1.0 PURPOSE AND NEED AND DESCRIPTION OF PROPOSED PROJECT

1.1 INTRODUCTION

The United States Army Corps of Engineers (Corps), Charleston District, Regulatory Division, is evaluating a permit application from the South Carolina Department of Commerce Division of Public Railways d/b/a Palmetto Railways (Palmetto Railways or the Applicant) that will require a Department of the Army (DA) permit under Section 404 of the Clean Water Act (CWA)[18] and Section 10 of the Rivers and Harbors Act[19]. Palmetto Railways proposes to construct a state-of-the-art Intermodal Container Transfer Facility (ICTF) at the former Charleston Naval Complex (CNC) to facilitate the transfer of international cargo containers from ships at port facilities to trucks and/or rail (e.g., trains). The Proposed Project, also referred to as the Navy Base Intermodal Container Transfer Facility (Navy Base ICTF), would provide equal access to the Class I rail carriers (CSX Transportation [CSX] and Norfolk Southern Railway [NS]) that serve the Port of Charleston (Port) and various local businesses and industries (see Figure 1.1-1). The proposed facility would be designed to accommodate existing and projected future intermodal container traffic within the region.

Intermodal Container Transfer Facility: **Location where containerized cargo is transferred from one mode of transport (such as truck) to another mode (such as rail).**

Palmetto Railways initially submitted a proposal to the Corps on September 27, 2013, and after several revisions, they submitted a revised proposal on September 8, 2015. The Draft Environmental Impact Statement (DEIS) was released on April 29, 2016, and was based on the September 8, 2015, proposal. Palmetto Railways submitted an updated proposal in their DA permit application and mitigation plan in October 2016 and a Public Notice was issued. A revised mitigation plans were submitted in May and December 2017 (Appendix B). A detailed description of the Proposed Project is located in Section 1.7.

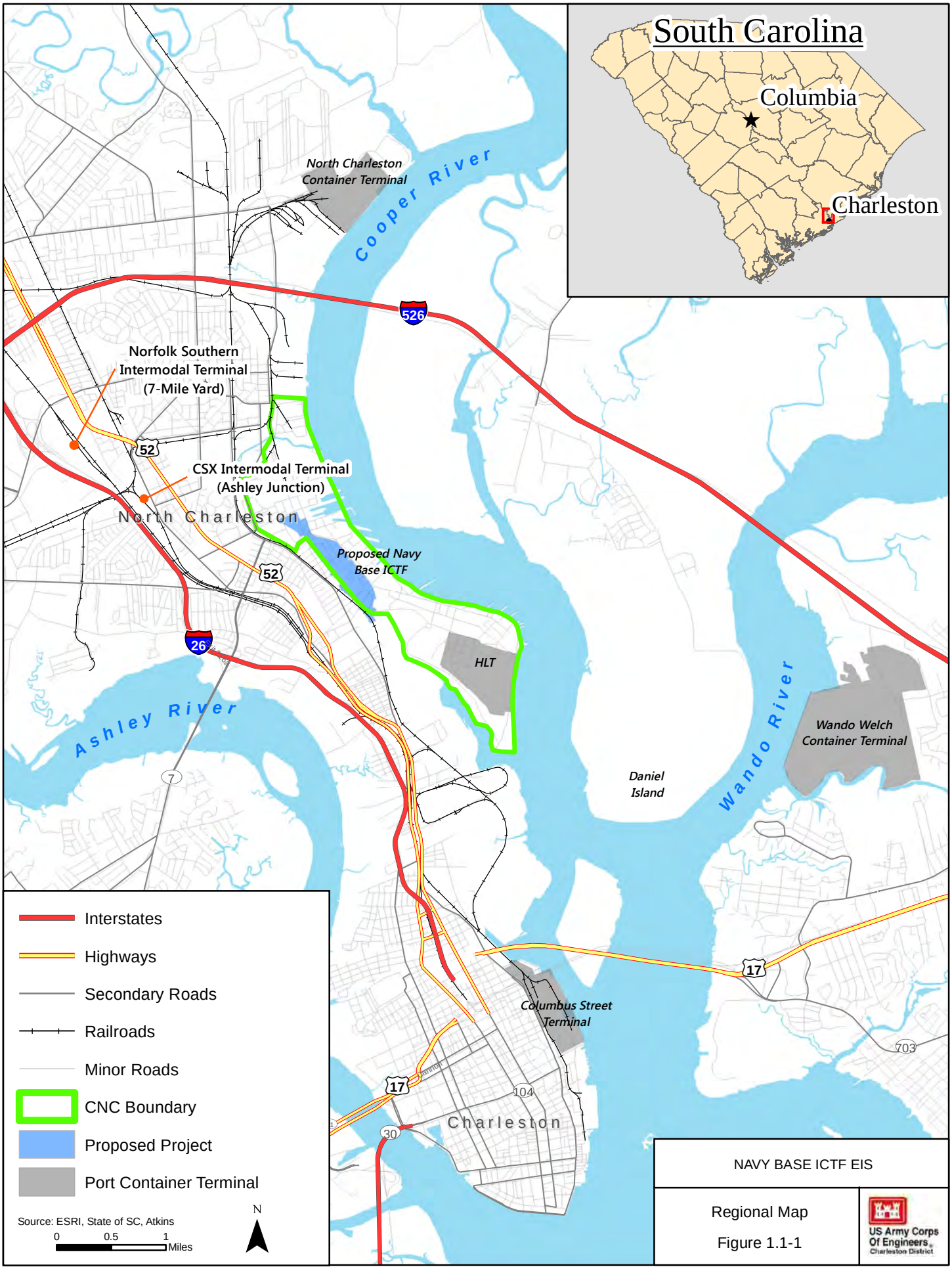
[18] 33 U.S.C § 1344

[19] 33 U.S.C § 403

***Equal access*: The same, but independent, opportunity for approach and entry to the ICTF. In this case, CSX and NS would have "equal access" to the ICTF.**

The Hugh K. Leatherman, Sr., Terminal (HLT) is a new 280-acre container terminal being constructed just south of the Navy Base ICTF. Intermodal containers that arrive at the HLT may be transported to the Navy Base ICTF or other destinations. In light of the ongoing construction and future operation of the HLT, and the future placements of the associated Port Access Road and Local Access Road; permitting the construction and operation of the Navy Base ICTF would have potentially significant impacts on the quality of the human environment. As a result, the Corps determined that this was a major federal action that warranted the preparation of an Environmental Impact Statement (EIS) in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S.C. 4323 et seq.), and notified Palmetto Railways of this determination in a letter dated July 10, 2013. Accordingly, the Corps published a "Notice of Intent to Prepare an Environmental Impact Statement"[20] in the *Federal Register*, Volume 78, No. 205, on October 23, 2013. The Corps also issued a local notice notifying the public of the project, the intent to prepare an EIS, and the scheduling of a scoping meeting (held on November 14, 2013). The Corps determined that the changes to Palmetto Railways' proposal in September 2015 were significant enough to warrant a new scoping meeting (held October 27, 2015) and a new scoping comment period to solicit additional public input on the revised project proposal.

[20] An EIS is not a Corps regulatory decision document. It is used by agency officials in conjunction with other relevant information in a permit application file, including public and agency comments on the Final EIS, to aid in the final permit decision.


South Carolina
Columbia
Charleston
North Charleston Container Terminal
Cooper River
526
Norfolk Southern Intermodal Terminal (7-Mile Yard)
52
CSX Intermodal Terminal (Ashley Junction)
North Charleston
Proposed Navy Base ICTF
52
26
HLT
Ashley River
7
Daniel Island
Wando River
Wando Welch Container Terminal
17
Columbus Street Terminal
703
17
104
Charleston
30
Interstates
Highways
Secondary Roads
Railroads
Minor Roads
CNC Boundary
Proposed Project
Port Container Terminal
Source: ESRI, State of SC, Atkins
0 0.5 1 Miles
N
NAVY BASE ICTF EIS
Regional Map
Figure 1.1-1
US Army Corps Of Engineers
Charleston District

1.2 THE NEPA PROCESS

1.2.1 What is NEPA?

Signed into law on January 1, 1970, NEPA[21] is the basic national charter for the protection of the environment, both human and natural. It established a national environmental policy and goals for the protection, maintenance, and enhancement of the environment and it provides a process for implementing these goals within the federal agencies. NEPA requires federal agencies to:

- consider the potential environmental consequences of their actions,
- consult with other interested agencies,
- document their analysis,
- make this environmental information available to the public for comment before the decisions are made and before actions are taken,
- identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment, and
- use all practicable means to restore and enhance the quality of the human environment and avoid or minimize any possible adverse effects of their actions upon the quality of the human environment.

NEPA is only applicable to federal actions, including projects and programs funded by federal agencies and those that require a federal permit or other regulatory decision. NEPA also established the Council on Environmental Quality (CEQ), which promulgated the *Council on Environmental Quality Regulations for Implementing NEPA (40 C.F.R. Parts 1500–1508)*. These regulations required each federal agency to issue its own individual implementing regulations. More information on NEPA can be found through the CEQ publication "A Citizen's Guide to NEPA," which is an informational guide that provides an explanation of NEPA, explains how it is implemented, and identifies how the public can participate in the assessment of environmental impacts conducted by federal agencies[22].

1.2.2 What interest factors are evaluated?

The Proposed Project and the alternatives are evaluated to determine the impacts or changes that may occur on both people and the environment as a result of the potential effects of the proposed improvements. Effects can be ecological, aesthetic, historic, cultural, economic, social, or health-related. The following are the interest factors to be evaluated in this EIS:

[21] 42 U.S.C. §§ 4321-4370h

[22] http://ceq.hss.doe.gov/publications/citizens_guide_to_nepa.html

- Geology and Soils
- Hydrology
- Water Quality
- Vegetation and Wildlife
- Waters of the United States
- Protected Species
- Essential Fish Habitat
- Transportation
- Land Use and Infrastructure
- Cultural Resources
- Visual Resources and Aesthetics
- Noise and Vibration
- Air Quality
- Climate Change
- Hazardous, Toxic, Radioactive Waste
- Socioeconomics and Environmental Justice
- Human Health and Safety
- Section 4(f) and Section 6(f)[23]

1.2.3 How is the Corps implementing the requirements of NEPA in the evaluation of this project?

This EIS has been prepared pursuant to (1) Section 102(2)(c) of NEPA (42 U.S.C. 4321 et seq.); (2) the Council on Environmental Quality (CEQ) regulations for implementing the procedural provisions of NEPA (40 C.F.R. 1502.4 et seq.); (3) Section 404 of the CWA on permitting disposal sites for dredged or fill material (33 U.S.C. 1344), as amended; and (4) NEPA "Implementation Procedures for the Regulatory Program" (33 C.F.R. 325, Appendix B); and (5) the Federal Railroad Administration (FRA) procedures for considering environmental impacts (78 C.F.R. 2713).

The purpose of this EIS is to inform decision makers and the public of the likely environmental consequences of the Proposed Project and its alternatives. To that end, the EIS identifies, documents, and evaluates potential effects of construction and operation of the Navy Base ICTF on the natural and human environment using a period of analysis from 2018 (facility opening) through 2038 (20-year planning horizon). The actual opening date is uncertain at this time.

An interdisciplinary team of scientists, planners, economists, engineers, archaeologists, and historians has described the existing environment and analyzed the Proposed Project and its alternatives with respect to the no-action alternative in the study area (defined as the area that may be directly and indirectly affected, as explained in Section 1.6.1), and has identified relevant beneficial and adverse effects associated with the project. The impacts can be direct effects (those caused by the action that occur at the same time and place), indirect effects (those caused by the action that take place later in time or farther removed in distance), or cumulative effects (the incremental impacts of the project when combined with past, present, and reasonably foreseeable future activities).

