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Index Field: Finding of No Significant Impact
Project Name: NCDOT US Highway 19 Improvements 26a Permit
Project Number: 2014-51

ADOPTION OF ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT
TENNESSEE VALLEY AUTHORITY

SECTION 26A APPROVAL OF ACTIVITIES ASSOCIATED WITH IMPROVEMENTS TO U.S. HIGHWAY 19 EAST IN YANCEY AND MITCHELL COUNTIES, NORTH CAROLINA

Proposed Action and Need

This environmental review concerns a highway widening project in western North Carolina. In June 2013, the North Carolina Department of Transportation (NCDOT) submitted a joint application to the U.S. Department of the Army, Army Corps of Engineers (USACE) and the Tennessee Valley Authority (TVA) for the requisite permits to improve a 7.5 mile section of U.S. Highway 19 East (US 19E) in Yancey and Mitchell Counties, North Carolina. The section of highway to be improved runs along US 19E from State Route 1186, west of Micaville in Yancey County, to the existing multilane section of US 19E, west of Spruce Pine in Mitchell County. The project includes widening the existing two-lane road to a four-lane median divided facility and improving bridge and drainage structures. NCDOT seeks to make improvements along US 19E to accommodate a greater capacity of vehicles, correct roadway deficiencies, and improve system linkage along the stretch of US 19E.

Specifically, NCDOT proposes to replace Bridge No. 43 over the South Toe River and Culvert No. C48 over the Big Crabtree Creek with dual bridges, as well as to replace culverts with reinforced concrete box culverts (RCBC) at nine locations on Little Crabtree Creek, Long Branch Creek, a tributary of Long Branch Creek, Brushy Creek, and a tributary to Brushy Creek (see Table 1 below). These actions would require the relocation of eight perennial streams and the placement of fill materials (including soils and approximately 692 feet of rip rap, pipes, culverts, and bridge piers) into streams.

NCDOT cannot complete the improvements without a permit from USACE under Section 404 of the Clean Water Act and a permit from TVA under Section 26a of the TVA Act (16 U.S.C. sec. 831). The TVA Section 26a approval ensures that the activities do not obstruct or have a negative impact on the waterways in the project area and on TVA's management of the Tennessee River system as a whole. TVA's interest in this project arises from these obligations under Section 26 of the TVA Act as well as its commitment to support economic growth within the Tennessee River Valley region, which includes the French Broad River watershed. The project would improve the area's transportation infrastructure and would be consistent with TVA's policies and goals for economic development.

In response to the application package submitted by NCDOT, the USACE completed an environmental assessment (EA) to evaluate the proposal (see Attachment 1). The EA was completed by USACE on December 12, 2013. In the EA, USACE stated that it found no significant impacts to environmental resources from the proposed project. In August 2014, USACE incorporated information in an addendum to the EA, updating the record to address NCDOT's coordination and agreement with the U.S. Fish and Wildlife Service (FWS) on mitigation requirements (see Attachment 2). On August 20, 2014, USACE issued NCDOT approval for the project and the discharge fill material under Section 404 of the Clean Water Act.

As set forth below, USACE concluded that the project would have an adverse effect on archaeological and historic resources and that the project had the potential to adversely affect aquatic resources and a listed species—the northern long-eared bat. To minimize or avoid these effects, USACE has placed numerous conditions on the project; has stated that it will enforce those conditions; and has required NCDOT to enter into agreements concerning the archaeological and historic resources. Thus, upon review of the EA and its addendum, TVA finds them to be adequate to support TVA's decision at hand and therefore adopts the EA and incorporates it herein by reference.

Alternatives

In the EA, USACE analyzed the NCDOT proposal and identified two additional alternatives: the No Action wherein no USACE permit would be approved and a No Build alternative. Under the No Action Alternative, no permits would be issued to NCDOT, necessitating the construction of bridges over all waters within the project area; this alternative was deemed not practicable and would not meet the need of the applicant. Under the No Build alternative, no improvement activities would occur along the 7.5-mile stretch of US 19E; the purpose and need for the action would not be met and the benefits of the improved infrastructure and road facility would not be realized. No off-site alternatives were considered, given the benefit of utilizing the existing roadway facility and right-of-way and the need to improve system linkage along US 19E.

As stated above, NCDOT's proposal would improve a 7.5-mile stretch of US 19E through portions of Mitchell and Yancey Counties into a four-lane median-divided roadway. To complete the project, drainage and waterways at numerous locations would be altered and two dual bridges would be constructed. TVA's Section 26a authorities apply only to the following activities at 11 locations along the 7.5-mile corridor:

Table 1. Project Actions and Locations.

	Action	Location
1	Replace Bridge 43 with dual bridges (3 span, 315' long x 39' wide); the existing structure would be replaced in its current location and used as the west-bound lanes of US 19E	US19 over South Toe River (near Micaville)
2	Replace Culvert C48 with dual bridges (1 span, 185' long x 39' wide)	US19 over Big Crabtree Creek (Micaville)
3	Culvert extension, with 4 RCBCs (12x10')	US19 in Little Crabtree Creek
4	Culvert, 2 RCBCs (6x6')	US19 in Long Branch Creek
5	Culvert, with 1 RCBC (7x5')	US19 in Long Branch Creek
6	Culvert, with 1 RCBC (8x6')	SR 1423 in Long Branch Creek
7	Culvert, with 3 RCBCs (8x12')	US19 in Brushy Creek
8	Culvert, with 2 RCBCs (8x8')	US19 in tributary to Brushy Creek
9	Culvert, with 2 RCBCs (7x7')	US19 in unnamed tributary to Brushy Creek
10	Culvert, with 2 RCBCs (7x6')	US19 in unnamed tributary to Brushy Creek
11	Culvert, with 1 RCBC (6x7')	US19 in unnamed tributary to Brushy Creek

NCDOT's design sketches for the two new dual-bridges and each of the nine culvert replacement locations (numbers 3 to11) are included in Attachment 3.

Impacts Assessment

Potential impacts of the project to numerous resources were evaluated in detail in the USACE EA. Upon review of the proposal and the existing conditions of the project area, the potential impacts to streams, wetlands, aquatic habitat, and cultural resources were identified as relevant environmental issues. There was no potential for other resources to be significantly impacted by the project.

As described in the USACE EA, implementing the NCDOT project would impact approximately 7,256 linear feet (lf) of streams in the 7.5-mile corridor. In addition, there would be approximately 1,360 lf of temporary impacts to streams and less than 0.01 acre of surface waters (a pond) temporarily affected (USACE EA, p. 12). These impacts would occur primarily from the relocation of streams and the placement of fill along the streams as the water drainage and waterway conveyances are extended, replaced, or relocated. NCDOT has agreed to mitigate impacts to streams partially with on-site mitigation and partially through the purchase of 12,749 lf of cold stream credit from the North Carolina Ecosystem Enhancement Program, as described on page 4 of the USACE EA.

Also described in the EA, measures to reduce impacts to water circulation and flow of the streams would include the installation of junction boxes, preformed scour holes, or detention basins at several sites, as well as on-site mitigation which would involve relocating or enhancing approximately 2,322 lf of stream within the watershed or along the stream channel being impacted (USACE EA, pp. 4 and 13). No significant effects on the downstream hydrologic regimes, current water patterns and/or circulation, or water chemistry are anticipated from the discharge of fill materials in the project area. As stated in the USACE EA, "The purpose of the proposed fill is not intended to obstruct or restrict water movement, but to convey it under the road; as such, no obstructions would be permanently placed in currently flowing surface waters." (USACE, p. 13)

Not all impacts analyzed by USACE would occur within areas under TVA's jurisdiction. The USACE EA identified the loss of a total of 0.15 acre of wetlands at several locations in the project area; these impacts would be mitigated through the purchase of 0.26 acre of riparian wetland credit as compensatory mitigation for permanent impacts (USACE EA, p. 4). However, TVA has reviewed the NCDOT proposal and determined that the affected wetlands are outside the limits of the 100-year floodplain and/or are not associated with perennial streams. Therefore, the wetlands are outside the area over which TVA has Section 26a authority, and are not addressed herein.

The project area also includes habitat for sensitive aquatic resources. As described in the USACE EA and its August 2014 Addendum, the area of the South Toe River that the proposed bridge would span is occupied critical habitat for the Appalachian elktoe (*Alasmidonta raveneliana*), a Federally endangered mussel species. In addition to the Appalachian elktoe, a review of TVA's database indicates that 10 state-listed species (9 fishes and 1 mussel) may be present within 10 miles and/or watersheds affected by the project.

The proposed project may affect unique or important aquatic habitat in the South Toe River but is not likely to jeopardize the continued existence of Appalachian elktoe or adversely modify its designated critical habitat in the river. This conclusion is based on the proposed preconstruction surveys and mussel relocations, compliance with mandatory terms and conditions, reasonable and prudent measures listed in the Biological Opinion (BO) prepared by

the FWS in 2008, conservation measures outlined in an amendment to the BO prepared by the FWS in August 2013, and project commitments outlined on the USACE's R-2519B Permit Greensheet (see Attachment 4).

Additionally, NCDOT would implement erosion and sedimentation control measures as specified by NCDOT's Design Standards in Sensitive Watersheds for all proposed projects. Although impacts could occur to the other state-listed fish and mussel species, project commitments outlined on the R-2519B Permit Greensheet and included in TVA's 26a permit conditions would reduce any potential impacts to aquatic species (see Attachment 4) and all impacts to state-listed aquatic species would be minor and temporary.

Several streams within the project area are designated trout waters. After coordinating with the North Carolina Wildlife Resources Commission, seasonal restrictions were identified to protect these trout waters during spawning season. Seasonal moratoriums would be placed on conducting activities within the following trout streams as follows:

- Big Crabtree Creek and unnamed tributaries, from October 15 to April 15
- Brushy Creek and unnamed tributaries, from January 1 to April 15
- Long Branch and unnamed tributaries, from January 1 to April 15
- Little Crabtree Creek and unnamed tributaries, from January 1 to April 15

A potential impact to cultural resources within the project was also identified as an issue during the environmental review. USACE determined that three archaeological sites (identified as 31YC31, 31YC183, and 31ML80) and one historic home (a property known as the Huskins House) would be adversely affected by the project. The USACE, acting on behalf of TVA as lead Federal agency for compliance under Section 106 of the National Historic Preservation Act, consulted with the North Carolina State Historic Preservation Officer (SHPO) to determine how these effects may be addressed.

USACE determined, and the SHPO concurred, that adverse impacts to the Huskins House, which is eligible for inclusion on the National Register of Historic Places (NRHP), would be addressed provided that NCDOT created a grassy slope in front of the house during their project. To address the potential impacts to the three archaeological sites, which were also determined to be eligible for listing in the NRHP, USACE entered into an agreement in June 2012 with the SHPO, NCDOT, and the Eastern Band of Cherokee Indians to address the potential adverse effects of the US 19E improvements project (see Attachment 5). Included in the Memorandum of Agreement are stipulations requiring data recovery at the three sites and stipulations that address unanticipated discoveries of additional cultural resources, human remains, or funerary objects during project activities. TVA concurs that adverse effects of the project would be mitigated through the terms of the agreement.

In August 2014, the USACE issued an addendum to the December 2013 EA to address the potential impact of the project on the northern long-eared bat (*Myotis septentrionalis*) and their additional consultation efforts with the FWS. As a result of the consultation, seasonal restrictions were identified to limit tree cutting to a time when females and their pups are least likely to be present in the project area (August 15 to April 15). With that restriction, FWS concurred that the project would not jeopardize the continued existence of the bat species. TVA concurs with this determination.

Public and Intergovernmental Review

NCDOT's proposal was the subject of Public Notice issued by the USACE on August 14, 2013. The U.S. Environmental Protection Agency, FWS, the North Carolina Wildlife Resources Commission and the SHPO, and the Eastern Band of Cherokee Indians responded with no comment. No other comments were received. The National Marine Fisheries Service wrote to inform USACE that the project would not occur in or near essential fish habitat designated by the agency or the South Atlantic Fishery Management Council and that the agency had no further action relating to the proposal.

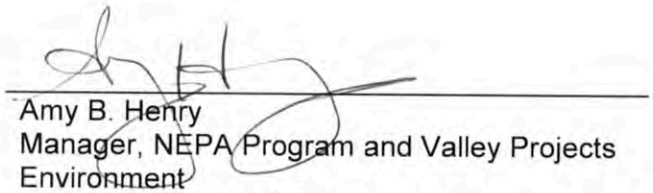
As described above, the USACE consulted as lead Federal agency with the North Carolina SHPO under Section 106 of the National Historic Preservation Act and with the FWS under Section 7 of the Endangered Species Act. In addition, NCDOT received approval for the project from the USACE in compliance with Section 404 of the Clean Water Act in August 2014. NCDOT received a Section 401 Water Quality Certification permit from the North Carolina Division of Water Resources in December 2013.

Mitigation and Special Permit Conditions

Numerous mitigation measures, conditions of approval, and commitments were identified during the course of the environmental review of the project. These include, but are not limited to, the measures, conditions, and commitments described above that address adverse impacts to streams, wetlands, sensitive aquatic species, northern long-eared bats, and NRHP-eligible cultural resources. The extensive list is detailed in the USACE EA, its addendum, and in Attachment 4. TVA concurs that the measures identified during the USACE review of the project would adequately address the project's adverse impacts. NCDOT must also adhere to TVA's general and standard conditions for approvals under Section 26a, which include measures to address impacts of vegetation loss, erosion, sedimentation and other pollutants on receiving waters, both during and after construction.

Conclusion and Findings

TVA has independently reviewed the USACE EA and its addendum and determined that the EA adequately addresses the potential impacts of implementing NCDOT's proposed project. Therefore, TVA adopts the EA and its addendum and concludes that the proposed Section 26a approval and the subsequent US 19E improvements would not be a major federal action significantly affecting the environment. Accordingly, an environmental impact statement is not required. This finding of no significant impact is contingent upon adherence to the permit's mitigation measures, conditions, and commitments described above and in Attachment 4.



Amy B. Henry
Manager, NEPA Program and Valley Projects
Environment
Tennessee Valley Authority

10/21/14
Date

Attachment 1: Department of the Army Environmental Assessment and Statement of Finding, December 13, 2013.

Attachment 2: Addendum 1 to the Department of the Army Environmental Assessment and Statement of Finding. August 2014.

Attachment 3: Project Vicinity Map, Map of Bridge Locations, and Culvert Replacement Plans.

Attachment 4: General and Standard Conditions (TVA) and Project Commitments (USACE Permit Greensheet)

Attachment 5: Memorandum of Agreement Between the Department of the Army, Corps of Engineers and the State Historic Preservation Officer for US 19E Improvements to a Multilane Facility between Micaville and Spruce Pine Yancey and Mitchell Counties, North Carolina Transportation Improvement Project R-2519B.

