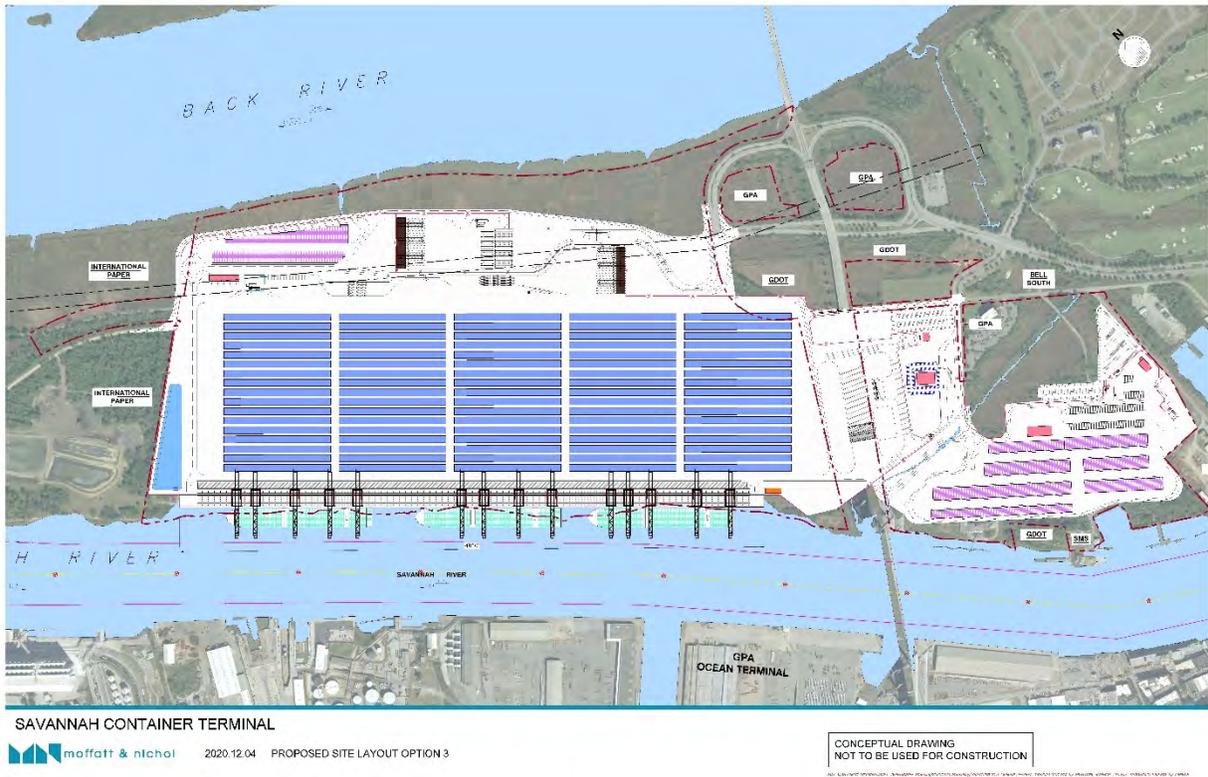
**Figure 11: On-Site Alternative 1 Concept**



On-Site Alternative 2:

There were only three directions to expand the landside capacity through property acquisition. Through discussions with adjoining landowners, it was determined that the land northwest (upstream) was occupied and not available for sale. The parcels along the Back River to the northeast, however, are owned by the applicant, so the applicant evaluated expanding landside facilities in this direction. Alternative 2 enlarged the container yards and provided additional empty container storage area to increase the overall yard capacity to 2.9M TEUs to match the berth capacity. This alternative developed approximately 370 acres and provided an additional two years of capacity as compared to On-Site Alternative 1. However, this alternative had greater environmental impacts. On the waterside, dredging impacts associated with berth/wharf construction would be the same as the preferred alternative. Landside development impacted an estimated 28.15 acres of freshwater wetland, but the impacts to vegetated saltmarsh were the most significant. By enlarging the container yards towards the Back River and re-configuring the gate, empty yard, and support services, this alternative resulted in the bulk fill of an estimated 67.2 acres of contiguous saltmarsh and 1.5 acre of tidal canal and feeder creeks. Due to the significant environmental impacts, On-Site Alternative 2 was not considered the LEDPA.

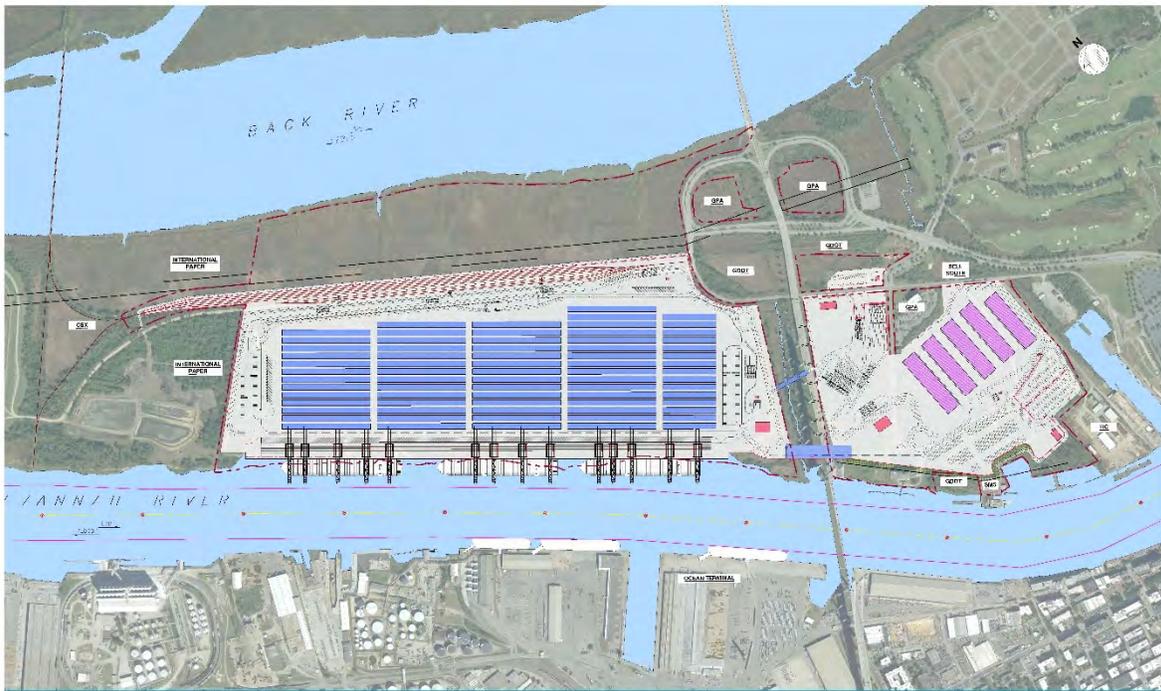
**Figure 12: On-Site Alternative 2 Concept**



**On-Site Alternative 3:**

Due to the environmental impacts associated with northeastern expansion, the applicant rejected the concept of filling marsh adjacent to the Back River and re-designed the downstream portion of the site. All support services, empty containers, truck gate, etc. were moved to the downstream parcels to free up space behind the berths for container yards. The empty container yard was moved to the downstream parcels and expanded to meet the empty container storage needs of the project but required impacts to the tidal creek and adjacent marsh and freshwater wetlands. Additional impacts were also required to the tidal creek system for the relocated truck gate. In all, this alternative developed approximately 344 acres and required landside impacts to 28.65 acres of freshwater wetland and 23.1 acres of saltmarsh and tidal creek (in addition to the dredging impacts). This alternative is similar to the preferred alternative, but the applicant evaluated it closely for ways to avoid and minimize impacts, and revised the site plan accordingly to come up with the final preferred site plan.

**Figure 13: On-Site Alternative 3 Concept**



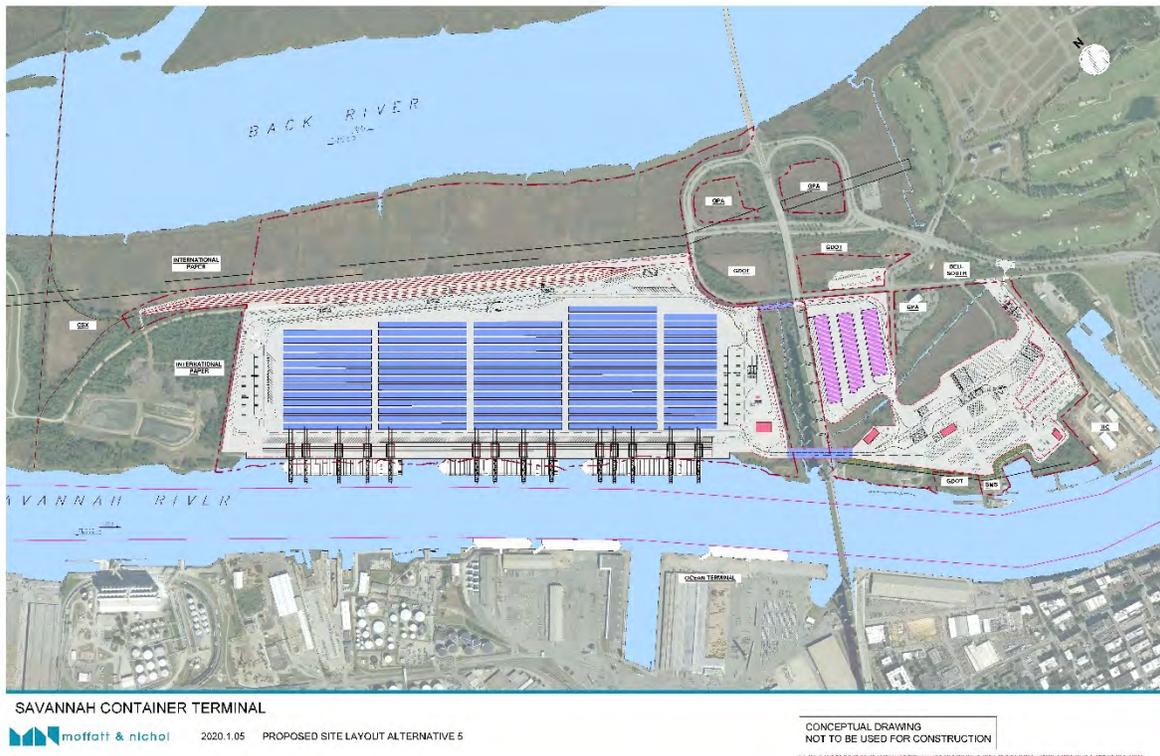
SAVANNAH CONTAINER TERMINAL  
moffatt & nichol 2020.1.05 PROPOSED SITE LAYOUT ALTERNATIVE 4  
CONCEPTUAL DRAWING  
NOT TO BE USED FOR CONSTRUCTION

**On-Site Alternative 4: Preferred Alternative:**

After a thorough evaluation of all possible alternatives including various parcel configurations, design options, berth layouts, etc., a final site plan was compiled to develop approximately 320 acres of the 395 acre site (not including dredging area) while minimizing impacts to the greatest extent practicable and still providing container capacity until 2035. Options that provided only a minimal lift in container capacity, while they may result in less impact, were not considered the preferred alternative as they would soon require expansions and improvements to keep pace with growing demand. The applicant considered choosing a smaller terminal layout, but realized that it is not a realistic long-term solution.

As compared to On-Site Alternative 3, the applicant first shifted the container yards and reduced them in size to avoid the tidal creek and adjacent marshes that extend into the site just upstream of the Talmadge Bridge. The truck gate and other support services on the downstream side of the bridge were also re-oriented to maximize the use of upland and minimize impacts to contiguous tidal wetlands to the greatest extent practicable. The number of truck lanes for instance was reduced, and the main access into the terminal was revised to utilize existing roads. To further reduce impacts, the applicant revised the internal road system so that only two roads are required, and the crossings over the tidal creek system will be bridged instead of culverted/filled. After all of the revisions, the total landside capacity trails the berth capacity slightly (2.7M TEU's vs 2.9M TEU's), but this satisfies the project Purpose and Need while minimizing impacts. Any further reduction in landside facilities would further limit the terminal's throughput capacity. It was therefore determined that On-Site Alternative 4 is the LEDPA for the project.

