



US Army Corps
Of Engineers
Wilmington District

PUBLIC NOTICE

Issue Date: October 4, 2018
Comment Deadline: November 2, 2018
Corps Action ID Number: SAW-2013-00201

The Wilmington District, Corps of Engineers (Corps) received an application from the North Carolina Department of Transportation (NCDOT) regarding a potential future requirement for Department of the Army authorization to discharge dredged or fill material into waters of the United States, associated with improvements to I-40 from the I-40/I-85 interchange to the Durham County line (STIP Project Number I-3306A) in Orange County, North Carolina.

Specific plans and location information are described below and shown on the attached plans. This Public Notice and all attached plans are also available on the Wilmington District Web Site at

<http://www.saw.usace.army.mil/Missions/RegulatoryPermitProgram.aspx>

Applicant: North Carolina Department of Transportation (NCDOT)
Project Management Unit - NCDOT Technical Services
Attn: Gene Tarascio
Project Manager
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Authority

The Corps will evaluate this application to compare alternatives that have been carried forward for detailed study pursuant to applicable procedures of the following Statutory Authorities:

- Section 404 of the Clean Water Act (33 U.S.C. 1344)
- Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403)
- Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413)

In order to more fully integrate Section 404 permit requirements with the National Environmental Policy Act of 1969, and to give careful consideration to our required public interest review and 404(b)(1) compliance determination, the Corps is soliciting public comment on the merits of this proposal and on the alternatives considered. At the close of this comment period, the District Commander will evaluate and consider the

comments received, as well as the expected adverse and beneficial effects of the proposed road construction, to select the least environmentally damaging practicable alternative (LEDPA). The District Commander is not authorizing construction of the proposed project at this time. A final DA permit may be issued only after our review process is complete, impacts to the aquatic environment have been minimized to the maximum extent practicable, and a compensatory mitigation plan for unavoidable impacts has been approved.

Location

Location Description: The proposed project is located along I-40, beginning at Exit 163 (I-40/I-85 interchange) near Hillsborough in Orange County, and ending just west of Exit 270 (US 15/501) at the Durham County line near Durham, North Carolina. The Study Area boundary for this project encompasses the proposed transportation improvements and consists of approximately 850 acres (Figure 1).