Attachment 1: Department of the Army Environmental Assessment and Statement of Finding, December 13, 2013.

CESAW-RG-A
Application SAW-2004-9987181/ 2004-30631, TIP No. R-2519B

MEMORANDUM FOR RECORD

SUBJECT: Department of the Army Environmental Assessment and Statement of Finding for Above-Numbered Permit Application

This document constitutes the Environmental Assessment, 404(b)(1) Guidelines Evaluation, Public Interest Review, and Statement of Findings.

1. Application as described in the public notice.

   APPLICANT: North Carolina Department of Transportation
   Project Development and Environmental Analysis Branch
   Attention: Richard W. Hancock, P.E.
   1598 Mail Service Center
   Raleigh, North Carolina 27699-1598

   WATERWAY & LOCATION: The project corridor is 7.5 miles in length and runs along US 19 E from SR 1186, west of Micaville in Yancey County, and ends at the existing multilane section of US 19E, west of Spruce Pine in Mitchell County, North Carolina. Streams in the project corridor include Little Crabtree Creek, Big Crabtree Creek, Long Branch, Brushy Creek, English Creek, and Ayles Creek, Phipps Creek, the South Toe River, and unnamed tributaries, all within the French Broad River Basin (HUC 06010108).

   LATITUDE & LONGITUDE: Latitude North: 35.9016
   Longitude West: -82.1441

   PROJECT PURPOSE:

   Basic: The U.S. Army Corps of Engineers (USACE) has determined that the basic project purpose is to convey vehicular traffic.

   Overall: The USACE has determined that the overall purpose is to add capacity, correct roadway deficiencies, and provide system linkage along US 19E.

   Water Dependency Determination: This proposal does not require siting in a special aquatic site to perform its basic purpose and is therefore not considered water dependent.

   PROPOSED WORK: In order to widen the existing two lane road to a multi-lane facility along the 7.5 mile project corridor, the applicant proposes to place fill material in waters of the U.S. Existing drainage structures and waterway conveyances would be extended, replaced, or relocated. There are nine (9) reinforced concrete box culverts on this project. There are two (2) bridges on this project; one over the South Toe River [occupied critical

habitat for the Appalachian elktoe (*Alasmidonta raveneliana*)] and one over Big Crabtree Creek. Eight (8) streams would require stream relocation. Plans submitted with the application show the placement of fill material which would permanently impact 7,256 linear feet (lf) of stream and 0.15 acre of wetland, and temporarily impact 1,360 lf of stream and <0.01 acre of surface waters (a pond) along the project corridor. The fill material would primarily consist of culverts, pipes, soil, rip rap, and bridge piers.

The applicant proposes to mitigate for impacts to waters of the U.S. by performing on-site mitigation and purchasing credits from the North Carolina Ecosystem Enhancement Program (NCEEP).

Avoidance and Minimization Information: According to information submitted by the applicant, the North Carolina Department of Transportation (NCDOT) implemented avoidance measures during the planning and NEPA compliance stages and minimization measures were incorporated as part of the project design. Avoidance and minimization measures include the following:

- Junction boxes would be utilized at several sites to dissipate energy and reduce outlet velocities.

- Hazardous spill basins would be located on both banks of the South Toe River crossing (Site 5) to minimize impacts to the river and endangered species/critical habitat.

- Dry detention basins would be employed at three sites to minimize erosive stormwater flows.

- Preformed Scour Holes would be utilized at three sites to attenuate and disperse stormwater flow.

- Design Standards in Sensitive Watersheds would be implemented throughout the project.

- The new bridges at the South Toe River crossing would largely span the river except for two bents which would be located at the edge of the water.

- Sills would be used in the outer barrels at the Brushy Creek crossing (Site 29) with baffles in the center barrel.

- The new South Toe river bridges have been designed to eliminate deck drains while directing runoff to grassed swales/hazardous spill basins.

- The amount of temporary impacts to streams at the South Toe River crossing was reduced through redesign from 0.22 acre to 0.15 acre.

- The culvert at Site 29 would be retrofitted with sills and baffles and a fish ladder would be constructed at the outlet

Compensatory Mitigation: As mitigation for the unavoidable impacts to waters of the U.S. associated with this project, the applicant proposes to provide a portion of the required mitigation by conducting on-site and in-kind mitigation (stream relocations, removal of in-stream structures, and the use of natural channel design at Site 30), and acquiring the remainder through the NCEEP's in-lieu fee program.

The proposed on-site mitigation areas are located within the same USGS hydrologic unit and watershed, as well as on the same reach of channel as the associated proposed impacts, and would be expected to improve floodplain functions (in areas of culvert removal); establish riparian buffers (at sites that would be planted), and; improve water quality within the watershed by reducing sediment, nutrient, and pollutant inputs (in areas with current sediment/pollutant input). The removal of perched structures at several sites would be expected to improve channel stability as well as increase habitat connectivity through improved passage. Additionally, many of the sites occur on multiple sections or unnamed tributaries of the same streams (Long Branch, Brushy Creek, etc.), which would provide improvements to habitat connectivity within the South Toe-North Toe and Headwater North Toe watersheds respectively, as well as within the Nolichucky Sub basin as a whole, and more specifically, within designated trout waters.

The proposed on-site mitigation areas are located in the NCDOT Right-of-Way (ROW) for the project. These sites would be managed to prohibit all activities inconsistent with their use as mitigation properties, to include any activity that would materially alter the biological integrity or functional value of the sites, consistent with the mitigation plan. These sites would have controlled access to ensure that they are protected from local landowner encroachment and would be placed on the NCDOT-Natural Environment Section's (NES's) Mitigation GeoDatabase. This database is provided to all NCDOT personnel as a record of mitigation sites and their attributes, including prohibited activities. NCDOT is held by virtue of the permit associated with these mitigation sites, and the associated roadway impacts, to protect the site in perpetuity. If an appropriate third party recipient is identified in the future, then the transfer of the property would include a conservation easement or other measure to protect the natural features and mitigation value of the site in perpetuity. The sites would be managed by NCDOT according to the mitigation plan submitted with the revised application. Encroachments into the areas would be investigated and appropriate measure taken to minimize any negative effects. In the event that unforeseen issues arose that would affect the management of the site(s), any remedial action(s) would be addressed by NCDOT in coordination with the Interagency Review Team.

Each mitigation site would be constructed in conjunction with the construction of the roadway project. Following successful completion of site grading and stabilization, each site would be reforested with a mix of bare-root tree species and live states, as described in the Streambank Reforestation Detail provided with the revised application. The stream channels would be stabilized by planting live stakes on three foot centers and matting with coir fiber

on the banks, as necessary. In accordance with the guidance and standard procedures of NCDOT's Roadside Environmental Unit (REU), seeding and mulching would be performed on all disturbed areas within the mitigation sites for stabilization purposes. An as-built report would be submitted within 60 days of completion of the project to verify the actual mitigation lengths and areas constructed and planted. For all of the proposed mitigation sites with either existing or proposed utility line relocations that would affect a mitigation site, there is a Memorandum of Agreement (MOA) between NCDOT and Duke Energy, that addresses vegetation maintenance in the NCDOT ROW areas. Duke Energy has also been provided the link the the Geodatabase.

Performance standards would be based on the April 2003 Stream Mitigation Guidelines. Success for vegetation monitoring within the riparian buffer areas would be based on the survival of at least 260 stems of five year old trees at year five. Assessment of channel stability would be based on the survival of riparian vegetation and lack of significant bank erosion, channel widening, or downcutting. Each site would be monitored for five (5) years with no less than two (2) bankfull events, which must occur in separate monitoring years and be documented. If less than two bankfull events occur during the first five (5) years, monitoring would continue until the second bankfull event is documented. The following components of Level 1 monitoring would be performed annually for the monitoring period: reference photographs, plan survival monitoring (identification of specific problem areas and proposed remedial action(s)), and visual inspection of channel stability. Vegetation stem counts would be conducted on Site 8, 21, and 30 only. Physical measurements of channel stability/morphology would be performed on site 30 only (Site 30 is the only relocation employing natural channel/stream design). An as-built would be submitted for each site and would include stream channel profile and cross-section surveys which would provide a baseline for comparison it is determined at any time during the monitoring period that a problem (i.e., erosion, downcutting, etc.) has occurred. The success of the on-site mitigation areas and determination of final credits would be based upon successful completion and closeout of the monitoring period at each site.

The USACE has determined that the required compensatory mitigation for permanent fill impacts (other than stabilization, rip rap placement, and the concrete ditch to rip rap), to include stream relocations, would be calculated at a 2:1 ratio (good quality streams), except for the impacts at Sites 5A and 30, which would require a 1:1 ratio (fair quality streams)], and a 2:1 for permanent wetland impacts. As such, if this project were authorized, 12,749 cold stream credits and 0.26 acre of riparian wetland credit would be required. The proposed on-site mitigation would be performed at 10 sites/2,322 lf of stream, and would generate 1,499 lf of stream mitigation credit; the remainder of the required mitigation (11,250 lf of cold stream credit and 0.26 acre of riparian wetland credit) would be obtained from the NCEEP. The USACE has determined that this amount of mitigation credit (12,749 lf of cold stream credit and 0.26 acre of riparian wetland credit) would be sufficient to mitigate for impacts to waters of the U.S. in the project corridor.

EXISTING CONDITIONS: The project is located in the Blue Ridge physiographic province of western North Carolina. The topography in the project area is generally

characterized as rolling hills with steeply sloping, deeply cut drainage ways. Elevations range from 2,600 to 3,000 feet above mean sea level. Surrounding land uses include agricultural, low density residential, commercial, and forested lands.

US Highway 19/19E is the primary route through Madison, Yancey, and Mitchell Counties. In 2008, NCDOT received authorization to impact waters of the U.S. along 21 miles of US Highway 19/19E under TIP Numbers R-2518A, R-2518B, and R-2519A. This project, TIP No. R-2519B, is a two-lane rural highway that is 7.5 miles in length and connects to R-2519A near Micaville in Yancey County. The entire 28.5 mile corridor (TIP Numbers R-2518 A & B and R-2519 A & B) are state funded; as such, USACE is the lead federal agency. The proposed road would be a four-lane median divided facility.

There are thirty-two (32) soil mapping units identified within the project area. Only one of these soils, Nikwasi sandy loam, is listed as a hydric soil for Yancey County. No hydric soils are listed for Mitchell County. Of the remaining thirty-one (31) non-hydric soils, eight are known to include hydric soils in depressions.

The project site is located within sub-basin 040306 of the French Broad River Basin Watershed (HUC 06010108). The stream channels in the project corridor are known as the South Toe River, Little Crabtree Creek, Big Crabtree Creek, Long Branch, Brushy Creek, English Creek, and Ayles Creek, Phipps Creek, and their tributaries. These waters all flow into either the South Toe or North Toe Rivers. The South Toe River flows to the North Toe River, which flows to the Nolichucky River, then to the French Broad River. The French Broad River is a water of the U.S. regulated pursuant to Section 10 of the Rivers and Harbors Act of 1899. Little Crabtree Creek, Big Crabtree Creek, Long Branch, Brushy Creek, English Creek, Ayles Creek, Phipps Creek, and their tributaries have the NC Division of Water Quality's (NCDWQ) stream classification of C; Tr. The South Toe River is classified as B;Tr and is designated as an Outstanding Resource Water (ORW). No streams within the project area are designated as North Carolina Natural and Scenic Rivers or as National Wild and Scenic Rivers.

2. Authority.

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

3. Scope of Analysis.

a. NEPA.

(1) Factors.

(i) Whether or not the regulated activity comprises "merely a link" in a corridor type project.

The USACE regulatory control over this project (TIP R-2519B) would involve the permanent discharge of fill material into 7,256 linear feet (lf) of stream and 0.15 acre of wetland, and temporary discharge into 1,360 lf of stream and <0.01 acre of surface waters (a pond) at fifty-four (54) locations along the 7.5 mile project corridor. As such, the regulated activities provide more than a link in the overall project and encompass substantial portions of roadway spread evenly throughout the length of the project.

(ii) Whether there are aspects of the upland facility in the immediate vicinity of the regulated activity which affect the location and configuration of the regulated activity.

Because this is a road widening project, the existing road is a constraint which does affect the location and configuration of the regulated activity.

(iii) The extent to which the entire project would be within USACE jurisdiction.

Based on the large number of impact sites (54) which would require Department of the Army (DA) authorization, and even distribution of these impact sites, the entire project corridor is within USACE jurisdiction. The portions of the roadway project for which a USACE permit is required are essential for the development of the project as a whole, especially considering the linear nature of this proposal.

(iv) The extent of cumulative Federal control and responsibility.

Although this project is not funded by the Federal Highway Administration (FHWA), there are a total of fifty-four (54) impact sites which would require DA authoriation in the 7.5 mile project corridor. In addition, this proposed project would directly impact resources regulated by other federal entities to include federally designated and occupied critical habitat (South Toe River), which is located in the project corridor, sites eligible for listing in the National Register of Historic Places (NRHP), which are located in the project corridor, and resources addressed by the Fish and Wildlife Coordination Act.

(2) Determined NEPA scope.

☐ Only within the footprint of the regulated activity within the delineated water.
☒ Over entire property. Based upon the distribution and amount of waters of the U.S. in the project corridor, and the requirement to obtain DA authorization from the USACE to place fill material into those waters, we have determined that the regulated impacts have essentially determined the location of the upland portions

of the facility. Accordingly, our Scope of Analysis under NEPA is the project corridor (as it extends to the limits of the ROW), waters of the U.S. located downstream which would be expected to be impacted by the proposed activities, and the primary, secondary, and cumulative impacts that the activities authorized by this permit would have on these areas.

b. NHPA "Permit Area".

(1) Tests. Activities outside the waters of the United States are included because all of the following tests are satisfied:

Such activity would not occur but for the authorization of the work or structures within the waters of the United States;

Such activity is integrally related to the work or structures to be authorized within waters of the United States (or, conversely, the work or structures to be authorized must be essential to the completeness of the overall project or program); and

Such activity is directly associated (first order impact) with the work or structures to be authorized.

(2) Determined NHPA scope – Based on the large number of impact sites (54) which would require DA authorization, and even distribution of these impact sites, the entire project corridor is within USACE jurisdiction and within the NHPA scope. The portions of the roadway project for which a USACE permit is required are essential for the development of the project as a whole, especially considering the linear nature of this proposal.

c. ESA "Action Area".

(1) Action area means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.

(2) Determined scope. The ESA action area for this project is within the project corridor (within the limits of the ROW), and in waters downstream that would be expected to be impacted by the proposed activities, and the primary, secondary, and cumulative impacts that the activities authorized by this permit would have on those waters and associated uplands.

d. Public notice comments.