**Figure 14: On-Site Alternative 4 – Applicant’s Preferred Alternative**



**Table 3: On-Site Alternatives Comparison Table**

On-Site Alternative	TEU Lift	Impacts (acres) (not including open water dredging)	Satisfies Project Purpose	LEDPA
On-Site Alternative 1	2.0M	N/A	N	N
On-Site Alternative 2	2.9M	FW Wetland Fill: 28.05 SW Marsh Fill: 67.2 <u>Dredging:</u> 8.73 Total 103.98	Y	N
On-Site Alternative 3	2.9M	FW Wetland Fill: 28.65 SW Marsh Fill: 23.1 <u>Dredging:</u> 8.73 Total 60.48	Y	N
On-Site Alternative 4: Applicant's Preferred	2.7M	FW Wetland Fill: 26.58 SW Marsh Fill: 5.59 Tidal Canal Fill: 0.44 <u>Dredging:</u> 8.73 Total: 41.34	Y	Y

**VIII. IMPACT AVOIDANCE AND MINIMIZATION MEASURES:**

Section 404(b)(1) mandates that once aquatic impacts on the proposed project site have been avoided to the maximum extent practicable, measures should be taken to minimize the effects of the remaining unavoidable impact. As mentioned previously, the backlands component is the limiting factor on overall terminal capacity. The final site plan represents a balance between providing enough backlands capacity to achieve the project purpose and minimizing environmental impacts as much as possible. The applicant will implement a variety of construction methodologies and techniques to avoid and minimize impacts to waters of the U.S. and other environmental resources during development of the project. Below is a discussion of those measures along with a description/explanation to justify some of the larger impact areas:

- The entire review area contains approximately 36.2 acres of freshwater wetland (including contiguous wetland, freshwater marsh, and potentially non-jurisdictional wetlands) and 127 acres of tidal saltmarsh in addition to internal tidal canals/creeks. The applicant chose the alternative that maximizes the site's potential and closely matches yard capacity with the wharf capacity while minimizing impacts to the greatest extent practicable. Approximately 9.62 acres of freshwater wetland (27%) and approximately 119.6 acres of saltmarsh (94%) will be avoided by the preferred site plan.
- Tidal wetland impacts are limited to the amount necessary for berth/wharf construction, road infrastructure, railyard construction, and truck access/gate construction, primarily. Only a small amount of tidal impact is required for the empty container yard construction which is already deficient in size and must be maximized as much as possible. Maximizing on-site container storage will reduce truck traffic associated with drayage of containers to GCT.
- Bulk fill of contiguous tidal marsh has been removed from consideration (e.g. On-site Alternatives 2 and 3). The majority of contiguous marsh adjacent to the Back River and internal to the site has been avoided. Only impacts along the wetland boundary are required to provide sufficient yard capacity and truck gate capacity to meet the project Purpose and Need.
- For the internal tidal canal/marsh system, the applicant chose an alternative that required impacts to the far upstream/inland reach of the system for the truck gate and left the remainder of the system open as opposed to Alternatives 2 and 3 which impacted the downstream reaches near the outfall to the Savannah River. It is preferable to impact this lower quality area (vegetation/hydrology impacted by two road crossings, adjacent ditch spoil, etc.) as opposed to natural areas immediately abutting the Savannah River.

- Internal roads will utilize bridges to cross tidal creeks/marsh instead of using culverts/fill. This design not only reduces the loss of marsh habitat but also preserves upstream tidal connectivity. Bridges will be elevated as much as possible and minimized in width to the greatest extent practicable minimizing shading of marsh vegetation. In other locations, existing roads will be used to limit “new” impacts.
- The applicant is evaluating measures to maximize container yard capacities. Among other things, this includes stacking containers higher thereby reducing the amount of land (and wetland) that must be developed.
- To minimize visual, noise, and air quality impacts as well as providing additional stormwater management and erosion control, an undeveloped buffer will remain between the terminal and the Savannah River on the downstream side of the site. The buffer will help shield the City of Savannah from daily operations at the truck gates. It will also aid in suppressing noise and dust from the terminal.
- The applicant plans to contract a landscape architect to design a planting plan to supplement the natural vegetation within the buffer. The plan will emphasize the use of native vegetation.
- The applicant will keep all ship loading and unloading operations upstream of the Talmadge Bridge and away from the commercial/residential district of Savannah. The berths will be across the river from existing industrial land uses that have been in place for many years.
- Stormwater from the facility will be collected via inlets, trench drains and piping networks and directed to detention / retention ponds on-site, to a manufactured stormwater system consisting of sediment/trash trap and water polishing units, or a combination of both. Additional detail is included in Section XI below. No direct point source discharge of untreated stormwater will be allowed to enter the estuary.
- To minimize the effects of the proposed discharge on the wetlands and estuarine systems that are avoided, all development activities will be performed using best management practices (silt fencing, grassed slopes, etc.)
- All discharge material will be clean material obtained from an upland source.

Below are specific design revisions that were implemented during final site planning to reduce or eliminate impacts:

Truck Gate: The truck gate is a key component to the overall operation of the terminal. An adequate number of in-bound and outbound truck lanes of sufficient length are required to safely and efficiently move trucks onto and off of the terminal and to avoid traffic congestion onto local streets. The truck gate will access the site from Wayne Shackleford Parkway on the downstream end of the site, and wetland impacts are unavoidable for construction of the gate. The applicant evaluated multiple alternatives as discussed above including alternative locations/designs for the truck gate. The applicant evaluated shifting the gate further south away from wetlands, but doing this would render the land north of the gate unusable – the gate acts as a barrier whereby on-terminal traffic cannot safely cross the truck lanes. A more central gate location would therefore cut the property in half and severely limit the site’s useability. Siting the gate along the perimeter of the upland yields the safest and most efficient use of the land. The applicant also evaluated a slight shift to the east, but this would impact an existing access road to other property owners, and access must be maintained around the downstream side of the terminal for these adjacent landowners who need to access the river (GDOT and Savannah Marine Services, Inc.). The applicant has already minimized the size of the truck gate and the number of lanes to the maximum extent practicable by employing a variety of technologies and other design efficiencies such as a 2-stage gate instead of 3-stage, weigh-in-motion scales instead of static scales, remote seal check and empty inspections, and independent bobtail lanes. All of these measures allow trucks to move more efficiently through the gates, reducing congestion, and reducing the number of lanes required. With the gate location and dimensions fixed, the applicant increased the fill slopes from the initially-proposed 4:1 slopes to vertical. Gabion walls will be used to minimize the overall amount of wetland impact required. For the truck gate alone, this measure avoided impacts to 1.29 acres of saltmarsh and 0.34 acre of freshwater wetland.

Empty Container Yard: Empty container storage space is in short supply on-site, as mentioned above. The areas directly behind the berths are needed for loaded containers, and the only feasible area for empty container storage on-site is directly downstream of the Talmadge Bridge, but the constraints of the bridge to the west, Wayne Shackleford Parkway to the north, Hutchinson Island Road to the east, and the internal wetland system to the

south necessitate some wetland impacts. The container yard will be accessed from the south via an existing road crossing corridor, and this access road will have to impact wetland due to the wetland's configuration and minimum lane width and turning radii required by truck traffic. The turning radius of the road was tightened as much as possible while still allowing safe usage by large trucks. To minimize impacts, the applicant will use gabion walls and vertical fill slopes instead of the original concept of 4:1 slopes which reduced saltwater impacts by 1.03 acres and freshwater impacts by 1.61 acres.

Northern and Southern Bridges: The northern and southern connector roads on-terminal will utilize bridges to cross a tidal creek and adjacent marsh instead of using culvert/fill crossings. The original bridge concepts were modified so that the bridges were lengthened as much as possible. This avoided the creek, and an additional 0.48 acres of wetland as compared to the original concept.

#### **IX. INDIRECT IMPACTS AND RELATED ACTIVITIES:**

An initial cursory assessment of related off-site activities that may be required in the future to support the new terminal is being conducted by the applicant. The focus of the analysis is on off-site transportation improvements to service or access SCT such as road improvements by GDOT or City of Savannah and rail improvements by CSX. These related activities, while not imminently required to construct/operate the terminal, would provide operational and safety enhancements to aid in the overall success of the facility. Therefore, these future off-site improvements are not proposed as part of the terminal development because they are not owned or controlled by the applicant but could be reasonably expected to occur over time. Any environmental impacts associated with these related activities are considered cumulative effects as a result of the proposed SCT, but site data collection and permitting would be the responsibility of the appropriate transportation authority.

Off-Site Road Improvements: The widening of US Highway 17 in South Carolina and I-16 in Georgia is part of a regional infrastructure improvements initiative to accommodate growth in the area and improve road safety. Currently, GDOT is under construction on the I-16 widening project and the I-16 /I-95 interchange improvements. SCDOT is in the process of widening US Highway 17 from Highway 315 to the Georgia state line (Back River). Preliminary planning has also been initiated by SCDOT for construction of Exit 3 on I-95 and a new parkway connecting the interstate to Highway 17. All of these projects are being planned independent of the SCT and are not considered indirect effects of the terminal but will enhance truck access to the terminal as well as other commercial and industrial land uses in the area. As a potential indirect effect of the project, some additional improvements to the interchange on Hutchinson Island at US Highway 17 could provide traffic flow improvements into the terminal, but currently, all public roads are owned by GDOT and/or City of Savannah and are not part of the proposed project. Future improvements to the interchange would have to be developed by those owners, but it is expected that environmental impacts would be limited since it would be an improvement to the existing road system and not a new interchange. Impacts would be along the existing road shoulder. Should interchange improvements be proposed, they would likely not be needed until future phases of the project come online and as container throughput and truck traffic increase over time.

Rail: The proposed site plan includes the construction of an intermodal yard as rail connectivity will be important for the future movements of goods throughout the United States. The terminal could exist without on-site rail and rely on truck drayage to GCT for rail shipment, but on-site rail access offers strategic advantages for GPA customers for the movement of containerized goods and reduces truck traffic. The terminal is located on the CSX Hutchinson Island Lead that was decommissioned years ago. The applicant would work with CSX in the future to restore service to the island, but because the rail line is not owned by the applicant, the decision to re-open the line would be that of CSX, and permitting and construction would be their responsibility. Because the Hutchinson Island Lead is relatively in-tact, it is expected that environmental impacts along the rail line would be limited to only minor improvements along the existing raised railbed and replacement or improvements to existing bridges over tidal creeks. The initial portion of the intermodal yard is expected to be constructed during the second phase of construction and completed during Phase III.

#### **IX. THREATENED AND ENDANGERED SPECIES:**

Attached to this application is a Biological Assessment for Federally Protected Species for distribution to US Fish and Wildlife Service (USFWS) and a Biological Assessment for Federally Protected Marine Species for distribution to National Marine Fisheries Service (NMFS).

#### **X. ESSENTIAL FISH HABITAT:**

Because the proposed project will impact tidal waters, there will be an effect on Essential Fish Habitat, but it is expected that through a variety of avoidance, minimization, and mitigation measures, the effect will not be significant. Attached to this application is an Essential Fish Habitat Assessment Report for review and distribution to NMFS.

#### **XI. WATER QUALITY:**

The Savannah Harbor is listed on the 303(d) list of impaired waters due to dissolved oxygen issues from urban runoff, industrial point source discharges, and municipal point source discharges. The proposed project will require dredging in the Savannah River adjacent to the Federal Channel for ship access and berthing, but the dredging will not deepen or extend the Federal Channel itself. Because the channel will neither be extended inland nor deepened, and the only dredging will be within a localized area adjacent to the river bank, it is unlikely that the project would adversely affect water quality throughout the harbor through increases in salinity, significant changes in flow pattern, changes in water temperature, or appreciable changes in DO given the high degree of existing anthropogenic and natural forces placed on the river. It is possible that the deepening of the project area may have a localized effect on DO in the immediate area, but it is expected this effect will only be in the vicinity of the berths and will not significantly affect the water quality throughout the entire harbor.

To study the project's potential effects on DO at the project site, the applicant is running a water quality model using the 2018 EFDC hydrodynamic model and the WASP water quality model, which are the same models used to evaluate SHEP. The models will evaluate the effects of the proposed dredging on salinity and DO at the project area and within the harbor immediately upstream and downstream of the site in accordance with the methodologies used for previous Savannah Harbor projects (e.g. GCT berth deepening (2009) and OT Improvements (2023)). The recent water quality modeling completed for the OT Improvements project, which was accepted by the Georgia Environmental Protection Division (EPD), demonstrated that the operation of the terminal's silt suspension system (SSS) results in a quantifiable increase in DO throughout the water column and offsets the effects from deepening the berths. The proposed project will use a similar SSS which should have beneficial effects to DO concentrations at the project site. In the event there is a net decrease in DO concentrations, the applicant will devise a mitigation plan to offset the effects. The water quality report will be provided at a later date, and all documentation will be provided to the Corps and EPD for review/approval.

Regarding management of the proposed dredge material, the applicant has completed a Tier II evaluation of the upland material to be excavated along the bank and the material to be removed from the Savannah River. A Tier II Sediment Sampling Report which addresses the physical and chemical composition of the material is attached to this permit application. A full electronic copy will be subsequently submitted. The report addresses potential effects from sedimentation, suspended solids, release of contaminants, and discharge from the containment area.

To reduce the potential effects on DO from runoff and point source discharges, stormwater from the facility will be treated in accordance with the Georgia Stormwater Management Manual. According to the manual, treating of storm events of 1.2 inches or less and the first 1.2 inches of runoff for all larger storm events is required. This will be accomplished on the project site through the installation of retention or detention ponds, a manufactured stormwater treatment system, or a combination of both. Stormwater on the site will be collected via inlets, trench drains, and piping networks. Depending on the final stormwater design, all runoff from the built-upon areas will be directed to water quality treatment facilities prior to exiting the system via culverts to the Savannah River. The stormwater system will be designed to remove suspended sediments and floating organics (oils). The overall drainage system will be designed to carry a 10-year event to minimize flooding within the facility.

It is therefore expected that while there may be a localized, temporary, and insignificant effect to water quality during construction, it is unlikely that the presence and future operation of the terminal will adversely affect water quality in the Savannah Harbor.

#### **XII. CULTURAL RESOURCES:**

The applicant has completed a Phase I Cultural Resources Survey Report and Assessment of Effects in addition to an underwater remote sensing survey. The reports are attached to this application.