Project Area (acres): ~850

Nearest Town: Chapel Hill, Durham, Hillsborough

Nearest Waterway: Cates Creek, New Hope Creek, Old Field Creek

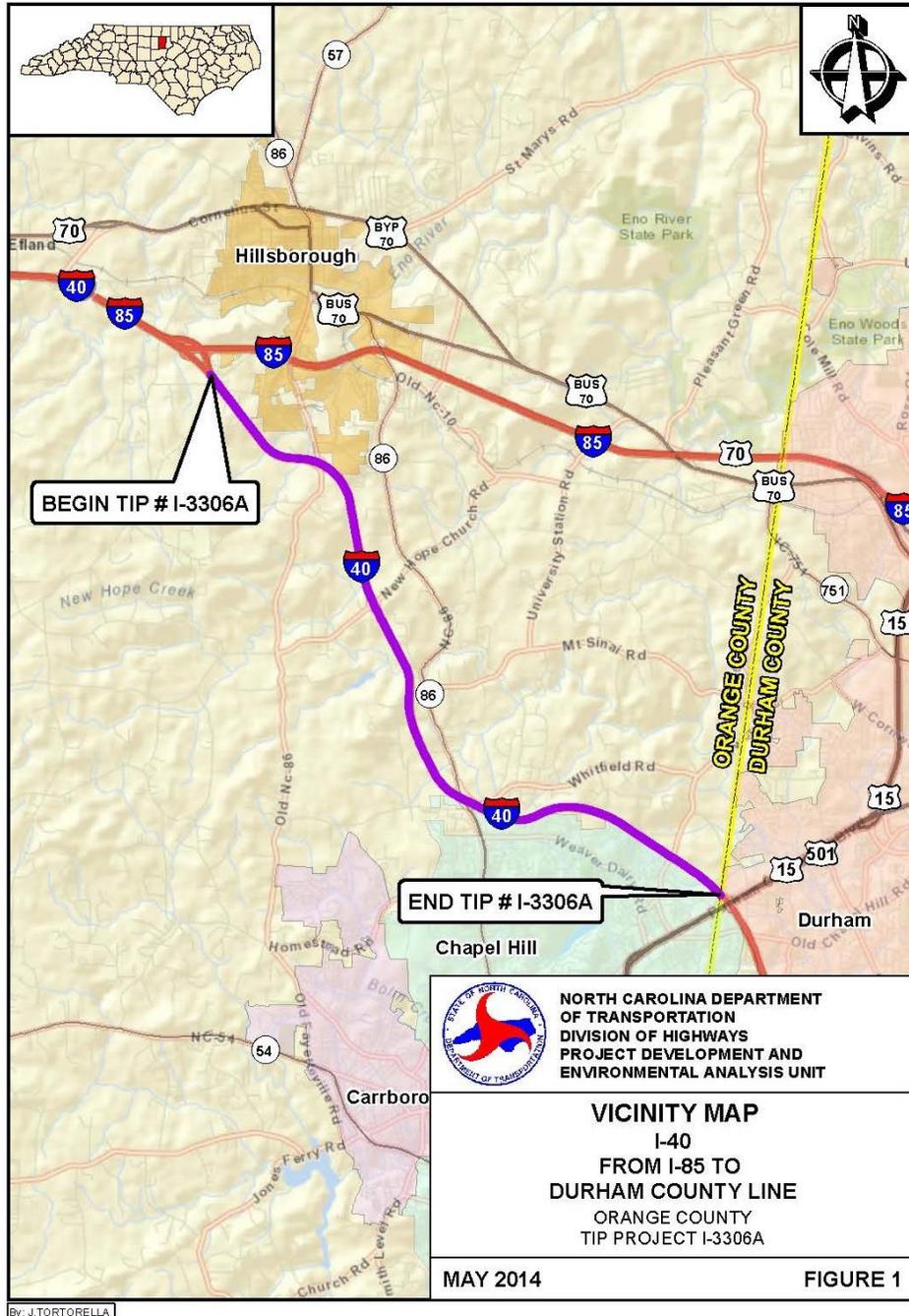
River Basin: Cape Fear, Neuse

Latitude and Longitude: 36.0592 N, -79.129

Existing Site Conditions

The project is located along an approximately 11.4 mile line segment of I-40 in the central and southeast portion of Orange County, within the piedmont region of central North Carolina. Over the past 50 years, rural agricultural land use has transitioned to residential and commercial developments, driven by the nearby municipalities of Durham and Chapel Hill. Adjacent land use along I-40 generally transitions from rural to urban from the western to eastern extents of the Study Area. Since the 1980s, I-40 has been the primary transportation route for east- and west-bound traffic in this part of Orange County.

Throughout the Study Area, I-40 currently has two east-bound lanes and two west-bound lanes, separated by a grassed median. Interchanges exist at the NC Highway 86, New Hope Church Road, and Old NC 86 crossings. There are several transportation structures within the Study Area: four bridges that carry I-40 over roads (Bridges 267, 268, 270 and 271), two bridges that carry I-40 over a railroad line (Bridges 264 and 265), five single box culverts that carries I-40 over streams, one quadruple box that carries I-40 over New Hope Creek (Culvert 263), and six bridges that carry secondary roads over I-40 (Bridges 79, 262, 260, 266, 259, and 258). The current posted speed on I-40 is 65 miles per hour.



Portions of the project Study Area are contained within the Cape Fear River Basin and Neuse River Basin, part of the U.S. Geological Survey (USGS) Hydrologic Units 03030002 and 03020201, respectively. Based on a delineation by NCDOT, there are 50 streams and 34 wetlands within the Study Area; all are potential waters of the U.S. The Corps field verified NCDOT's delineation on February 26 and 27, 2014, and issued a Preliminary Jurisdictional Determination for the Study Area on August 5, 2015.