(1) The USACE received a complete application for this project on August 7, 2013, and issued a public notice on August 14, 2013; this notice was sent to all interested parties including, appropriate state and federal agencies. All comments received are detailed below.

(2) Comments and issued raised:

Name	Issue
U.S. Environmental Protection Agency (EPA)	No comment.
NOAA's National Marine Fisheries Service (NMFS)	By letter dated August 27, 2013, the NMFS noted that based on the information in the public notice, the proposed project would not occur in the vicinity of essential fish habitat designated by the South Atlantic Fishery Management Council or NMFS. Additionally, no further action on the part of NMFS is planned. "This position is neither supportive of nor in opposition to authorization of the proposed work."
U.S. Fish and Wildlife Service	No comment.
North Carolina Wildlife Resources Commission (WRC)	No comment.
North Carolina Department of Cultural Resources, State Historic Preservation Office (SHPO)	No comment.
Members of the Public	In response to the public notice, Ms. Carolyn Cornette, who lives near Spruce Pine in Mitchell County, called the USACE (Beckwith) with questions about how the proposed project would impact her property. Ms. Beckwith told Ms. Cornette that she would convey this question to NCDOT and they would call her. Ms. Cornette was asked to submit written comments if the matter wasn't resolved after her conversation with NCDOT. Ms. Cornette did not contact Ms. Beckwith in writing or by telephone after their initial conversation. NCDOT indicated by e-mail on August 27, 2013 (see file), that they had spoken to her and addressed her questions. No other comments from the public were received.
Eastern Band of Cherokee Indians (EBCI), Tribal Historic Preservation Office (THPO)	No comment.

(3) Jurisdictional site visits were conducted on March 14, 2012 (USACE, DWR, and NCDOT), and on November 25, 2013 (USACE). On-site mitigation site visits were conducted on February 22, 2013 (USACE and NCDOT), and on October 31, 2013 (USACE). On-site meetings to discuss the bridge over the South Toe River and formal consultation requirements were conducted on June 28, 2011, and on November 15, 2012 (all agencies).

(4) Issues identified by the USACE. By letters dated October 4, 2013, and October 15, 2013, the USACE sent all comments received in response to the public notice to the applicant. In addition to these comments, the USACE asked the applicant to provide the following: (1) additional information detailing the needs of the watershed and ecoregion and an explanation as to how the proposed on-site mitigation would address these needs; (2) revised monitoring for the proposed on-site mitigation; (3) notice that the proposed mitigation was not sufficient; (4) a revised acceptance letter from NCEEP or a revised on-site mitigation/relocation plan; (5) utility overlays for the proposed on-site mitigation areas, and; (6) a copy of the response to the Division of Water Resources (DWR) letter of August 27, 2013.

(5) Issues/comments forwarded to the applicant. ☐NA/☒Yes.
All comments were forwarded to the applicant by letters dated October 4, 2013, and October 15, 2013.

(6) Applicant replied/provided views. ☐NA/☒Yes. The applicant responded by letter/package on November 7, 2013.

(7) The following comments are not discussed further in this document as they are outside USACE purview: N/A

4. Alternatives Analysis.

a. Basic and Overall Project Purpose (as stated by applicant and independent definition by the USACE).

☒Same as Project Purpose in Paragraph/Section 1.
☐Revised:

b. Water Dependency Determination:

☒Same as in Paragraph/Section 1.
☐Revised:

c. Applicant preferred alternative site and site configuration.

☒ Same as Project Description in Section 1.
☐ Revised:

Criteria.

Issue	Measurement and/or constraint
Placement of fill in streams	Reported in linear feet of impact/must avoid, minimize, and mitigate for impacts.
Placement of fill in wetlands and open waters	Reported in acres of impact/must avoid, minimize, and mitigate for impacts.
Housing and business relocations	Reported as number of residences and businesses relocated under each alternative. Must avoid or minimize when possible. Relocations require obtaining the property and relocation costs.
Historic resources	Effect to listed or eligible resources. Avoid when possible, mitigate when not possible. Consultation.
Listed species and critical habitat	Effects to listed species and/or critical habitat. Avoid when possible, mitigate when not possible. Formal consultation.
Cost	Reported in dollars/limited state funding.

d. Off-site locations and configuration(s) for each.

Description (Functional Design)	Comparison to criteria
Off-site alternatives	As noted in the State Environmental Assessment (SEA) for this project, dated July 29, 2005, no off-site alternatives were evaluated as the purpose of this project, as defined by the Merger Team, is to add capacity, correct roadway deficiencies, and provide system linkage along US 19E; off-site alternatives would not satisfy this purpose.

e. ☒ N/A (Check when all alternatives are on-site).
☐ Site selected for further analysis and why.

f. On-site configurations. As noted in the SEA for this project, two (2) alternatives were considered: build (best fit) and no build. On September 15, 2004, the Merger Team carried forward the Best Fit and No-build Alternatives for detailed study. The Merger Team also discussed the general location for the Best Fit Alternative in relation to the constraints identified at the meeting.

Description	Comparison to criteria
Best Fit Alternative	Placement of fill in streams – avoided and/or minimized when possible.
	Placement of fill in wetlands and open waters – avoided and/or minimized when possible.
	Housing and business relocations – avoided and/or minimized when possible.
	Historic resources – this alternative would have an adverse effect to historic properties. A Memorandum of Agreement (MOA) was executed on June 12, 2012. Please see Section 7.d) for a detailed discussion.
	Listed species and federally designated critical habitat – this alternative required reinitiation of formal consultation with the USFWS. Consultation was completed on August 1, 2013. Please see Section 7.b) for a detailed discussion.

g. Other alternatives not requiring a permit, including No Action.

Description	Comparison to criteria
No Action (no DA permit required)	The no action alternative would involve bridging all waters of the U.S. Bridging the resources would cost substantially more that extending the existing culverts. Because it would not be practicable to construct bridges immediately adjacent to existing culverts, NCDOT would be required to remove all culverts, perform bank stabilization without placing fill material at or below the ordinary high water mark, which would not be possible in many cases (i.e., some fill would need to occur to ensure stable banks). Additionally, it would not be practicable to relocate the streams that run parallel to the existing road without placing fill material into waters of the U.S. Also, the bridge over the South Toe River would need to be replaced and according to NCDOT, this could not occur without temporarily placing fill material (work pads) in the South Toe River because of site constraints. As such, implementation of the No Action Alternative would not meet the purpose and need of the applicant.
No Build	The No Build Alternative would not increase capacity or correct existing roadways deficiencies along the 7.5 mile section of US 19E. As such, implementation of the No Build Alternative would not meet the purpose and need of the applicant.

h. Alternatives not practicable or reasonable.

The No Action and No Build alternatives described above do not meet the applicant's purpose and need and are not practicable due to cost and logistics.

i. Least environmentally damaging practicable alternative.

We have determined that, after review of all project alternatives, the applicant's proposed alternative represents the least environmentally damaging practicable alternative (LEDPA). All appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem in consideration of 40 CFR Parts 230.70-230.77.

5. Evaluation of the 404(b)(1) Guidelines.

a. Factual determinations:

Physical Substrate.	
	As proposed, implementation of this project would permanently impact 7,256 linear feet (lf) of stream and 0.15 acre of wetland, and temporarily impact 1,360 lf of stream and <0.01 acre of surface waters (a pond) along the project corridor. The fill material would primarily consist of culverts, pipes, soil, rip rap, and bridge piers. Areas where culverts were installed or extended would be disconnected from the hyporheic zone and the floodplain (in the footprint of the fill), and the current physical substrate of the piped streams would be lost in those areas; the on-site mitigation plans proposes to daylight two streams segments that are currently piped. Any discharge associated with these impacts would consist of suitable, clean fill material and would not include any trash, debris, car bodies, asphalt, etc. The fill material would also be free of toxic pollutants in toxic amounts. The bottom elevation of the jurisdictional areas would not be raised by the discharge of culverts. Although proper sediment and erosion control devices would be installed prior to and during construction, turbidity rates would likely increase during construction, but would subside upon completion of the work. Culverts would be constructed, or extended, in such a manner to prevent aggradation or erosion of the stream up or down stream of the structure(s). Overall, implementation of this project would not be expected to have a significant effect on physical substrate.
Water circulation, fluctuation, and salinity.	
	The discharge of fill material associated with this project would not be expected to have significant effects on the downstream hydrologic regimes, current water

	patterns and/or circulation, or water chemistry. All authorized culverts would be installed to allow the passage of low stream flows and the continued movement of fish and other aquatic life, as well as to prevent head-cutting of the streambed. For all box culverts and for pipes greater than 48 inches in diameter, the bottom of the culvert would be buried one foot below the bed of the stream unless such burial would be impractical and the USACE has waived this requirement. For culverts 48 inches in diameter or smaller, the bottom of the pipe would be buried below the bed of the stream to a depth equal to or greater than 20 percent of the diameter of the culvert. The purpose of the proposed fill is not intended to obstruct or restrict water movement, but to convey it under the road; as such, no obstructions would be permanently placed in currently flowing surface waters. Areas where culverts were installed or extended (in the footprint of the fill) would be disconnected from the hyporheic zone and the floodplain, so those functions would be diminished or lost in those areas. In order to reduce adverse effects to water circulation and downstream flows, NCDOT has proposed the following measures: junction boxes would be utilized at several sites to dissipate energy and reduce outlet velocities, dry detention basins would be employed at three sites to minimize erosive stormwater flows, Preformed Scour Holes would be utilized at three sites to attenuate and disperse stormwater flow, and on-site mitigation, which entails relocation and/or enhancement of 2,322 lf of stream. Overall, implementation of this project would not be expected to have a significant effect on water circulation, fluctuation, and salinity.
Suspended particulate/turbidity.	
	During construction activities in the project corridor, there could be increases in suspended particulates that could lead to increased turbidity in on-site streams. The applicant, however, would minimize the effects of suspended particulates through the placement of appropriate and required sediment and erosion control techniques in the areas of disturbance. Any construction-related impacts would occur primarily during and immediately after construction, and are expected to dissipate upon project completion. In order to reduce suspended particulate/turbidity, NCDOT has proposed to implement the following measures: Design Standards in Sensitive Watersheds would be implemented throughout the project, the amount of temporary impacts to streams at the South Toe River crossing (occupied critical habitat) was reduced through redesign of the causeways (from 0.22 acre to 0.15 acre so less to install and remove), removal of two culverts, and repair of the eroded areas at the inlets and outlets of these culverts. Overall, implementation of this project would not be expected to have a significant effect on suspended particulate or turbidity measurements in the vicinity of the proposed project area.

Contaminant availability.	
	The proposed project is not expected to introduce contaminants or increase the likelihood of contamination. The fill material proposed for use (culverts, pipes, soil, rip rap, and bridge piers) would consist of suitable, clean fill material and would not include any trash, debris, car bodies, asphalt, etc., and would be free of toxic pollutants. Any permit that may be issued for this project would include special conditions that require that (1) the permittee temporarily dewater all excavation and/or construction sites in waters of the U.S., and (2) the permittee ensure that all necessary measures are taken to prevent live or fresh concrete, including bags of uncured concrete, from coming into contact with streams/surface waters until the concrete has cured. In addition to using suitable, clean fill material, NCDOT has proposed the following measures to reduce contamination in the project corridor: hazardous spill basins would be located on both banks of the South Toe River crossing (Site 5) to minimize impacts to the river and endangered species/critical habitat, dry detention basins would be employed at three sites to minimize erosive stormwater flows, The new South Toe river bridges have been designed to eliminate deck drains while directing runoff to grassed swales/hazardous spill basins, and Design Standards in Sensitive Watersheds would be implemented throughout the project. As such, implementation of this project would not be expected to have a significant effect on contaminant availability to waters of the U.S.
Aquatic ecosystem and organism.	
	The proposed project would permanently impact 7,256 linear feet (lf) of stream and 0.15 acre of wetland, and temporarily impact 1,360 lf of stream and <0.01 acre of surface waters (a pond) along the project corridor. These permanent impacts would adversely affect aquatic functions within the impact areas as these areas would no longer provide nutrient filtration, sediment removal, hyporheic zone functions, and natural habitat for aquatic species. All authorized culverts would be installed to allow the passage of low stream flows and the continued movement of fish and other aquatic life as well as to prevent head-cutting of the streambed. For all box culverts and for pipes greater than 48 inches in diameter, the bottom of the culvert would be buried one foot below the bed of the stream unless such burial would be impractical and the USACE has waived this requirement. For culverts 48 inches in diameter or smaller, the bottom of the pipe would be buried below the bed of the stream to a depth equal to or greater than 20 percent of the diameter of the culvert. The purpose of the proposed fill is not intended to obstruct or restrict water movement, but to convey it under the road; as such, no obstructions would be permanently placed in currently flowing surface waters. In order to allow for the continued movement of bed load and aquatic organisms, existing channel widths and depths would be maintained at the

	inlet and outlet ends of culverts. To reduce adverse effects to aquatic organism passage, NCDOT has committed to the following measures: junction boxes would be utilized at several sites to dissipate energy and reduce outlet velocities, preformed scour holes would be utilized at three sites to attenuate and disperse stormwater flow, and the culvert at Site 29 would be retrofitted with sills, baffles, and a fish ladder. Additionally, the proposed on-site mitigation would relocate and/or enhance approximately 2,322 lf of stream. During site construction activities, there could be increases in suspended particulates that could lead to increased turbidity in on-site streams. The applicant, however, would minimize the effects of suspended particulates through the placement of appropriate and required sediment and erosion control techniques in the area of disturbance. Any permit that may be issued for this project would include a special condition that requires the permittee to temporarily dewater all excavation and/or construction areas in waters of the United States. Any construction-related impacts would occur primarily during and immediately after construction, and are expected to dissipate upon project completion. Considering all factors noted above, implementation of this project would not be expected to have a significant effect on aquatic ecosystems and organisms.
Proposed disposal site.	
	There is no disposal of dredged material in waters of the U.S. proposed as part of this project.
Cumulative effects on the aquatic ecosystem. Please note that cumulative effects are also discussed in Section 7.e.	
	The proposed project was reviewed for potential cumulative effects/impacts on the aquatic ecosystem that are attributable to the collective effect of a number of individual discharges of dredged or fill material. Typical discharges associated with residential, commercial, and road projects in and around the project corridor would be expected to continue at a steady rate, Yancey County intends to construct a new wastewater treatment plant (East Yancey) and there are a number of large road projects in the surrounding area. Construction of this plant and other road projects would be expected to involve discharges of fill material for their construction and construction of these projects may facilitate growth in the area, which may in turn involve discharges of fill material into waters of the U.S. As such, the proposed project, in association with similar activities, does have the potential to result in adverse cumulative impacts; however it is expected that other projects in the area would be implemented as follows: projects would use erosion control measures, silt fencing, and other Best Management Practices; sufficient storm water management structures would be constructed as

	part of new construction; erosion and sedimentation control plans would be filed in accordance with the Sedimentation Pollution Control Act of 1973 (North Carolina General Statutes Chapter 113A Article 4); and all projects would be conducted in accordance/in compliance with federal, state, and local laws and requirements. This includes obtaining and adhering to appropriate Clean Water Act permits, including compliance with compensatory mitigation requirements outlined in the permit(s). We have determined that the proposed project, with proposed special permit conditions, would not have significant impacts on wetlands and/or other waters of the U.S. when considered alone or in concert with the other past, present and reasonably foreseeable future projects in the project vicinity.
Secondary effects on the aquatic ecosystem. Please note that secondary effects are also discussed in Section 7.e.	
	The authorized work would result in permanent loss of streambed/aquatic habitat (culverts and relocations) and wetland. The on-site mitigation plan, however, which includes relocated streams, would compensate for a portion of this stream loss and the mitigation obtained through the NCEEP would compensate for the remainder. This amount of discharge of fill material is not significant. Many of the secondary effects, such as sedimentation, would be expected to be minimal and would dissipate upon completion of the project. Potential long term secondary effects would be an increase of stormwater runoff due to the increased impervious surface of the roadway and the effect of this increased stormwater on the water quality of area streams. During the merger process, NCDOT worked with the agencies to reduce potential adverse from stormwater runoff and the North Carolina Division of Water Resources issued a conditioned certification in which they verified that this project would meet all applicable state water quality standards and also complies with Section 401 of the Clean Water Act. As such, we have determined that the expected secondary effects associated with this project would be minimal.

b. Restrictions on discharges (230.10).

