1.1 Description of this Document

The South Carolina Department of Transportation (SCDOT), Federal Highway Administration (FHWA), United States Army Corps of Engineers (USACE) and Charleston County have prepared this Draft Environmental Impact Statement (DEIS) in accordance with the National Environmental Policy Act of 1969 (NEPA), as amended, the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR 1500-1508) and FHWA’s Environmental Impact and Related Procedures (23 CFR 771).

The Mark Clark Expressway DEIS was written in a “reader-friendly” format. This format differs from the traditional EIS format and attempts to meet the needs of professionals, decision-makers and the public by “telling the story” of the project development process. This document will attempt to engage the reader through the use of question and answer headings, defined terms and visuals in an easy-to-follow format. Blue call-out boxes can be found throughout the document. These call-out boxes provide the reader with additional information, define words and/or bring attention to important terms found within the DEIS. Public interest review factors, as defined by USACE, are identified in green text. In the public interest review, USACE has the responsibility to balance public interest needs or benefits against public interest detriments.

The reader will find several terms throughout this document that are similar but have different meanings in the context of the development of this project. These similar terms include scoping area, study area and refined study area, and project team and study team. Special green call-out boxes (on right) explaining the differences in these terms will be included at the beginning of each chapter in which they are discussed.

1.2 Project Background

1.2.1 Why was the Mark Clark Expressway project initiated?

Since the early 1970s, the original plan for the Mark Clark Expressway proposed a “Charleston Inner Belt Freeway” from Mount Pleasant to James Island, which included a connection between West Ashley, Johns Island and James Island. Since then, 19.4 miles have been constructed creating a semi-circle around Charleston, with the western
terminus located at Savannah Highway in West Ashley at Sam Rittenberg Boulevard, and the eastern terminus located at Johnnie Dodds Boulevard in Mount Pleasant. The proposed improvements would complete the original plan for the Mark Clark Expressway by adding approximately seven miles of new roadway between its current endpoint at Savannah Highway and the James Island Connector interchange at Folly Road. However, the original plan will not limit the alternatives considered, the studies completed or the outcome of this project. See Figure 1-1 for an overview map.

The Mark Clark Expressway project has been studied a number of times since 1972:

- 1972 - FHWA approved a Final EIS (FEIS) for I-526 from North Charleston to James Island, including the 7-mile portion of I-526 from West Ashley to James Island, for which this DEIS is being prepared.

- 1976 – FHWA approved an EIS for the James Island Connector, from Folly Road on James Island to Calhoun Street in downtown Charleston.

- 1981 – FHWA approved a FEIS for an additional 9.4-mile segment of I-526, which extended from Virginia Avenue in North Charleston easterly across the Cooper River and the Wando River to Johnnie Dodds Boulevard in Mount Pleasant.

- 1995 - a Draft Supplemental Environmental Impact Statement (DSEIS) was prepared for the remaining unbuilt 7-mile segment of I-526, connecting Savannah Highway in West Ashley to the James Island Connector on James Island. This document was not finalized.

Since the project was last studied for environmental impacts (in 1995) changes have occurred within the study area; because of this, SCDOT and FHWA determined that a new EIS was necessary to address the environmental impacts of the proposed construction of the remaining section of I-526. In addition, a new study would allow new alternatives to be considered and evaluated. This EIS is being developed by SCDOT, in association with FHWA, USACE and Charleston County to address the environmental impacts of the proposed construction of the remaining section of I-526.

In 2006, Charleston County applied to the South Carolina Transportation Infrastructure Bank (SIB) for funding to complete the construction of approximately seven miles of I-526 between its current endpoint at U.S. 17 (Savannah Highway) and the James Island Connector interchange at Folly Road. Charleston County voters approved a half-cent sales tax in November 2004, that funded transportation, public transportation and greenbelt projects in the county. To complete the plan for the Mark Clark Expressway, Charleston County officials used the sales tax revenue committed to transportation projects as a local match to apply for funding from the SIB in 2006. Upon review of the application and the availability of matching funds, the SIB committed to fund the proposed project on June 30, 2006.1

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1.2.2 Are proposed improvements consistent with local transportation plans?

The traditional long-range transportation planning process federally-mandated for metropolitan planning organizations (MPOs) enables state and local governments to establish a vision for a region’s future transportation system, define a region’s transportation goals and objectives for realizing that vision, decide which needs to address, and determine the time frame for addressing these needs. This process includes the involvement of stakeholders and the public. Out of the planning process emerge proposed projects intended to meet the needs and achieve the objectives of the plan.