[23] U.S Department of Transportation Act of 1966 (49 U.S.C. 303, Section 4(f)) and Land and Water Conservation Fund Act of 1965 (Public Law 88-578, 78 Stat 897)

The Proposed Project is described in detail in Chapter 1, followed by a discussion in Chapter 2 of the development and screening of alternatives, resulting in the identification of alternatives carried forward for analysis in the EIS. Chapter 3 presents the "Affected Environment" or baseline conditions of the resources potentially impacted by the project (as of September 2015). The potential direct and indirect impacts of each alternative on these resources are discussed in Chapter 4 – Environmental Consequences, while cumulative impacts are discussed in Chapter 5. Mitigation measures to reduce project impacts are identified throughout Chapter 4, but are consolidated into one discussion in Chapter 6. The remaining chapters of the EIS (Chapters 7–12) provide information that supports and documents the NEPA process followed during consideration of a permit decision.

EIS Chapters

1	Purpose and Need and Description of Proposed Project
2	Development and Description of Alternatives
3	Affected Environment
4	Environmental Consequences
5	Cumulative Impacts
6	Mitigation
7	Irreversible and Irretrievable Commitments of Resources
8	Regulatory Environment Overview
9	Public, Agency, and Stakeholder Coordination and Consultation
10	References
11	Glossary
12	List of Preparers

An EIS is not a regulatory decision document. It is used by agency officials, in this case, the Corps, in conjunction with other relevant information in a permit application file, to inform the final permit decision. Since the "action" in this case is a permit decision, not an action proposed to be undertaken by the Corps, the decision options available to the District Engineer are: 1) to issue the permit; 2) to issue the permit with conditions, or 3) to deny the permit. As required by NEPA, the final decision will be documented in a Record of Decision (ROD).

The U.S. Army Corps of Engineers is the Lead Federal Agency for the Navy Base ICTF EIS.

In compliance with the CEQ regulations, when an EIS is being prepared and more than one federal agency has jurisdiction over a proposed action, a lead agency shall supervise the preparation of the EIS. In this case, the Corps is the lead federal agency for the preparation of this EIS. As provided for by NEPA, the United States Environmental Protection Agency (EPA) and the Federal Railroad Administration (FRA) have agreed to formally become cooperating agencies in the preparation of this EIS. A "Cooperating Agency" can be any federal agency with jurisdiction by law or special expertise with respect to any environmental impact (or reasonable alternative) involved in a proposed project or action. Under CEQ regulations (40 C.F.R. Section 1501.6), a Cooperating Agency may, "assume on request of the lead agency responsibility for developing information and preparing environmental analyses including portions of the environmental impact statement concerning which

the Cooperating Agency has special expertise. In addition, pursuant to CEQ Regulations (40 C.F.R. Section 1506.3), a Cooperating Agency may adopt without recirculation the environmental impact statement of a lead agency when, after an independent review of the statement, the Cooperating Agency concludes that its comments and suggestions have been satisfied." Additional information on the roles of the EPA and the FRA as Cooperating Agencies can be found in Section 1.3.4.

1.3 AGENCY INVOLVEMENT (ROLES AND RESPONSIBILITIES)

1.3.1 What is the role of the U.S. Army Corps of Engineers?

The Department of the Army regulatory program is one of the oldest in the Federal Government. Initially, it served a fairly simple, straightforward purpose: to protect and maintain the navigable capacity of the nation's waters. Time, changing public needs, evolving policy, case law, and new statutory mandates have changed the complexion of the program, adding to its breadth, complexity, and authority.

The Corps has direct permit authority to evaluate applications for certain activities in our nation's waters pursuant to three separate laws:

- Section 10 of the Rivers and Harbors Act regulates the construction, excavation, or deposition of materials in, over, or under "navigable waters of the U.S.," or any work which would affect the course, location, condition, or capacity of those waters;
- Section 404 of the CWA regulates the discharge of dredged or fill material into "waters of the U.S., including wetlands"; and
- Section 103 of the Marine Protection, Research and Sanctuaries Act regulates the transportation of dredged material for the purpose of disposal in the ocean[24].

The regulations found at 33 C.F.R. Part 320–332 govern the regulatory program of the U.S. Army Corps of Engineers. These regulations outline the laws and procedures utilized by the Corps in assessing applications for permits.

[24] The project will not result in discharges of dredged material proposed to be transported to the ocean; therefore, Section 103 of the Marine Protection, Research and Sanctuaries Act is not applicable.

Waters of the U.S.:

- All Navigable Waters of the U.S.;
- All interstate waters including interstate wetlands;
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
  - Which are or could be used by interstate or foreign travelers for recreational or other purposes; or from which fish or shellfish could be taken and sold in interstate or foreign commerce; or,
  - Which are used or could be used for industrial purposes by industries in interstate commerce.
- All impoundments of waters otherwise defined as waters of the United States under the definition;
- Tributaries of waters;
- The territorial seas; and
- Wetlands adjacent to waters (other than waters that are themselves wetlands).

1.3.2 Public Interest Review

One of the major aspects of the Corps' evaluation process is the "public interest review." The decision whether to issue a DA permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on public interest. Evaluation of the probable impact which the proposed activity may have on the public interest requires a careful weighing of all those factors which become relevant in each particular case. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. The decision whether to authorize a proposal, and if so, the conditions under which it will be allowed to occur, are therefore determined by the outcome of this general balancing process. That decision should reflect the national concern for both protection and utilization of important resources. All factors that may be relevant to the proposal must be considered, including the cumulative effects thereof, as shown below.

PUBLIC INTEREST FACTORS

Conservation	Shore erosion and accretion
Economics	Recreation
Aesthetics	Water supply and conservation
General environmental concerns	Water quality
Wetlands	Energy needs
Historic properties	Safety
Fish and wildlife values	Food and fiber production
Flood hazards	Mineral needs
Floodplain values	Considerations of property ownership
Land use	Needs and welfare of the people
Navigation	

For activities that are also subject to Section 404 of the CWA, a permit will be denied if the project would not comply with the Environmental Protection Agency's Section 404(b)(1) Guidelines (discussed below). Subject to the preceding sentence and any other applicable laws and regulations, a DA permit will be granted unless the District Engineer determines that it would be contrary to the public interest. In accordance with NEPA, the final decision on the DA permit will be documented in the ROD. The ROD will also include analysis on the public interest review, as a basis for the decision.

Section 404 (b)(1) Guidelines

Under Section 404(b)(1) of the CWA, the EPA, in conjunction with the Corps, developed guidelines to ensure compliance with Section 404 of the CWA when evaluating permit applications. These guidelines are specifically referred to as the "404(b)(1) Guidelines." 404(b)(1) Guidelines provide regulations outlining measures to avoid unnecessary aquatic impacts, aquatic impact minimization measures, and compensatory mitigation. The Draft 404(b)(1) Guidelines Evaluation (Subparts C-G) for the proposed Navy Base ICTF Project is included in Appendix A. These guidelines are heavily weighted towards preventing environmental degradation of waters of the U.S., including wetlands and therefore place additional constraints on Section 404 discharges. The 404(b)(1) Guidelines specifically outline four conditions that must be satisfied in order to make a determination that a proposed discharge complies with these Guidelines. These conditions are referred to as "restrictions on discharge." In general, these four restrictions on discharge do not allow the Corps to issue a permit if a discharge would:

1. have a "practicable" alternative which would have less adverse impact on the aquatic ecosystem as long as the alternative does not have other significant adverse environmental consequences;

2. cause or contribute to violations of any applicable State water quality standard; violate toxic effluent standards; jeopardize the continued existence of an endangered or threatened species; or violate any marine sanctuary;
3. cause or contribute to significant degradation of the waters of the U.S., including wetlands; and
4. not minimize potential adverse impacts of the discharge on the aquatic ecosystem.

Per 40 C.F.R. 230.10, each of these "restrictions" has specific requirements in order to determine compliance. The direct excerpt for the 404(b)(1) Guidelines that outlines these "restrictions" is provided below.

> *"(A) Except as provided under section 404(b)(2), no discharge of dredged or fill material shall 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.*
>
> > *(1) For the purpose of this requirement, practicable alternatives include, but are not limited to:*
> >
> > > *(i) Activities which do not involve a discharge of dredged or fill material into the waters of the United States or ocean waters;*
> > >
> > > *(ii) Discharges of dredged or fill material at other locations in waters of the United States or ocean waters;*
> >
> > *(2) An 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. If it is otherwise a practicable alternative, an area not presently owned by the applicant, which could reasonably be obtained, utilized, expanded or managed in order to fulfill the basic purpose of the proposed activity may be considered.*
> >
> > *(3) Where the activity associated with a discharge which is proposed for a special aquatic site (as defined in subpart E) does not require access or proximity to or siting within the special aquatic site in question to fulfill its basic purpose (i.e., is not "water dependent"), practicable alternatives that do not involve special aquatic sites are presumed to be available, unless clearly demonstrated otherwise. In addition, where a discharge is proposed for a special aquatic site, all practicable alternatives to the proposed discharge, which do not involve a discharge into a special aquatic site are presumed to have less adverse impact on the aquatic ecosystem, unless clearly demonstrated otherwise.*
> >
> > *(4) For actions subject to NEPA, where the Corps of Engineers is the permitting agency, the analysis of alternatives required for NEPA environmental documents, including supplemental Corps NEPA documents, will in most cases provide the information for the evaluation of alternatives under these Guidelines. On occasion, these NEPA documents may address a broader range of alternatives than required to be considered under this paragraph or may not have considered the alternatives in sufficient detail to respond to the requirements of these Guidelines. In the latter case, it may be necessary to supplement these NEPA documents with this additional information.*

(5) To the extent that practicable alternatives have been identified and evaluated under a Coastal Zone Management program, a section 208 program, or other planning process, such evaluation shall be considered by the permitting authority as part of the consideration of alternatives under the Guidelines. Where such evaluation is less complete than that contemplated under this subsection, it must be supplemented accordingly.

(B) No discharge of dredged or fill material shall be permitted if it:

(1) Causes or contributes, after consideration of disposal site dilution and dispersion, to violations of any applicable State water quality standard;

(2) Violates any applicable toxic effluent standard or prohibition under section 307 of the Act;

(3) Jeopardizes the continued existence of species listed as endangered or threatened under the Endangered Species Act of 1973, as amended, or results in likelihood of the destruction or adverse modification of a habitat which is determined by the Secretary of Interior or Commerce, as appropriate, to be a critical habitat under the Endangered Species Act of 1973, as amended. If an exemption has been granted by the Endangered Species Committee, the terms of such exemption shall apply, in lieu of this subparagraph;

(4) Violates any requirement imposed by the Secretary of Commerce to protect any marine sanctuary designated under Title III of the Marine Protection, Research, and Sanctuaries Act of 1972.

(C) Except as provided under section 404(b)(2), no discharge of dredged or fill material shall be permitted which will cause or contribute to significant degradation of the waters of the United States. Findings of significant degradation related to the proposed discharge shall be based upon appropriate factual determinations, evaluations, and tests required by subparts B and G, after consideration of subparts C through F, with special emphasis on the persistence and permanence of the effects outlined in those subparts. Under these Guidelines, effects contributing to significant degradation considered individually or collectively, include:

(1) Significantly adverse effects of the discharge of pollutants on human health or welfare, including but not limited to effects on municipal water supplies, plankton, fish, shellfish, wildlife, and special aquatic sites.