(1) It has been demonstrated in Section 4 that there are no practicable or less damaging alternatives which could satisfy the project's basic purpose. The activity is located in a special aquatic site (wetlands, sanctuaries, and refuges, mudflats, vegetated shallows, coral reefs, riffle & pool complexes). The activity does not need to be located in a special aquatic site to fulfill its basic purpose.

(2) The proposed activity does not violate applicable State water quality standards or Section 307 prohibitions or effluent standards. The proposed activity does not jeopardize the continued existence of federally listed threatened or endangered species or affects their critical habitat. The proposed activity does not violate the

requirements of a federally designated marine sanctuary.

(3) The activity would not cause or contribute to significant degradation of waters of the United States, including adverse effects on human health; life stages of aquatic organisms' ecosystem diversity, productivity and stability; and recreation, esthetic, and economic values.

(4) Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem.

The February 6, 1990, USACE/Environmental Protection Agency Memorandum of Agreement (MOA) established procedures to determine the type and level of mitigation necessary to comply with the Clean Water Act Section 404(b)(1) Guidelines. This MOA provides for first, avoiding impacts to waters and wetlands through the selection of the least damaging, practical alternative; second, taking appropriate and practical steps to minimize impacts on waters and wetlands; and finally, compensating for any remaining unavoidable impacts to the extent appropriate and practical. To determine "appropriate and practicable" measures to offset unavoidable impacts, measures should be selected which are appropriate to the scope and degree of those impacts, and practicable in terms of cost, logistics, and technology in light of the overall project purpose.

Implementation of the proposed project would permanently impact 7,256 linear feet (lf) of stream and 0.15 acre of wetland, and temporarily impact 1,360 lf of stream and <0.01 acre of surface waters (a pond) along the project corridor. The fill material would primarily consist of culverts, pipes, soil, rip rap, and bridge piers.

As mitigation for the unavoidable impacts to waters of the U.S. associated with this project, the applicant proposes to provide a portion of its mitigation requirements with on-site and in-kind mitigation (stream relocations, removal of in-stream structures, and the use of natural channel design) while acquiring the remainder through the NCEEP's in-lieu fee program. The USACE has determined that the required compensatory mitigation for permanent fill impacts (other than stabilization, rip rap placement, and the concrete ditch to rip rap), to include stream relocations, would be calculated at a 2:1 ratio (good quality streams), except for the impacts at Sites 5A and 30, which would require a 1:1 ratio (fair quality streams)], and a 2:1 for permanent wetland impacts. As such, if this project were authorized, 12,749 cold stream credits and 0.26 acre of riparian wetland credit would be required. The proposed on-site mitigation would be performed at 10 sites/2,322 lf of stream, and would generate 1,499 lf of stream mitigation credit; the remainder of the required mitigation (11,250 lf of cold stream credit and 0.26 acre of riparian wetland credit) would be obtained from the NCEEP. The USACE has determined

that this amount of mitigation credit (12,749 lf of cold stream credit and 0.26 acre of riparian wetland credit) would be sufficient to mitigate for impacts to waters of the U.S. in the project corridor.

(5) Appropriate and practicable special conditions to be added to the permit to minimize pollution or adverse effects to the affected ecosystem:

Special Conditions

Failure to institute and carry out the details of the following special conditions will result in a directive to cease all ongoing and permitted work within waters of the U.S. associated with the permitted project, or such other remedies and/or fine as the Wilmington District Engineer, or his authorized representatives, may seek.

WORK LIMITS

1) All work authorized by this permit must be performed in strict compliance with the attached plans (Wetland/Surface Water Permit Drawings) titled "TIP Project: R-2519B," Sheets 1-114, to include the revisions of October 2013, which are a part of this permit. Any modification to these plans must be approved by the U.S. Army Corps of Engineers (USACE) prior to implementation.

2) Except as authorized by this permit or any USACE approved modification to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, within waters or wetlands. This permit does not authorize temporary placement or double handling of excavated or fill material within waters or wetlands outside the permitted area. This prohibition applies to all borrow and fill activities connected with this project.

3) Except as specified in the plans attached to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, in such a manner as to impair normal flows and circulation patterns within waters or wetlands or to reduce the reach of waters or wetlands.

4) The permittee shall schedule a pre-construction meeting between their representatives, the contractor, and the USACE, Wilmington District, Asheville Regulatory Field Office, NCDOT Regulatory Project Manager, prior to any work in jurisdictional waters of the U.S. to ensure that there is a mutual understanding of all terms and conditions contained in this DA permit. The permittee shall provide the NCDOT Regulatory Project Manager with a copy of the final plans at least two (2) weeks prior to the pre-construction meeting along with a description of any changes that have been made to the project's design, construction methodology or construction timeframe. The permittee shall schedule the pre-construction meeting for a time when the USACE and the North Carolina Division of Water Resources (NCDWR) Project Managers can attend. The permittee shall notify the USACE and NCDWR Project Managers a minimum of thirty (30) days in advance of the meeting.

5) The permittee shall advise the USACE in writing at least two (2) weeks prior to beginning the work authorized by this permit and again upon completion of the work authorized by this permit.

RELATED LAWS

6) The permittee shall fully implement and abide by all stipulations identified in the Memorandum of Agreement titled "Memorandum of Agreement Between the Department of the Army, Corps of Engineers and the State Historic Preservation Officer for US 19E Improvements to a Multilane Facility between Micaville and Spruce Pine Yancy *(sic)* and Mitchell Counties, North Carolina Transportation Improvement Project R-25198," signed June 2012, which is incorporated herein by reference.

7) NCDOT shall comply with its commitments regarding the National Register eligible E.W. and Dollie Husking House. The final design shall include a seeded slope that is feasible for mowing/is maintainable by the property owner.

8) If the permittee discovers any previously unknown historic or archaeological sites while accomplishing the authorized work, he shall immediately stop work and notify the USACE, Asheville Regulatory Field Office NCDOT Regulatory Project Manager who will initiate the required State/Federal coordination.

9) This USACE permit does not authorize you to take an endangered species, in particular, the Appalachian elktoe mussel (*Alasmidonta raveneliana*). In order to legally take a listed species, you must have separate authorization under the Endangered Species Act (ESA) (e.g., a Biological Opinion under the ESA, Section 7, with "incidental take" provisions with which you must comply). The U.S. Fish and Wildlife Service's (USFWS's) Biological Opinion, dated March 14, 2008, and amended on January 9, 2009, and August 1, 2013 (collectively referred to hereinafter as BO), contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that is specified in the BO. Your authorization under this USACE permit is conditional upon your compliance with all the mandatory terms and conditions associated with incidental take of the BO, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the BO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute non-compliance with your USACE permit. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its BO, and with the ESA.

10) All necessary precautions and measures will be implemented so that any activity will not kill, injure, capture, harass, or otherwise harm any protected federally listed species. While accomplishing the authorized work, if the permittee discovers or observes a damaged or hurt listed endangered or threatened species, the USACE Wilmington District Engineer will be immediately notified to initiate the required Federal coordination.

11) The permittee will comply with all conditions in the attached letter from the North Carolina Wildlife Resources Commission, dated September, 11, 2007, with the exception of the requirement for a trout moratorium in the South Toe River.

12) The North Carolina Division of Water Resources has issued a conditioned Water Quality Certification for this project. The conditions of that certification are hereby incorporated as special conditions of this permit. A copy of this certification is attached.

13) This Department of the Army permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

PROJECT MAINTENANCE

14) Unless otherwise authorized by this permit, all fill material placed in waters or wetlands shall be generated from an upland source and will be clean and free of any pollutants except in trace quantities. Metal products, organic materials (including debris from land clearing activities), or unsightly debris will not be used. Soils used for fill shall not be contaminated with any toxic substance in concentrations governed by Section 307 of the Clean Water Act.

15) All mechanized equipment will be regularly inspected and maintained to prevent contamination of waters and wetlands from fuels, lubricants, hydraulic fluids, or other toxic materials. In the event of a spill of petroleum products or any other hazardous waste, the permittee shall immediately report it to the N.C. Division of Water Resources at (919) 733-3300 or (800) 858-0368 and provisions of the North Carolina Oil Pollution and Hazardous Substances Control Act will be followed.

16) The permittee shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project, and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this permit. A copy of this permit, including all conditions, shall be available at the project site during construction and maintenance of this project.

17) The permittee shall employ all sedimentation and erosion control measures necessary to prevent an increase in sedimentation or turbidity within waters and wetlands outside the permit area. This shall include, but is not limited to, the immediate installation of silt fencing or similar appropriate devices around all areas subject to soil disturbance or the movement of earthen fill, and the immediate stabilization of all disturbed areas. Additionally, the project must remain in full compliance with all aspects of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statutes Chapter 113A Article 4).

18) The permittee shall remove all sediment and erosion control measures placed in wetlands or waters, and shall restore natural grades in those areas, prior to project completion.

19) No fill or excavation impacts for the purposes of sedimentation and erosion control shall occur within jurisdictional waters, including wetlands, unless the impacts are included on the plan drawings and specifically authorized by this permit.

20) The permittee shall implement Design Standards in Sensitive Watersheds throughout the project corridor. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices. This shall include, but is not limited to, the immediate installation of silt fencing or similar appropriate devices around all areas subject to soil disturbance or the movement of earthen fill, and the immediate stabilization of all disturbed areas. Additionally, the project must remain in full compliance with all aspects of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statutes Chapter 113A Article 4). Adequate sedimentation and erosion control measures must be implemented prior to any ground disturbing activities to minimize impacts to downstream aquatic resources. These measures must be inspected and maintained regularly, especially following rainfall events. All fill material must be adequately stabilized at the earliest practicable date to prevent sediment from entering into adjacent waters or wetlands.

21) The permittee shall ensure that all excavation and/or construction areas in waters of the U.S. are temporarily dewatered during work.

22) Prior to commencing construction within jurisdictional waters of the U.S. for any portion of the project, the permittee shall forward the latest version of project construction drawings to the USACE, Asheville Regulatory Field Office NCDOT Regulatory Project Manager. Half-size drawings will be acceptable.

23) During the clearing phase of the project, heavy equipment must not be operated in surface waters or stream channels. Temporary stream crossings will be used to access the opposite sides of stream channels. All temporary diversion channels and stream crossings will be constructed of non-erodible materials. Grubbing of riparian vegetation will not occur until immediately before construction begins on a given segment of stream channel.

24) The permittee shall take measures to prevent live or fresh concrete, including bags of uncured concrete, from coming into contact with any water in or entering into waters of the U.S. Water inside coffer dams or casings that has been in contact with concrete shall only be returned to waters of the U.S. when it no longer poses a threat to aquatic organisms (concrete is set and cured).

25) Unless otherwise requested in the application and depicted on the approved work plans, culverts greater than 48 inches in diameter will be buried at least one foot below the bed of the stream. Culverts 48 inches in diameter and less shall be buried or placed on the stream bed as practicable and appropriate to maintain aquatic passage, and every effort shall be made to maintain existing channel slope. The bottom of the culvert must be placed at a depth below the natural stream bottom to provide for passage during drought or low flow conditions.

Destabilizing the channel and head cutting upstream should be considered in the placement of the culvert.

26) Measures will be included in the construction/installation that will promote the safe passage of fish and other aquatic organisms. The dimension, pattern, and profile of the stream above and below a pipe or culvert should not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. The width, height, and gradient of a proposed opening should be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. Spring flow should be determined from gauge data, if available. In the absence of such data, bankfull flow can be used as a comparable level.

27) To ensure that all borrow and waste activities occur on high ground and do not result in the degradation of adjacent wetlands and streams, except as authorized by this permit, the permittee shall require its contractors and/or agents to identify all areas to be used to borrow material, or to dispose of dredged, fill, or waste material. The permittee shall provide the USACE with appropriate maps indicating the locations of proposed borrow or waste sites as soon as the permittee has that information. The permittee will coordinate with the USACE before approving any borrow or waste sites that are within 400 feet of any streams or wetlands.

28) Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in the disequilibrium of wetlands, streambeds or stream banks adjacent to, upstream of or downstream of the structures. Riprap armoring of streams at culvert inlets and outlets shall be minimized above ordinary high water elevation in favor of bioengineering techniques such as bank sloping, erosion control matting and revegetation with deep-rooted native woody plants.

29) The permittee shall implement all reasonable and practicable measures to ensure that equipment, structures, fill pads, work, and operations associated with this project do not adversely affect upstream and/or downstream reaches. Adverse effects include, but are not limited to, channel instability, flooding, and/or stream bank erosion. The permittee shall routinely monitor for these effects, cease all work when detected, take initial corrective measures to correct actively eroding areas, and notify this office immediately. Permanent corrective measures may require additional authorization by the USACE.

30) As noted in the Project Commitments for this project, the permittee will put forth its best effort to suppress the Japanese Knotweed population within the project limits, with the use of aquatic labeled glycophosate. Additionally, the construction contract(s) for this project will stipulate that any knotweed material disturbed through construction activities at the two bridge sites, as well as in identified mitigation sites, will be buried within the project boundaries in fill or waster areas, below the depth of topsoil.

31) Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

32) The permittee, upon receipt of a notice of revocation of this permit or upon its expiration before completion of the work will, without expense to the United States and in such time and manner as the Secretary of the Army or his authorized representative may direct, restore the water or wetland to its pre-project condition.

33) All reports, documentation and correspondence required by the conditions of this permit shall be submitted to the following address: U.S. Army Corps of Engineers, Asheville Regulatory Field Office, NCDOT Regulatory Project Manager (Division 13), 151 Patton Avenue, Room 208, Asheville, NC 28801-5006, and by telephone at: (828) 271-7980. The Permittee shall reference the following permit number, SAW-2004-9987181/ 2004-30631, TIP No. R-2519B, on all submittals.

COMPENSATORY MITIGATION

34) The Permittee shall fully implement the compensatory mitigation plan titled "Mitigation Plan, US 19E Widening, Yancey & Mitchell Counties, North Carolina, T.I.P. Number R-2519, WBS No. 35609.1.1, May 6, 2013 (Revised November 4, 2013)," in order to compensate for a portion of the unavoidable impacts to waters of the U.S. associated with this project. Activities prescribed by this plan shall be initiated prior to, or concurrently with, commencement of any construction activities within jurisdictional areas authorized by this permit. The permittee shall conduct all mitigation and monitoring activities in accordance with the above referenced plan and with the following conditions:

a) As the permittee, NCDOT is the party responsible for the implementation, performance and long term management of the on-site compensatory mitigation project.

b) Any changes or modifications to the mitigation plan must be approved by the USACE.

c) The permittee shall maintain the entire mitigation site in its natural condition, as altered by the work in the mitigation plan, in perpetuity. Prohibited activities within the mitigation site specifically include, but are not limited to: filling; grading; excavating; earth movement of any kind; construction of roads, walkways, buildings, signs, or any other structure; any activity that may alter the drainage patterns on the property; the destruction, cutting, removal, mowing, or other alteration of vegetation on the property; disposal or storage of any garbage, trash, debris or other waste material; graze or water animals, or use for any agricultural or horticultural purpose; or any other activity which would result in the property being adversely impacted or destroyed, except as specifically authorized by this permit.

35) The permittee shall not sell or otherwise convey any interest in the mitigation property used to satisfy the mitigation requirements for this permit to any third party, without written approval from the Wilmington District USACE.

36) In order to compensate for a portion of the impacts associated with this permit, mitigation shall be provided in accordance with the provisions outlined on the most recent version of the

attached Compensatory Mitigation Responsibility Transfer Form. The requirements of this form, including any special conditions listed on this form, are hereby incorporated as special conditions of this permit.

ENFORCEMENT

37) A representative of the USACE will periodically and randomly inspect the work for compliance with these conditions. Deviations from these procedures may result in an administrative financial penalty and/or directive to cease work until the problem is resolved to the satisfaction of the USACE.

38) Violation of these conditions or violation of Section 404 of the Clean Water Act of Section 10 of the Rivers and Harbors Act must be reported in writing to the Wilmington District USACE within 24 hours of the permittee's discovery of the violation.

6. Public Interest Review: All public interest factors have been reviewed as summarized here. Both cumulative and secondary impacts on the public interest were considered.

				+ Beneficial effect
				0 Negligible effect
				- Adverse effect
				M Neutral as result of mitigative action
+	0	-	M	
☐	☒	☐	☐	Conservation. Given the relatively rural and rural-residential/commercial nature of the project corridor, any proposed major improvement to the existing road would involve the use of resources, including aquatic resources (streams and wetlands), farmland soils, and forested lands. The proposed project would involve the use of resources, including streams and wetlands. The applicant has taken measures to avoid and /or minimize impacts to resources when practicable. Land in the project area is not currently under any conservation instrument. The proposed on-site mitigation is located in the ROW and would consist of 2,322 lf of stream and buffer and be protected in perpetuity. Overall, the impact on area conservation would be negligible.
☒	☐	☐	☐	Economics. According to information in the SEA for this project, both Yancey and Mitchell Counties have depressed economic situations (compared to the rest of the State) and the region has experienced slower growth. See 7.e) for a detailed discussion on future development. Based on the number of proposed projects in this general area (Yancey Wastewater Treatment Plant and other major road projects), induced growth along this corridor is feasible; the availability of sewer and water services appears to be the limiting factor. Regardless, construction of this project could induce growth along the 7.5 mile corridor but the steep topography would be expected to

				limit this growth. Any growth would increase the tax base and would likely be beneficial to area economics. Although the road would necessitate the relocation of a number of businesses, these owners would be compensated according to State requirements. Minor and temporary benefits to area economics (restaurants, employment, convenience stores, etc.) would be expected to occur during construction of the project; these benefits would subside upon completion. Overall the project would be expected to have a beneficial effect on area economics.
☐	☒	☐	☐	Aesthetics. The project corridor is comprised of an existing two lane highway surrounded by low-density, single family housing, small-scale commercial uses (convenience stores, gift shops, etc.), and scattered industrial uses. Much of the land is unsuitable for development due to the steep topography. Construction of the project would necessitate cutting into hillsides and/or filling in steep slopes. Any trees or vegetation along US 19E where the road would be widened would be removed. Any project, however, that facilitates travel into or through an area has the potential to induce growth. Induced growth has the potential to degrade scenic views and recreational amenities. The effects on aesthetics that would result in the surrounding areas from the construction of this project may be considered beneficial or adverse, depending on whether one is oriented toward development or undeveloped rural settings. In the context of Yancey and Mitchell Counties or the State of North Carolina, the overall effect on aesthetics would be negligible.
☐	☒	☐	☐	General environmental concerns. No effects to resource areas, other than those addressed in this document, have been identified. No activities associated with the proposed project have been identified that would have significant impacts on environmental resources.
☐	☐	☐	☒	Wetlands. Construction of the project would impact wetlands as follows: permanent fill in 0.06 acre, excavation of 0.05 acre, and mechanized clearing of 0.04 acre. These impacts are unavoidable and are considered to be minimal. If a permit were issued for this project, NCDOT would be required to provide 0.26 acre of riparian wetland credit as compensatory mitigation for these permanent impacts.
☐	☐	☒	☐	Historic properties. See Section 7.d) for a detailed discussion. The USACE has determined that there will be an adverse impact to historic resources (archaeological sites) from implementation of proposed project, but this adverse impact would not be significant if all work were conducted in accordance with the MOA and with all attachments and any and all agreed upon (by the signatories) amendments to this MOA. The USACE has also determined that there would be no adverse effect on

				the Huskins House, provided that NCDOT creates a grassy slope in front of the house that is easily maintainable by the property owner. Any permit that may be issued for this project would include compliance with the MOA and NCDOT's commitment concerning the Huskins House.
☐	☐	☒	☐	Fish and wildlife values. See Section 7.b) for a detailed discussion concerning Section 7 of the Endangered Species Act coordination. The USFWS noted that the project, as proposed, is not likely to jeopardize the continued existence of the Appalachian elktoe or adversely modify its designated critical habitat. Additionally, the USACE has determined that there will be no effect to any listed species, other than the Appalachian elktoe. The public notice was sent to the NCWR on August 14, 2013; the agency did not comment on this public notice, but did respond with comments to the merger public notice by letter dated September 11, 2007. In their 2007 comments, the agency noted required moratoria for on-site streams and noted 14 conditions that should be followed during project construction. By e-mail dated July 17, 2013, the NCWRC noted "we are not requesting a trout moratorium for the South Toe River crossing of this project." All conditions of the September 11, 2007, letter from the NCWRC, with the revision indicating no trout moratorium in the South Toe River, would be a special condition of any permit issued for this project. While construction of the project would be expected to impact fish and wildlife resources, such as loss/reduction of food sources, loss of habitat, clogging and/or abrading of gills, temperature increases due to removal of riparian vegetation on trout streams, etc., the permittee would implement measures such as dewatering construction sites, adhering to all requirements regarding sedimentation and erosion from the N.C. Division of Water Resources, and implementing Design Standards in Sensitive Watersheds throughout the project. As such, impacts to fish and wildlife would be expected to be adverse, yet minor, and those that were construction related would subside upon completion of the project.
☐	☒	☐	☐	Flood hazards and Floodplain values. The proposed project crosses several streams and their associated floodplains. Construction of the project would not be expected to increase area flood hazards. The streams and floodplains in the project corridor provide many natural values, including water quality maintenance, flood storage, energy dissipation, and aquatic habitat for wildlife and plants. The drainage structures along the proposed impact were designed to adequately pass anticipated flood flows. While some of these values will be lost in the footprints of the fill, due to culvert extensions, these areas do not constitute a significant amount. The Hydraulics Until of NCDOT will coordinate with the NC Floodplain Mapping Program to determine the status of the project

				with regard to applicability of NCDOT's Memorandum of Agreement, or approval of a Conditional Letter of Map Revision (CLOMR), and subsequent final Letter of Map Revision (LOMR). In the context of Yancey and Mitchell Counties, the overall effect on flood hazards and floodplain functions would be negligible.
☐	☒	☐	☐	Land use. Land use in and immediately surrounding the corridor is low-density, single family housing, small-scale commercial uses (convenience stores, gift shops, etc.), and scattered industrial uses. Much of the land is unsuitable for development due to the steep topography. The local land use patterns would not conflict with the proposed project.
☐	☒	☐	☐	Navigation. There are no waters of the U.S. regulated pursuant to Section 10 of the Rivers and Harbors Act of 1899 in the project corridor. The South Toe River is a traditionally navigable water (TNWs), as paddlers have been known to use it. While paddling may be impeded and/or prevented during construction, replacement and construction of the new bridges, and placement of the bridge piers, would not prevent paddlers from using this river after construction of the bridges is complete.
☐	☒	☐	☐	Shore erosion and accretion. Not Applicable.
☐	☒	☐	☐	Recreation. Other than the typical recreation which occurs in the residences and private properties, there is no known recreational activity located in the project corridor. Additionally, implementation of this project would not be expected to affect any downstream recreational activities (assumed activities – none identified). While implementation of the project may facilitate traveling to or from recreational events, the project would not be expected to have more than a negligible effect on area recreation.
☐	☒	☐	☐	Water supply and conservation. Construction activities would be expected to require a minimal amount of water; however, it is not anticipated that the structures would require water input post-construction. While extending existing culverts in what are now open streams and widening the road would affect infiltration, based on affected area, this proposed impact would not be significant. Overall, implementation of the project would have a negligible effect on water supply.
☐	☒	☐	☐	Water quality. As noted previously, construction of this project would permanently impact 7,256 linear feet (lf) of stream and temporarily impact 1,360 lf of stream. These impacts would affect numerous functions, to include water quality, as discussed previously. Mitigation provided by the applicant, both on-site and through NCEEP, would satisfactorily compensate for these impacts. Any project that facilitates travel into or through an area has the potential to

				induce growth. Induced growth has the potential to degrade water quality; however, it is expected that future projects would be conducted in accordance/in compliance with federal, state, and local laws and requirements. Additionally, the North Carolina Division of Water Resources issued a Certification (Certification No. 3977) on December 2, 2013. Special conditions were issued and a copy of these conditions is attached to this document. With this conditioned certification, the state has verified that this project would meet all applicable state water quality standards and also complies with Section 401 of the Clean Water Act. The Water Quality Certification, including all conditions stated therein, would be made a part of any draft permit which may be issued for this project. No significant impacts to water quality would be expected; however, minor and temporary adverse impacts may result, including increases in turbidity, during construction. These would be expected to subside upon completion of construction. Overall the effect on water quality would be negligible.
☐	☒	☐	☐	Energy needs. Construction of the project would require the use of petroleum products for operation of construction equipment; however, energy would not be required post-construction. Additionally, implementation of the project would require the relocation of several aerial power lines, but these impacts would be temporary. Conversely, improvement of the road would allow more efficient transfer of energy by truck. Overall, implementation of the proposed project would be expected to have a negligible effect on energy supply/needs.
☒	☐	☐	☐	Safety. Implementation of the proposed project would be expected to have a positive effect on safety by creating a less congested roadway and an improved traffic flow. There are no police stations or EMS facilities located along the project corridor, but emergency response time would be expected to improve due to a less congested roadway.
☐	☒	☐	☐	Food and fiber production. Land in the project corridor is not currently used for food and fiber production, although a small amount of livestock is scattered throughout the project corridor. Construction of the proposed project would result in the direct conversion of some forested and undeveloped land to highway and cleared ROW, thereby eliminating this land from future fiber production. The amount of land converted, however, is not great and there is plentiful forested and undeveloped land in this area.
☐	☒	☐	☐	Mineral needs. Land in the project area is not currently used for mineral production but there are mining companies that do use this road. While construction of this project would be expected to temporarily impact travel times during construction, including mining company vehicles, NCDOT would ensure that property owners can access their properties and businesses. It would

				also be expected that upon completion/improvement of the road, more efficient transfer of minerals by truck would be possible. Construction of the proposed project would require construction material such as sand, gravel, concrete, etc.; however, mineral resources are readily available and in ample supply. Overall, the effects of the proposed action on mineral resources/needs would be expected to be negligible.
☐	☐	☒	☐	Considerations of property ownership. Implementation of the proposed project would displace a number of residents (65), businesses (12), and non-profits (3), and the applicant would be required to provide compensation for these properties. This has been/would be addressed during ROW acquisition (the applicant has obtained ROW from all but 74 landowners with property in the project corridor). The Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 requires the applicant to assist individuals and families who would be relocated due to the project.
☐	☒	☐	☐	Needs and welfare of the people. There are no known resources conflicts, or factors which would affect the needs and welfare of the people, other than the issues noted above.

7. Effects, policies and other laws.

   a) PIR factors discussed in Section 6 above.

   b) Endangered Species Act.

      Because the project does not utilize federal funds, the USACE is the lead federal agency with respect to compliance with Section 7 of the Endangered Species Act (ESA) of 1973.

      The South Toe River in the project corridor is federally designated and occupied critical habitat for the Appalachian elktoe mussel (*Alasmidonta raveneliana*).

      The USACE initiated consultation with the U.S. Fish and Wildlife Service (USFWS) for TIP Numbers R-2518A, R-2518B, R-2519A, and R-2519B in 2007. No permanent impacts to the South Toe River were proposed by NCDOT because they believed that the bridges could be constructed to span the river. The USFWS issued a biological opinion (BO) on March 14, 2008, and an amendment to the BO on January 9, 2009. Currently, construction on the R-2518A, R-2518B, and R-2519A projects has either been completed or is underway.

      During planning of the current project, R-2519B, NCDOT determined that spanning the South Toe River completely is not possible. Due to the new information concerning permanent impacts to the South Toe River from two (2) bridge piers (31.8 ft^2), the USACE reinitiated consultation with the USFWS on March 29, 2013. The USFWS

issued an Amendment to the BO on August 1, 2013. As noted in this amended BO, the document updates and clarifies the activities associated with constructing the new bridges over the South Toe River (only) and reassesses the impact on the Appalachian elktoe and its designated critical habitat. Additionally, the USFWS noted that the project, as proposed, is not likely to jeopardize the continued existence of the Appalachian elktoe or adversely modify its designated critical habitat.