#### **XIII. COMPENSATORY MITIGATION PLAN:**

Compensatory mitigation is required for fill impacts to tidal marsh and freshwater wetland for intermodal development, access construction, and landside infrastructure to support the required container capacity. Though not required under Section 404, the applicant is proposing additional mitigation to offset the effects from dredging of tidal marsh and freshwater wetland. As indicated on the attached mitigation credit worksheets, 159.52 freshwater wetland mitigation credits and 43.6 saltwater mitigation credits are proposed to off-set the project-related impacts. The applicant is proposing to purchase the required freshwater mitigation credits from a freshwater wetland mitigation bank within the project's Primary Service Area (PSA), if available. Though there are currently no banks available in the PSA, according to the Regulatory In-Lieu Fee and Bank Information Tracking System (RIBITS) website, there are several mitigation banks listed as pending approval. If credits are not available, the applicant will look to the Secondary Service Area (SSA) (Lower Ogeechee River Basin) for credits. In the absence of any credits, the applicant will purchase the required credits from an in-lieu fee program.

The applicant is proposing to purchase the required 43.6 saltwater credits from a saltwater wetland mitigation bank within the project's PSA. According to RIBITS, there are currently two approved saltwater mitigation banks within the coastal region of Chatham County. Upon approval of the proposed project and prior to initiation of wetland impacts, the applicant will purchase the required mitigation credits and provide the USACE with a proper receipt.

In the event that neither freshwater nor saltwater mitigation credits are available at the time of permit approval, or if it is determined that a different mitigation strategy is preferable, the applicant will consult with the USACE on an alternative mitigation plan to adequately offset the unavoidable impacts.

#### **XIV. CONCLUSION:**

In conclusion, the Georgia Ports Authority is proposing the development of the Savannah Container Terminal in Chatham County to meet a future increase in container volumes moving through the Port of Savannah. The terminal is part of GPA's growth strategy starting in 2030 to satisfy growing demand in the region. The GPA has implemented many improvements programs over the years to keep pace with growing demand, and several upcoming projects will accommodate growth for the next seven years and will restore the 20% above-demand cushion that has been the key to GPA's past success. The applicant evaluated several alternatives to the project including expanding GCT, expanding OT, and opening a new terminal. Various on-site concepts and feasible alternatives were then evaluated once the preferred site was identified, and the applicant chose the one that maximizes the site's potential while minimizing impacts and satisfying the Purpose and Need. Following the selection of the preferred site plan, the applicant decided to implement many design features such as bridges, tree buffers, operational features, and BMP's to further avoid and minimize impacts. The applicant has assessed effects to federally protected species, EFH, water quality, cultural resources, cumulative and related activities, and a variety of other logistic, social, and environmental resources, and additional avoidance and minimization measures are being proposed to minimize impacts to those resources. The new terminal will provide a significant economic benefit to the local, state, and national economies in the years to come and will bring many jobs to Savannah and Chatham County. The project will allow the Port of Savannah to remain one of the busiest and most successful ports in the United States.

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## SHEET INDEX

SHEET NUMBER	SHEET TITLE
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17	OUT GATE BRIDGE PLAN & PROFILE
18	OUT BRIDGE SECTION
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20	BERTH SECTION
21	DREDGE PLAN

PROPOSED ACTIVITY: WETLAND IMPACTS  
DATUM: MEAN LOWER LOW WATER  
BODY OF WATER: SAVANNAH RIVER  
RIVER MILE: 15.0  
COUNTY: CHATHAM STATE: GEORGIA

### SAVANNAH CONTAINER TERMINAL

GEORGIA PORTS AUTHORITY  
P.O. BOX 2406  
SAVANNAH, GA

### SHEET INDEX

APPLICANT: GEORGIA PORTS AUTHORITY  
SOURCE: MOFFATT & NICHOL  
PROJECT NUMBER: 5531-263  
SHEET 1 OF 21 DATE: 7/17/23

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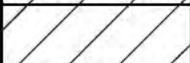


**SITE**  
 +/- 395.4 ACRES  
 LAT: N32°05'56.65"  
 LONG: W81°06'10.62"

PROPOSED ACTIVITY: WETLAND IMPACTS  
 DATUM: MEAN LOWER LOW WATER  
 BODY OF WATER: SAVANNAH RIVER  
 RIVER MILE: 15.0  
 COUNTY: CHATHAM STATE: GEORGIA

**SAVANNAH CONTAINER TERMINAL**  
 0' 4000' 8000'  
 1" = 4000'  
 GEORGIA PORTS AUTHORITY  
 P.O. BOX 2406  
 SAVANNAH, GA

**VICINITY MAP**  
 APPLICANT: GEORGIA PORTS AUTHORITY  
 SOURCE: USGS US TOPO MAPS  
 PROJECT NUMBER: 5531-263  
 SHEET 2 OF 21 DATE: 7/17/23

LEGEND			
SYMBOL	IMPACT TYPE	WETLAND TYPE	ACREAGE
	DREDGING	OPEN WATER	26.96
	DREDGING	INTERTIDAL FLAT	6.01
	DREDGING	SALTMARSH	1.86
	DREDGING	FRESHWATER WETLAND	0.10
	DREDGING	ROCK/RIP-RAP/RUBBLE	0.76
	TOTAL DREDGING		35.69
	FILL	FRESHWATER WETLAND	26.58
	FILL	SALTMARSH	5.59
	FILL	OPEN WATER (CANAL)	0.44
	TOTAL FILL		32.73

PROPOSED ACTIVITY: WETLAND IMPACTS  
 DATUM: MEAN LOWER LOW WATER  
 BODY OF WATER: SAVANNAH RIVER  
 RIVER MILE: 15.0  
 COUNTY: CHATHAM STATE: GEORGIA

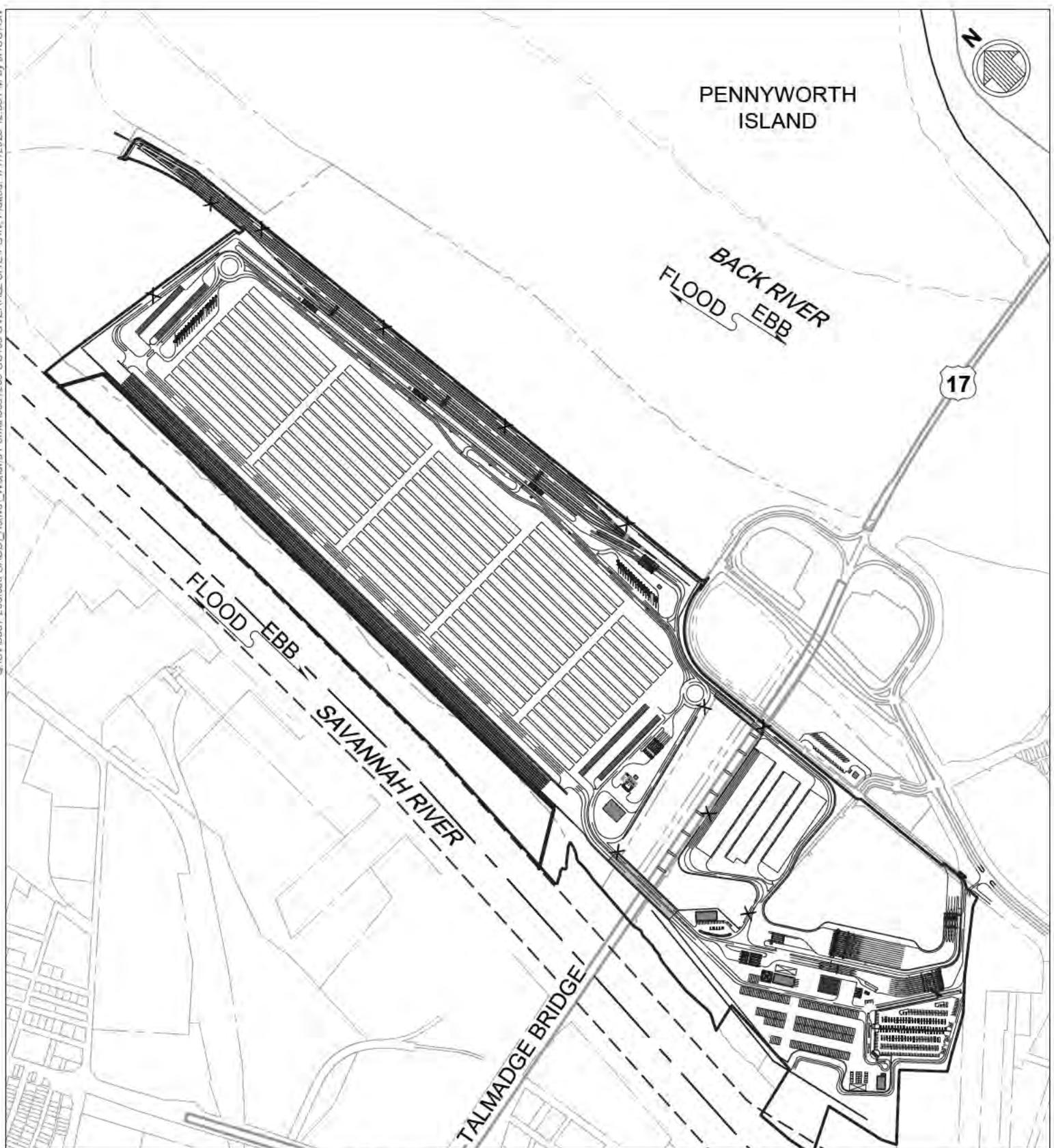
**SAVANNAH CONTAINER TERMINAL**

GEORGIA PORTS AUTHORITY  
 P.O. BOX 2406  
 SAVANNAH, GA

**IMPACT SUMMARY**

APPLICANT: GEORGIA PORTS AUTHORITY  
 SOURCE: MOFFATT & NICHOL  
 PROJECT NUMBER: 5531-263  
 SHEET 3 OF 21 DATE: 7/17/23

Q:\515531-2631600 CAD\DW\_Active\Welland\_Permit\5531263-CS100 OVERALL SITE PLAN; Plotted: 7/17/2023 12:53 PM by JHUJSTON



PROPOSED ACTIVITY: WETLAND IMPACTS  
 DATUM: MEAN LOWER LOW WATER  
 BODY OF WATER: SAVANNAH RIVER  
 RIVER MILE: 15.0  
 COUNTY: CHATHAM STATE: GEORGIA

SAVANNAH CONTAINER TERMINAL

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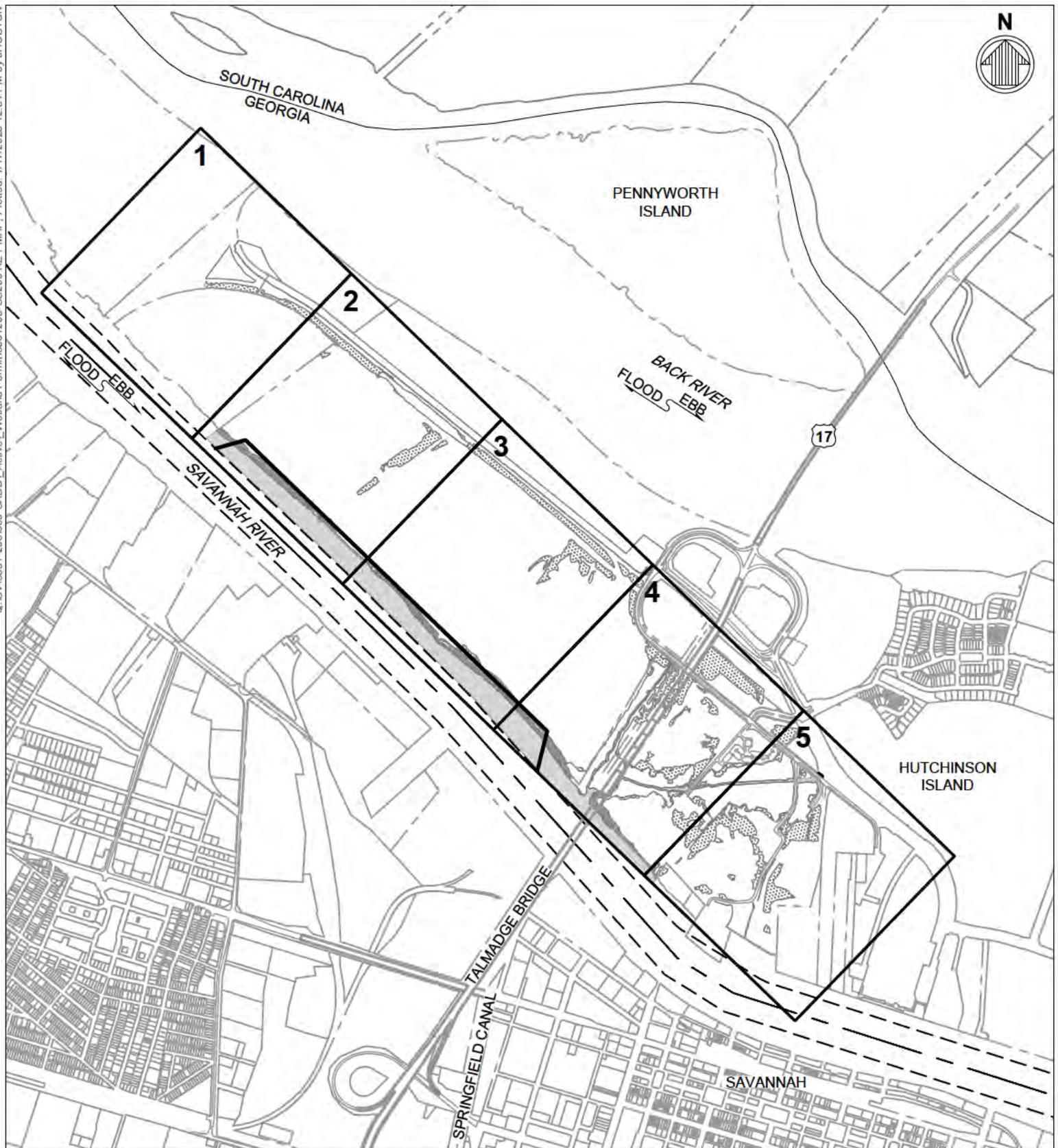
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GEORGIA PORTS AUTHORITY  
 P.O. BOX 2406  
 SAVANNAH, GA