The need for transportation improvements in the study area is consistent with local, regional and statewide planning. The Mark Clark Expressway project has been included in local long range transportation plans since the 1970s. The 1972 FEIS stated that “The proposed freeway was an integral part of the Charleston Area Transportation Study (CHATS), a long range plan designed to meet traffic demands of the Charleston area....” The proposed project is consistent with Charleston County’s transportation plans and is currently included in the CHATS Long Range Transportation Plan.

1.2.3 What is the scoping area?

The scoping area for the project was established by assessing the regional road network in West Ashley, Johns Island and James Island, which are located west of the Charleston peninsula (see Figure 1-2). The scoping area boundary encompasses the majority of the existing roadway network in these areas and the Charleston peninsula that could be affected by the proposed Mark Clark Expressway project. The scoping area would allow the project team to consider a broad range of alternatives.

1.3 The NEPA Process

1.3.1 What is NEPA?

Signed into law on January 1, 1970, the National Environmental Policy Act of 1969 established a national environmental policy and a framework for considering the environment in decision-making for Federal actions. NEPA applies to Federal government activities and it requires all Federal agencies to:

- assess the environmental impacts of major Federal projects or decisions such as issuing permits, spending Federal money, or affecting Federal lands;
- consider the environmental impacts when making decisions; and
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• disclose the environmental impacts to the public.

NEPA also established the Council on Environmental Quality, which oversees NEPA for all Federal agencies. CEQ developed regulations for implementing the law (Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act [40 CFR 1500-1508]). These regulations require all Federal agencies to write their own regulations for implementing NEPA.

The principle objective of NEPA and the CEQ regulations is for the Federal government, and those regulated by Federal agencies, to design, locate and operate projects in ways that reduce adverse and increase beneficial environmental impacts for existing and succeeding generations.2

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, how it is implemented and how the public can participate in the assessment of environmental impacts conducted by Federal agencies.3 This can be found on the CEQ’s website at: http://ceq.hss.doe.gov/publications/citizens_guide_to_nepa.html.

1.3.2 How does FHWA implement the NEPA process?

In accordance with the CEQ regulations, FHWA implemented regulations specific to transportation projects, Environmental Impact and Related Procedures (23 CFR 771). This requires FHWA and other transportation agencies to consider potential impacts to the social and natural environment, while taking into account the public’s need for safe and efficient transportation.

In addition to evaluating potential impacts, NEPA established requirements for documentation of the decisions resulting from that process. According to FHWA, the essential elements of NEPA decision-making include:

• assessment of the social, economic and environmental impacts of a proposed action or project;
• analysis of a range of reasonable alternatives to the proposed project, based on the applicant’s defined purpose and need for the project;
• consideration of appropriate impact mitigation: avoidance, minimization and compensation;
• interagency participation: coordination and consultation;
• public involvement including opportunities to participate and comment; and
• documentation and disclosure.4

1.3.3 What other environmental regulations must be considered?

Many different Federal and state laws, regulations, memoranda of agreement and executive orders govern environmental review of Federal transportation projects. FHWA established an “umbrella” process5 for coordinating compliance with each law through the preparation of an EIS for major Federal actions significantly affecting the environment. Other special purpose statutes and procedures may apply as well, depending on specific circumstances. These laws, regulations, et cetera are listed in Figure 1-3, pages 1-8 and 1-9.

1.3.4 What is addressed in this DEIS?

This DEIS includes:

- the need for and purpose of the project;
- the Reasonable Alternatives and the process by which the alternatives were developed;
- the impacts of the alternatives on the human and natural environment; and
- a description of the agency and public involvement that has occurred.

This document considered a design year of 2035. Conceptual designs have been prepared for each of the alignments to allow equal comparison of the alternatives at each stage of project development. The negative and beneficial impacts of all alternatives were evaluated and are presented and compared in Chapter 3. A SCDOT recommended preferred alternative is identified in Chapter 6. The DEIS also documents involvement and input from State and Federal resource and regulatory agencies, as well as project stakeholders and the public in Chapter 4.