(2) Significantly adverse effects of the discharge of pollutants on life stages of aquatic life and other wildlife dependent on aquatic ecosystems, including the transfer, concentration, and spread of pollutants or their byproducts outside of the disposal site through biological, physical, and chemical processes;

(3) Significantly adverse effects of the discharge of pollutants on aquatic ecosystem diversity, productivity, and stability. Such effects may include, but are not limited to, loss of fish and wildlife habitat or loss of the capacity of a wetland to assimilate nutrients, purify water, or reduce wave energy; or

(4) Significantly adverse effects of discharge of pollutants on recreational, aesthetic, and economic values.

(D) Except as provided under section 404(b)(2), no discharge of dredged or fill material shall be permitted unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem. Subpart H identifies such possible steps."

1.3.3 What Other Environmental Regulations must the Corps Consider?

As discussed in 33 C.F.R. 320.3, the Corps must review projects for compliance with numerous other Federal, state, and local laws, regulations, memoranda of agreement, and EOs, such as the Fish and Wildlife Coordination Act, the Endangered Species Act (ESA)[25], the National Historic Preservation Act (NHPA)[26], and the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA). Relevant laws and regulations that the Corps considered for the Navy Base ICTF EIS are identified in Chapter 8 (Regulatory Environment Overview).

1.3.4 Who are the Cooperating Agencies for this project?

1.3.4.1 U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency and the Federal Railroad Administration are cooperating agencies for the Navy Base ICTF EIS.

The U.S Environmental Protection Agency (EPA) mission is to protect human health and the environment. Through a suite of environmental laws and Executive Orders (EOs) (e.g., Clean Air Act [CAA][27], CWA[28], EO 12898 Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, and EO 13045 Protection of Children from Environmental Health Risks and Safety Risks), EPA has jurisdiction over/interest in multiple topics relevant to the project. These topics include air quality, climate change, wetlands, socioeconomics, Environmental Justice, and health and safety. Additionally, under Section 309 of the CAA, EPA reviews and comments on EISs prepared by other federal agencies, including (but not limited to): (1) the adequacy of the analysis and the environmental impacts of the proposed action, (2) issues related to its duties and responsibilities, and (3) potential violation of or inconsistency with national environmental standards, and determines whether the scopes of the impacts analyses are adequate. Due to their interest in the potential air quality, socioeconomic/Environmental Justice, and human health and safety impacts from the project, EPA is a Cooperating Agency on this EIS. As a Cooperating Agency, EPA is afforded the opportunity to participate in NEPA coordination meetings, discuss technical studies, and provide information on alternatives/mitigation.

[25] 16 U.S.C. 1536

[26] 16 U.S.C. § 470 et seq.

[27] 42 U.S.C. § 1857 et seq., as amended and recodified in 42 U.S.C. § 7401 et seq.

[28] 33 U.S.C. § 1251 et seq.

1.3.4.2 Federal Railroad Administration

The Federal Railroad Administration (FRA) was created by the Department of Transportation Act of 1966, and is one of ten agencies within the U.S. Department of Transportation (USDOT) concerned with intermodal transportation. The FRA mission is to enable the safe, reliable, and efficient movement of people and goods now and in the future. Regarding this project, FRA understands the ICTF would provide increased opportunity for CSX Transportation and NS Railway, both Class I railroads, to service intermodal traffic handled by the South Carolina Ports Authority (SCPA) at the CNC.

Palmetto Railways submitted a Railroad Rehabilitation and Improvement Financing (RRIF) loan application to FRA. At the time of submittal, the loan program was under FRA; however, it has since been moved under the Build America Bureau. This new bureau was established in July 2016 and is responsible for driving transportation infrastructure development projects in the United States. Under the RRIF program, the Build America Bureau is authorized to provide direct loans and loan guarantees that may be used to acquire, improve, or rehabilitate rail equipment or facilities, or develop new intermodal or railroad facilities. Because this is a rail project, the FRA is the most appropriate agency to issue USDOT's NEPA clearance for the Proposed Project. As such, the FRA will consider the potential environmental impacts resulting from the Proposed Project, and the EIS must comply with FRA's Procedures for Considering Environmental Impacts as well as other applicable statutes and regulations, including the NHPA and Sections 4(f) of the U.S. Department of Transportation Act of 1966[29] and 6(f) of the Land and Water Conservation Fund (LWCF) Act[30]. Before the Proposed Project is eligible for a RRIF, FRA must have completed the NEPA process. The FRA is participating in the EIS as a Cooperating Agency. As a Cooperating Agency, FRA is afforded the opportunity to participate in NEPA coordination meetings, discuss technical studies, review and comment on the EIS, and provide information on alternatives/mitigation, all of which would help ensure the EIS conforms to FRA's Procedures. In addition, because Palmetto Railways is considering a RRIF loan to fund the Proposed Project, FRA has an action under NEPA and will issue a separate ROD in addition to the Corps' ROD.

1.3.5 What are the Roles of the Public, Other Agencies, and Tribes in this EIS?

The opportunity for public input is one element of the Corps' overall public participation program for the Navy Base ICTF EIS. This program includes a framework for: (1) broadly distributing and providing public access to information regarding development of the Draft Environmental Impact Statement (DEIS) and the Final EIS (FEIS); (2) promoting an understanding of the NEPA process, studies, alternatives evaluation, and environmental analyses; and (3) providing a number of

[29] 49 U.S.C. 303, Section 4(f)

[30] Public Law 88-578, 78 Stat 897

opportunities for public input. The program incorporates several means for engaging and providing information to the public, agencies, and tribes, including public meetings, community outreach meetings, mailings to interested parties, a project website (www.NavyBaseICTF.com), and news-letters.

Upon initiation of the NEPA process, a public scoping period, including a scoping meeting, was opened to solicit input from agencies and the public on issues of concern for project. As a result of a revised proposal by Palmetto Railways, the Corps opened a second public scoping period, and a second scoping meeting was held, to inform the public of the revised project. The comments received during the scoping periods and meetings assisted the Corps in determining the overall scope of the analysis for this EIS. A Public Hearing on the Draft EIS was also held and allowed comment on the project. Additional information about consultation, coordination, and public involvement is included in Chapter 9.

1.4 PROJECT PURPOSE AND NEED

In accordance with the CEQ Regulations for Implementing the Procedural Provisions of NEPA (CEQ Regulations), 40 C.F.R. Parts 1500-1508, the Corps must specify the underlying purpose and need for the project (40 C.F.R. 1502.13). Considered together, the purpose and need establish part of the framework to identify the range of alternatives for a proposed action to be evaluated in an EIS.

Corps regulations define three ways of stating the purpose of a project. As described below, one statement is provided by the Applicant, the other two are determined by the Corps:[31]

- Palmetto Railways has included a stated purpose and need in its proposal to the Corps.
- The Corps determines the "basic" purpose of the project, which in turn is used to determine whether the project is water dependent as it relates to Section 404(b)(1) of the CWA.
- The Corps determines the "overall" purpose of the project, which is used to determine the range of practicable alternatives for the proposed action.

1.4.1 What is the Applicant's Stated Purpose and Need?

Palmetto Railways (the Applicant) is a division of the South Carolina Department of Commerce and was established in 1969. The Applicant's mission is "to provide safe, efficient, and cost-effective rail solutions to facilitate the movement of freight and support economic development efforts; thereby, promoting the economic viability of the State of South Carolina." Palmetto Railways operates three railroad subdivisions; Charleston, North Charleston, and Charity Church Subdivisions. The Charleston and North Charleston Subdivisions provide switching services to the terminals of the South Carolina Ports Authority and other various industries in Charleston County, interchanging with

[31] 33 C.F.R. 325, Appendix B, "NEPA Implementation Procedures for the Regulatory Program"; 40 C.F.R. 230.10(a).

CSX Transportation and Norfolk Southern. The Charity Church Subdivision, located in southern Berkeley County serves BP Chemical, Nucor Steel and Santee Cooper Cross Generating Station, interchanging with CSX Transportation (Palmetto Railways 2016).

The Applicant's stated purpose and need is an expression, typically in the applicant's own words, of the underlying goals for a proposed project. Palmetto Railways' Statement of Purpose and Need is included in Appendix B. The Corps takes an applicant's purpose and need into account when determining the overall project purpose. Elements of the applicant's proposal are important from the Corps' perspective, as they establish the basis for the project. These elements are factored into the evaluation of alternatives under NEPA and the Section 404(b)(1) guidelines.

Palmetto Railways has stated that the purpose of the project is:

> *To locate, build, and operate a state-of-the-art intermodal container transfer facility serving the Port of Charleston with near-dock, equal access for the two Class I rail carriers serving the area (e.g., CSX Transportation [CSX] and Norfolk Southern Railway [NS]) to meet future demand in the Charleston region to facilitate the movement of goods and commerce over rail, thus stimulating and supporting economic development in the region and providing and maintaining connections to key regional and national transportation corridors (Appendix B).*"

As stated by the Applicant, the need for the project is to provide consolidated intermodal facility capacity beyond the two existing intermodal terminals in the Charleston region that serve the Port and other regional businesses, and to accommodate projected future increases in the volume of intermodal container cargo in the region (Appendix B). The SCPA anticipates that, by the year 2018, the Port will handle approximately 2.2 million twenty-foot equivalent units (TEUs) of container traffic, or "throughput," the majority of which are international import and export. The projected increase in container throughput is expected to reach approximately 4.0 million TEUs by 2038 (Table 1.4-1)[32].

Table 1.4-1
Projected TEU Container Traffic at Port of Charleston

Port of Charleston Container Terminals	Projected TEU Container Traffic in 2018	Projected TEU Container Traffic in 2038
Columbus Street Terminal	66,000	305,060
North Charleston Container Terminal	645,213	694,727
Wando Welch Container Terminal	1,492,481	1,583,740
Hugh K. Leatherman, Sr. Terminal	–	1,400,000
Total	2,203,694	3,983,527

Source: Personal communication, Barbara Melvin, August 12, 2014.

[32] Personal communication, Barbara Melvin, August 12, 2014.

A *Twenty-Foot Equivalent Unit* (TEU), or the volume of one 20-foot container, is the standard volume unit for describing a container terminal's cargo-handling capacity.

Currently, the existing intermodal facilities in the Charleston region include the CSX Ashley Junction intermodal terminal and the NS 7-Mile intermodal terminal (see Figure 1.1-1). CSX's Ashley Junction/Bennett Yard includes four working tracks with grounded trackside storage, as well as storage for chassis and containers on chassis. The NS 7-Mile yard has a single loading track and both grounded and wheeled storage for containers and chassis. To promote competitive rail service, the new ICTF would provide equal access to both Class I rail carriers, allowing the facility to accommodate and provide equal service to both rail carriers simultaneously. The reported combined capacity of the two existing intermodal terminals is approximately 498,800 TEUs (Appendix B). Both existing intermodal facilities could increase the total throughput capacity with infrastructure and operational improvements to handle a portion of the projected future growth in intermodal container cargo volume at the Port; however, constraints such as available land and height restrictions may limit potential improvements (Appendix B).