OVERALL SITE PLAN

APPLICANT: GEORGIA PORTS AUTHORITY  
 SOURCE: MOFFATT & NICHOL  
 PROJECT NUMBER: 5531-263  
 SHEET 4 OF 21 DATE: 7/17/23

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PROPOSED ACTIVITY: WETLAND IMPACTS  
 DATUM: MEAN LOWER LOW WATER  
 BODY OF WATER: SAVANNAH RIVER  
 RIVER MILE: 15.0  
 COUNTY: CHATHAM STATE: GEORGIA

SAVANNAH CONTAINER TERMINAL

0' 1500' 3000'

1" = 1500'

GEORGIA PORTS AUTHORITY  
 P.O. BOX 2406  
 SAVANNAH, GA

KEY MAP

APPLICANT: GEORGIA PORTS AUTHORITY  
 SOURCE: MOFFATT & NICHOL  
 PROJECT NUMBER: 5531-263  
 SHEET 5 OF 21 DATE: 7/17/23

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SALTMARSH "A" FILL  
0.88 ACRES

PROPERTY LINE

PROJECT L MITS

FRESHWATER WETLAND "A" FILL  
2.53 ACRES

MATCHLINE SEE SHEET 7

EDGE OF SHEP CHANNEL

PROPOSED ACTIVITY: WETLAND IMPACTS  
DATUM: MEAN LOWER LOW WATER  
BODY OF WATER: SAVANNAH RIVER  
RIVER MILE: 15.0  
COUNTY: CHATHAM STATE: GEORGIA

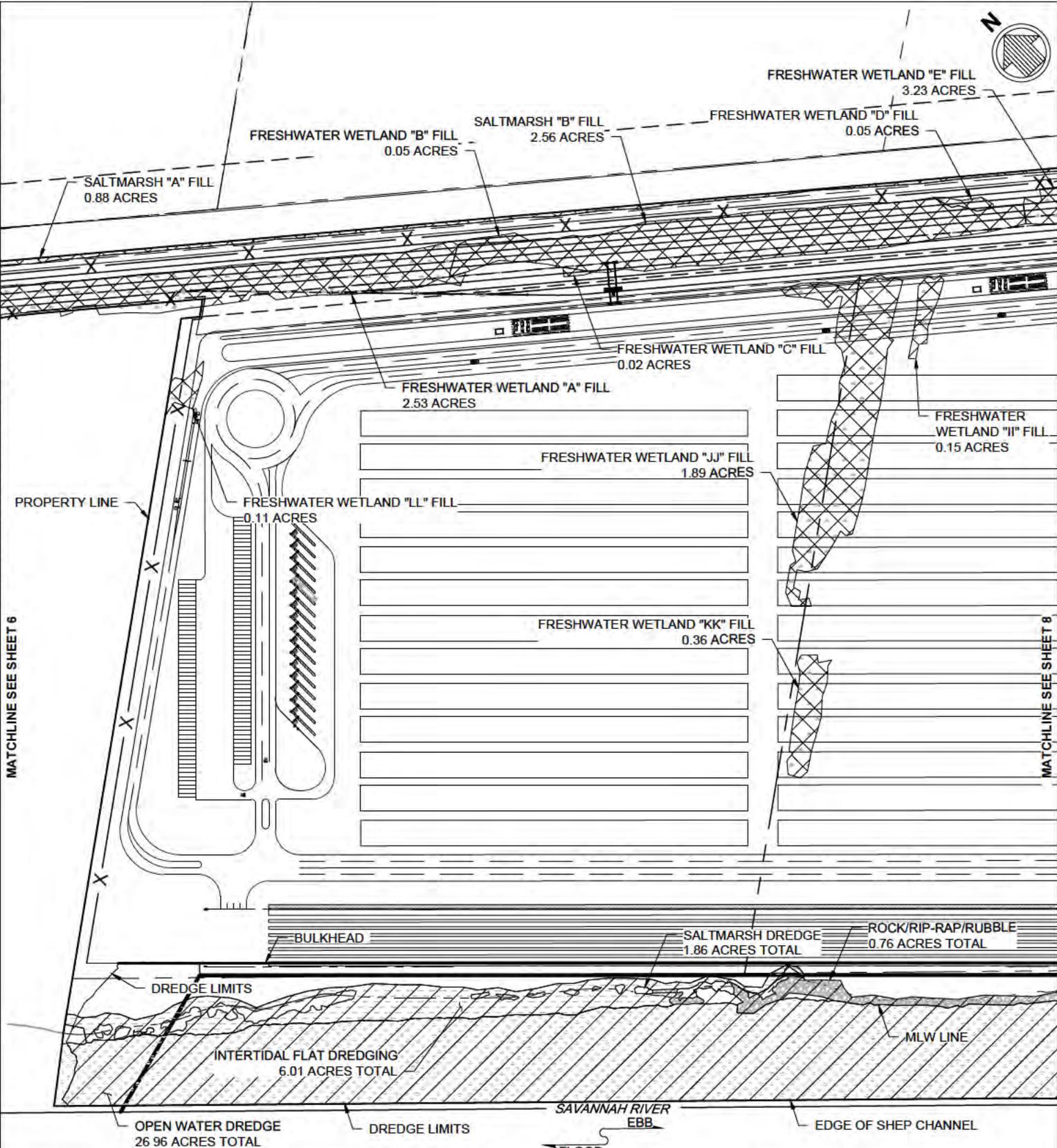
SAVANNAH CONTAINER TERMINAL  
0' 300' 600'  
1" = 300'  
GEORGIA PORTS AUTHORITY  
P.O. BOX 2406  
SAVANNAH, GA

SITE PLAN (1 OF 5)  
APPLICANT: GEORGIA PORTS AUTHORITY  
SOURCE: MOFFATT & NICHOL  
PROJECT NUMBER: 5531-263  
SHEET 6 OF 21 DATE: 7/17/23

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MATCHLINE SEE SHEET 6

MATCHLINE SEE SHEET 8

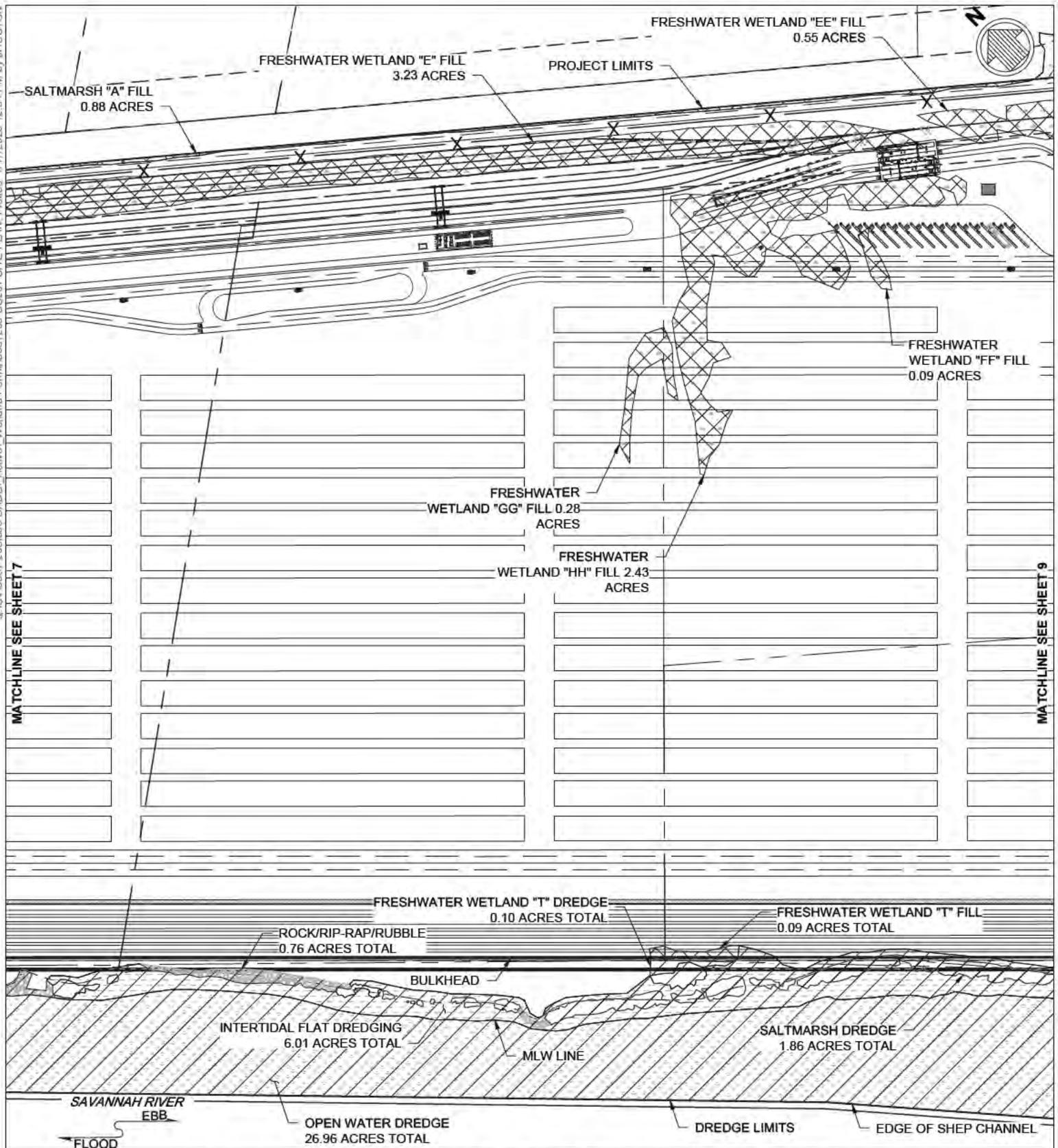


PROPOSED ACTIVITY: WETLAND IMPACTS  
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 COUNTY: CHATHAM STATE: GEORGIA

SAVANNAH CONTAINER TERMINAL  
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 P.O. BOX 2406  
 SAVANNAH, GA

SITE PLAN (2 OF 5)  
 APPLICANT: GEORGIA PORTS AUTHORITY  
 SOURCE: MOFFATT & NICHOL  
 PROJECT NUMBER: 5531-263  
 SHEET 7 OF 21 DATE: 7/17/23

C:\GIS\5531-263\600 CAD\DWG\_Active\Wetland Permits\5531-263-CS201 SITE PLAN\_Plot.dwg, 7/17/2023 12:54 PM by JHUUSTON



MATCHLINE SEE SHEET 7

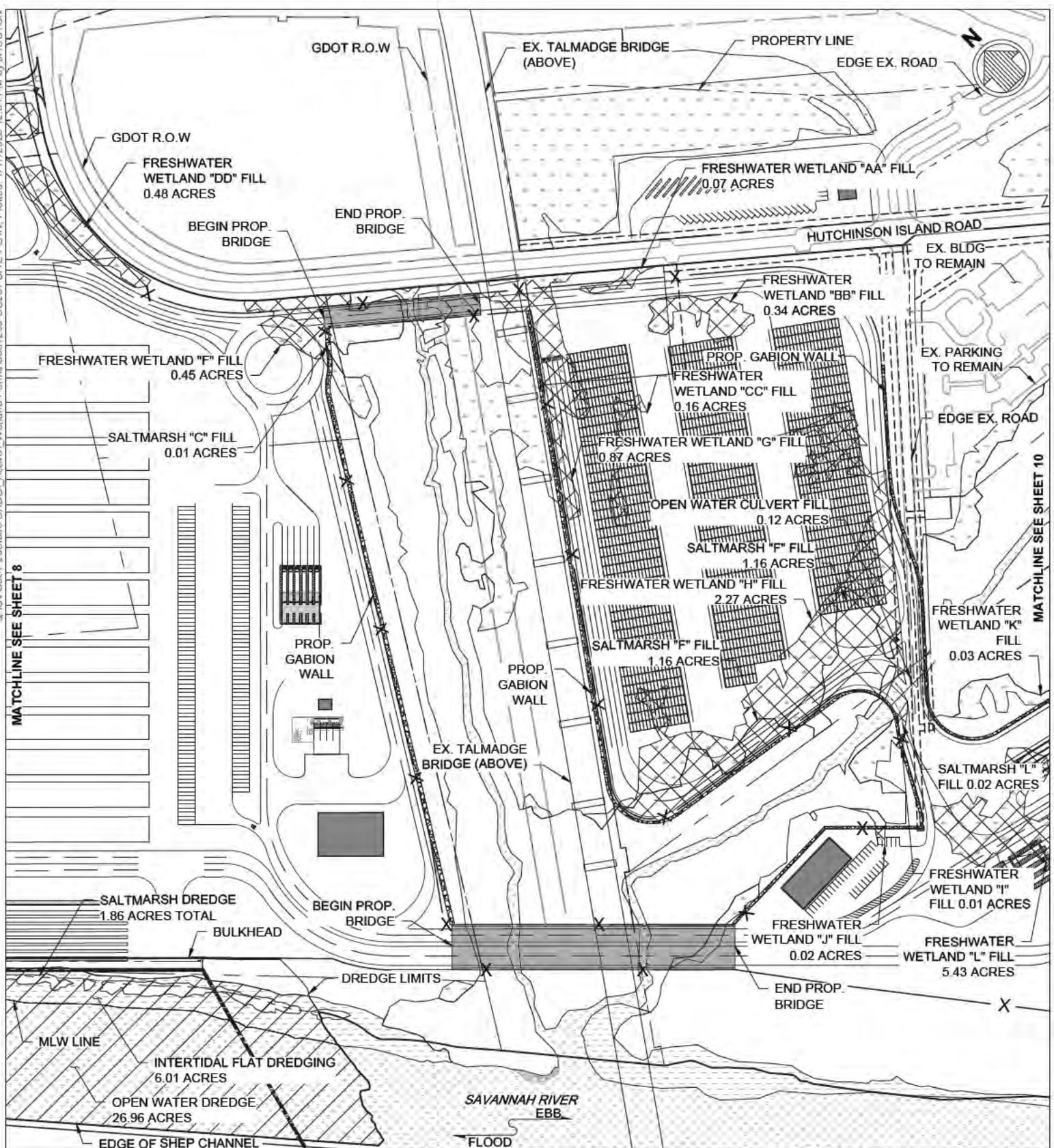
MATCHLINE SEE SHEET 9

PROPOSED ACTIVITY: WETLAND IMPACTS  
 DATUM: MEAN LOWER LOW WATER  
 BODY OF WATER: SAVANNAH RIVER  
 RIVER MILE: 15.0  
 COUNTY: CHATHAM STATE: GEORGIA