1.3.5 What type of impacts are evaluated?

Both negative and beneficial impacts can occur as a result of implementing a transportation project. “The CEQ regulations (40 CFR 1508.7 and 1508.8) define the impacts and effects that must be addressed and considered by Federal agencies in satisfying the requirements of the NEPA process, which includes direct, indirect and cumulative impacts.”6 For the purpose of this DEIS, effects and impacts will be used synonymously.7

**Direct impacts**

Direct impacts are caused by the action and occur at the same time and place. Impacts may also include those resulting from actions which may have both beneficial and detrimental effects.

**Indirect impacts**

“Indirect impacts are caused by the action and occur later or farther away (off-site) but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate and related effects on air and water and other natural systems, including ecosystems.”8

**Cumulative impacts**

Defined as an impact on the environment that results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions. The impacts of a proposed action can include ecological, aesthetic, historic, cultural, economic, air, noise, social, or health, whether direct, indirect or cumulative.9

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Federal Laws

- The National Environmental Policy Act of 1969 ("NEPA" P.L. 91-190; 42 U.S.C. 4321);
- The Clean Air Act (as amended by P.L. 91-604);
- The Noise Control Act of 1972 (P.L. 92-574; 42 U.S.C. 4901);
- Homeland Security Act of 2002;
- The Rivers and Harbors Act of 1899 (33 U.S.C. 403);
- The Fish and Wildlife Act of 1956 (16 U.S.C. 7421 et seq.);
- The Migratory Marine Game-Fish Act (16 U.S.C. 760 (c-g);
- The Magnuson-Stevens Fishery Conservation Management Act;
- The Fish and Wildlife Coordination Act (16 U.S.C. 661-666c);
- The Wild and Scenic Rivers Act (16 U.S.C. 1279 et seq.);
- The Coastal Zone Management Act of 1972 (P.L. 92-583; 16 U.S.C. 1451-1464);
- The Coastal Barrier Resources Act of 1982 (P.L. 97-348; 16 U.S.C. 3501-3510);
- The Water Bank Act (P.L. 91-559; 16 U.S.C. 1301);
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-528; 42 U.S.C. 4601);
- The Farmland Protection Policy Act (P.L. 97-98 and 7 CFR 658);
- The Department of Transportation Act (49 U.S.C.);
- Forest and Rangeland Renewable Resources Planning Act of 1974 (P.L. 93-378; 42 U.S.C. 1601-1614) as amended by the National Forest Management Act of 1976 (P.L. 94-588); and

Federal Resources

- 33 CFR 1 – 200;
- 33 CFR 320 – 332;
- 40 CFR 220 – 230;
- 40 CFR 1500 – 1508;
- 36 CFR 800 (39 FR 3365; January 25, 1974, and 51 FR 31115; September 1986);
- 7 CFR 657 (43 FR 4030; January 31, 1978);
- 49 CFR 18 (March 11, 1988);
- 49 CFR 24 (March 2, 1989);
- 33 CFR 320 et seq.;
- 40 CFR 230;
- 36 CFR 215;
- 36 CFR 251; and
- 36 CFR 254.

Executive Orders

- Executive Order 11593, Protection and Enhancement of the Cultural Environment, May 13, 1971;
- Executive Order 11988, Floodplain Management (43 FR 6030);
- Executive Order 11990, Protection of Wetlands;
- Executive Order 123772, Intergovernmental Review of Federal Programs, July 14, 1982;
- President’s 1979 Environmental Message Directive on Wild and Scenic Rivers, August 2, 1979;
- Executive Order 11514, Protection and Enhancement of Environmental Quality, March 4, 1970;
- Executive Order 11296, Flood Hazard Evaluation Guidelines;
- Executive Order 12898, Federal Actions Address Environmental Justice in Minority Populations and Low-Income Populations, February 11, 1994; and
- Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks.
Memoranda of Understanding/Memoranda of Agreement