***Near-dock* or *on-dock facilities*: Near-dock facilities are located landward of the marine terminal and cargo containers are transported by over-the-road (OTR) trucks and/or Utility Tractor Rig (UTR) trucks to the near-dock facility from the marine terminal or from the near-dock facility to the marine terminal. Near-dock facilities may serve multiple marine terminals. On-dock facilities are located proximate to the marine terminal and cargo containers may be transferred directly between the marine terminal and the on-dock facility.**

As stated by the Applicant, historically at the Port of Charleston, intermodal containers transported by rail account for approximately 13 percent of the total container volumes handled by the Port, with the remainder being transported by truck. In 2015, 22 percent of all total container volumes handled by the Port were moved via intermodal rail (SCPA 2016). This increase is due in part to the recent creation of the Inland Port in Greer, South Carolina. At that percentage, rail intermodal container volumes are projected to outgrow the region's existing rail intermodal capacity to transport them in 2022 (Appendix B).

To handle the next generation of container vessels, U.S. ports will require significant improvements to both waterside and landside infrastructure (Corps 2012). To successfully compete with other ports, Post-Panamax container terminals will need to provide "on-dock" or "near-dock" intermodal

rail capabilities to serve these vessels and to minimize the truck traffic and environmental impacts associated with rapid transfers of large numbers of containers.

The Port's main competitor to the north, the Virginia Ports Authority, handled intermodal container transport by rail at a rate of approximately 30 percent of total container cargo volumes in 2013 (Port of Virginia 2014). The Georgia Ports Authority, the main competitor to the south, handled approximately 19 percent of its total container transport volumes by rail in 2013, with consistent increases over the past four years (Georgia Ports Authority 2013). The historical intermodal container transport volumes by rail for both Virginia and Georgia ports were approximately 15–18 percent of the total container volumes prior to their expanding intermodal capacity through the development of new intermodal terminals (Appendix B). Both of these ports operate "on-dock" intermodal facilities, thereby eliminating a public dray move of containers.

The State of South Carolina has a need for a regional ICTF to service the Port of Charleston's container terminals in order to provide capacity to accommodate existing and future growth of intermodal containerized cargo projected to move through the Port. In addition, per the Applicant, the regional ICTF would need to be "near-dock" (Appendix B). Palmetto Railways proposes to maximize their throughput capacity by connecting their near-dock facility with a private drayage road. Equally important is the need to connect the near-dock facility to a Port container terminal that handles and processes sufficient TEU volumes to support ICTF operations 24 hours a day, 7 days a week. A private drayage road would eliminate interaction of truck drayage with public traffic (from the connected Port container terminal), and would provide operational efficiency to reach approximately 12,000 TEUs per acre of ICTF site. Increased operational efficiency of the Navy Base ICTF can be achieved because the private drayage road would enable the facility to operate 24 hours per day.

With a minimum throughput goal of 800,000 TEUs (20 percent of future projected throughput), the facility site size would need to be a minimum of approximately 65 acres. According to Palmetto Railways, by full build-out, the Navy Base ICTF will be designed to accommodate a throughput capacity of 1.2 million TEUs, or 30 percent of the projected future volume of intermodal containers. While there is not a specific definable configuration that is required, the site configuration must be conducive to process the intended throughputs of the Navy Base ICTF.

1.4.2 What is the Corps' evaluation of the Applicant's Need Statement?

The concept of public and private need for the project is important to the balancing process of the Corps' public interest review. Part of the public interest review in the evaluation of every application is to consider the relative extent of the public and private need for the proposed structure or work[33]. The Corps assumes that an applicant has considered economic viability and need in the market place;

[33] 33 C.F.R. 320.4(a)(2)

however, regulations require that the Corps should make an independent review of the need for a project from the perspective of the overall public interest. This independent review is relevant to the Corp's DA permit decision. The Corps will question the public need for a project if it appears to be unduly speculative.

The Corps has reviewed the information provided by Palmetto Railways, including the need for a near-dock ICTF (Appendix B) in the region to have capacity for existing and projected future growth of intermodal container traffic. The Corps recognizes the need and projected increase of rail-based TEUs in the Final Environmental Impact Statement Proposed Marine Container Terminal at the Charleston Naval Complex (2006),[34] where the future projected rail-based TEUs would be approximately 20–25 percent of TEUs throughput from the Port of Charleston. This projection was validated by a September 2016 year-to-date statistic of 22 percent rail TEUs provided by the SCPA (2016). The Corps also recognizes the need for Palmetto Railways, a State agency, to provide equal access to both Class I rail carriers (CSX and NS). Equal access is necessary to ensure that the Port and Palmetto Railways remain neutral in business dealings with Class I rail carriers and do not provide preferential treatment to either carrier, in order to prevent giving one carrier an unfair competitive advantage over the other. Equal access also seeks to preserve competitive intermodal rail transport pricing for the Port as a destination for intermodal traffic versus its competitors (e.g., Port of Norfolk and Port of Savannah).

The Corps has found, based on the Applicant's information and its own independent review, that the Applicant's stated need is not unduly speculative.

1.4.3 Corps' Basic Project Purpose and Water Dependency

The Section 404(b)(1) Guidelines require that the Corps determine whether a project is "water dependent." Water dependent means that the project requires access or proximity to, or siting within, a special aquatic site to fulfill its basic purpose. If the Corps determines that a project is not water dependent, the regulations presume that: (1) an alternative site that does not involve special aquatic sites is available, and (2) practicable alternatives are available that would result in less environmental loss, unless clearly demonstrated otherwise by the applicant[35]. The Corps has determined that the basic purpose of Palmetto Railways' discharge of fill material is to create the elevations necessary to facilitate the construction of an ICTF that would handle the transfer of intermodal containers; however, this action does not require access or proximity to, or siting within, a special aquatic site to fulfill its basic purpose. Therefore, the Corps has found that the basic purpose of this project is not water dependent.

[34] The Final Environmental Impact Statement Proposed Marine Container Terminal at the Charleston Naval Complex is available at www.navybaseictf.com. The Corps issued a DA permit to the SCPA (No. 2003-1T-016) in April 2007.

[35] 40 C.F.R. 230.10 [a][3]

1.4.4 Corps' Overall Project Purpose and Alternatives Analysis

In addition to the Applicant's purpose discussed above, the Section 404(b)(1) Guidelines require that the Corps define the "overall project purpose" to evaluate practicable alternatives. In accordance with the Section 404(b)(1) Guidelines, the overall project purpose must be specific enough to define the Applicant's needs, but not so narrow and restrictive as to preclude a proper evaluation of alternatives. In this regard, defining the overall project purpose for review and approval of Corps permits is the sole responsibility of the Corps. While generally focusing on the Applicant's purpose and need statement, the Corps will, in all cases, exercise independent judgment in defining the purpose and need for the project from both the Applicant's and the public's perspectives (33 C.F.R. Part 325; 53 Fed. Reg. 3120). The Corps has reviewed and discussed Palmetto Railways' proposal, and has defined the overall project purpose as follows:

> *The overall Project purpose is to provide a state-owned, near-dock ICTF that provides equal access to both Class I rail carriers and accommodates existing and projected future increases in intermodal container cargo transport through the Port of Charleston to enhance transportation efficiency in the state of South Carolina*.

1.5 BACKGROUND OF PROPOSED PROJECT

1.5.1 Background and Other Relevant Activities Associated with the Former Charleston Naval Complex

In 1996, under the Federal Defense Base Closure and Realignment Act (BRAC)[36], the Department of Defense (DOD) closed the CNC, which included the Shipyard, Naval Station, Naval Annex, Defense Distribution Depot, and part of the Naval Supply Center in Charleston, South Carolina. The Final Environmental Impact Statement for the Disposal and Reuse of the Charleston Naval Base North Charleston, South Carolina was prepared (1994-1995) to evaluate the impacts of the closure and plan for the reuse of the nearly 1,500-acre complex. The state of South Carolina set up the Charleston Naval Complex Redevelopment Authority (Redevelopment Authority) to oversee the property's conversion and to replace the jobs lost by the closing of the base (SCLAC 2000). The SCPA was granted the southern portion of the property (an approximately 350-acre parcel) and its docks by state legislation. The Redevelopment Authority deeded the northern end of the property to the City of North Charleston for redevelopment (DOD 2006). Subsequently, a Memorandum of Understanding and Agreement (MOUA) was signed by the SCPA and the City of North Charleston, in which the City of North Charleston agreed to develop the northern portion of the former CNC site and SCPA would develop the southern portion of the site (Port Facility Area). The MOUA further specified that, "certain minimum infrastructure must be in place before the SCPA commences container operations."

[36] Title II of Public Law (P.L.) 100-526 (10 U.S.C. 2687 note), adopted October 24, 1988 and extensively amended in 1990, 1994 and 1996.

This minimum infrastructure included a truck access road from the Port Facility Area to Interstate 26 (I-26), as well as several rail overpasses. Rail and highway access to serve the Port would be coordinated by the South Carolina Department of Transportation (SCDOT) in conjunction with the State Infrastructure Bank, South Carolina Public Railways (now Palmetto Railways), and the Charleston Area Transportation Study (Corps 2006).

For the northern portion of the CNC property, the City of North Charleston entered into a public-private agreement with developer John Knott to revitalize the 3,000-acre historic core of North Charleston, which included the former CNC. Knott's Noisette Company created The North Charleston Noisette Community Master Plan, which was accepted by the City of North Charleston in 2003. Ten years after the plan was unveiled, some elements—such as a Riverfront Park—have been implemented, while others—such as a new urban core along eastern McMillan Avenue and Storehouse Row—have not (Behre 2012).

During the same time period that the City of North Charleston was developing their plans for the northern portion of the former CNC, the SCPA was developing plans to build a marine container terminal on the Cooper River at the south end of the site. The SCPA proposed to develop a new marine container terminal on 240 acres of land that is located within the Port Facility Area (Corps 2006), and submitted an application for a DA permit from the Corps. The proposed marine container terminal consisted of the following major components: wharf, berth and access channel, container yard and support facilities, improvements to Tidewater Road, and stormwater management facilities. The SCDOT also submitted an application for a DA permit for the proposed Port Access Road, which consisted of the following major components: Port Access Road, Meeting Street interchange (Exit 217), local access roadway (four-lane roadway at Stromboli Avenue), Stromboli Avenue improvements, and a bridge to Tidewater Road (Corps 2006). After evaluating and comparing the proposed projects and alternatives, the Corps released its findings in the 2006 Final EIS Proposed Marine Container Terminal at the Charleston Naval Complex. Subsequently, the Corps issued DA permits to the SCPA (No. 2003-1T-016) and the SCDOT (No. 2005-1N-440) in April 2007.

In April 2013, the Federal Highway Administration (FHWA) and the South Carolina Department of Transportation (SCDOT) completed an EA for the proposed I-26 and Port Access Road Interchange Project. The project involved removing the existing Spruill Avenue ramps (Exit 218) and building a new full movement directional T-interchange connecting to the new Port Access Road. In August 2013, FHWA issued a Finding of No Significant Impact (FONSI) for the proposed I-26 and Port Access Road Interchange Project (FHWA 2013). The EA was prepared to enable the FHWA to make a decision on the Interchange Modification Report, which included updated traffic information from what was available for the Final EIS Proposed Marine Container Terminal at the Charleston Naval Complex and on the Naval Base Terminal Access Road Interchange modification as it was proposed to tie into the Port Access Road and the Interstate system (SCDOT 2013). Construction of the marine container terminal is currently ongoing, with an anticipated completion date in 2019. Construction

of the Port Access Road began in 2016 and the work must be completed prior to the operation of the marine container terminal in 2019.