The Public Notice for this project was sent to the U.S. Fish and Wildlife Service (USFWS). The USFWS did not respond to the public notice or submit comments during the review process.

Additionally, the USACE has determined, after discussing the issue with the USFWS (Marella Buncick) on December 4, 2013, that there will be no effect to any listed species or critical habitat, other than to, and critical habitat of, the Appalachian elktoe.

c) Essential Fish Habitat. Adverse impacts to Essential Fish Habitat would not result from the proposed project.

By letter dated August 27, 2013, the NMFS noted that based on the information in the public notice, the proposed project would not occur in the vicinity of essential fish habitat designated by the South Atlantic Fishery Management Council or NMFS. Additionally, no further action on the part of NMFS is planned. "This position is neither supportive of nor in opposition to authorization of the proposed work."

d) Historic Properties.

Because the project does not utilize federal funds, the USACE is the lead federal agency with respect to compliance with Section106 of the National Historic Preservation Act (NHPA) of 1966. Pursuant to Section 106 of the 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, the latest published version of the National Register of Historic Places (NRHP), and consulted with the North Carolina State Historic Preservation Office (NCSHPO).

Historic Architecture - the USACE determined that the project would have no effect on the Micaville Historic District and no adverse effect on the Huskins House, provided that NCDOT creates a grassy slope in front of the house that is maintainable by the property owner; any permit that may be issued for this project would include this as a special condition. The NCSHPO concurred with the no effect determination on April 19, 2005, and the no adverse effect determination on June 28, 2005.

Archaeological Sites – the USACE determined that the project would have an adverse effect on archaeological sites 31YC31, 31YC183, and 31ML80; these properties have been determined eligible for listing on the NRHP. A Memorandum of Agreement titled "Memorandum of Agreement Between the Department of the Army, Corps of Engineers

and the State Historic Preservation Officer for US 19E Improvements to a Multilane Facility between Micaville and Spruce Pine Yancy *(sic)* and Mitchell Counties, North Carolina Transportation Improvement Project R-2519B" was signed by the USACE, the Eastern Band of Cherokee Indians, NCSHPO, and NCDOT in June 2012, and was then filed with the Advisory Council on Historic Preservation.

The EBCI THPO did not comment on the public notice for this project.

e) Cumulative & Secondary Impacts
Please note that cumulative and secondary impacts are also discussed in Section 5.a

(1) Baseline *(Present Conditions).*

The information in the following paragraph was taken from the document titled "French Broad River Basinwide Water Quality Plan June 2011" from the NCDENR website - http://portal.ncdenr.org/web/wq/ps/bpu/basin/frenchbroad/2011

The Nolichucky River subbasin covers approximately 630 square miles. The Nolichucky River begins at the confluence of the North Toe River and Cane River about 10 miles before it enters Tennessee. The Nolichucky River continues to flow west until it meets the French Broad River at Douglas Lake near White Pine, Tennessee. Mount Mitchell, the tallest mountain in North Carolina, divides the headwaters of the South Toe River and Cane River watersheds. Mining and ornamental tree farming are common activities in the headwaters of the subbasin and are key economic contributors to the area. The South Toe, North Toe, Cane, and Nolichucky Rivers make up a few remaining areas that still support populations of the Federally Endangered Appalachian Elktoe. This mussel species, once found throughout the mountains of western North Carolina requires clean, well-oxygenated water that flows at a moderate to fast pace and a stable, relatively silt-free, gravelly or rocky stream bottoms. The Nolichucky River subbasin has the lowest overall population, and lowest population density in the French Broad River basin. It is also growing at a slower pace than the rest of the basin. This subbasin has the greatest percentage of land covered by forest and is the least agricultural. This is mostly likely the result of steep slopes and the lack of suitable locations for development and agriculture. There are 19 NPDES individual wastewater discharge permits in this subbasin with a total permitted flow of 17.21 million gallons per day (MGD). Six of those dischargers are permitted to discharge one MGD or more of treated wastewater. They are the Unimin Corporation Quartz (3.6 MGD); Feldspar Corporation Spruce Pine Facility (3.5 MGD); Unimin Corporation Schoolhouse Quartz (2.16 MGD); Spruce Pine WWTP (2 MGD); Unimin Corporation Red Hill Quartz Processing Plant (2 MGD); and K-T Feldspar Corporation Spruce Pine (1.73 MGD). There are no registered animal operations in the Nolichucky River subbasin. There were five sites sampled by DWQ for water quality. Of those five sites, four resulted in turbidity impairments; two in copper

impairments; and one low pH impairment. Two sites exceeded the screening criteria for fecal coliform bacteria but require five samples in a 30 day period in order to make a determination as to whether those waterbodies should be impaired. One Random Ambient Monitoring System (RAMS) site sampled in 2007 and 2008 resulted in an impairment for low pH.
Two fish kills were reported in the Nolichucky River watershed between January 2004 and December 2008; further investigations are needed as to the cause. Copper has become an emerging issue in this subbasin, but is not yet well understood.

According to USACE ORM2 data, the USACE has authorized impacts to 139,347 lf of stream and 218 acres of wetland in this 8-digit HUC during the period of January 1, 2000, to December 5, 2013. As mitigation, the USACE required mitigation activities to 8.06 acre of wetlands, 30,912 lf of stream, and the purchase of 2,649 credits. Note that the impact amounts listed above include authorizations for numerous NWP 27s, which are for stream and wetland restoration projects and for NWP 13s, which are for bank stabilization projects. Typically, while NWPs 27 and 13 authorize permanent impacts, these impacts do not result in an overall loss of jurisdictional waters and do provide beneficial effects to the aquatic ecosystem; as such, these activities do not require compensatory mitigation. Additionally, in many cases, authorizations to impact streams with minimal/low aquatic function do not require compensatory mitigation.

Yancey County intends to build a new sewer system and treatment plant in the area east of Burnsville (East Yancey Sewer Project). Yancey County expects that water quality would improve as failing and substandard septic systems are replaced by sewer connections (http://www.yanceycountync.gov/east-yancey-water-sewer) .
The Indirect and Cumulative Effects (ICE) Assessment prepared by NCDOT in March 2004, notes that future development is typically dependent on water and sewer services, so this new system would be expected to facilitate future development, although to what degree is unknown. The project corridor has steep topography which is not conducive to certain types of/large scale development. An update to the 2004 ICE notes that induced growth that is anticipated is likely to occur within or adjacent to the municipalities where water and sewer services exist or are planned. Modeling indicates that the potential for growth is due to the expansion of water and sewer services and not the proposed road project.

There are a number of large road improvement projects in the planning process in western North Carolina. According to the update to the 2004 ICE, local travel patterns will not be altered as a result of the US 19/19E project, but traffic service will be enhanced by the proposed improvements to this road. The cumulative effect of the road widening of US 19, combined with other TIP improvements, including I-240, US 221 widening, and A-10A, would help improve regional accessibility.

Authorizations are projected to continue, and may rise above, the current rate because of residential, commercial and institutional development within the watershed. However, the amount of stream and wetland impacts are expected to decrease, because large fills are less common and have been since approximately 2000, due to the discontinued use of Nationwide Permit (NWP) 26 and a general decrease in stream length and acreage thresholds associated with all NWPs. Natural resource issues of particular concern are decreases in water quality and increases in the amount and duration of storm water flows due to the conversion of forested and other pervious areas to commercial, residential, institutional and other land uses that increase impervious surface areas.

(2) Context. Impacts associated with the proposed project are larger than impacts associated with typical individual activities in the watershed, with the exception of other large road projects. Other activities typical of development in Yancey and Mitchell Counties include the construction of single residential structures, small commercial structures, governmental structures, and NCDOT projects, such as road widening/improvement projects. Except for projects associated with road projects, there have been few large projects within this watershed. Future conditions in the watershed are expected to continue at a minimal pace since most of the activity in the watershed is related to mining, tree farms, residences, and small businesses. Natural resource changes and stressors would include loss and fragmentation of wildlife habitat, increases in stormwater runoff, and impacts to water quality.

(3) Mitigation and Monitoring. See Sections 5.b.(4) and 8.a.(1). The project would affect the following key issue(s): aquatic habitat loss, aquatic organism passage, hyporheic zone function, impacts to listed species (resolved through formal consultation), pollutant filtration, infiltration, and impacts to water quality. The magnitude of the proposed effect would be minimal within the watershed. Avoidance and minimization methods proposed by the applicant to reduce impacts to these areas include utilization of NCDOT's Best Management Practices for the projection of surface waters; use of Design Standards in Sensitive Watersheds through the project; construction of dry detention basins at three sites to minimize erosive stormwater flows; use of preformed scour holes at three sites to attenuate and disperse stormwater flow; construction of hazardous spill basins on both banks of the South Toe River crossing to minimize impacts to listed species and critical habitat; elimination of deck drains (would direct runoff to grassed swales/hazardous spill basins) on the new South Toe River Bridges; baffles and/or sills used in culverts when practicable to facilitate passage, and; retrofitting the culvert at Site 29 with sills and baffles and a fish ladder to facilitate/rectify passage issues. These activities, along with the proposed compensatory mitigation would result in sufficient and reasonable compensation for the proposed loss of stream and wetland functions.

f. USACE Wetland Policy. Based on the public interest review herein, the beneficial effects of the project outweigh the detrimental impacts of the project.

g. Water Quality Certification under Section 401 of the Clean Water Act has been issued by the State. The North Carolina Division of Water Resources issued a Certification (Certification No. 3977) on December 2, 2013. Special conditions were issued, and a copy of these conditions is attached to this document. With this conditioned certification, the state has verified that this project would meet all applicable state water quality standards and also complies with Section 401 of the Clean Water Act. The Water Quality Certification, including all conditions stated therein, would be made a part of any draft permit which may be issued for this project. No significant impacts to water quality would be expected, however minor adverse impacts may result, including increases in turbidity, during construction.

h. Coastal Zone Management (CZM) consistency/permit: Issuance of a State permit certifies that the project is consistent with the CZM plan. There is no evidence or indication from the North Carolina Division of Coastal Management that the project is inconsistent with their CZM plan.

i. Other authorizations. Other than local planning/zoning requirements and those noted in previous sections of this document, there are no other authorizations known to be required.

j. Significant Issues of Overriding National Importance. ☒ N/A

8. Compensation and other mitigation actions. See Sections 5.b.(4).

a. Compensatory Mitigation

(1) Is compensatory mitigation required? ☒ yes ☐ no [If "no," do not complete the rest of this section]

(2) Is the impact in the service area of an approved mitigation bank? ☐ yes ☒ no

(i) Does the mitigation bank have appropriate number and resource type of credits available? ☐ yes ☐ no

(3) Is the impact in the service area of an approved in-lieu fee program?
☒ yes ☐ no

(i) Does the in-lieu fee program have appropriate number and resource type of credits available? ☒ yes ☐ no

(4) Check the selected compensatory mitigation option(s):

- ☐ mitigation bank credits
- ☒ in-lieu fee program credits
- ☐ permittee-responsible mitigation under a watershed approach
- ☒ permittee-responsible mitigation, on-site and in-kind
- ☐ permittee-responsible mitigation, off-site and out-of-kind

(5) If a selected compensatory mitigation option deviates from the order of the options presented in §332.3(b)(2)-(6), explain why the selected compensatory mitigation option is environmentally preferable. Address the criteria provided in §332.3(a)(1) (i.e., the likelihood for ecological success and sustainability, the location of the compensation site relative to the impact site and their significance within the watershed, and the costs of the compensatory mitigation project): if the mitigation does not deviate, make that statement.

As mitigation for the unavoidable impacts to waters of the U.S. associated with this project, the applicant proposes to provide a portion of the required mitigation by conducting on-site and in-kind mitigation (stream relocations, removal of in-stream structures, and the use of natural channel design at Site 30), and acquiring the remainder through the NCEEP's in-lieu fee program.

The proposed on-site mitigation areas are located within the same USGS hydrologic unit and watershed, as well as on the same reach of channel as the associated proposed impacts, and would be expected to improve floodplain functions (in areas of culvert removal); establish riparian buffers (at sites that would be planted); improve water quality within the watershed by reducing sediment, nutrient, and pollutant inputs (in areas with current sediment/pollutant input). The removal of perched structures at several sites would be expected to improve channel stability as well as increase habitat connectivity through improved access and passage. Additionally, many of the sites occur on multiple sections or unnamed tributaries of the same streams (Long Branch, Brushy Creek, etc.), which would provide improvements to habitat connectivity within the South Toe-North Toe and Headwater North Toe watersheds respectively, as well as within the Nolichucky Sub basin as a whole, and more specifically within designated trout waters.

Because there are numerous sensitive resources in the project area (e.g., numerous trout streams, occupied critical habitat), the proposed on-site mitigation would directly enhance resources in the project corridor such as: (1) 148 lf of Long Branch at Site 5A would be relocated prior to construction of the South Toe Bridge, as requested by the Merger Team (vs. piping). Currently this segment of stream contributes sediment to the South Toe River (directly downstream), which is occupied, critical habitat for the Appalachian elktoe mussel. This relocation, conducted prior to construction of the South Toe Bridge, would be expected to result in an improved tie-in further downstream from the existing confluence and would be more stable than what currently exists (a fair quality stream with eroding banks); (2) Site 30 involves the relocation (321 lf) and

restoration (635 lf) of an unnamed tributary to Brushy Creek into the historic, relic channel location. The existing channel currently runs parallel between US 19 and a gas station/repair shop and parking lot and has a narrow, maintained, grass buffer and receives direct storm water runoff from the parking lot and road. There are several areas exhibiting severe erosion problems. More stable channel dimensions would be expected to reduce erosion and sedimentation while a protected, planted, riparian buffer would provide for improved in-stream habitat and water quality both along the reach and downstream within the watershed, and; (3) The removal of the perched box culvert on Long Branch (Site 6) and of a perched corrugated metal pipe on Long Branch will enhance aquatic organism passage and reduce erosion at these locations. The remaining on-site mitigation would consist of relocations, as detailed in the mitigation plan.

(6) Other Mitigative Actions. There are no other mitigative actions, other than what is noted in this document as compensatory mitigation, avoidance, and minimization, and mitigative activities associated with the Biological Opinion (ESA) and the MOA (NHPA).