SAVANNAH CONTAINER TERMINAL  
 0' 300' 600'  
 1" = 300'  
 GEORGIA PORTS AUTHORITY  
 P.O. BOX 2406  
 SAVANNAH, GA

SITE PLAN (3 OF 5)  
 APPLICANT: GEORGIA PORTS AUTHORITY  
 SOURCE: MOFFATT & NICHOL  
 PROJECT NUMBER: 5531-263  
 SHEET 8 OF 21 DATE: 7/17/23

C:\GIS\5531-263\6000 CADD\_Actival Wetland Permits\5531263-C201 SITE PLAN; Plotted: 7/17/2023 12:54 PM by JHUUSTON

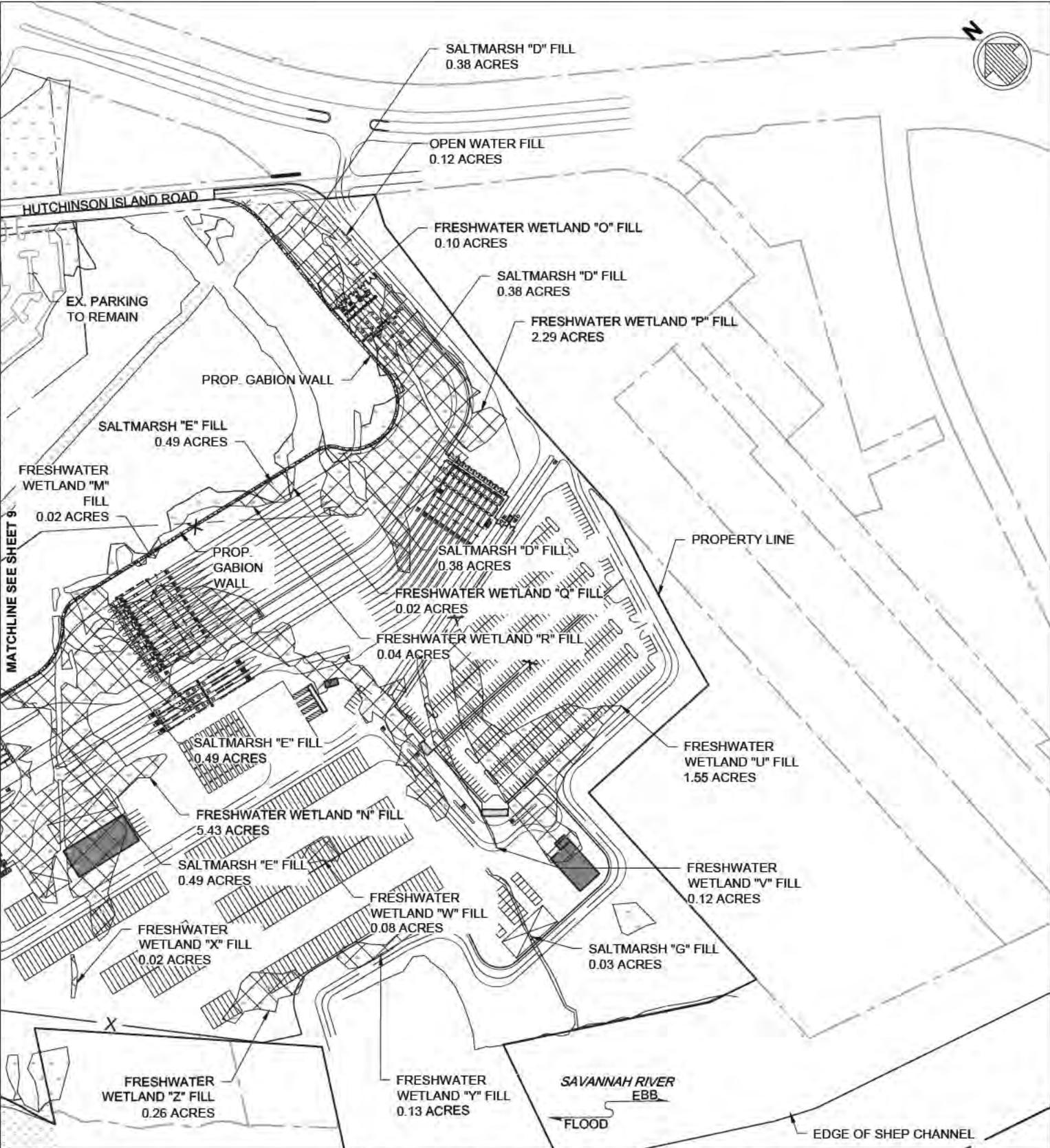


PROPOSED ACTIVITY: WETLAND IMPACTS  
 DATUM: MEAN LOWER LOW WATER  
 BODY OF WATER: SAVANNAH RIVER  
 RIVER MILE: 15.0  
 COUNTY: CHATHAM STATE: GEORGIA

SAVANNAH CONTAINER TERMINAL  
 0' 300' 600'  
 1" = 300'  
 GEORGIA PORTS AUTHORITY  
 P.O. BOX 2406  
 SAVANNAH, GA

SITE PLAN (4 OF 5)  
 APPLICANT: GEORGIA PORTS AUTHORITY  
 SOURCE: MOFFATT & NICHOL  
 PROJECT NUMBER: 5531-263  
 SHEET 9 OF 21 DATE: 7/17/23

Q:\ISV\5531\_2621600\_CADD\_Active\Wetland Permits\5531\_263-CS01 SITE PLAN - Plotted 7/17/2023 2:18 PM by JHUUSTON

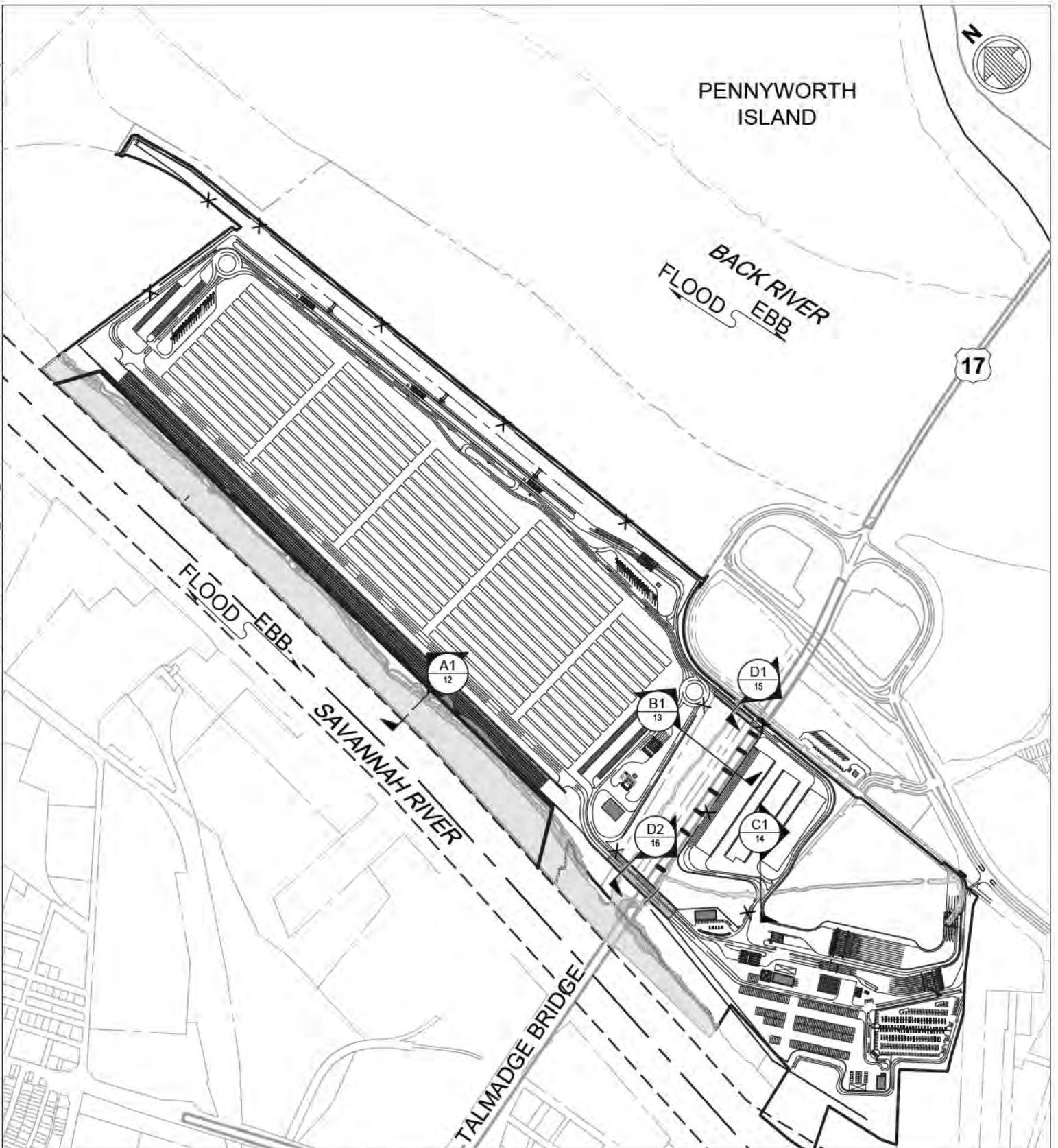


PROPOSED ACTIVITY: WETLAND IMPACTS  
 DATUM: MEAN LOWER LOW WATER  
 BODY OF WATER: SAVANNAH RIVER  
 RIVER MILE: 15.0  
 COUNTY: CHATHAM STATE: GEORGIA

SAVANNAH CONTAINER TERMINAL  
 0' 300' 600'  
 1" = 300'  
 GEORGIA PORTS AUTHORITY  
 P.O. BOX 2406  
 SAVANNAH, GA

SITE PLAN (5 OF 5)  
 APPLICANT: GEORGIA PORTS AUTHORITY  
 SOURCE: MOFFATT & NICHOL  
 PROJECT NUMBER: 5531-263  
 SHEET 10 OF 21 DATE: 7/17/23

Q:\SV\5531-2631600\_CADD\Active\Wetland Permits\5531263-CS300-SECTION KEY MAP.Plot: 7/17/2023 12:54 PM by JHUJSTON