In March 2013, Palmetto Railways submitted a written request to initiate environmental review as per NEPA for its proposed Navy Base ICTF on the former Clemson Site in the CNC. The Corps prepared a Memorandum for Record[37] in July 2013 regarding the need for an EIS to evaluate the Proposed Project. In this memorandum, the Corps details a number of federal and state lawsuits associated with the redevelopment of the former CNC. These lawsuits and their outcomes are summarized as follows:

The Southern Environmental Law Center filed a lawsuit against the Corps, the EPA and the National Marine Fisheries Service (NMFS) in January 2008. This lawsuit challenged the Corps' issuance of a DA permit to develop a new marine container terminal at the former CNC. This lawsuit was resolved in August 2010 when the SCPA and the Plaintiffs signed a Settlement Agreement. The agreement resulted in the SCPA's commitment for a private (drayage) road from the port to the ICTF and several additional air quality initiatives.

Although SCPR was able to purchase the majority of the land that is required to develop the proposed ICTF, they filed several condemnation notices in December 2010 to acquire the remainder of the necessary property. The City of North Charleston challenged these condemnation actions in January 2011. This lawsuit was resolved in December 2012 when the parties signed a Settlement Agreement. This agreement resulted in several property exchanges, support from the City for any necessary zoning changes for the ICTF, development of a Surface Transportation Impact Study, and a mitigation payment of $8 million from the Applicant to the City of North Charleston. The Applicant also assumed responsibility for the repayment of $6.5 million in Tax Increment Financing (TIF) as part of the agreement.

The City of North Charleston filed a lawsuit against the South Carolina State Ports Authority, S.C. Department of Commerce, SCPR, State of South Carolina, and the Corps in U.S. District Court in August 2011. This lawsuit alleged that the Corps violated NEPA by failing to require a Supplemental EIS considering the impacts of an intermodal rail facility as part of the SCPA's new marine container terminal at the former CNC. This lawsuit also alleged that the SCPA is in violation of a 2002 MOU between North Charleston and SCPA. This lawsuit was dismissed in April 2012.

[37] Department of the Army Memorandum for Record. Need for an Environmental Statement, South Carolina Public Railways Intermodal Container Transfer Facility, Charleston County, SC. July 8.

1.5.2 Description of Proposed Project

The Proposed Project is located on the CNC in North Charleston, South Carolina, on the former Clemson Site. It lies on the west bank of the Cooper River 6 miles north of the confluence with the Ashley River. It is centrally located between several terminals operated by the SCPA, including the North Charleston Container Terminal, Veterans Terminal, the future Hugh K. Leatherman, Sr. Terminal (HLT), Union Pier Terminal, Columbus Street Terminal, and the Wando Welch Container Terminal. Intermodal containers that arrive at these marine terminals may be transported to the Navy Base ICTF or other destinations. The CNC is bounded by the Cooper River to the east, the neighborhoods of Chicora and Cherokee to the west, the Park Circle neighborhood to the north, and residential and industrial areas (e.g., the Macalloy site) to the south (see Figure 1.1-1). As of September 2015, the site contains both open land and developed areas that are interspersed within a network of private roads. The dominant land use on the site is industrial with open fields and parking lots. Sterett Hall (closed and demolished in spring 2016) and the North Charleston Fire Department Station 2 (relocated in January 2016) were located on the northern portion of the site. The central portion of the site contains various abandoned buildings and athletic fields associated with Charleston County's Academic Magnet High prior to its relocation. The Chapel of the Eternal Father of the Sea was also located in the northern portion of the site between North Hobson Avenue and Avenue B South, but has been relocated to another part of the CNC that is outside of the ICTF. A tank farm (demolished) and the Viaduct Road overpass are located on the southern portion of the site.

Terminology used in this EIS:

- ***ICTF*: The approximately 135-acre facility site.**
- ***Project Site*: The ICTF and associated impact areas for the ICTF and off-site roadway and rail improvements, which total 231.28 acres.**
- ***Navy Base ICTF*: Generic term that also means the Proposed Project Site, including components and functionality. Also known as the Proposed Project.**
- **Alternative 1 (Proposed Project): The Applicants Proposed Project as described in Section 1.7 (Alternative 1).**
- **Project: The term project is used when describing the concept of the ICTF regardless of location or alternative.**

The Corps recognizes that Palmetto Railways is conducting voluntary cleanup and site preparation of the Project site, and that these activities will be required to redevelop the site regardless of whether the DA permit is issued or not.

1.6 FRAMEWORK FOR ANALYSIS

1.6.1 What is the Study Area?

A study area is defined as the area that may be directly and indirectly affected by the Proposed Project as shown in Figure 1.6-1. The study area was optimized to be the most appropriate boundary for the most resources; if the study area varies for a specific resource, it is defined in the affected environment section for that resource (Chapter 3). The study area for this EIS is based on and includes areas that may be directly impacted by construction and operation of the ICTF and components (off-site rail and roadway improvements).

1.6.2 What is the Project Site?

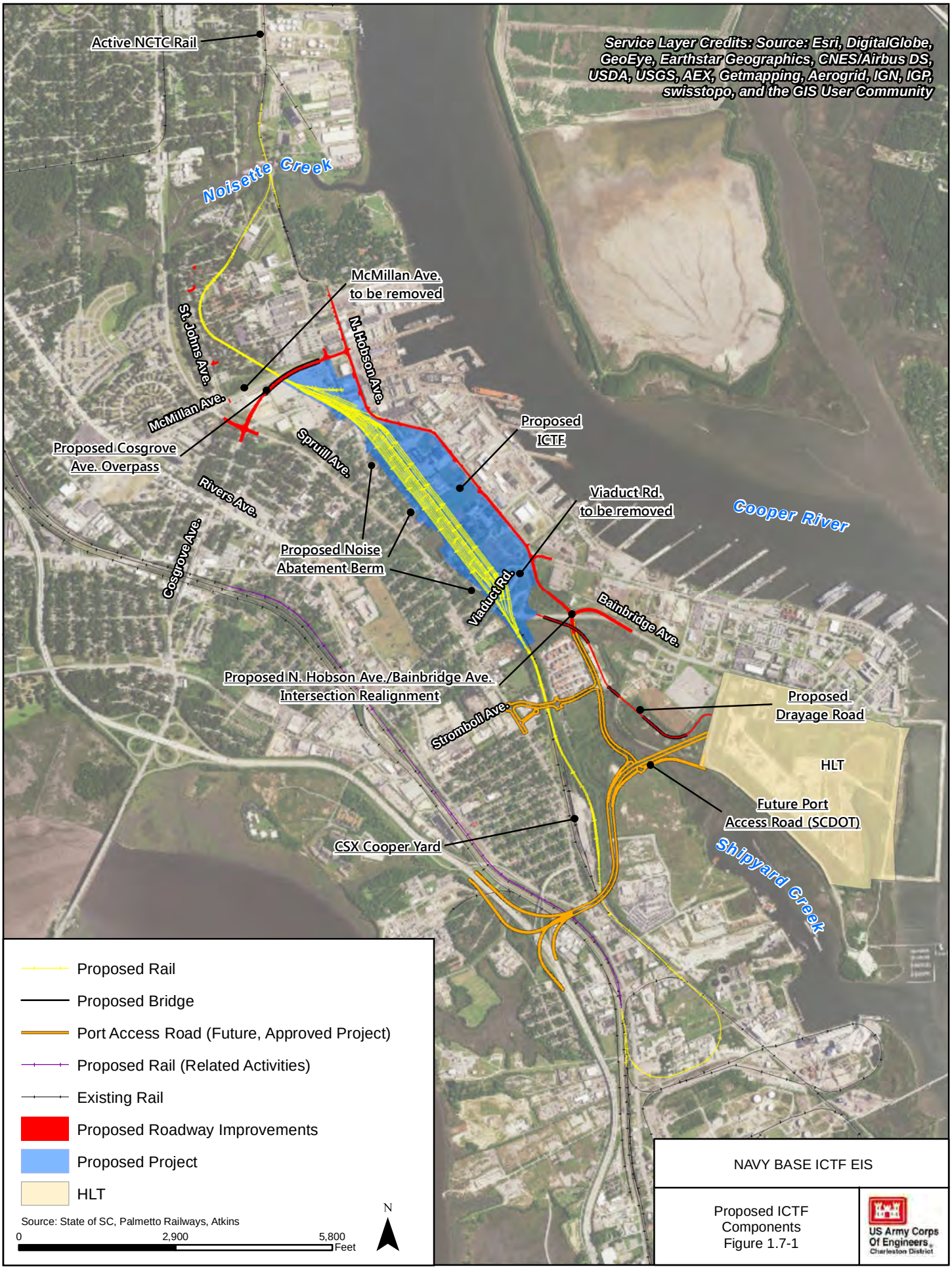
The Project site is a subset of the study area and is defined as the area of potential direct impacts on the resources. The Project site is shown on Figure 1.6-1 and includes the impact areas, also known as limits of construction, for the approximately 135-acre ICTF and the associated roadway and rail improvements.

1.7 DESCRIPTION OF PROPOSED PROJECT

The Proposed Project, as submitted by Palmetto Railways, consists of constructing and operating an ICTF on approximately 135 acres for the facility site, and undertaking off-site roadway and rail improvements for a total of 231.28 acres. The intermodal facility would include, but is not limited to, processing and classification railroad tracks, wide-span gantry cranes, container stacking areas, administrative buildings, and vehicle driving lanes. The off-site infrastructure improvements would include building: (1) a private drayage road and associated bridges approximately 1 mile long connecting the ICTF to the HLT, (2) rail improvements to the north and south of the ICTF resulting in 174,410 feet of new track, and (3) several roadway improvements and modifications, including the construction of a new overpass. As identified on Figure 1.7-1, the Proposed Project consists of the ICTF and proposed rail and roadway improvements.

***Wide-span gantry crane*: A crane that may be rail mounted or on tires, with a span of adequate width to straddle several rows of cargo containers. The crane is used to manage and stack cargo.**


Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
526
Noisette Creek
Cooper River
26
Shipyard Creek
Ashley River
Proposed Project
Study Area
Existing Rail
Source: State of SC, Atkins
0
1
2
Miles
N
NAVY BASE ICTF EIS
Study Area
Figure 1.6-1
US Army Corps Of Engineers
Charleston District


Active NCTC Rail
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
Noisette Creek
McMillan Ave. to be removed
St. Johns Ave.
N Hobson Ave.
McMillan Ave.
Proposed Cosgrove Ave. Overpass
Spruill Ave.
Proposed ICTF
Rivers Ave.
Viaduct Rd. to be removed
Cooper River
Cosgrove Ave.
Proposed Noise Abatement Berm
Viaduct Rd.
Bainbridge Ave.
Proposed N. Hobson Ave./Bainbridge Ave. Intersection Realignment
Proposed Drayage Road
Stromboli Ave.
HLT
Future Port Access Road (SCDOT)
CSX Cooper Yard
Shipyard Creek
Proposed Rail
Proposed Bridge
Port Access Road (Future, Approved Project)
Proposed Rail (Related Activities)
Existing Rail
Proposed Roadway Improvements
Proposed Project
HLT
Source: State of SC, Palmetto Railways, Atkins
0
2,900
5,800
Feet
N
NAVY BASE ICTF EIS
Proposed ICTF Components
Figure 1.7-1
US Army Corps Of Engineers
Charleston District