- MOA Between the Department of Commerce and the Department of the Army
- MOA Between the United States Army Corps of Engineers and the United States Coast Guard
- MOA among the USDA, USEPA, DOI, and the Department of the Army (DA) Concerning the Delineation of Wetlands for the Purposes of Section 404 of the Clean Water Act and Subtitle B of the Food Security Act
- MOA Between the USEPA and the Department of the Army Concerning the Determination of Mitigation under the Clean Water Act Section 404(b)(1) Guidelines
- MOA Between the Department of the Army and the USEPA Concerning the Determination of the Section 404 Program and the Application of the Exceptions under Section 404(f) of the Clean Water Act
- Amendment to the January 19, 1989 DA/EPA Memorandum of Agreement Concerning the Determination of the Geographic Jurisdiction of the Section 404 Program and the Application of the Exemptions Under Section 404(f) of the Clean Water Act (USEPA and Department of the Army)
- MOA Between the Department of the Army and the USEPA Concerning Federal Enforcement for the Section 404 Program of the Clean Water Act
- Section 404 Enforcement Memorandum of Agreement (MOA) Procedures Regarding the Applicability of Previously-Issued Corps Permits
- Guidance on Judicial Civil and Criminal Enforcement Priorities
- Corps/EPA Enforcement Procedures for Section 404 Unpermitted Violations
- MOA Between the USEPA and the Department of the Army concerning Clean Water Act Section 404(Q)
- MOA Between the Department of the Army and the USEPA Concerning the Determination of Mitigation Under the Clean Water Act Section 404(b)(1) Guidelines
- MOA Between the USEPA (Asst. Secretary of the Army for Civil Works) Concerning Regulation of Discharge of Solid Waste under the Clean Water Act
- Memorandum for the Field: Clean Water Act Section 404 Regulatory Program and Agricultural Activities (USEPA and Department of the Army)
- Memorandum to the Field: Appropriate Level of Analysis Required for Evaluating Compliance with the Section 404(b)(1) Guidelines Alternatives Requirements (USEPA and Department of Defense, USCOE)
- Memorandum for the Field: Individual Permit Flexibility for Small Landowners (Department of Defense)
- Federal Guidance for the Establishment, Use and Operation of Mitigation Banks (Federal Register, November 28, 1995; Volume 60, Number 228, Page 58605-58614) (Agencies: Corps of Engineers, USEPA, NRCS, USF&WS, NMFS)
- MOU Between the Corps of Engineers, United States Army, and the United States Nuclear Regulatory Commission for Regulation of Nuclear Power Plants

State Regulations

- South Carolina Coastal Zone Management Program (1976, as amended).
1.3.5.1 What interest factors will be evaluated?

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

- Land use
- Environmental Justice
- Historic Resources
- Wild and Scenic Rivers
- Noise
- Construction impacts
- Wetlands
- Water quality
- Energy
- Indirect impacts
- Communities
- Section 4(f) and 6(f) Resources
- Parks, wildlife refuges
- Hazardous materials
- Air quality
- Farmlands
- Threatened and Endangered Species
- Floodplains
- Coastal zone resources
- Cumulative impacts

1.4 Agency Involvement (Roles and Responsibilities)

1.4.1 What are the roles of SCDOT, FHWA and Charleston County?

The U.S. Department of Transportation (USDOT) “must serve as the Federal lead agency for a transportation project. USDOT is the Federal Cabinet department concerned with transportation and FHWA is a division of this department. For FHWA, the State DOT is typically the direct recipient of project funds, and therefore must serve as a joint lead agency along with FHWA. A local governmental agency that is the project sponsor may be invited to serve as a joint lead agency.”

Who is the Lead Federal Agency for this project and what is their role?

FHWA is the lead Federal agency for the project. This agency supervises the preparation of the EIS and manages the environmental review, in accordance with transportation regulations in 23 CFR 771 and 40 CFR 1500-1508. In addition, the lead agency develops coordination plans, identifies participating agencies and provides opportunities for their involvement in defining the purpose and need, the range of alternatives and methodologies for the analysis of alternatives. The lead agency also provides opportunities for the public to be involved in the development of the purpose and need and the range of alternatives. A lead agency provides oversight in resolving issues that occur.

Who are the joint lead agencies for the project?

According to the CEQ, A Citizen’s Guide to NEPA, if another Federal, State, Local, or Tribal agency has a major role in the proposed action and also has NEPA responsibilities or responsibilities under a similar NEPA-like law, that agency may be a joint lead agency. A joint lead agency shares the responsibility for management of the NEPA process,
including public involvement and the preparation of documents. Charleston County is the local governing body that initiated the Mark Clark Expressway project. At the request of Charleston County, SCDOT is developing the DEIS for the proposed project. Because both Charleston County and SCDOT have major roles in the development of the proposed project, they will serve as joint lead agencies with FHWA.

1.4.2 Who are the Cooperating Agencies for this project?

In addition to these lead agencies, many other partners have been involved in the development of the project. Cooperating agencies are any Federal, State, Local agency or Tribal government other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in an EIS project. In accordance with 23 CFR 771.111(d), FHWA and SCDOT requested other agencies having special interest or expertise to become cooperating agencies. Agencies with jurisdiction by law must be invited to become a cooperating agency. Four agencies accepted the invitation to participate in the project development process as cooperating agencies:

- United States Army Corps of Engineers (USACE);
- United States Coast Guard (USCG);
- South Carolina Department of Health and Environmental Control (SCDHEC); and
- SCDHEC Office of Ocean and Coastal Resource Management (OCRM).