9. General evaluation criteria under the public interest review. We considered the following within this document:

a. The relative extent of the public and private need for the proposed structure or work. The applicant has established the need for the proposed project, which is to add capacity, correct roadway deficiencies, and provide system linkage along US 19 E, which would be expected to facilitate efficient travel along the project corridor and have a positive effect on safety by creating a less congested roadway with improved traffic flow.

b. There are no unresolved conflicts as to resource use.

c. The extent and permanence of the beneficial and/or detrimental effects, which the proposed work is likely to have on the public, and private uses to which the area is suited. Many of the detrimental impacts are expected to be minimal, although some would be permanent in the construction/fill areas. Construction related effects, such as an increase in turbidity, would subside upon project completion. The proposed mitigation plan adequately compensates for losses of waters of the U.S. and the adverse impacts to Historic Properties and Listed Species/Critical Habitat have been resolved through consultation processes. The beneficial effects (i.e., additional capacity, correction of roadways deficiencies, and system linkage along US 19E and a positive effect on safety) would be beneficial and permanent.

10. Determinations.

a. Public Hearing Request:

The USACE did not receive any requests for a public hearing.

b. Section 176I of the Clean Air Act General Conformity Rule Review:

The proposed permit action has been analyzed for conformity applicability pursuant to regulations implementing Section 176I of the Clean Air Act. It has been determined that the activities proposed under this permit would not exceed de minimis levels of direct or indirect emissions of a criteria pollutant or its precursors and are exempted by 40 CFR Part 93.153. Any later indirect emissions are generally not within the USACE's continuing program responsibility and generally cannot be practicably controlled by the USACE. For these reasons a conformity determination is not required for this permit action.

c. Relevant Presidential Executive Orders:

(1) EO 13175, Consultation with Indian Tribes, Alaska Natives, and Native Hawaiians. While this action has no substantial direct effect on one or more Indian tribes, it is located in traditional territory of the Cherokee. In accordance with informal agreements between Wilmington District and the three (3) federally recognized Cherokee Tribes, the public notices (both Merger and application public notices) were sent to the Eastern Band of Cherokee Indians (EBCI) and the United Keetoowah Band (UKB) of Cherokee Indians (the Cherokee Nation of Oklahoma does not want to be copied on public notices unless burial sites are involved); no comments were received. Additionally, the EBCI participated in consultation regarding adverse effects to archaeological sites and signed the MOA.

(2) EO 11988, Floodplain Management. Alternatives to locations within the floodplain, minimization, and compensation of the effects were considered above.

(3) EO 12898, Environmental Justice. In accordance with Title III of the Civil Right Act of 1964 and Executive Order 12898, it has been determined that the project would not directly or through contractual or other arrangements, use criteria, methods, or practices that discriminate on the basis of race, color, or national origin nor would it have a disproportionate effect on minority or low-income communities.

(4) EO 13112, Invasive Species. Based on concerns expressed by the USFWS and the NCWRC because the project area already contains invasive species, the NCDOT has committed to the following: NCDOT will put forth its best effort to suppress the Japanese Knotweed population within the project limits, with the use of aquatic labeled glycophosate. Additionally, the construction contract(s) for this project will stipulate that any knotweed material disturbed through construction activities at the two bridge sites, as well as in identified mitigation sites, will be buried within the project boundaries in fill or waster areas, below the depth of topsoil. Other than this commitment by NCDOT, there are no known invasive species issues associated with this project.

(5) EO 13212 and 13302, Energy Supply and Availability. The project is not one that would directly increase the production, transmission, or conservation of energy, or strengthen pipeline safety, but it would allow for more efficient transport of certain types of energy (e.g., gas, oil, etc).

b. Finding of No Significant Impact (FONSI). Having reviewed the information provided by the applicant and all interested parties and an assessment of the environmental impacts, I find that this permit action would not have a significant impact on the quality of the human environment. Therefore, an Environmental Impact Statement will not be required.

c. Compliance with 404(b)(1) guidelines.

Having completed the evaluation in paragraph 5, I have determined that the proposed discharge complies with the 404(b)(1) guidelines.

d. Public Interest Determination:

I find that issuance of a Department of the Army permit is not contrary to the public interest provided that the Permittee complies with the attached special conditions.

PREPARED BY:

Lori Beckwith Date: 12 Dec 2013
Lori Beckwith,
Project Manager, Asheville Field Office

REVIEWED BY:

M. Scott Jones Date: 12 DEC 2013
Scott Jones,
Chief, Asheville Regulatory Field Office

APPROVED BY:

_____ Date: _____
Steven A. Baker,
Colonel, EN Commanding

(5) EO 13212 and 13302, Energy Supply and Availability. The project is not one that would directly increase the production, transmission, or conservation of energy, or strengthen pipeline safety, but it would allow for more efficient transport of certain types of energy (e.g., gas, oil, etc).

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d. Public Interest Determination:

I find that issuance of a Department of the Army permit is not contrary to the public interest provided that the Permittee complies with the attached special conditions.

PREPARED BY:

Lori Beckwith Date: 12 Dec 2013
Lori Beckwith,
Project Manager, Asheville Field Office

REVIEWED BY:

M. Scott Jones Date: 12 DEC 2013
Scott Jones,
Chief, Asheville Regulatory Field Office

APPROVED BY:

for Henry Wicker Date: 12 Dec 2013
Steven A. Baker,
Colonel, EN Commanding

Attachment 2: Addendum 1 to the Department of the Army Environmental Assessment and Statement of Finding. August 2014.

CESAW-RG-A
Application SAW-2004-9987181/ 2004-30631, TIP No. R-2519B

MEMORANDUM FOR RECORD

SUBJECT: Addendum Number 1 to Department of the Army Environmental Assessment and Statement of Finding for Above-Numbered Permit Application

APPLICANT: North Carolina Department of Transportation
Project Development and Environmental Analysis Branch
Attention: Richard W. Hancock, P.E.
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

1. Purpose

The purpose of this document is to summarize events since the Environmental Assessment (EA) and Statement of Findings for this project (R-2519B) was finalized and signed on December 12, 2013. The U.S. Army Corps of Engineers (USACE) issued a First Time Out (FTO) permit (i.e., initially proffered permit) to the North Carolina Department of Transportation (NCDOT) on December 13, 2013, but due NCDOT's disagreement with the compensatory mitigation and the need to confer with the U.S. Fish and Wildlife Service (FWS) concerning a proposed species, the FTO was never signed or returned to the district. The mitigation issue has been resolved (NCDOT accepted the original mitigation requirement from the USACE) and the conference process with the FWS has been completed, so the USACE is ready to issue a revised FTO with special conditions.

For detailed project and background information, please refer to the EA dated December 12, 2013, and the FTO dated December 13, 2013; these documents are incorporated into this addendum by reference.

2. Project History

US Highway 19/19E is the primary route through Madison, Yancey, and Mitchell Counties in western North Carolina. In 2008, NCDOT received authorization to impact waters of the U.S. along 21 miles of US Highway 19/19E under TIP Numbers R-2518A, R-2518B, and R-2519A. This project, TIP No. R-2519B, is a 7.5 mile-long, two-lane rural highway that connects to R-2519A near Micaville in Yancey County. The entire 28.5 mile corridor (TIP Numbers R-2518 A & B and R-2519 A & B) are state funded; as such, USACE is the lead federal agency. The proposed road would be a four-lane median divided facility.

On December 13, 2013, the USACE issued an FTO permit to NCDOT authorizing permanent impacts to 7,256 linear feet (lf) of stream and 0.15 acre of wetland, and temporary impacts to 1,360 lf of stream and <0.01 acre of surface waters (a pond) in order to widen approximately 7.5 miles of US Highway 19E from SR 1186, west of Micaville in Yancey County, to the existing multilane section west of Spruce Pine in Mitchell County, North Carolina. The applicant will

mitigate for impacts to waters of the U.S. by performing on-site mitigation and purchasing credits from the North Carolina Ecosystem Enhancement Program (NCEEP). As noted above, NCDOT did not sign and return the December 2013 FTO permit, so the USACE has not authorized impacts to waters of the U.S. on the R-2519B project to date.

3. **Proposed Revisions to the Special Conditions**

The USACE proposes to revise the special conditions that were issued with the initial FTO permit for three reasons: (1) to take into account the results of the NLEB conference process, (2) to revise the NCWRC comments, and (3) to correct typos and a duplicate condition.

a. Results of the NLEB conference process: After the FTO was issued in December 2013, the FWS notified the USACE that the northern long-eared bat (*Myotis septentrionalis*) (NLEB) was proposed to be listed in October of 2014. Because construction for R-2519B will not be completed prior to listing of the NLEB, the USACE initiated the conference process with the FWS by letter dated May 12, 2014; this was done in an effort to avoid project disruptions once the NEB is federally listed. The FWS, USACE, and NCDOT, met on June 11, 2014, to discuss activities and commitments which would avoid and/or minimize potential effects to the NLEB that could result from R-2519B.

Based on this meeting and subsequent conversations, the NCDOT prepared information detailing NLEB survey efforts and analysis for the R-2519B project and proposed a special condition. The USACE reviewed the information submitted by NCDOT and concurred with the conclusions in the NLEB Analysis document. By email dated July 14, 2014, the USACE forwarded this information to the FWS and requested a jeopardy determination/confirmation (for the conference opinion) and concurrence with a determination of may affect, not likely to adversely affect, for use once the NLEB is listed. Following is language from the USACE request:

Based on the data provided by NCDOT and inclusion of the NLEB special condition (noted below) in the revised FTO permit for this project, the USACE believes that this project will not result in jeopardy of the NLEB. Additionally, the USACE has determined that once listed, this project may affect, but is not likely to adversely affect, the NLEB. Considering the information noted above, the USACE requests the following from the Service for the R-2519B project:

- A jeopardy determination/confirmation for the NLEB.
- Once listed, we request Service concurrence with our determination of may affect, not likely to adversely affect, for the NLEB.

NLEB special condition - NCDOT will conduct winter tree cutting between August 15 and April 15 (of any year) as an avoidance measure for the Northern Long-eared Bat (*Myotis septentrionalis*). Any felled trees that are not part of an active work area during this time shall be left in place until clearing, grubbing and seeding can commence after April 15. Any winter tree cutting conducted in a trout buffer will be cut by hand only and the felled trees

will be left in place until the trout moratorium has ended (after April 15 of any year). Within the trout buffer area, dropping trees into the stream must be avoided whenever possible. This condition is project specific and applies only to the R-2519B, US 19E Widening Project in Yancey and Mitchell Counties of North Carolina.

By email dated August 1, 2014, the FWS responded as follows:

In order to reduce the likelihood of impacting occupied NLEB summer habitat, NCDOT has agreed to limit tree cutting to the period from August 15 to April 15. Based on the data collected and the agreement to limit tree cutting to the time when females and nonvolant pups are least likely to be present, we agree that this project will not jeopardize the continued existence of the NLEB. Further we concur that if the bat is listed, the project is not likely to adversely NLEB.

With the FWS's response, the conference process for the NLEB is complete and the consultation requirements, once the NLEB is listed, is also complete. Additionally, by phone conversation on August 6, 2014, between the FWS (Marella Buncick) and the USACE (Lori Beckwith), Ms. Buncick noted the revised special conditions are adequate.

b. Revision of NCWRC's comments: On January 6, 2014, NCDOT contacted the USACE and noted that although they had reviewed the special conditions prior to USACE issuance in December 2013, they had since discovered that special condition number 11 didn't reflect a July 18, 2013, email (see file) from the WRC in which the agency noted that they would agree to drop the listed species moratorium for the South Toe River crossing of this project. "No moratoria will be requested for this crossing."

Special condition number 11 in the original FTO sent to NCDOT in December 2013 reads as follows: The permittee will comply with all conditions in the attached letter from the North Carolina Wildlife Resources Commission, dated September, 11, 2007, with the exception of the requirement for a trout moratorium in the South Toe River.

The USACE drafted revisions to the special conditions based on WRC's July 18, 2013, email and the special condition that resulted from the NLEB conference process, and requested that the WRC review these revised conditions, especially as the NLEB condition which concerns work in the trout buffers. WRC commented by email dated August 1, 2014, that the WRC comment letter dated September 11, 2007, did not refer to the R-2519B section of the US 19E widening project. WRC then forwarded three letters that did reference R-2519B and noted that they would defer to the FWS for measures to protect the NLEB, but they "...would like to mention that we would prefer that efforts to prevent dropping trees into waterways always be avoided as much as possible..." The USACE reviewed all four WRC comment letters, including the one attached to the original FTO.

All four WRC letters reference streams included in the R-2519B project corridor, and the original letter attached to the FTO does mention streams in the R-2519B section. This is also the only WRC letter that contains standard WRC conditions; these standard conditions

are appropriate for most, if not all, USACE permits in trout counties, and reference standard matters such as erosion and sediment control measures, seeding bare soil, etc.

Considering the above, the USACE determined that the revised special conditions for WRC (now condition number 12) will reference the letter of September 11, 2007 (standard conditions), and the WRC letter of July 19, 2007, which contains moratoria for on-site streams and shall read as follows (note that special condition number 10 (referred to below) is the NLEB condition discussed above in Section 3.a.):

12) The permittee will comply with all conditions in the attached letter from the North Carolina Wildlife Resources Commission (WRC), dated September, 11, 2007, with the exceptions of the in-water work moratorium for the South Toe River and tree removal activities, as long as tree removal activities are conducted in accordance with special condition number 10 of these conditions. Additionally, the permittee will comply with the moratoria detailed in the WRC letter dated July 19, 2007, for all streams in the R-2519B project corridor, with the exceptions of the in-water work moratorium for the South Toe River and tree removal activities, as long as tree removal activities are conducted in accordance with special condition number 10 of these conditions. Dropping trees into streams must be avoided within the trout buffer area.

By email dated August 6, 2014, NCDOT noted that they will be able to implement this revised condition.

c. Correct typos and a duplicate condition: Special condition number 7 was revised to correct a typo in the original conditions (Husking to Huskins), and special condition number 17 was deleted because the information is repeated in special condition 20. Also, the number of the conditions changed after number 9 due to the addition of the NLEB condition (number 10). Additionally, the reference to "attached plans" in special condition 1 was removed and the plans were identified specifically so it is not necessary to attach the approximately 124 plan sheets to the permit.

None of the proposed work in waters of the U.S. that was examined in the 2013 EA has changed; the USACE is only proposing to revise the special conditions, as noted above.

Other Agency Comments

The North Carolina Division of Water Resources (NCDWR) issued a Water Quality Certification (Certification No. 3977) on December 2, 2013. Special conditions were issued and a copy of these conditions is attached to the December 2013 EA for this project. With this conditioned certification, the state has verified that this project would meet all applicable state water quality standards and also complies with Section 401 of the Clean Water Act. The Water Quality Certification, including all conditions stated therein, will be made a part of any permit which may be issued for this project. By e-mail dated July 28, 2014 (see file), the NCDWR noted that they do not need to revise the 401 Certification based on the addition of special condition number 10 (NLEB condition), which concerns winter tree clearing activities in trout buffers.