Streams identified within the project area, which include Cates Creek and unnamed tributaries (C; NSW), New Hope Creek and unnamed tributaries (WS-V; NSW), Old

Field Creek and unnamed tributaries (WS-V; NSW), Rocky Run (WS-II; HQW; NSW; CA), Sevenmile Creek and unnamed tributaries (WS-II; HQW; NSW; CA), as well as unnamed tributaries to the Eno River (C; NSW), are all part of the Jordan or Falls Lake Water Supply Watersheds. Water Quality Classifications referenced above are defined as the following:

- Class C (C) refers to waters protected for uses such as secondary recreation, fishing, wildlife, fish consumption, aquatic life including propagation, survival and maintenance of biological integrity, and agriculture. Secondary recreation includes wading, boating, and other uses involving human body contact with water where such activities take place in an infrequent, unorganized, or incidental manner;
- Water Supply II (WS-II) refers to waters used as sources of water supply for drinking, culinary, or food processing purposes where a WS-I classification is not feasible. These waters are also protected for Class C uses. WS-II waters are generally in predominantly undeveloped watersheds. All WS-II waters are HQW by supplemental classification;
- Water Supply V (WS-VI) refers to waters protected as water supplies which are generally upstream and draining to Class WS-IV waters or waters used by industry to supply their employees with drinking water or as waters formerly used as water supply. These waters are also protected for Class C uses;
- High Quality Waters (HQW) is a supplemental classification intended to protect waters which are rated excellent based on biological and physical/chemical characteristics through Division monitoring or special studies, primary nursery areas designated by the Marine Fisheries Commission, and other functional nursery areas designated by the Marine Fisheries Commission;
- Nutrient Sensitive Waters (NSW) is a supplemental classification intended for waters needing additional nutrient management due to being subject to excessive growth of microscopic or macroscopic vegetation;
- Critical Area (CA) is a supplemental classification intended for waters needing additional protection.

No waters within the Study Area have been identified by the North Carolina Wildlife Resource Commission (NCWRC) as trout waters; therefore, no moratoria are anticipated for the proposed project. The National Marine Fisheries Service (NMFS) has not identified any streams within the Study Area as an Essential Fish Habitat. There are no streams within the Study Area determined by the USACE as Navigable Waters under Section 10 of the Rivers and Harbors Act. Further environmental features in the project vicinity are shown on Figure 2.

Applicant's Stated Purpose

The primary purpose of improving this section of I-40 is to relieve peak hour congestion on this facility such that a Level of Service (LOS) D can be achieved for the 2040 build condition. Other desired outcomes from this would be to improve the traffic flow and continuity between the eight-lane section at I-85 and the six-lane section at the Durham County line.

Project Description

NCDOT proposes to widen I-40 to six lanes and install ITS facilities from I-85 in Orange County to the Durham County line, a distance of approximately 11.4 miles. Two alternatives are under consideration: a “No Build” alternative and a “Best-Fit Widening Build” alternative.

Detailed Study Alternatives (DSA)

Best-Fit Widening Build Alternative (Figure 3, A-O): This alternative would widen I-40 at locations that “best fit” the current road location and surrounding land uses, from an existing four-lane facility to a six-lane facility with a 22-foot median. The widening would involve adding an additional lane in each direction along I-40, predominately within the existing median which would require minor additional right of way. Full depth, twelve-foot paved outside shoulders would also be provided. Improvements to interchange areas would be provided as needed to accommodate future traffic demand.

Alternatives that provide widening only on the right side, widening only on the left side, or widening on both sides equally were not considered because the “Best-Fit” alternative allows the design engineers an opportunity to minimize the impacts to the human and natural environments by shifting the alignment as necessary to accommodate the proposed improvements. “Best Fit” locations were evaluated and selected to improve the existing road alignment, minimize impacts, and allow traffic to remain on I-40 and the roads that intersect I-40 during project construction.

For construction, right of way, and utilities, the Best-Fit Widening Build Alternative is estimated to cost a total of \$161.2 million. Based on a 25-foot buffer from the preliminary design slope stake limits, and excluding the existing I-40 facility footprint, approximately 2,567 linear feet of stream and 0.17 acre of wetland impacts are proposed for this alternative.