1.4.2.1 United States Army Corps of Engineers (USACE)

What is the role of USACE?

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.

USACE 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;
- Section 404 of the Clean Water Act; and
- Section 103 of the Marine Protection, Research and Sanctuaries Act.

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 Clean Water Act regulates the discharge of dredged or fill material into “waters of the U.S.” Section 103 of the Marine Protection, Research and Sanctuaries Act regulates the transportation of dredged material for the purpose of disposal in the ocean.

USACE’s “public interest review” is of great importance to the project evaluation. The public benefits and detriments
of all factors relevant to each project are carefully evaluated and balanced. In addition, projects are reviewed for compliance with numerous other laws, including the National Environmental Policy Act (NEPA), the Fish and Wildlife Coordination Act, the Endangered Species Act; the National Historic Preservation Act, the Magnuson-Stevens Fishery Conservation and Management Act, Essential Fish Habitat, etc.

Because construction of the proposed Mark Clark Expressway project would involve construction, excavation, or deposition of materials into “navigable waters of the U.S.” and will involve the discharge of fill material into “waters of the U.S.”, a Department of the Army (DA) permit would be required pursuant to Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Since there are no discharges of dredged material proposed to be transported to the ocean, Section 103 of the Marine Protection, Research and Sanctuaries Act is not applicable. Based thereon, USACE became a cooperating agency for the proposed project. For more information regarding cooperating agencies, please see Chapter 4, section 4.2.

Section 10 of the Rivers and Harbors Act
The Rivers and Harbors Act regulates the development and use of the nation’s navigable waterways. Section 10 of the Act prohibits unauthorized obstruction or alteration of navigable waters of the U.S. and vests USACE with authority to regulate discharges of fill and other materials into such waters. Activities likely to occur from the proposed project regulated under the Rivers and Harbors Act include, fill for bridge pilings, abutments and/or roadway construction. USACE will evaluate impacts from the proposed project under Section 10 of the Rivers and Harbors Act simultaneously with Section 404 of the Clean Water Act.

Section 404 of the Clean Water Act
Section 404 of the Clean Water Act establishes a program to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Any activity where material is placed in waters of the U.S. and has the effect of either replacing any portion of a water of the U.S. with dry land or changing the bottom elevation of any portion of a water requires a permit from USACE. Examples of “fill material” that could be used for the construction of the proposed Mark Clark Expressway project include: rock, sand, clay, soil, rip-rap, or any material that could be used for roadbase, bridge abutments, erosion control, etc.

404 (b)(1) Guidelines
Under Section 404(b)(1) of the Clean Water Act, the Environmental Protection Agency, in conjunction with USACE, developed “Guidelines” to insure compliance with Section 404 of the Clean Water Act when evaluating permit applications. These “Guidelines” are specifically referred to as the “404(b)(1) Guidelines”. These guidelines are heavily weighted towards preventing environmental degradation of waters of the U.S. and therefore place additional constraints on Section 404 discharges. The 404(b)(1) Guidelines specifically outline four conditions that must be

Activities Requiring Department of the Army Permits
Activities identified in 33 CFR 323.4 (a)(1-6) must have a DA permit if it is part of an activity whose purpose is to convert an area of the waters of the United States into a use to which it was not previously subject, where the flow or circulation of waters of the United States may be impaired or the reach of such waters reduced. Where the proposed discharge will result in significant discernible alterations to flow or circulation, the presumption is that flow or circulation may be impaired by such alteration.

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 USACE 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.

4. not have taken appropriate and practicable steps to minimize potential adverse impacts of the discharge on the aquatic ecosystem.

Each of these “restrictions” has specific requirements in order to determine compliance. Below is the direct excerpt for the 404(b)(1) Guidelines that outlines these “restrictions.”

(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.

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 purpose by industries in interstate commerce.
- All impoundments of waters otherwise defined as waters of the United State under the definition;
- Tributaries of waters;
- The territorial seas;
- Wetlands adjacent to waters (other than waters that are themselves wetlands);
- Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA are not waters of the U.S.
- Waters of the U.S. do not include prior converted cropland.
(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 sighting 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 degra-
tion 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 ecosystems 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.