1.7.1 The Intermodal Container Transfer Facility

1.7.1.1 Facility Infrastructure

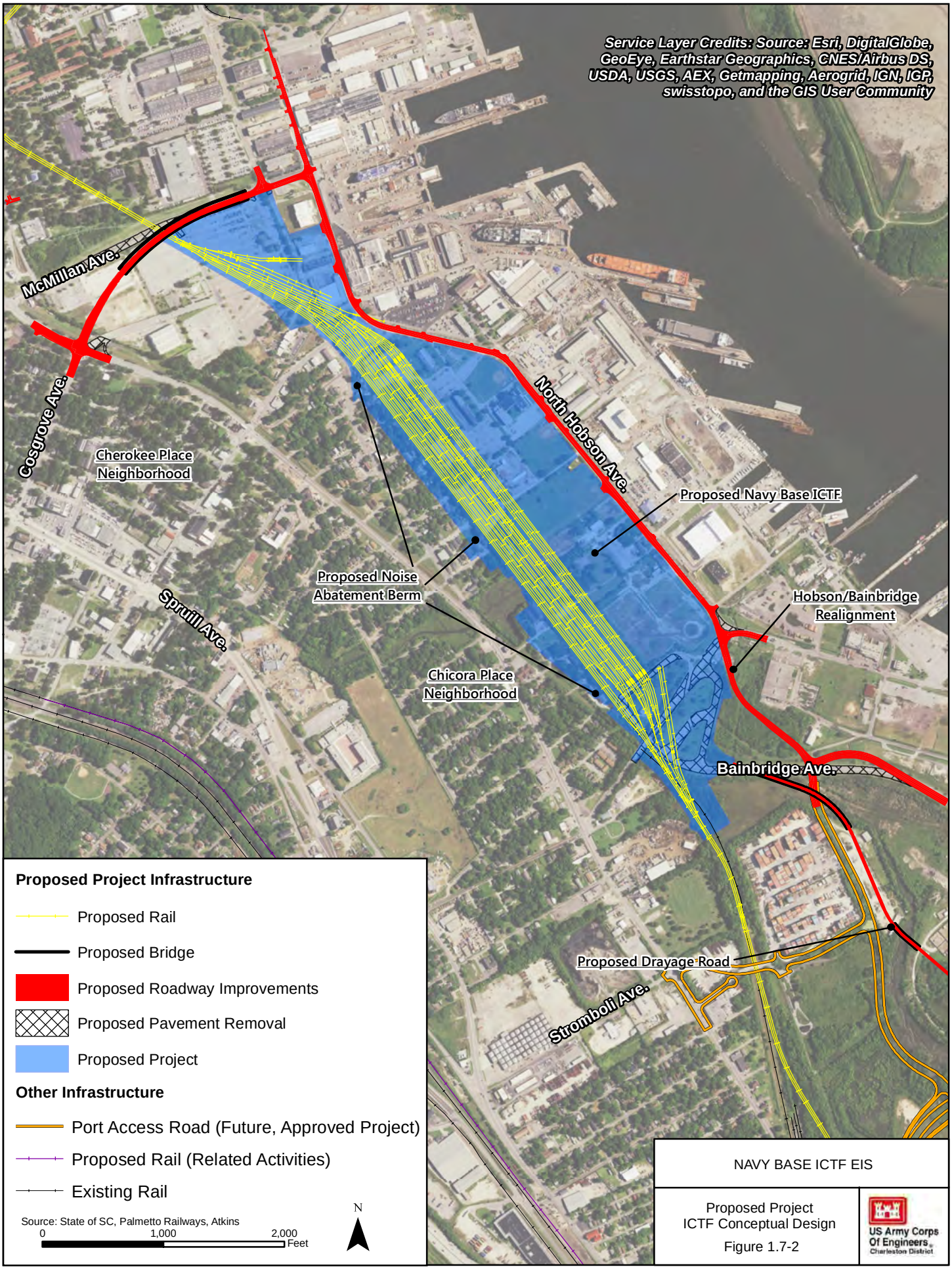
The proposed 135-acre ICTF is bordered to the east by Bainbridge Avenue/North Hobson Avenue, to the north by McMillan Avenue and Cosgrove Avenue, to the south by Stromboli Avenue, and to the west by Spruill Avenue and the Chicora and Cherokee neighborhoods (Figure 1.7-2). Detailed designs for various components of the ICTF can be found in Appendix B. Design assumptions are based on approximately 60 percent plans.

The ICTF would include the following permanent structures:

- Two two-story buildings (a locomotive repair shop and an administration and maintenance building, including heating, ventilation, air conditioning [HVAC] systems; plumbing; mechanical systems; security systems; and electrical systems); the area of the buildings would be approximately 24,377 square feet (SF);
- A parking area for operational and commercial vehicles (143 parking spaces and 6 handicap parking spaces);
- A landscaped earthen berm and two walls with security fence to provide for sound attenuation along the length of the processing and classification railroad tracks adjacent to the Chicora and Cherokee neighborhoods; in areas adjacent to waters of the U.S., including wetlands, a sound attenuation wall would replace the earthen berm. The sound walls would be approximately 10 feet in height. The top of the berm would be approximately 10 feet above the rail elevation.
- Two sound walls (approximately 10 feet in height) along St. Johns Avenue. One is in the vicinity of Reddin Road extending north for approximately 280 feet and one begins in the vicinity of Hunter Street extending to the northeast for approximately 700 feet.
- A cut-section (trench) at the northern rail connection that would be approximately 3,200 feet in length and 15-feet deep (trench varies approximately 10 to 20 feet in depth, depending on existing topography).
- Approximately 41,600 linear feet (LF) of processing railroad track;
- Approximately 28,950 LF of classification railroad track;
- Four electric, wide-span gantry cranes, with heights up to 103 feet, and the potential for up to eleven "nested" cranes at full build-out that would be placed east of the wide-span gantry cranes, resulting in a maximum total combined height of 125 feet (Appendix B);

Processing and classification tracks: **One of several sets of railroad tracks devoted to sorting and classifying rail cars for their next destination.**

Inbound cars arrive on receiving tracks, are inspected, assigned priority for departure, and sent to classification tracks in "blocks" with common destinations.


Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
McMillan Ave.
Cosgrove Ave.
Cherokee Place Neighborhood
North Hobson Ave.
Proposed Navy Base ICTF
Proposed Noise Abatement Berm
Spruill Ave.
Hobson/Bainbridge Realignment
Chicora Place Neighborhood
Bainbridge Ave.
Proposed Drayage Road
Stromboli Ave.
Proposed Project Infrastructure
Proposed Rail
Proposed Bridge
Proposed Roadway Improvements
Proposed Pavement Removal
Proposed Project
Other Infrastructure
Port Access Road (Future, Approved Project)
Proposed Rail (Related Activities)
Existing Rail
Source: State of SC, Palmetto Railways, Atkins
0
1,000
2,000
Feet
N
NAVY BASE ICTF EIS
Proposed Project
ICTF Conceptual Design
Figure 1.7-2
US Army Corps Of Engineers
Charleston District

- Container stacking areas, up to four containers in height: Container area for Production/ Stacking (Production Cranes) at approximately 254,110 SF;
- One automated gate system for on-road trucks entering/exiting the ICTF from the Wando Welch and North Charleston port facilities and an optical character recognition (OCR) portal on the drayage road between the ICTF and the HLT;
- Vehicle driving lanes: Gate Area at 4,600 LF, Yard Circulations at 6,500 LF; and
- Stormwater management improvements including approximately 74,075 LF of pipe of varying sizes, approximately 52,700 LF of underdrains, and construction of five dry detention ponds (A, B, C, D1, and D2) and two sediment forebays associated with pond A, totaling approximately 989,281 cubic feet (cf) of storage (not including 1 foot of freeboard, which would provide additional storage) for on-site water, and vegetated swales.

Actions supporting the facility construction include land clearing, paving, fencing, general site improvements, and extension of utilities to serve the Proposed Project. Approximately 3 acres of land disturbance would be expected per day during daylight hours, Monday through Saturday. All drainage infrastructure—including dry detention ponds, outlet control structures, and storm sewers—would be constructed as part of Phase I construction. A staging area (or more, as needed) would be located within the 135-acre facility site for equipment storage and stockpiling of materials to be used for construction. One hundred forty-eight structures, or approximately 451,500 SF (includes buildings only and does not include other structures such as overpasses), would be demolished. The Chapel of the Eternal Father of the Sea has been relocated to another part of the CNC that is outside of the ICTF (independent of this Proposed Project). Details regarding anticipated construction activities and materials for the Proposed Project are provided in Table 1.7-1. Use of proper Best Management Practices (BMPs) for erosion and sedimentation control would be implemented during all construction phases, such as installation of silt fences and turbidity barriers and re-vegetating areas of exposed soil immediately following construction. Sediment basins with temporary diversion ditches for runoff would be used to control sediment loading to surface waters during land-disturbing activities.

Table 1.7-1
Details of anticipated construction activities and associated materials for the Proposed Project

Material or Activity	Quantity
Export material (site ~15 miles away)	66,400 CY
Import material	355,000 CY
Demolition of facility site buildings	451,500 SF
Demolition of asphalt and sidewalks for facility site	2,218,810 SF
Demolition of roadway paving	867,376 SF
Total asphalt/concrete to be reused/recycled	All paving/concrete demolished on-site
Vegetation removal/paving	130 acres
Soil imported for grading facility site	160,000 CY
Soil imported for grading roadways (site ~28 miles away)	105,000 CY
Soil exported for roadway	3,000 CY
Architectural coating	2,000 SF

Source: Palmetto Railways 2016.

1.7.1.2 Road and Rail Improvements

1.7.1.2.1 Drayage Road

Establishing a direct connection between the ICTF and the HLT would involve the construction of a drayage road of approximately 1 mile in length, and 50 feet in width (one-lane divided roadway). The drayage trucks would exit the HLT, continue north through Federal Law Enforcement Training Center (FLETC)-owned property and across Shipyard Creek, and then would pass through the OCR portal before entering the southern portion of the ICTF (see Figure 1.7-3). The route for the drayage road would require construction of three bridges over Shipyard Creek and associated marsh. The drayage road would be a private roadway, would include security fencing as required, and would accommodate two-way traffic from Utility Tractor Rig (UTR) trucks transporting intermodal containers from the HLT to the ICTF. The drayage road would be grade separated over the Port Access Road.

***Private drayage road*: For intermodal freight transport, a dedicated, private roadway used for the transfer of goods or cargo over a short distance between ocean ports or rail ramps and shipping docks or intermodal transfer container facilities.**


Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
Hobson Ave.
Hobson/Bainbridge Realignment
Bainbridge Ave.
FLETC Charleston Center
Spruill Ave.
Stromboli Ave. Extension
Stromboli Ave.
Shipyard Creek Road
Port Access Road (Permitted Future Construction)
Proposed Drayage Road
HLT
Shipyard Creek
Proposed Project Infrastructure
Proposed Rail
Proposed Bridge
Proposed Roadway Improvements
Proposed Pavement Removal
Proposed Project
Other Infrastructure
Port Access Road (Future, Approved Project)
Existing Rail
HLT
Source: State of SC, Palmetto Railways, Atkins
0
750
1,500
Feet
N
NAVY BASE ICTF EIS
Proposed Project Drayage Road Improvements
Figure 1.7-3
US Army Corps Of Engineers
Charleston District

1.7.1.2.2 Road Improvements

Several roadway improvements and modifications would be constructed to facilitate operation of the Proposed Project.