The No-Build Alternative was also retained as a baseline against which the benefits, costs, and impacts of the Build Alternatives could be compared. The No-Build Alternative assumed the continuation of routine road repairs and maintenance to existing I-40. Although the estimated construction, right of way, and utilities cost would be \$0, this alternative would not provide any substantial improvements to the I-40 project area and would not improve traffic flow.

Avoidance, Minimization and Compensatory Mitigation

Through development of the preliminary functional design within the Best-Fit Widening Build Alternative, NCDOT has attempted to avoid impacts to streams and wetlands to the greatest practicable extent. To this point, those efforts include:

- Using the existing, disturbed median to accommodate the majority of the widening;
- Retaining and extending all existing major hydraulic structures, minimizing stream and wetland impacts;
- Using 2:1 slopes where possible.

NCDOT will continue to seek ways to avoid and minimize impacts in further design efforts for the selected Alternative.

The purpose of compensatory mitigation is to offset unavoidable functional losses to the aquatic environment resulting from project impacts to waters of the United States. NCDOT will investigate potential on-site compensatory mitigation opportunities for the selected alternative. If on-site mitigation is not feasible, NCDOT intends to coordinate with the North Carolina Division of Mitigation Services to provide the required compensatory mitigation.

Essential Fish Habitat

Pursuant to the Magnuson-Stevens Fishery Conservation and Management Act, this Public Notice initiates the Essential Fish Habitat (EFH) consultation requirements. The Corps' initial determination is that the proposed project would not effect EFH or associated fisheries managed by the South Atlantic or Mid Atlantic Fishery Management Councils or the National Marine Fisheries Service.

Cultural Resources

Pursuant to Section 106 of the National Historic Preservation Act of 1966 (NHPA), Appendix C of 33 CFR Part 325, and the 2005 Revised Interim Guidance for Implementing Appendix C, the District Engineer consulted district files and records and the latest published version of the National Register of Historic Places and initially determines that:

- Should historic properties, or properties eligible for inclusion in the National Register, be present within the Corps' permit area; the proposed activity requiring the DA permit (the undertaking) is a type of activity that will have no potential to cause an effect to an historic properties.
- No historic properties, nor properties eligible for inclusion in the National Register, are present within the Corps' permit area; therefore, there will be no historic properties affected. The Corps subsequently requests concurrence from the SHPO (or THPO).
- Properties ineligible for inclusion in the National Register are present within the Corps' permit area; there will be no historic properties affected by the proposed work. The Corps subsequently requests concurrence from the SHPO (or THPO).

- Historic properties, or properties eligible for inclusion in the National Register, are present within the Corps' permit area; however, the undertaking will have no adverse effect on these historic properties. The Corps subsequently requests concurrence from the SHPO (or THPO).
- Historic properties, or properties eligible for inclusion in the National Register, are present within the Corps' permit area; moreover, the undertaking may have an adverse effect on these historic properties. The Corps subsequently initiates consultation with the SHPO (or THPO).
- The proposed work takes place in an area known to have the potential for the presence of prehistoric and historic cultural resources; however, the area has not been formally surveyed for the presence of cultural resources. No sites eligible for inclusion in the National Register of Historic Places are known to be present in the vicinity of the proposed work. Additional work may be necessary to identify and assess any historic or prehistoric resources that may be present.

The applicant states that no historic architecture resources were identified within their Area of Potential Effect (APE) and no eligible historic properties would be impacted by the proposed project. NCDOT defined the APE as the 150-foot radius away from I-40 starting at the toe of fill where streams are crossed. Twelve previously recorded archaeological sites were identified within or adjacent to the APE during the initial map review and file search conducted by the NCDOT Archaeology Group. Of these twelve, eight had been destroyed by the construction of I-40 completed in 1986, while the four remaining sites are outside the current Study Area or would not be disturbed by the current project. Additional field surveys were conducted within the project Study Area; these surveys did not reveal the presence of any archeological resources. The final determination of the of the NCDOT's Archaeology Group's report indicated there were No National Register Eligible or listed archaeological sites present or affected by this project.