**Public Interest Review**

Regardless of the type of proposed impact resulting from the proposed project, USACE has general regulatory policies that they must comply with when reviewing a DA permit application. These policies can be found in 33 CFR 320. One of these policies is the public interest review which specifies that “the decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest. Evaluation of probable impacts 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.” All factors which may be relevant to the proposed project must be considered including the cumulative effects thereof. The public interest review factors include:

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

Subject to compliance with the 404(b)(1) Guidelines, a permit will be granted unless the district engineer determines that the proposed project would be contrary to the public interest.

1.4.2.2 United States Coast Guard (USCG)

What are the Applicable Laws and Regulations?

The USCG is responsible for issuing permits for bridges crossing navigable waters of the United States under Section 9 of the Rivers and Harbors Act of 1899, as amended, 33 U.S.C. 401, and the General Bridge Act of 1946, as amended, 33 U.S.C. 525. Congress' intent, in enacting the bridge statutes, was to retain exclusive jurisdiction for all bridges over all navigable waters of the U.S. These statutes are intended to maintain the freedom of navigation on the navigable waters of the U.S. and to prevent their impairment as navigable streams.¹⁴

A significant number of these bridges are constructed with the assistance of Federal funds administered by the FHWA. The actions by the FHWA and USCG require an evaluation under the terms of NEPA, as implemented by the CEQ Regulations (40 CFR 1500-1508) and DOT Order 5610.1C, applicable parts of the operating agencies' directives (FHPM 7-7-2 and Commandant Instruction M 16475.1D).

Navigable Waters of the United States
Those waters that are subject to the ebb and flow of the tide and/or are presently used or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

¹⁴ USCG Bridge Administration Manual, Chapter 1, page 1-1
**What is the Role of the USCG?**

Under their authority, the USCG must approve a permit for the location and plans for any bridges that will cross navigable waters. It is anticipated that the Mark Clark Expressway project would require the construction of a bridge or bridges over the Stono River and the Atlantic Intracoastal Waterway (AIWW), requiring a permit from the USCG. Therefore, the USCG is acting as a cooperating agency for development of the project.

The permitting process will require that SCDOT submit a permit application, including documentation of the environmental effects of the project. “The USCG is obligated to consult with other Federal Agencies with legal jurisdiction or special expertise concerning environmental impacts. Comments are also gathered from the public notice and Local Notice to Mariners.”

During the permitting process, the USCG must ensure that navigational and environmental considerations are carefully considered in each permitting decision. Navigation factors to be considered include the vertical and horizontal clearances, existing bridges on the waterway, complaints against existing bridges, recreational and commercial use of the waterway, including access by vessels to existing local service facilities. Environmental considerations include impacts on water quality, the coastal zone, floodplains, historic resources, wetland impacts, threatened or endangered species, noise, air quality, wild and scenic rivers, prime and unique farmlands, and relocations.

**1.4.2.3 South Carolina Department of Health and Environmental Control (SCDHEC)**

**What are the Applicable Laws and Regulations?**

Section 401 of the Clean Water Act dictates that applicants for Federal permits that result in discharges to navigable waters must obtain a certification from SCDHEC that the proposed activity will not violate state water quality standards. This includes individual or general Federal permits issued pursuant to Section 404 of the CWA (33 U.S.C. 1344), Sections 9 and 10 of the Federal Rivers and Harbors Act of 1899 (33 U.S.C. 401-403), and permits or licenses issued by the Federal Energy Regulatory Commission (16 U.S.C. 1791, et seq.). The USACE Section 404 permit applications cannot be issued without a State-issued Section 401 Water Quality Certification. SCDHEC’s Regulation 61-101, entitled Water Quality Certification, directs the processing of applications for certification.

SCDHEC also must consider whether to issue a Construction in Navigable Waters Permit which is filed as part of the Section 401 Water Quality Certification. The issuance of this permit is dependent on the Agency’s assessment of the proposed project and its effects to the navigable water body. The purpose of this permit is to ensure that the project does not adversely impact navigation.

A permit is required from SCDHEC for any construction, dredging, filling or alteration activity in, over or under South Carolina Navigable Waters when such activity involves the use of areas below the mean high water line in affected waters or any area below the ordinary high water mark of any non-tidal waterway within the State. A SCDHEC Construction in Navigable Waters Permit may be required even when a USACE permit is not required.