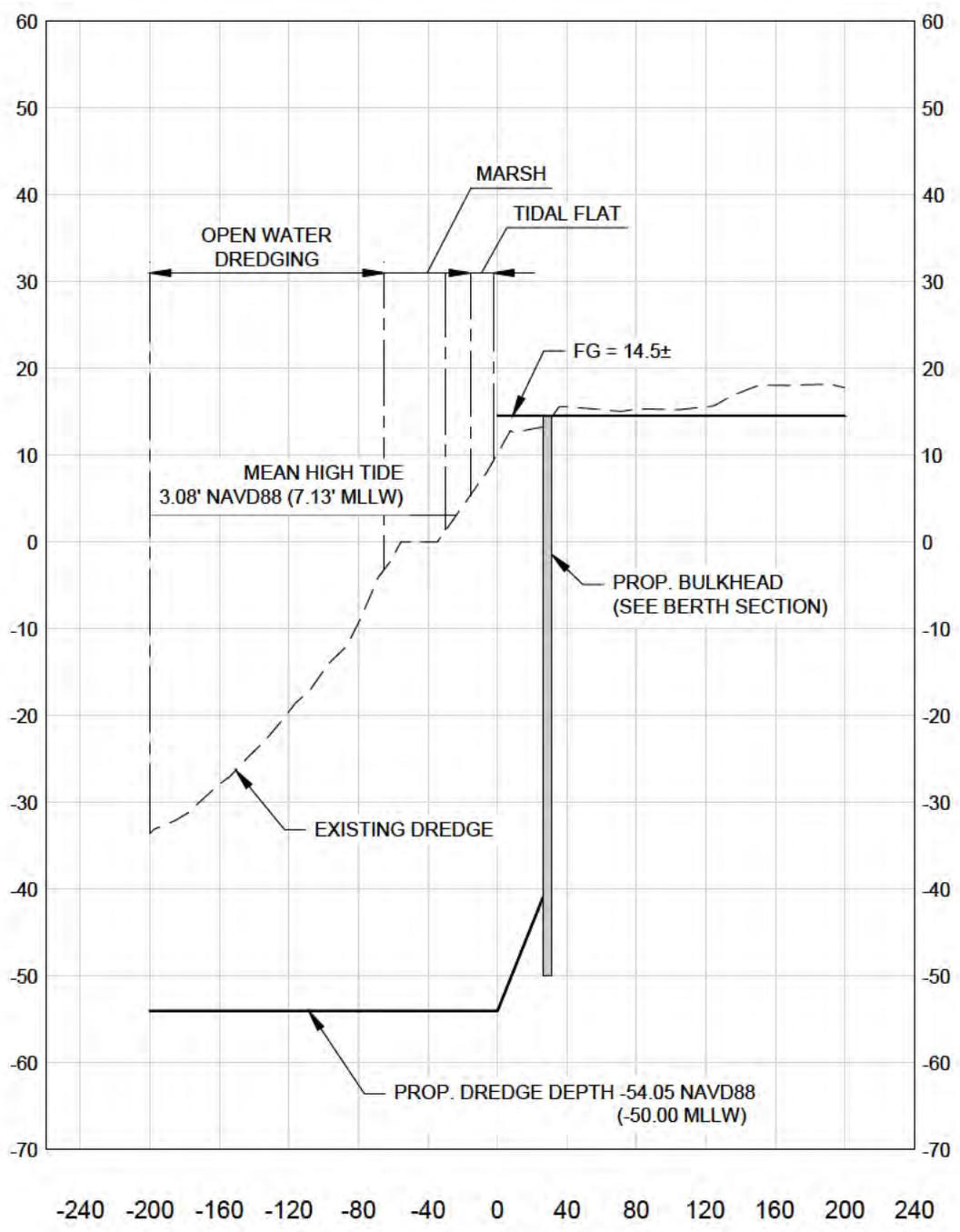


PROPOSED ACTIVITY: WETLAND IMPACTS  
 DATUM: MEAN LOWER LOW WATER  
 BODY OF WATER: SAVANNAH RIVER  
 RIVER MILE: 15.0  
 COUNTY: CHATHAM STATE: GEORGIA

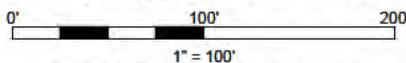
SAVANNAH CONTAINER TERMINAL  
 0' 1000' 2000'  
 1" = 1000'  
 GEORGIA PORTS AUTHORITY  
 P.O. BOX 2406  
 SAVANNAH, GA

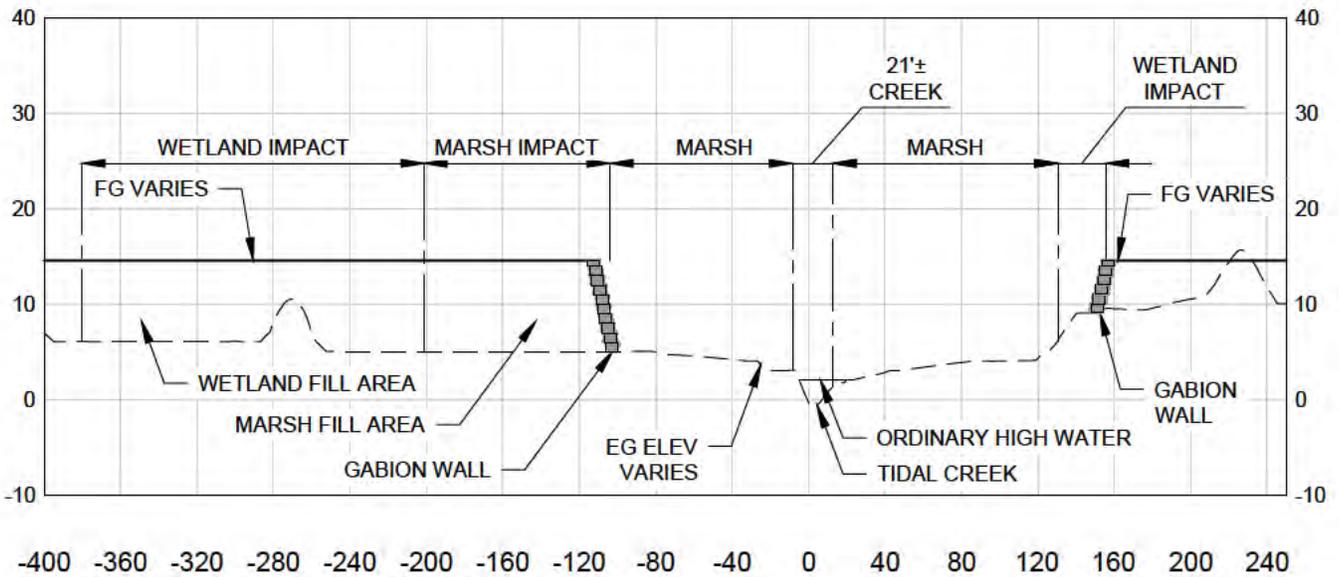
SECTION KEY MAP  
 APPLICANT: GEORGIA PORTS AUTHORITY  
 SOURCE: MOFFATT & NICHOL  
 PROJECT NUMBER: 5531-263  
 SHEET 11 OF 21 DATE: 7/17/23

Q:\SV5531-2631600\_CADD\_Active\Wetland Permit\5531263-CS301-OPENSECT; Plotted: 7/17/2023 12:58 PM by JHUJSTON



**A1**  
 5
 
**OPEN WATER SECTION**  
 SCALE: 1" = 100 (H), 5 (V)

PROPOSED ACTIVITY: WETLAND IMPACTS DATUM: MEAN LOWER LOW WATER BODY OF WATER: SAVANNAH RIVER RIVER MILE: 15.0 COUNTY: CHATHAM    STATE: GEORGIA	<b>SAVANNAH CONTAINER TERMINAL</b>  1" = 100' GEORGIA PORTS AUTHORITY P.O. BOX 2406 SAVANNAH, GA	<b>OPEN WATER SECTION</b> APPLICANT: GEORGIA PORTS AUTHORITY SOURCE: MOFFATT & NICHOL PROJECT NUMBER: 5531-263 SHEET 12 OF 21      DATE: 7/17/23
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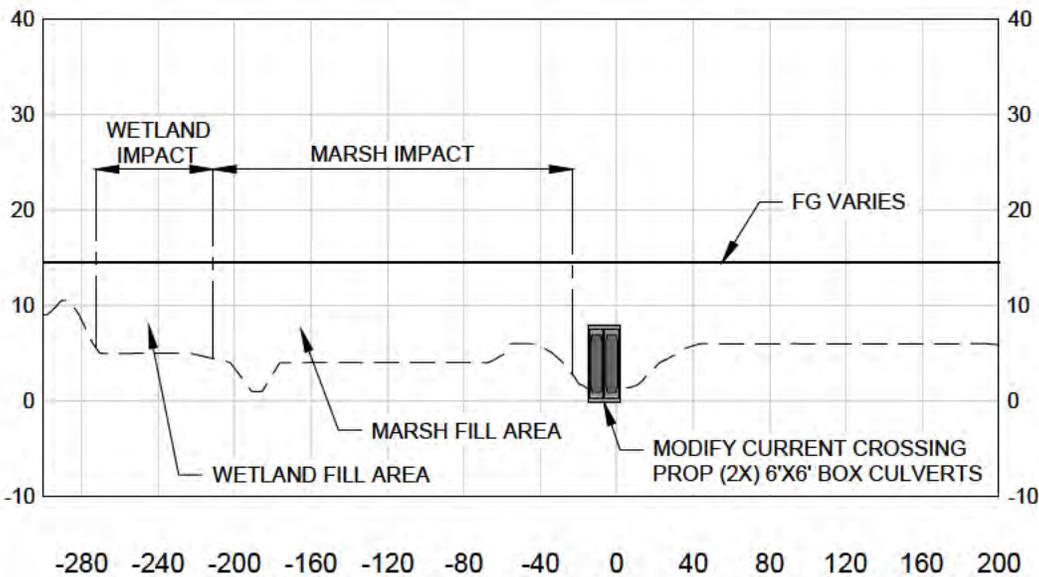
**B1**  
 5
 
**FRESHWATER SECTION**  
 SCALE: 1" = 100 (H), 5 (V)

PROPOSED ACTIVITY: WETLAND IMPACTS  
 DATUM: MEAN LOWER LOW WATER  
 BODY OF WATER: SAVANNAH RIVER  
 RIVER MILE: 15.0  
 COUNTY: CHATHAM STATE: GEORGIA

**SAVANNAH CONTAINER TERMINAL**  
  
 1" = 100'  
 GEORGIA PORTS AUTHORITY  
 P.O. BOX 2406  
 SAVANNAH, GA

**FRESH WATER SECTION**  
 APPLICANT: GEORGIA PORTS AUTHORITY  
 SOURCE: MOFFATT & NICHOL  
 PROJECT NUMBER: 5531-263  
 SHEET 13 OF 21 DATE: 7/17/23

Q:\S\16531-263\600 CAD\DDI\_Active\Wetland Permi\6531263-CS305-CULVERTSECT; Plotted: 7/17/2023 12:59 PM by JHUJSTON

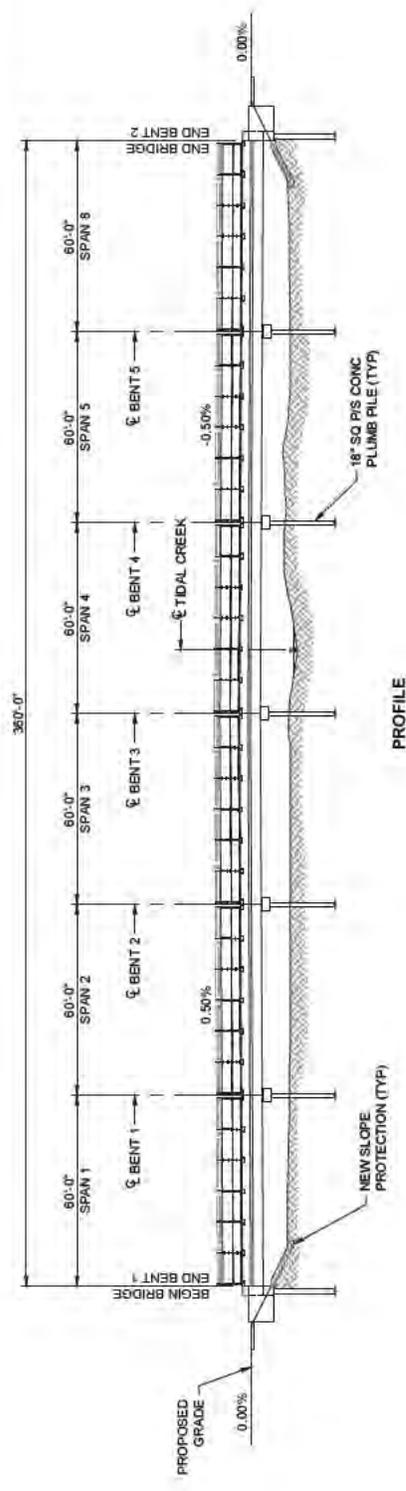
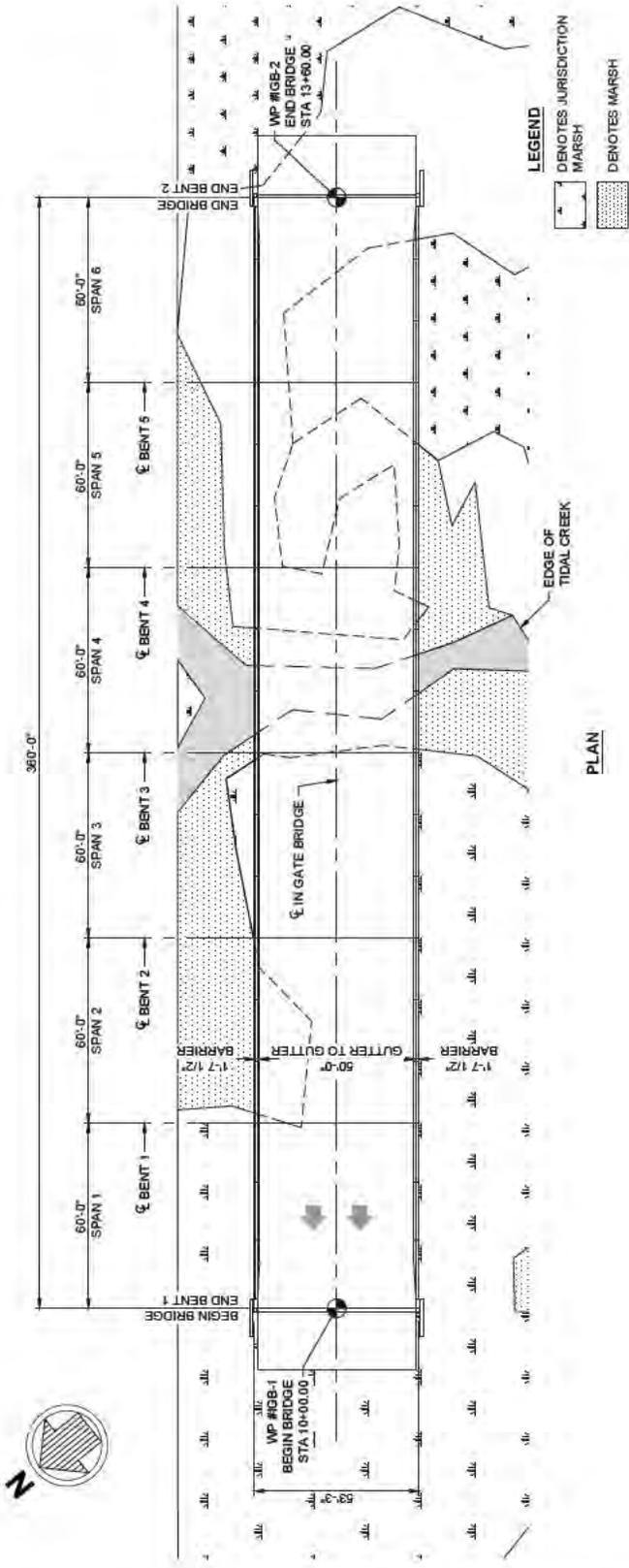