The District Engineer's final eligibility and effect determination will be based upon coordination with the SHPO, as appropriate and required, and with full consideration given to the proposed undertaking's potential direct and indirect effects on historic properties within the Corps-identified permit area.

Endangered Species

Pursuant to the Endangered Species Act of 1973, the Corps reviewed the project area, examined all information provided by the applicant and consulted the latest North Carolina Natural Heritage Database. Based on available information:

- The Corps determines that the proposed project would not affect federally listed endangered or threatened species or their formally designated critical habitat.

- The Corps determines that the proposed project may affect, not likely to adversely affect federally listed endangered or threatened species or their formally designated critical habitat.
- The Corps initiates consultation under Section 7 of the ESA and will not make a permit decision until the consultation process is complete. As of October 3, 2018, the U.S. Fish and Wildlife Service (USFWS) lists four federally protected species for Orange County, including the dwarf wedgemussel (*Alasmidonta heterodon*), Michaux's sumac (*Rhus michauxii*), smooth cone flower (*Echinacea laevigata*), and Cape Fear shiner (*Notropis mekistocholas*). The applicant has indicated that habitat does exist for this species in the project area, although no specific information on surveys for these species were submitted.
- The Corps will consult under Section 7 of the ESA and will not make a permit decision until the consultation process is complete.
- The Corps has initiated consultation under Section 7 of the ESA and will not make a permit decision until the consultation process is complete.
- The Corps determines that the proposed project may affect federally listed endangered or threatened species or their formally designated critical habitat. Consultation has been completed for this type of activity and the effects of the proposed activity have been evaluated and/or authorized by the National Marine Fisheries Service (NMFS) in the South Atlantic Regional Biological Opinion or its associated documents, including 7(a)(2) & 7(d) analyses and Critical Habitat assessments. A copy of this public notice will be sent to the NMFS.
- The Corps is not aware of the presence of species listed as threatened or endangered or their critical habitat formally designated pursuant to the Endangered Species Act of 1973 (ESA) within the project area. The Corps will make a final determination on the effects of the proposed project upon additional review of the project and completion of any necessary biological assessment and/or consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service.

Northern Long-Eared Bat. The US Fish and Wildlife Service has developed a programmatic biological opinion (PBO) in conjunction with FHWA, USACE, and NCDOT for the northern long-eared bat in eastern North Carolina (which includes Wake County). The PBO went into effect in 2016 and covers all NCDOT projects and activities in NCDOT Divisions 1 to 8. The programmatic determination for the bat is "May Affect, Likely to Adversely Affect". The PBO involves a research and tracking program to establish conclusive information concerning the existence of the northern long-eared bat in the eastern part of North Carolina. The PBO also requires that upon completion of clearing activities for each project with federal funds, NCDOT will report on the estimated acres of clearing to the US Fish and Wildlife Service.

Evaluation

The decision whether to issue a permit will be based on an evaluation of the probable impacts including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values (in accordance with Executive Order 11988), land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. For activities involving the discharge of dredged or fill materials in waters of the United States, the evaluation of the impact of the activity on the public interest will include application of the Environmental Protection Agency's 404(b)(1) guidelines.

Commenting Information

The Corps of Engineers is soliciting comments from the public; Federal, State and local agencies and officials, including any consolidated State Viewpoint or written position of the Governor; Indian Tribes and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to select the least environmentally damaging practicable alternative (LEDPA) for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment (EA) and/or an Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA). Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

NCDOT held a Public Meeting in June 2014 at the Southern Human Services Center on Homestead Road in Chapel Hill to update the public on the project studies, present the design alternatives, and request public comments on the project in general. A total of 62 citizens signed in at the meeting, and NCDOT received 23 comments sheets by the end of the advertised comment period.

The Corps of Engineers, Wilmington District will receive written comments pertinent to the proposed work, as outlined above, until 5pm, November 2, 2018. Comments should be submitted to David E. Bailey, Raleigh Regulatory Field Office, 3331 Heritage Trade Drive, Suite 105, Wake Forest, North Carolina 27587, at (919) 554-4884 extension 30, or by email to David.E.Bailey2@usace.army.mil.