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15 USCG Bridge Administration, Bridge Permit Application Guide, Chapter 1, Page 3
16 Ibid, Page 5
What is the role of SCDHEC?

The SCDHEC administers the Water Quality Certification program pursuant to Section 401 of the CWA. Since activities requiring a Federal 404 permit (a USACE permit for the discharge of dredged or fill material) result in a discharge to waters or wetlands, SCDHEC must take certification action on all 404 permit applications. USCG Permits also require states to take Water Quality Certification action. Because the Mark Clark Expressway project would require a 404 permit and a USCG permit, SCDHEC was also a cooperating agency for the development of the project.

SCDHEC considers other factors to determine whether to issue a Section 401 Water Quality Certification, including:

- whether the activity is water dependent;
- the intended purpose of the activity;
- whether there are feasible alternatives to the activity; and
- all potential water quality impacts associated with the project, both direct and indirect, over the life of the project, including impacts on existing and classified uses; physical, chemical, and biological impacts, including cumulative impacts; the effect on circulation patterns and water movement; and the cumulative impacts of the proposed activity and reasonably foreseen similar activities of the applicant and others.

This Water Quality Certification must state that applicable effluent limits and water quality standards will not be violated and the certification must be denied if SCDHEC does not have a reasonable assurance that the proposed activity will not cause or contribute to a violation of water quality standards.

1.4.2.4 South Carolina Department of Health and Environmental Control-Office of Ocean and Coastal Resource Management (OCRM)

What are the Applicable Laws and Regulations?

The South Carolina Coastal Zone Management Act (SC Code of Laws Ann. Section 48-39-10 et seq.) was passed by the 1977 General Assembly of South Carolina to provide for the protection and enhancement of the State's coastal resources. These regulations can be found in OCRM’s Critical Area Permitting Regulations, published April 25, 2008.

In critical areas of the coastal zone, it is OCRM policy that, in determining whether a permit application is approved or denied, OCRM “shall base its determination on the individual merits of each application, the policies specified in Sections 48-39-20 and 48-39-30 (of the Act).”

What is the Role of SCDHEC-OCRM?

The OCRM administers the South Carolina Coastal Zone Management Act and has direct permitting authority over the “critical areas” of the coast. OCRM must balance the public’s desire to utilize South Carolina's natural resources...
while protecting environmental quality. OCRM’s responsibility, as implemented under the Regulations, is to ensure that impacts to coastal resources are minimized.

Also, to ensure that stormwater runoff during construction of projects and following project completion do not have a negative effect on rivers, streams, marshes and other sensitive areas of the coast, OCRM regulates permitting for high-ground land disturbance. A stormwater management and sediment control plan is required for any construction/land disturbance activities in the coastal region.

OCRM is required to review all State and Federal permit applications for consistency with the South Carolina Coastal Zone Management Plan. Because the proposed project falls within the critical area, a permit would be required; therefore, OCRM has been a cooperating agency in the development of the project.

When reviewing permit applications, OCRM considers:

(a) In the planning of major transportation routes and airports, these projects should be sited for location inland from the critical areas;
(b) The location and design of public and private transportation projects must avoid the critical areas to the maximum extent feasible. Where coastal waters and tidelands cannot be avoided, bridging rather than filling of these areas will be required to the maximum extent feasible;
(c) Where wetlands will be destroyed, their value as wetlands will be assessed by the Department and weighed against public need for their destruction;
(d) To the maximum extent feasible, transportation structures must be designed so as not to alter the natural water flow and circulation regimes or create excessive shoaling or erosion. Where applicable, adequate clearance for commercial and pleasure craft must be provided;
(e) Where feasible, maximum care shall be taken to prevent the direct drainage of runoff water from transportation routes and associated facilities from entering adjacent water bodies;
(f) Where appropriate, bridges and approaches should be designed to provide for the enhancement of public access by the utilization of fishermen, catwalks, boat launching ramps, bike lanes and other structural features;
(g) During the planning of a multi-lane widening or improvement project, it is preferable to follow the existing alignment in wetland areas. Existing causeway and fill areas must be utilized wherever possible. The degree to which any existing causeway through wetlands can be widened must be reasonably proportionate to the expected traffic load of the causeway in the near future and the size and use of the area being provided access. The width of medians of divided highways must be reduced as much as possible wherever they cross wetland areas;
(h) Roadway embankments and fill areas shall be stabilized by utilizing appropriate erosion devices and/or techniques in order to minimize erosion and water quality degradation problems. Culverts shall be required, where appropriate, in order to maintain normal tidal influence and minimize disruption of drainage patterns;
(i) The Department will require applicants for transportation project permits to consider the accommodation of other public utilities in facility design, thus avoiding unnecessary future alteration such as that caused by the laying of cables or transmission lines in wetlands adjacent to an existing roadway;
(j) New road or bridge projects involving the expenditure of public funds to provide access to previously undeveloped barrier islands will not be approved unless an overriding public interest can be demonstrated.  