**C1**  
 5
 
**CULVERT SECTION**  
 SCALE: 1" = 100 (H), 5 (V)

PROPOSED ACTIVITY: WETLAND IMPACTS  
 DATUM: MEAN LOWER LOW WATER  
 BODY OF WATER: SAVANNAH RIVER  
 RIVER MILE: 15.0  
 COUNTY: CHATHAM STATE: GEORGIA

**SAVANNAH CONTAINER TERMINAL**  
  
 1" = 100'  
 GEORGIA PORTS AUTHORITY  
 P.O. BOX 2406  
 SAVANNAH, GA

**CULVERT SECTION**  
 APPLICANT: GEORGIA PORTS AUTHORITY  
 SOURCE: MOFFATT & NICHOL  
 PROJECT NUMBER: 5531-263  
 SHEET 14 OF 21 DATE: 7/17/23

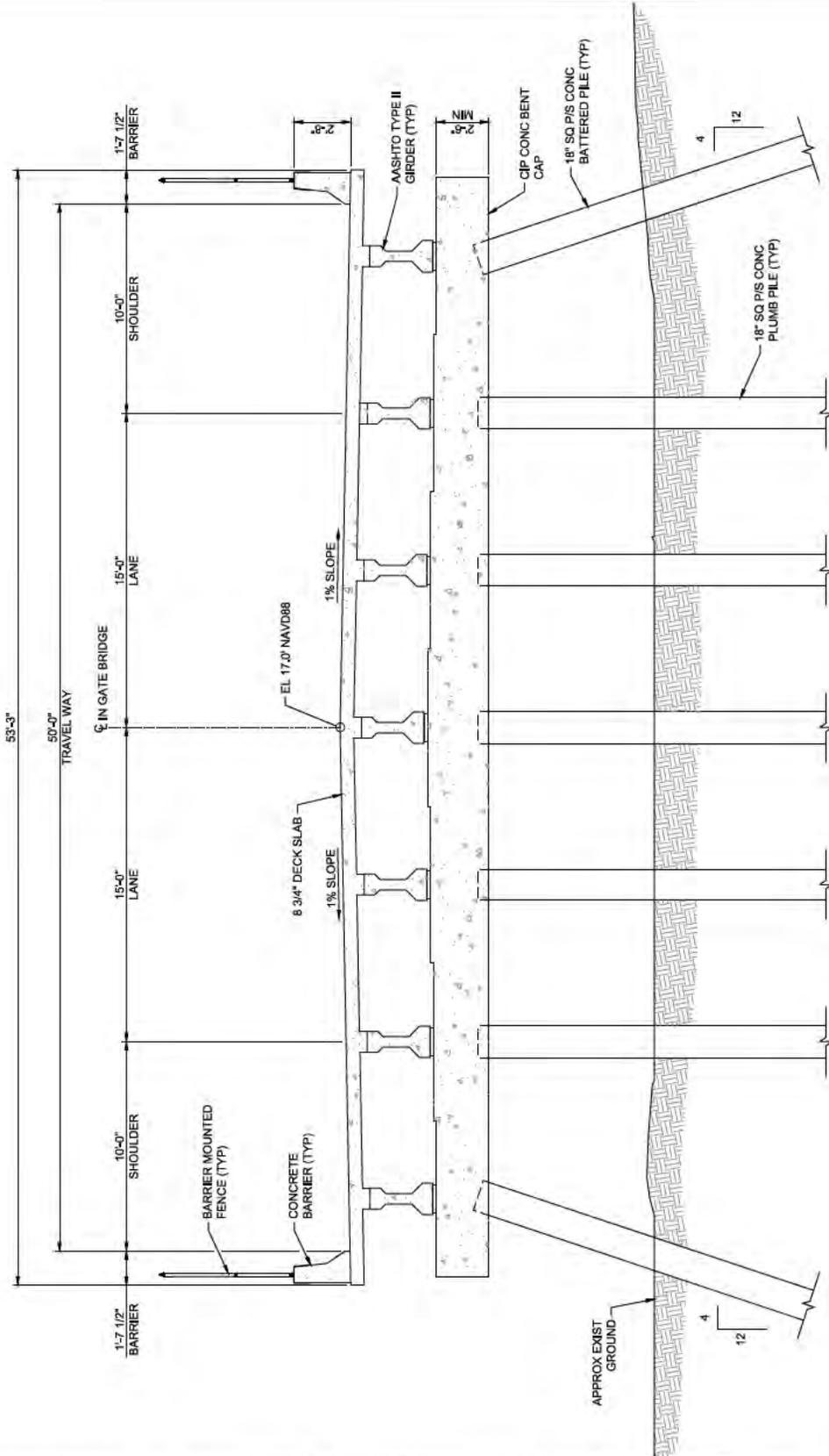


PLAN & PROFILE IN GATE BRIDGE  
SCALE: 1" = 60'

PROPOSED ACTIVITY: WETLAND IMPACTS  
 DATUM: MEAN LOWER LOW WATER  
 BODY OF WATER: SAVANNAH RIVER  
 RIVER MILE: 15.0  
 COUNTY: CHATHAM STATE: GEORGIA

SAVANNAH CONTAINER TERMINAL  
 0' 60' 120'  
 1" = 60'  
 GEORGIA PORTS AUTHORITY  
 P.O. BOX 2406  
 SAVANNAH, GA

IN GATE BRIDGE PLAN & PROFILE  
 APPLICANT: GEORGIA PORTS AUTHORITY  
 SOURCE: MOFFATT & NICHOL  
 PROJECT NUMBER: 5531-263  
 SHEET 15 OF 21 DATE: 7/17/23



**IN GATE BRIDGE SECTION**  
SCALE: 1" = 8'

PROPOSED ACTIVITY: WETLAND IMPACTS  
 DATUM: MEAN LOWER LOW WATER  
 BODY OF WATER: SAVANNAH RIVER  
 RIVER MILE: 15.0  
 COUNTY: CHATHAM STATE: GEORGIA

**SAVANNAH CONTAINER TERMINAL**

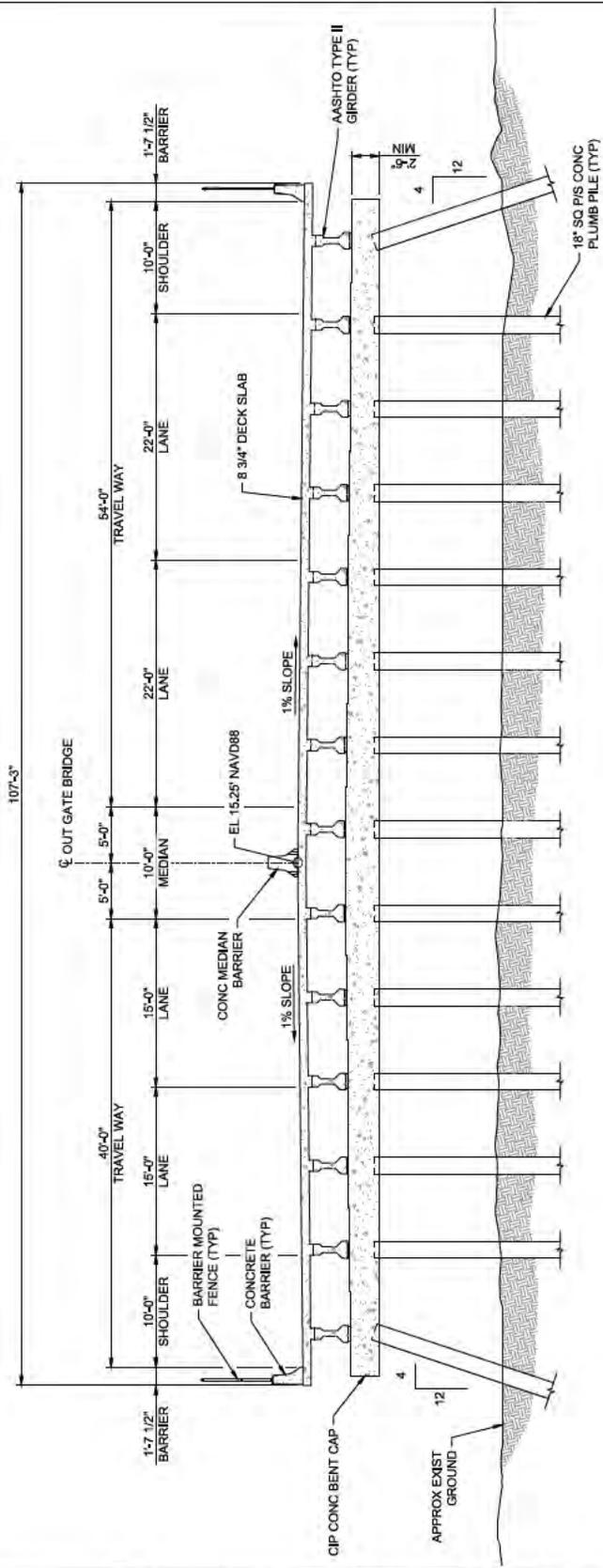
0' 8' 16'

1" = 8'

GEORGIA PORTS AUTHORITY  
 P.O. BOX 2406  
 SAVANNAH, GA

**IN GATE BRIDGE SECTION**  
 APPLICANT: GEORGIA PORTS AUTHORITY  
 SOURCE: MOFFATT & NICHOL  
 PROJECT NUMBER: 5531-263  
 SHEET 16 OF 21 DATE: 7/17/23





**OUT GATE BRIDGE SECTION**  
SCALE: 1" = 16'

PROPOSED ACTIVITY: WETLAND IMPACTS  
 DATUM: MEAN LOWER LOW WATER  
 BODY OF WATER: SAVANNAH RIVER  
 RIVER MILE: 15.0  
 COUNTY: CHATHAM STATE: GEORGIA

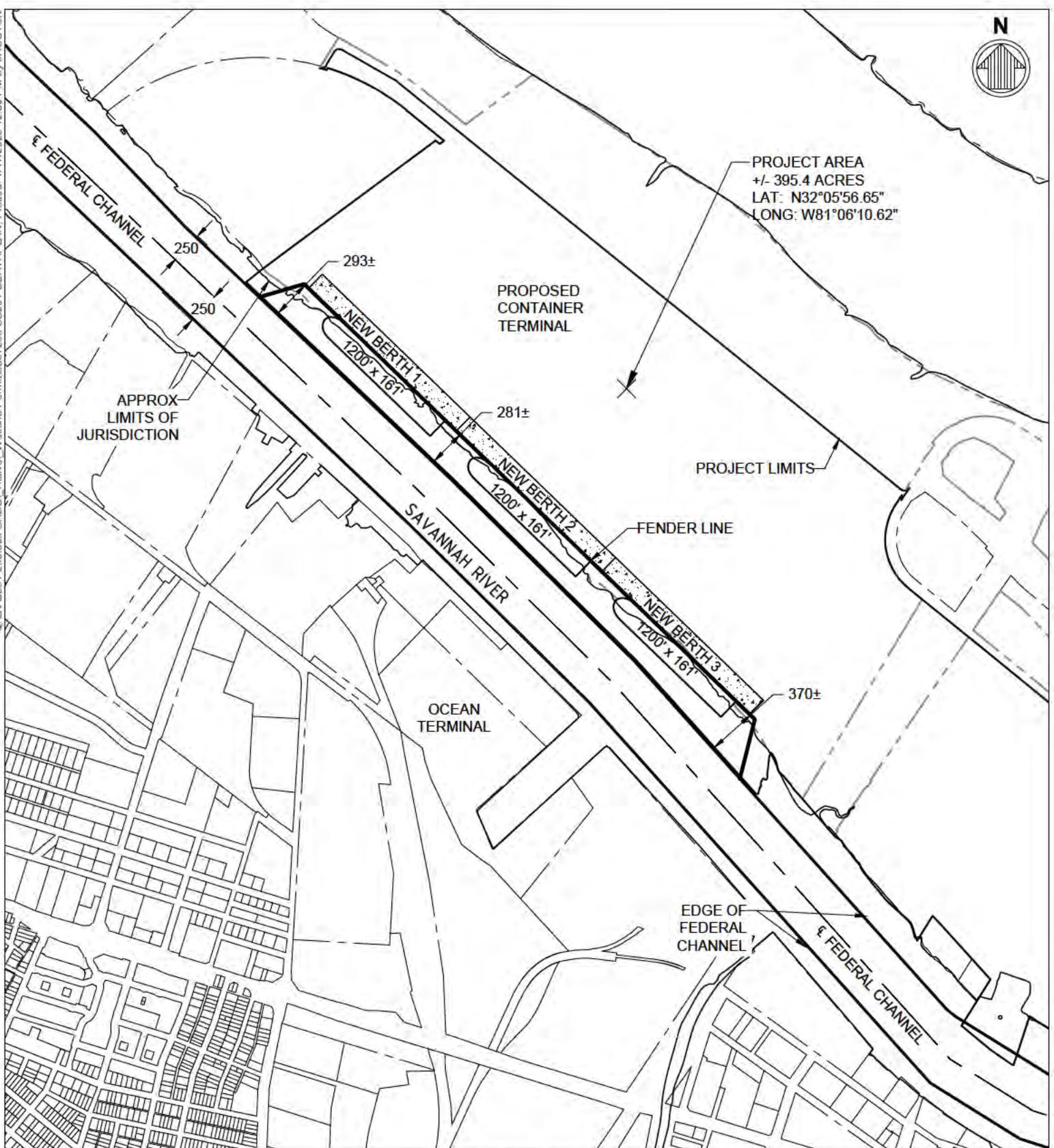
**SAVANNAH CONTAINER TERMINAL**

0' 16' 32'  
1" = 16'