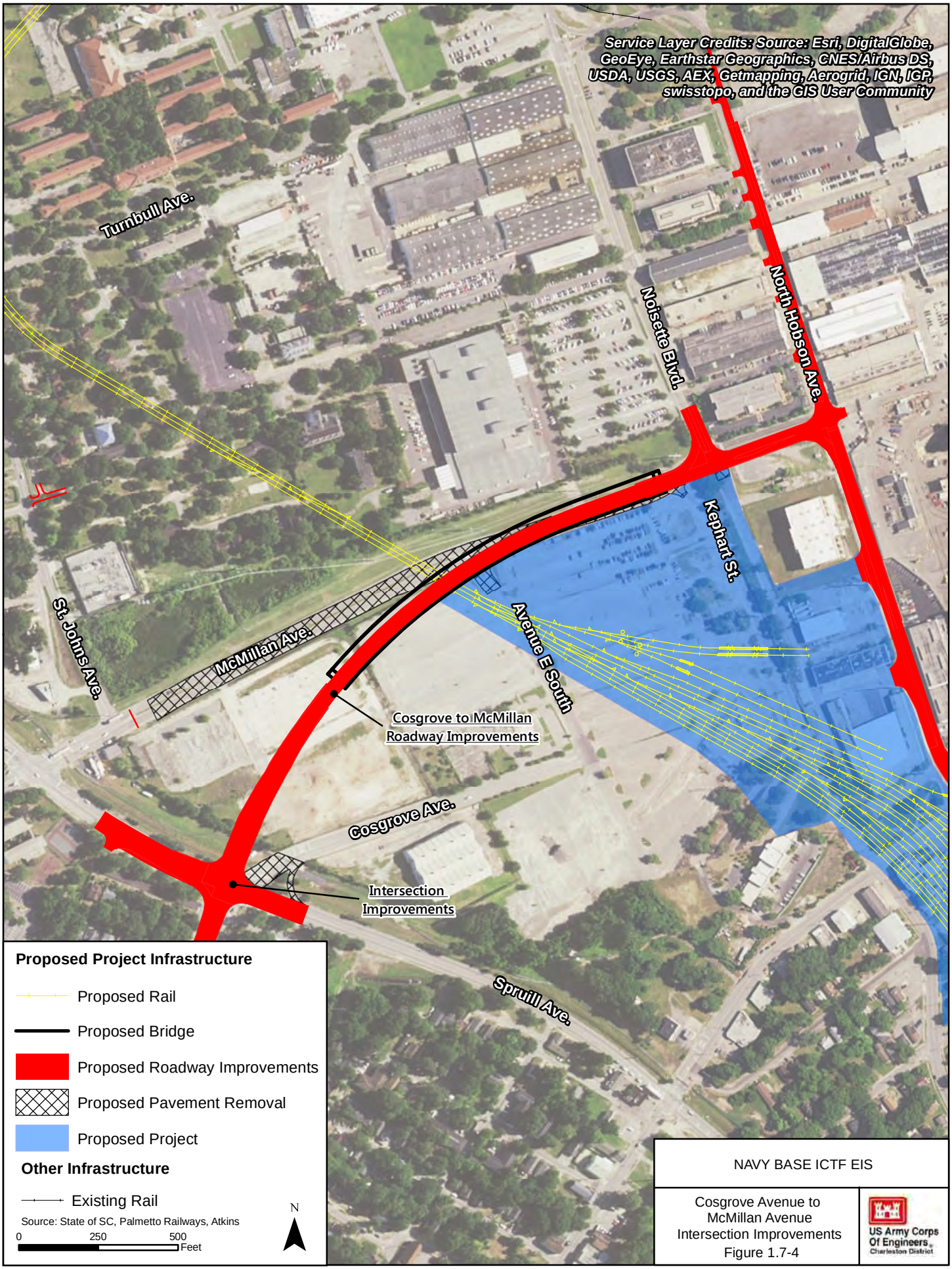
At the northern end of the ICTF, the segment of McMillan Avenue between St. Johns Avenue and Kephart Street would be closed. The remainder of McMillan Avenue would become an extension of St. Johns Avenue. The segment of Cosgrove Avenue that is located east of Spruill Avenue would be realigned and replaced with a flyover above the new rail lines. The flyover would provide future roadway access between Spruill Avenue and North Hobson Avenue after McMillan Avenue is closed. A multi-use path would be integrated into the flyover structure providing pedestrian access from Spruill Avenue to Noisette Boulevard, and then continuing to Hobson Ave and north to property owned by the City of North Charleston. The City could connect this access point to the Riverfront Park in the future. The CNC gate at Turnbull Avenue and St. Johns Avenue would remain closed (Figure 1.7-4). Turnbull Avenue would be closed where the northern lead crosses. Access for properties along St. Johns Avenue would be maintained through improved connections from St. Johns Avenue to Truxtun Avenue and from St. Johns Avenue to Avenue H.

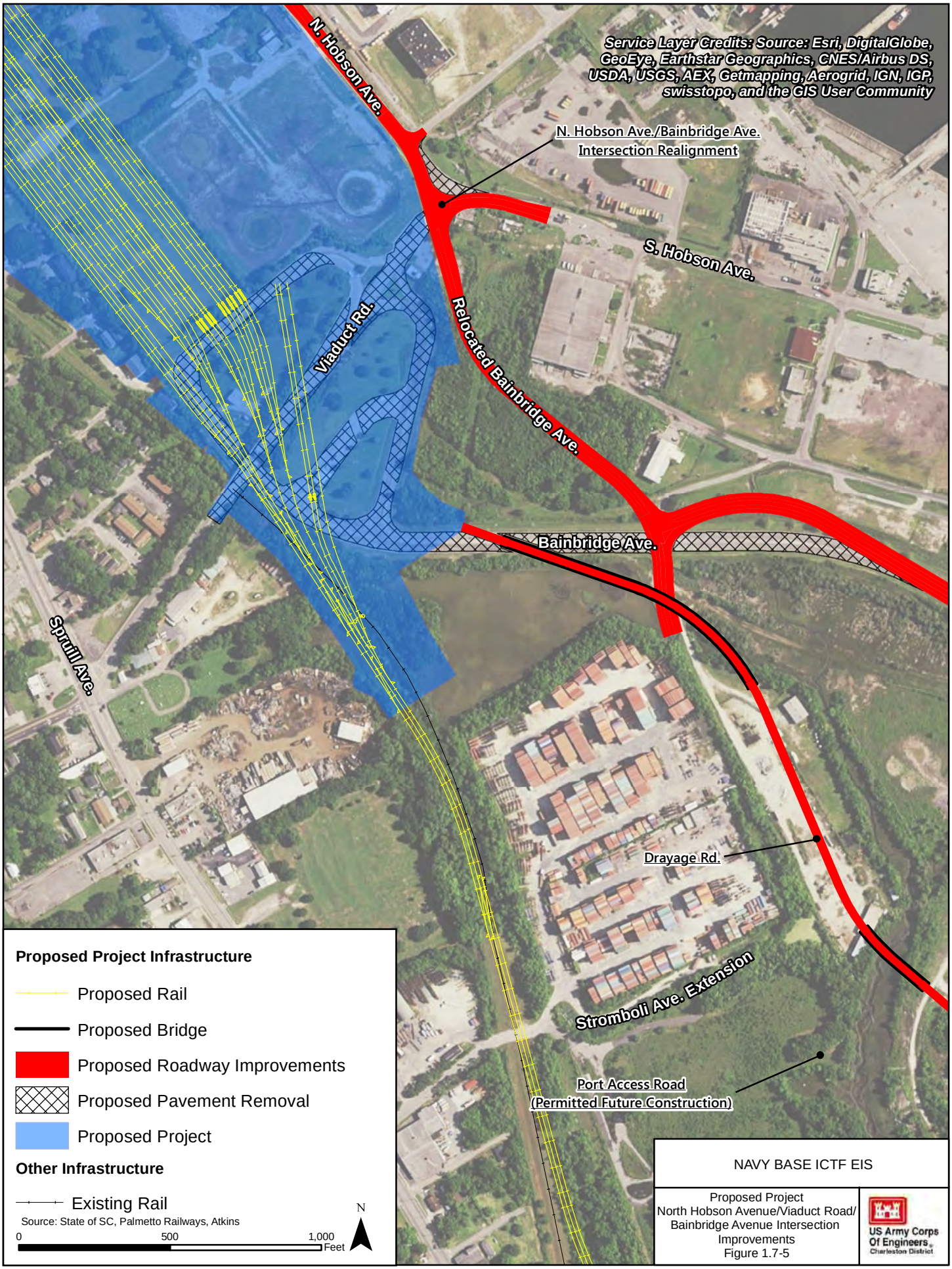
At the southern end of the ICTF, the Viaduct Road Overpass would be closed and removed. Bainbridge Avenue and North Hobson Avenue would be realigned, including improvements to their intersection (Figure 1.7-5). With the removal of Viaduct Road, vehicular access to the southern end of the CNC would use Stromboli Avenue, which would be grade separated, or the Port Access Road, which would provide a direct connection to I-26. The construction of the local access segment of the Port Access Road including the elevation of Stromboli Avenue is part of the Port Access Road Design Build project to be undertaken by the SCDOT. Palmetto Railways will not begin closure and removal of Viaduct Road until SCDOT's project is completed (Chapter 6).

1.7.1.2.3 Rail Improvements

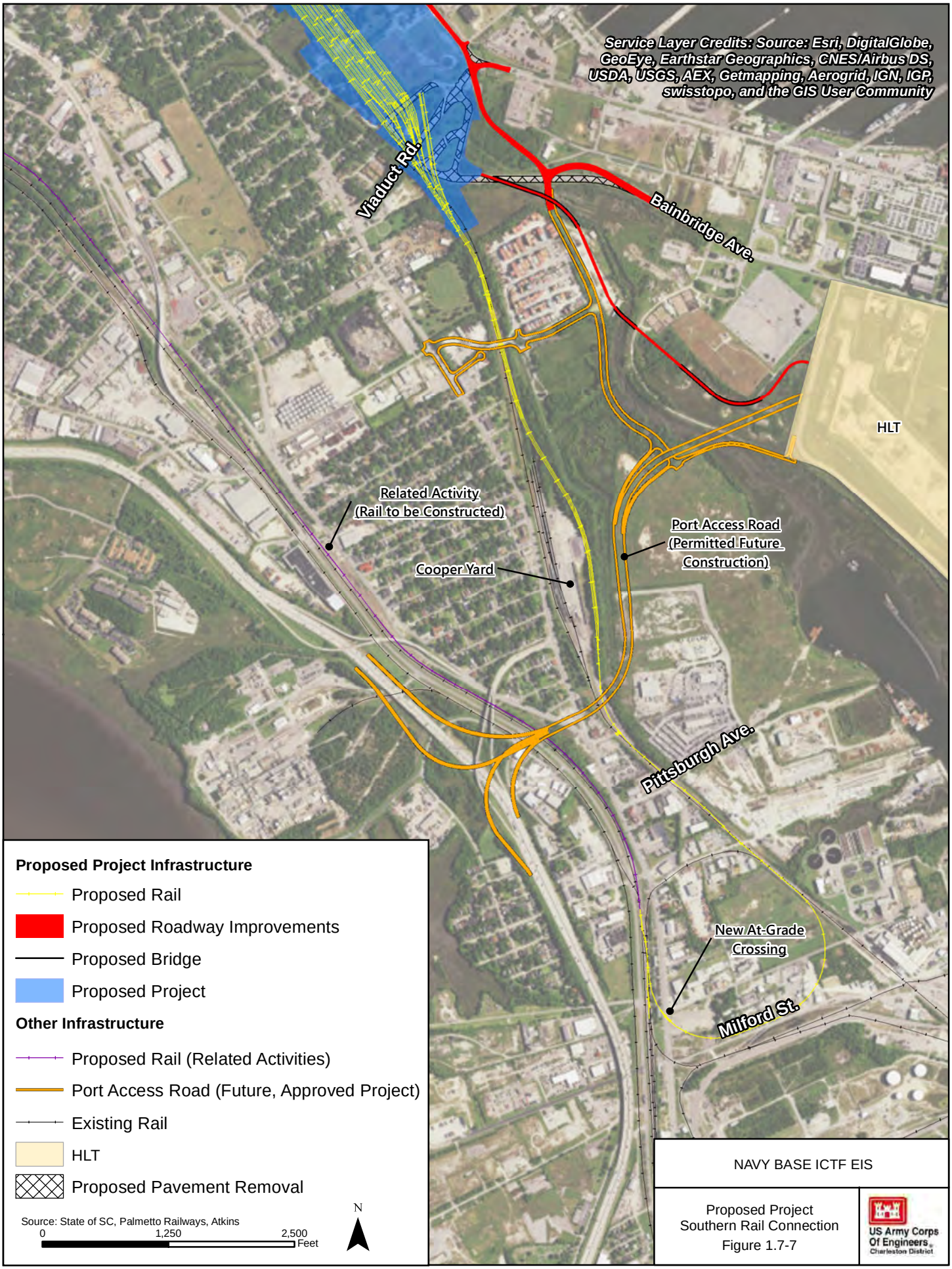
Several rail improvements would be undertaken to facilitate operation of the Proposed Project and accommodate equal access for CSX and NS. These include:

- Construct a northern rail connection through the Charleston Naval Hospital Historic District (Hospital District), which would connect to an existing interchange point with the North Charleston Terminal Company (NCTC) located across Noisette Creek (Figure 1.7-6).
- As part of the northern rail connection, rehabilitate the existing railroad bridge across Noisette Creek by elevating the superstructure a foot to improve hydrology and by sheathing existing piles (Figure 1.7-6).
- Construct a southern rail connection that begins in the vicinity of Viaduct Road, extends to the south on the east side of Cooper Yard, crosses Meeting Street, then connects to existing railroad ROW (Figure 1.7-7). One major at-grade rail crossing on Meeting Street would be required.


Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
Turnbull Ave.
Noisette Blvd.
North Hobson Ave.
Kephart St.
Avenue E South
St. Johns Ave.
McMillan Ave.
Cosgrove to McMillan Roadway Improvements
Cosgrove Ave.
Intersection Improvements
Spruill Ave.
Proposed Project Infrastructure
Proposed Rail
Proposed Bridge
Proposed Roadway Improvements
Proposed Pavement Removal
Proposed Project
Other Infrastructure
Existing Rail
Source: State of SC, Palmetto Railways, Atkins
0
250
500
Feet
N
NAVY BASE ICTF EIS
Cosgrove Avenue to McMillan Avenue Intersection Improvements
Figure 1.7-4
US Army Corps Of Engineers
Charleston District


Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
N. Hobson Ave.
N. Hobson Ave./Bainbridge Ave. Intersection Realignment
S. Hobson Ave.
Viaduct Rd.
Relocated Bainbridge Ave.
Bainbridge Ave.
Spruill Ave.
Drayage Rd.
Stromboli Ave. Extension
Port Access Road (Permitted Future Construction)
Proposed Project Infrastructure
Proposed Rail
Proposed Bridge
Proposed Roadway Improvements
Proposed Pavement Removal
Proposed Project
Other Infrastructure
Existing Rail
Source: State of SC, Palmetto Railways, Atkins
0
500
1,000
Feet
N
NAVY BASE ICTF EIS
Proposed Project
North Hobson Avenue/Viaduct Road/
Bainbridge Avenue Intersection
Improvements
Figure 1.7-5
US Army Corps Of Engineers
Charleston District


Interchange with NCTC
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
Bexley St.
O'Hear Ave.
Noisette Blvd.
Rehabilitation of Existing Rail Bridge
Noisette Creek
Noisette Blvd.
Charleston Naval Hospital Historic District (Hospital District)
Proposed Project Infrastructure
Proposed Rail
Other Infrastructure
Existing Rail
Source: State of SC, Palmetto Railways, Atkins
0 210 420
Feet
N
NAVY BASE ICTF EIS
Proposed Project
Northern Rail Connection
Figure 1.7-6
US Army Corps Of Engineers
Charleston District


Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
Viaduct Rd.
Bainbridge Ave.
HLT
Related Activity (Rail to be Constructed)
Port Access Road (Permitted Future Construction)
Cooper Yard
Pittsburgh Ave.
New At-Grade Crossing
Milford St.
Proposed Project Infrastructure
Proposed Rail
Proposed Roadway Improvements
Proposed Bridge
Proposed Project
Other Infrastructure
Proposed Rail (Related Activities)
Port Access Road (Future, Approved Project)
Existing Rail
HLT
Proposed Pavement Removal
Source: State of SC, Palmetto Railways, Atkins
0
1,250
2,500
Feet
N
NAVY BASE ICTF EIS
Proposed Project
Southern Rail Connection
Figure 1.7-7
US Army Corps Of Engineers
Charleston District

1.7.2 Operations

Information on operational activities associated with the Navy Base ICTF were provided by the Applicant. These activities include transferring intermodal containers from UTR trucks and over the road (OTR) trucks; classifying, processing, and storing the intermodal containers; switching (building) train segments; inbound and outbound train activity; and maintenance and administrative activities associated with daily operations. Operations of the Navy Base ICTF would take place 24 hours a day, 7 days a week. Palmetto Railways would employ approximately 120 employees overall, which would include shift workers (approximately 30 employees per shift, three shifts in total) and non-shift workers.

There would be two different methods for the Navy Base ICTF to accept intermodal containers from the Port's various container terminals. Intermodal containers that arrive at the HLT would be transported to the Navy Base ICTF using the private, secure drayage road, and would enter through the OCR portal at the southern end of the facility site. These transfers would take place on a 24-hour-per-day schedule, seven days a week. The intermodal containers would initially be transported by as many as 16 diesel-engine yard trucks during the start-up of the facility; however, the number of diesel-engine yard trucks would increase to as many as 40 with full build-out.

Intermodal containers that arrive from the port facilities would first be placed on OTR trucks and driven on public roadways (primarily I-26 and Interstate 526 [I-526]) into the ICTF through its main gate, which is located in the middle of the facility site along North Hobson Avenue. Gate hours for trucks that transport these intermodal containers would be aligned with the Port's gate hours to allow for early staging of containers at the Port gate in the mornings, and for final cut-off for containers at the ICTF in the evening. The ICTF gate would be operational seven days a week.

Once intermodal containers enter the ICTF by UTR trucks and OTR trucks, a network of rail-mounted electric wide-span gantry cranes would be used to offload the containers. Off-loaded containers then would be classified and processed, including the storing and stacking of containers in designated areas (four-container high stacking limit). Containers come in varying lengths (e.g., 20, 40, 45, and 53 feet), and are typically 8 feet wide and 9.5 feet in height. Initially, four wide-span gantry processing cranes with heights up to 103 feet would be operated. In addition, at full build-out, eleven "nested" cranes, can be positioned east of the existing wide-span gantry cranes and may be employed in the future to meet projected demand for processing and transporting intermodal containers to/from the Navy Base ICTF. At full build-out, the resulting maximum total combined height would be 125 feet.

The design of the Proposed Project and the presence of two separate arrival/departure tracks that allow connectivity to both CSX and NS rail lines, provides the opportunity for equal access by the Class I rail carriers. The Proposed Project's design allows it to manage and switch two trains at the same time. Assumptions for the number of train occurrences and average crossing time was based on a rail simulation model provided by Palmetto Railways and its consultants at the request of the

Corps and included certain assumptions of Class I rail carrier service design that are outside the control of Palmetto Railways. In the initial years of operation, the analysis assumed that the facility would load/unload up to eight trains (i.e., two inbound and two outbound trains for NS and CSX for a total of eight train movements) every day. However, depending on capacity needs and service designs at facility opening and through initial years of operation, the distribution of arrival/departure trains connecting to NS or CSX rail lines may vary. Average train lengths may be less than 8,000 feet considering the TEU throughput that would occur at the ICTF. By the year 2038 (full build-out), the facility is expected to load/unload approximately eight trains (i.e., two inbound and two outbound trains for NS and CSX for a total of eight train movements) every day (based on assumed service design which may vary), although the average train lengths would be greater than 8,000 feet. Containers would be moved using a specially designed rail car with a depressed section (well) that carries the containers low, hence, allowing them to be double stacked. An 8,000-foot train (approximately 1.5 miles) would equate to approximately 145 individual intermodal wells.

Train with intermodal wells.

The Navy Base ICTF design would accommodate the assembly of outbound trains up to 10,000 feet in length; however, the typical limiting factor in Class I mainline capacity is 9,000 feet due to the length of much of the current sidings infrastructure east of the Mississippi River (infrastructure cannot accommodate very large trains). There is potential that rail infrastructure east of the Mississippi River could improve over time to accommodate longer trains. In the initial years of the operation of the ICTF, the average train length is expected to be smaller (5,000–8,000 feet). Palmetto Railways would assemble the longer train length by building separate 1,500–3,150-foot train segments by utilizing the southern and northern leads and tracks within the ICTF. During the switching of trains, existing and proposed future at-grade crossings would not be blocked by the

train. While incoming trains from CSX and NS would be on a regular schedule, deviations from the schedule and delays could occur. Similarly, outbound trains from the ICTF to these rail carriers also would be on a schedule, though delays could occur. Trains could enter or exit the ICTF during day or night. Train speeds entering and leaving the ICTF would be approximately 10 miles per hour (mph) or less. Anecdotally, with regards to the size of trains being processed, a trend seen in existing Charleston intermodal rail operations is that inbound trains are longer toward the end of the week, while outbound trains are longer at the beginning of the week. During nighttime hours, the ICTF would use high mast lights, approximately 85 feet in height, and they would operate from dusk to dawn, 7 days a week. Security patrols also would be employed within the ICTF and along the drayage road.

The ICTF design would also accommodate incoming trains. A network of rail-mounted electric wide-span gantry cranes would be used to offload the containers to then be classified and processed, including the storing and stacking of containers in designated areas. Containers would either be placed on OTR trucks bound for other port facilities or their final destination, or on UTR trucks bound for the HLT via the drayage road. OTR truck egress would proceed out of the exiting ICTF truck gate located in the middle of the facility site and turn right onto North Hobson Avenue, to the Port Access Road, then to I-26. A no left-hand turn restriction was placed on trucks leaving the facility for purposes of traffic safety and in an effort to funnel truck traffic to the Port Access Road and I-26, which will reduce truck traffic on local roadways.

Maintenance and administrative activities associated with daily operations would occur at the ICTF. Maintenance activities could be conducted at the Locomotive Shop and involve repair or maintenance work on locomotives. Light duty maintenance activities on railcars would occur at Repair-in-Place tracks located on the north and south of the facility. Light chassis repair would occur in the southeast corner of the facility where there is the open paved area. Administrative duties would be carried out at the ICTF Administrative and Maintenance Building located adjacent to North Hobson Avenue.

Estimated annual utility needs and consumption levels during operation of the Proposed Project are summarized in Table 1.7-2.

Table 1.7-2
Estimated annual utility consumption levels for the Proposed Project

Utility Consumption	Estimated Usage
Electricity for total Project	18 million kilowatt hours/year
Total water consumption	264,625 gallons/year
Water used per employee	28.9 gallons/day
Indoor water consumption	36,500 gallons/year
External water consumption	38,325 gallons/year
Solid waste generation	21 tons/year

Source: Palmetto Railways 2016.