1.4.3 Who are the Participating Agencies for this project?

Section 6002 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: a Legacy for Users (SAFETEA-LU) created a new category of “participating agencies” to allow more Federal, State, Local, and Tribal agencies a formal role and rights in the environmental process.  

Fifteen agencies accepted SCDOT and FHWA’s invitation to participate in the project development process as participating agencies. These agencies are:

- Berkeley, Charleston, Dorchester Council of Governments (BCDCOG);
- City of Charleston;
- Charleston County Department of Parks and Recreation Commission;
- Federal Aviation Administration (FAA);
- National Oceanic and Atmospheric Administration-National Marine Fisheries Service (NOAA-NMFS);
- South Carolina Department of Archives and History (SCDAH);
- South Carolina Department of Commerce (SCDOC);
- South Carolina Department of Natural Resources (SCDNR);
- South Carolina Emergency Management Division (SCEMD);
- South Carolina State Ports Authority (SCSPA);
- United States Department of Agriculture Farm Service Agency (FSA);
- United States Department of Agriculture Natural Resources Conservation Service (NRCS);

20 SCDHEC Rules and Regulations for Permitting in the Critical Areas of the Coastal Zone, Section R.30-12, F. Transportation, Page 39

What are Participating Agencies and how are they different from Cooperating Agencies?

Participating agencies, are those with an interest in the project. The roles and responsibilities of cooperating and participating agencies are similar, but cooperating agencies have a higher degree of authority, responsibility, and involvement in the environmental review process.

Figure 1-4 NEPA/404 Merger Process

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<thead>
<tr>
<th>Step</th>
<th>Activity</th>
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<tbody>
<tr>
<td>1</td>
<td>SCOPING</td>
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<tr>
<td>2</td>
<td>Determine the purpose and need of the project.</td>
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<tr>
<td>3</td>
<td>Develop Alternatives</td>
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<td>4</td>
<td>Study Environmental Impacts</td>
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<td>5</td>
<td>Refine Evaluation Criteria</td>
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<td>6</td>
<td>DRAFT EIS</td>
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A FHWA, http://www.fhwa.dot.gov/hep/section6002/1.htm#toc148770580
1.4.4 What is the NEPA/404 Merger process?

In order to streamline reviews, provide a more comprehensive environmental analysis, and to reduce the overall time needed to complete the project, FHWA and USACE have agreed to merge the NEPA and 404 process. On past projects, FHWA and USACE have independently completed their NEPA responsibilities; USACE did not initiate their responsibilities until FHWA had completed their process, increasing the time to complete the environmental studies and obtain a DA permit decision. Many times, FHWA’s NEPA document does not satisfactorily address all of USACE’s permitting needs (due to additional components required by USACE regulations). Therefore, USACE must complete a separate NEPA document, duplicating efforts and increasing the time it takes to get a decision on a DA permit. Since USACE and FHWA, in coordination with SCDOT, are required by law to evaluate the impacts of a proposed project in similar ways, these agencies agreed to use an integrated “NEPA/404 Merger Process” for the Mark Clark Expressway project. This minimizes the risk of redundant reevaluations during the DA permit process and will ensure that the environmental document will meet both agency’s requirements. SCDOT will provide FHWA and USACE seven decision points throughout the Mark Clark Expressway project. This process is not prescribed, and will continue to evolve as the project continues. These decision points are shown as brown diamonds on the flowchart, see Figure 1-4. The graphic is a condensed depiction of the “NEPA/404 Merger Process.” For a diagram of the entire NEPA/404 Merger Process, please see Appendix J, Agency Coordination and Public Involvement Plan.

As a result, in addition to FHWA’s regulations and procedures, this document has also been prepared to satisfy the requirements of USACE. The “NEPA/404 Merger Process” has the potential to improve the project development process by identifying and resolving issues throughout the project, which assists in maintaining schedules and eliminating duplication of effort between the two federal agencies.