GEORGIA PORTS AUTHORITY  
 P.O. BOX 2406  
 SAVANNAH, GA

**OUT BRIDGE SECTION**  
 APPLICANT: GEORGIA PORTS AUTHORITY  
 SOURCE: MOFFATT & NICHOL  
 PROJECT NUMBER: 5531-263  
 SHEET 18 OF 21 DATE: 7/17/23

Q:\515531-263\600 CADD\_Activel\_Welland\_Permit\5531263-SS201-BERTHP\PLAN\_Plotfiled: 7/17/2023 12:59 PM by JHUUSTON

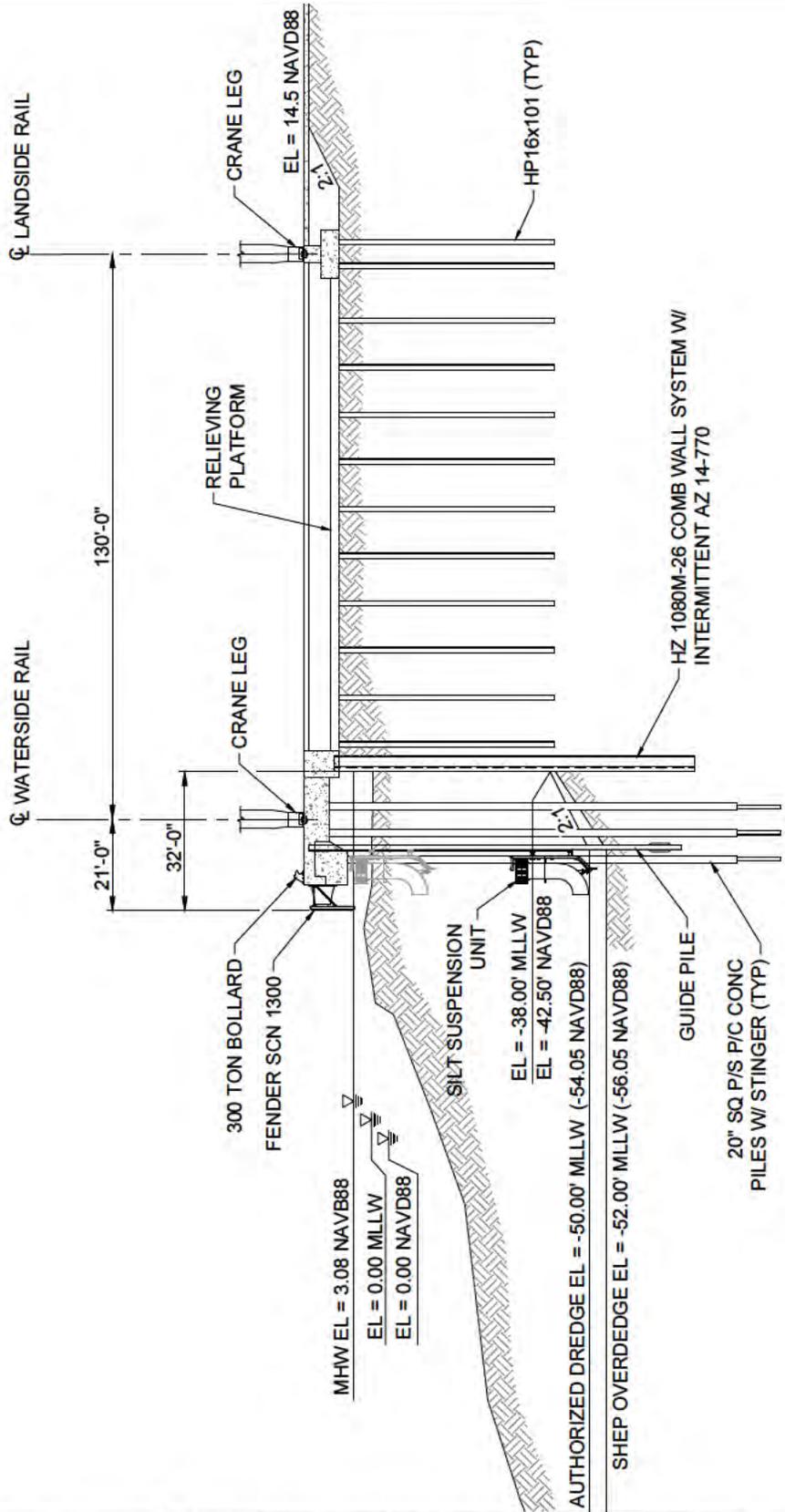


PROJECT AREA  
 +/- 395.4 ACRES  
 LAT: N32°05'56.65"  
 LONG: W81°06'10.62"

PROPOSED ACTIVITY: WETLAND IMPACTS  
 DATUM: MEAN LOWER LOW WATER  
 BODY OF WATER: SAVANNAH RIVER  
 RIVER MILE: 15.0  
 COUNTY: CHATHAM STATE: GEORGIA

SAVANNAH CONTAINER TERMINAL  
 0' 1000' 2000'  
 1" = 1000'  
 GEORGIA PORTS AUTHORITY  
 P.O. BOX 2406  
 SAVANNAH, GA

BERTH PLAN  
 APPLICANT: GEORGIA PORTS AUTHORITY  
 SOURCE: MOFFATT & NICHOL  
 PROJECT NUMBER: 5531-263  
 SHEET 19 OF 21 DATE: 7/17/23



PROPOSED ACTIVITY: WETLAND IMPACTS  
 DATUM: MEAN LOWER LOW WATER  
 BODY OF WATER: SAVANNAH RIVER  
 RIVER MILE: 15.0  
 COUNTY: CHATHAM STATE: GEORGIA

SAVANNAH CONTAINER TERMINAL

0' 40' 80'

1" = 40'

GEORGIA PORTS AUTHORITY  
 P.O. BOX 2406  
 SAVANNAH, GA

BERTH SECTION

APPLICANT: GEORGIA PORTS AUTHORITY  
 SOURCE: MOFFATT & NICHOL  
 PROJECT NUMBER: 5531-263  
 SHEET 20 OF 21 DATE: 7/17/23

Q:\IS\5531-263\600 CAD\1\_Active\Wetland Permits\5531263-SS300-DREDGEPLAN - Plotted: 7/17/2023 1:00 PM by JHUJSTON

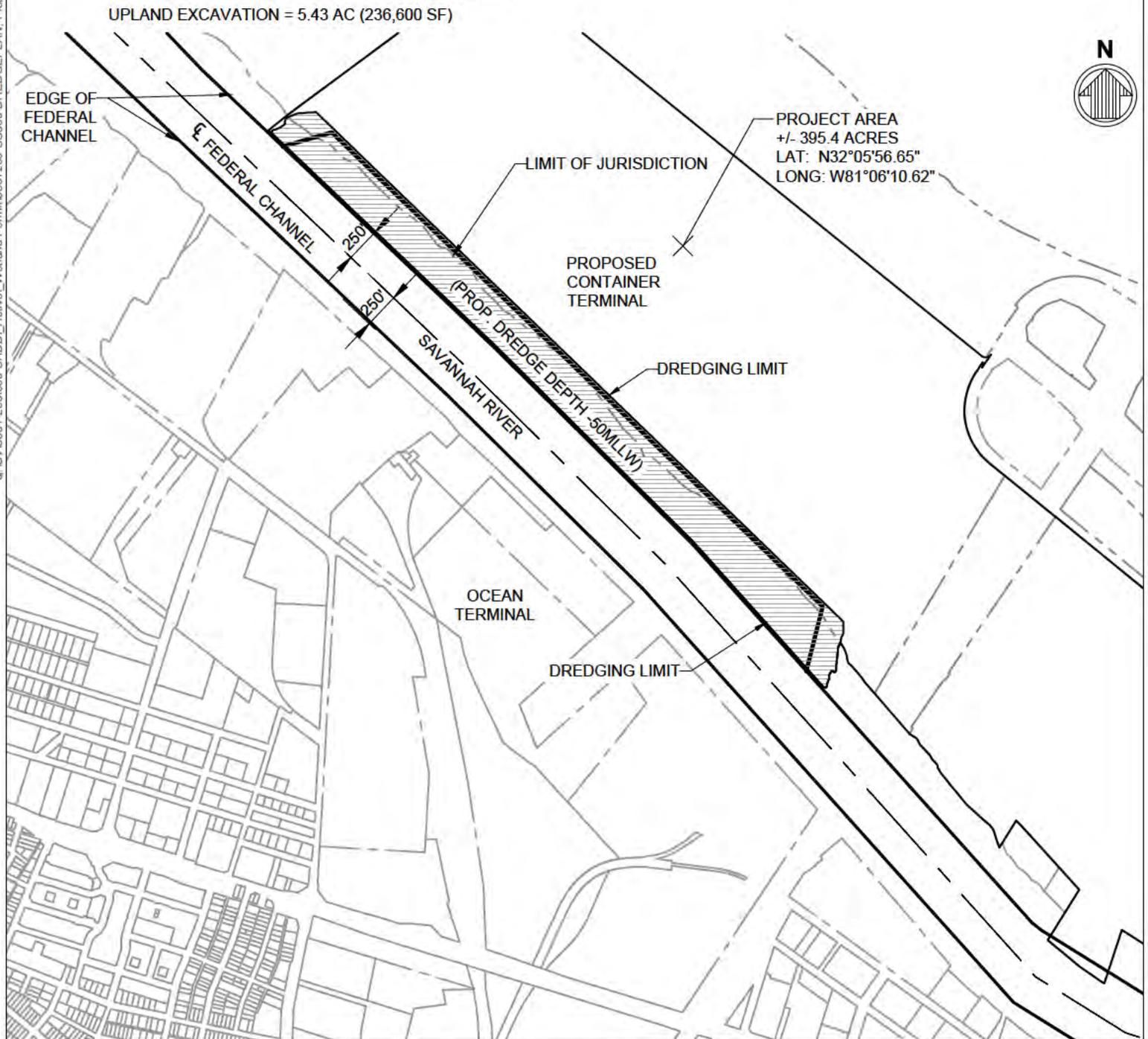
**LEGEND:**



- TOTAL DREDGE = 35.69 AC (1,554,700 SF)**
- OPEN WATER DREDGING - 26.96 AC (1,174,400 SF)
  - SALT MARSH DREDGING - 1.86 AC (81,100 SF)
  - INTER TIDAL DREDGING - 6.01 AC (261,800 SF)
  - WETLAND DREDGING - 0.10 AC (4,400 SF)
  - RIP-RAP/ROCK DREDGING - 0.76 AC (33,000 SF)
- UPLAND EXCAVATION = 5.43 AC (236,600 SF)**

**NOTES:**

- PROPOSED DREDGE -54.05' NAVD88 (-50' MLLW)  
2,407,100 CY
- PROPOSED OVER DREDGE -56.05' NAVD88 (-52' MLLW)  
115,400 CY



PROPOSED ACTIVITY: WETLAND IMPACTS  
 DATUM: MEAN LOWER LOW WATER  
 BODY OF WATER: SAVANNAH RIVER  
 RIVER MILE: 15.0  
 COUNTY: CHATHAM STATE: GEORGIA

**SAVANNAH CONTAINER TERMINAL**  
 0' 1000' 2000'  
 1" = 1000'  
 GEORGIA PORTS AUTHORITY  
 P.O. BOX 2406  
 SAVANNAH, GA

**DREDGE PLAN**  
 APPLICANT: GEORGIA PORTS AUTHORITY  
 SOURCE: MOFFATT & NICHOL  
 PROJECT NUMBER: 5531-263  
 SHEET 21 OF 21 DATE: 7/17/23