4. Findings

The revised special conditions for the R-2519B project read as follows:

SPECIAL CONDITIONS

Failure to institute and carry out the details of the following special conditions will result in a directive to cease all ongoing and permitted work within waters of the U.S. associated with the permitted project, or such other remedies and/or fine as the Wilmington District Engineer, or his authorized representatives, may seek.

WORK LIMITS

1) All work authorized by this permit must be performed in strict compliance with the Wetland/Surface Water Permit Drawings that were submitted with the application dated July 10, 2013, titled "TIP Project: R-2519B," Sheets 1-114, to include the revisions of October 2013, which are a part of this permit. Any modification to these plans must be approved by the U.S. Army Corps of Engineers (USACE) prior to implementation.

2) Except as authorized by this permit or any USACE approved modification to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, within waters or wetlands. This permit does not authorize temporary placement or double handling of excavated or fill material within waters or wetlands outside the permitted area. This prohibition applies to all borrow and fill activities connected with this project.

3) Except as specified in the permit plans referenced in special condition number 1 above, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, in such a manner as to impair normal flows and circulation patterns within waters or wetlands or to reduce the reach of waters or wetlands.

4) The permittee shall schedule a pre-construction meeting between their representatives, the contractor, and the USACE, Wilmington District, Asheville Regulatory Field Office, NCDOT Regulatory Project Manager, prior to any work in jurisdictional waters of the U.S. to ensure that there is a mutual understanding of all terms and conditions contained in this DA permit. The permittee shall provide the NCDOT Regulatory Project Manager with a copy of the final plans at least two (2) weeks prior to the pre-construction meeting along with a description of any changes that have been made to the project's design, construction methodology or construction timeframe. The permittee shall schedule the pre-construction meeting for a time when the USACE and the North Carolina Division of Water Resources (NCDWR) Project Managers can attend. The permittee shall notify the USACE and NCDWR Project Managers a minimum of thirty (30) days in advance of the meeting.

5) The permittee shall advise the USACE in writing at least two (2) weeks prior to beginning the work authorized by this permit and again upon completion of the work authorized by this permit.

RELATED LAWS

6) The permittee shall fully implement and abide by all stipulations identified in the Memorandum of Agreement titled "Memorandum of Agreement Between the Department of the Army, Corps of Engineers and the State Historic Preservation Officer for US 19E Improvements to a Multilane Facility between Micaville and Spruce Pine Yancy *(sic)* and Mitchell Counties, North Carolina Transportation Improvement Project R-25198," signed June 2012, which is incorporated herein by reference.

7) NCDOT shall comply with its commitments regarding the National Register eligible E.W. and Dollie Huskins House. The final design shall include a seeded slope that is feasible for mowing/is maintainable by the property owner.

8) If the permittee discovers any previously unknown historic or archaeological sites while accomplishing the authorized work, he shall immediately stop work and notify the USACE, Asheville Regulatory Field Office NCDOT Regulatory Project Manager who will initiate the required State/Federal coordination.

9) This USACE permit does not authorize you to take an endangered species, in particular, the Appalachian elktoe mussel (*Alasmidonta raveneliana*). In order to legally take a listed species, you must have separate authorization under the Endangered Species Act (ESA) (e.g., a Biological Opinion under the ESA, Section 7, with "incidental take" provisions with which you must comply). The U.S. Fish and Wildlife Service's (USFWS's) Biological Opinion, dated March 14, 2008, and amended on January 9, 2009, and August 1, 2013 (collectively referred to hereinafter as BO), contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that is specified in the BO. Your authorization under this USACE permit is conditional upon your compliance with all the mandatory terms and conditions associated with incidental take of the BO, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the BO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute non- compliance with your USACE permit. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its BO, and with the ESA.

10) NCDOT will conduct winter tree cutting between August 15 and April 15 (of any year) as an avoidance measure for the Northern Long-eared Bat (*Myotis septentrionalis*). Any felled trees that are not part of an active work area during this time shall be left in place until clearing, grubbing and seeding can commence after April 15. Any winter tree cutting conducted in a trout buffer will be cut by hand only and the felled trees will be left in place until the trout moratorium has ended (after April 15 of any year). Within the trout buffer area, dropping trees into the stream must be avoided whenever possible. This condition is project specific and applies only to the R-2519B, US 19E Widening Project in Yancey and Mitchell Counties of North Carolina.

11) All necessary precautions and measures will be implemented so that any activity will not kill, injure, capture, harass, or otherwise harm any protected federally listed species. While accomplishing the authorized work, if the permittee discovers or observes a damaged or hurt listed

endangered or threatened species, the USACE Wilmington District Engineer will be immediately notified to initiate the required Federal coordination.

12) The permittee will comply with all conditions in the attached letter from the North Carolina Wildlife Resources Commission (WRC), dated September, 11, 2007, with the exceptions of the in-water work moratorium for the South Toe River and tree removal activities, as long as tree removal activities are conducted in accordance with special condition number 10 of these conditions. Additionally, the permittee will comply with the moratoria detailed in the WRC letter dated July 19, 2007, for all streams in the R-2519B project corridor, with the exceptions of the in-water work moratorium for the South Toe River and tree removal activities, as long as tree removal activities are conducted in accordance with special condition number 10 of these conditions. Dropping trees into streams must be avoided within the trout buffer area.

13) The North Carolina Division of Water Resources has issued a conditioned Water Quality Certification for this project. The conditions of that certification are hereby incorporated as special conditions of this permit. A copy of this certification is attached.

14) This Department of the Army permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

PROJECT MAINTENANCE

15) Unless otherwise authorized by this permit, all fill material placed in waters or wetlands shall be generated from an upland source and will be clean and free of any pollutants except in trace quantities. Metal products, organic materials (including debris from land clearing activities), or unsightly debris will not be used. Soils used for fill shall not be contaminated with any toxic substance in concentrations governed by Section 307 of the Clean Water Act.

16) All mechanized equipment will be regularly inspected and maintained to prevent contamination of waters and wetlands from fuels, lubricants, hydraulic fluids, or other toxic materials. In the event of a spill of petroleum products or any other hazardous waste, the permittee shall immediately report it to the N.C. Division of Water Resources at (919) 733-3300 or (800) 858-0368 and provisions of the North Carolina Oil Pollution and Hazardous Substances Control Act will be followed.

17) The permittee shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project, and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this permit. A copy of this permit, including all conditions, shall be available at the project site during construction and maintenance of this project.

18) The permittee shall remove all sediment and erosion control measures placed in wetlands or waters, and shall restore natural grades in those areas, prior to project completion.

19) No fill or excavation impacts for the purposes of sedimentation and erosion control shall occur within jurisdictional waters, including wetlands, unless the impacts are included on the plan drawings and specifically authorized by this permit.

20) The permittee shall implement Design Standards in Sensitive Watersheds throughout the project corridor. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices. This shall include, but is not limited to, the immediate installation of silt fencing or similar appropriate devices around all areas subject to soil disturbance or the movement of earthen fill, and the immediate stabilization of all disturbed areas. Additionally, the project must remain in full compliance with all aspects of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statutes Chapter 113A Article 4). Adequate sedimentation and erosion control measures must be implemented prior to any ground disturbing activities to minimize impacts to downstream aquatic resources. These measures must be inspected and maintained regularly, especially following rainfall events. All fill material must be adequately stabilized at the earliest practicable date to prevent sediment from entering into adjacent waters or wetlands.

21) The permittee shall ensure that all excavation and/or construction areas in waters of the U.S. are temporarily dewatered during work.

22) Prior to commencing construction within jurisdictional waters of the U.S. for any portion of the project, the permittee shall forward the latest version of project construction drawings to the USACE, Asheville Regulatory Field Office NCDOT Regulatory Project Manager. Half-size drawings will be acceptable.

23) During the clearing phase of the project, heavy equipment must not be operated in surface waters or stream channels. Temporary stream crossings will be used to access the opposite sides of stream channels. All temporary diversion channels and stream crossings will be constructed of non-erodible materials. Grubbing of riparian vegetation will not occur until immediately before construction begins on a given segment of stream channel.

24) The permittee shall take measures to prevent live or fresh concrete, including bags of uncured concrete, from coming into contact with any water in or entering into waters of the U.S. Water inside coffer dams or casings that has been in contact with concrete shall only be returned to waters of the U.S. when it no longer poses a threat to aquatic organisms (concrete is set and cured).

25) Unless otherwise requested in the application and depicted on the approved work plans, culverts greater than 48 inches in diameter will be buried at least one foot below the bed of the stream. Culverts 48 inches in diameter and less shall be buried or placed on the stream bed as practicable and appropriate to maintain aquatic passage, and every effort shall be made to maintain existing channel slope. The bottom of the culvert must be placed at a depth below the natural stream bottom to provide for passage during drought or low flow conditions. Destabilizing the channel and head cutting upstream should be considered in the placement of the culvert.

26) Measures will be included in the construction/installation that will promote the safe passage of fish and other aquatic organisms. The dimension, pattern, and profile of the stream above and

below a pipe or culvert should not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. The width, height, and gradient of a proposed opening should be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. Spring flow should be determined from gauge data, if available. In the absence of such data, bankfull flow can be used as a comparable level.

27) To ensure that all borrow and waste activities occur on high ground and do not result in the degradation of adjacent wetlands and streams, except as authorized by this permit, the permittee shall require its contractors and/or agents to identify all areas to be used to borrow material, or to dispose of dredged, fill, or waste material. The permittee shall provide the USACE with appropriate maps indicating the locations of proposed borrow or waste sites as soon as the permittee has that information. The permittee will coordinate with the USACE before approving any borrow or waste sites that are within 400 feet of any streams or wetlands.

28) Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in the disequilibrium of wetlands, streambeds or stream banks adjacent to, upstream of or downstream of the structures. Riprap armoring of streams at culvert inlets and outlets shall be minimized above ordinary high water elevation in favor of bioengineering techniques such as bank sloping, erosion control matting and revegetation with deep-rooted native woody plants.

29) The permittee shall implement all reasonable and practicable measures to ensure that equipment, structures, fill pads, work, and operations associated with this project do not adversely affect upstream and/or downstream reaches. Adverse effects include, but are not limited to, channel instability, flooding, and/or stream bank erosion. The permittee shall routinely monitor for these effects, cease all work when detected, take initial corrective measures to correct actively eroding areas, and notify this office immediately. Permanent corrective measures may require additional authorization by the USACE.

30) As noted in the Project Commitments for this project, the permittee will put forth its best effort to suppress the Japanese Knotweed population within the project limits, with the use of aquatic labeled glycophosate. Additionally, the construction contract(s) for this project will stipulate that any knotweed material disturbed through construction activities at the two bridge sites, as well as in identified mitigation sites, will be buried within the project boundaries in fill or waster areas, below the depth of topsoil.

31) Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

32) The permittee, upon receipt of a notice of revocation of this permit or upon its expiration before completion of the work will, without expense to the United States and in such time and manner as the Secretary of the Army or his authorized representative may direct, restore the water or wetland to its pre-project condition.

33) All reports, documentation and correspondence required by the conditions of this permit shall be submitted to the following address: U.S. Army Corps of Engineers, Asheville Regulatory Field Office, NCDOT Regulatory Project Manager (Division 13), 151 Patton Avenue, Room 208, Asheville, NC 28801-5006, and by telephone at: (828) 271-7980. The Permittee shall reference the following permit number, SAW-2004-9987181/ 2004-30631, TIP No. R-2519B, on all submittals.

COMPENSATORY MITIGATION

34) The Permittee shall fully implement the compensatory mitigation plan titled "Mitigation Plan, US 19E Widening, Yancey & Mitchell Counties, North Carolina, T.I.P. Number R-2519, WBS No. 35609.1.1, May 6, 2013 (Revised November 4, 2013)," in order to compensate for a portion of the unavoidable impacts to waters of the U.S. associated with this project. Activities prescribed by this plan shall be initiated prior to, or concurrently with, commencement of any construction activities within jurisdictional areas authorized by this permit. The permittee shall conduct all mitigation and monitoring activities in accordance with the above referenced plan and with the following conditions:

a) As the permittee, NCDOT is the party responsible for the implementation, performance, and long term management of the on-site compensatory mitigation project.

b) Any changes or modifications to the mitigation plan must be approved by the USACE.

c) The permittee shall maintain the entire mitigation site in its natural condition, as altered by the work in the mitigation plan, in perpetuity. Prohibited activities within the mitigation site specifically include, but are not limited to: filling; grading; excavating; earth movement of any kind; construction of roads, walkways, buildings, signs, or any other structure; any activity that may alter the drainage patterns on the property; the destruction, cutting, removal, mowing, or other alteration of vegetation on the property; disposal or storage of any garbage, trash, debris or other waste material; graze or water animals, or use for any agricultural or horticultural purpose; or any other activity which would result in the property being adversely impacted or destroyed, except as specifically authorized by this permit.

35) The permittee shall not sell or otherwise convey any interest in the mitigation property used to satisfy the mitigation requirements for this permit to any third party, without written approval from the Wilmington District USACE.

36) In order to compensate for a portion of the impacts associated with this permit, mitigation shall be provided in accordance with the provisions outlined on the most recent version of the attached Compensatory Mitigation Responsibility Transfer Form. The requirements of this form, including any special conditions listed on this form, are hereby incorporated as special conditions of this permit.

ENFORCEMENT

37) A representative of the USACE will periodically and randomly inspect the work for compliance with these conditions. Deviations from these procedures may result in an administrative financial penalty and/or directive to cease work until the problem is resolved to the satisfaction of the USACE.

38) Violation of these conditions or violation of Section 404 of the Clean Water Act of Section 10 of the Rivers and Harbors Act must be reported in writing to the Wilmington District USACE within 24 hours of the permittee's discovery of the violation.

5. Conclusion

The USACE has determined that implementation of the revised special conditions for the R-2519B project will ensure project compliance with the 404 (b)(1) Guidelines and the Endangered Species Act, ensure that the district has taken into account concerns of the WRC (Fish and Wildlife Coordination Act), and ensure that the project is not contrary to the public interest. Additionally, the USACE has determined that implementation of the project with the revised special conditions (1) will not directly or through contractual or other arrangements, use criteria, methods, or practices that discriminate on the basis of race, color, or national origin nor would it have a disproportionate effect on minority or low-income communities; (2) will not exceed *de minimis* levels of direct or indirect emissions of a criteria pollutant or its precursors and are exempted by 40 CFR Part 93.153, and; (3) will not have a significant impact on the quality of the human environment. Therefore, an Environmental Impact Statement will not be required. Additionally, no public hearing was requested and this project complies with relevant Executive Orders.

Based on the minimal nature of the revisions for this project, we have also determined that this addendum to the 2013 EA is sufficient to evaluate the revised special conditions; as such a new EA will not be prepared.

PREPARED BY:

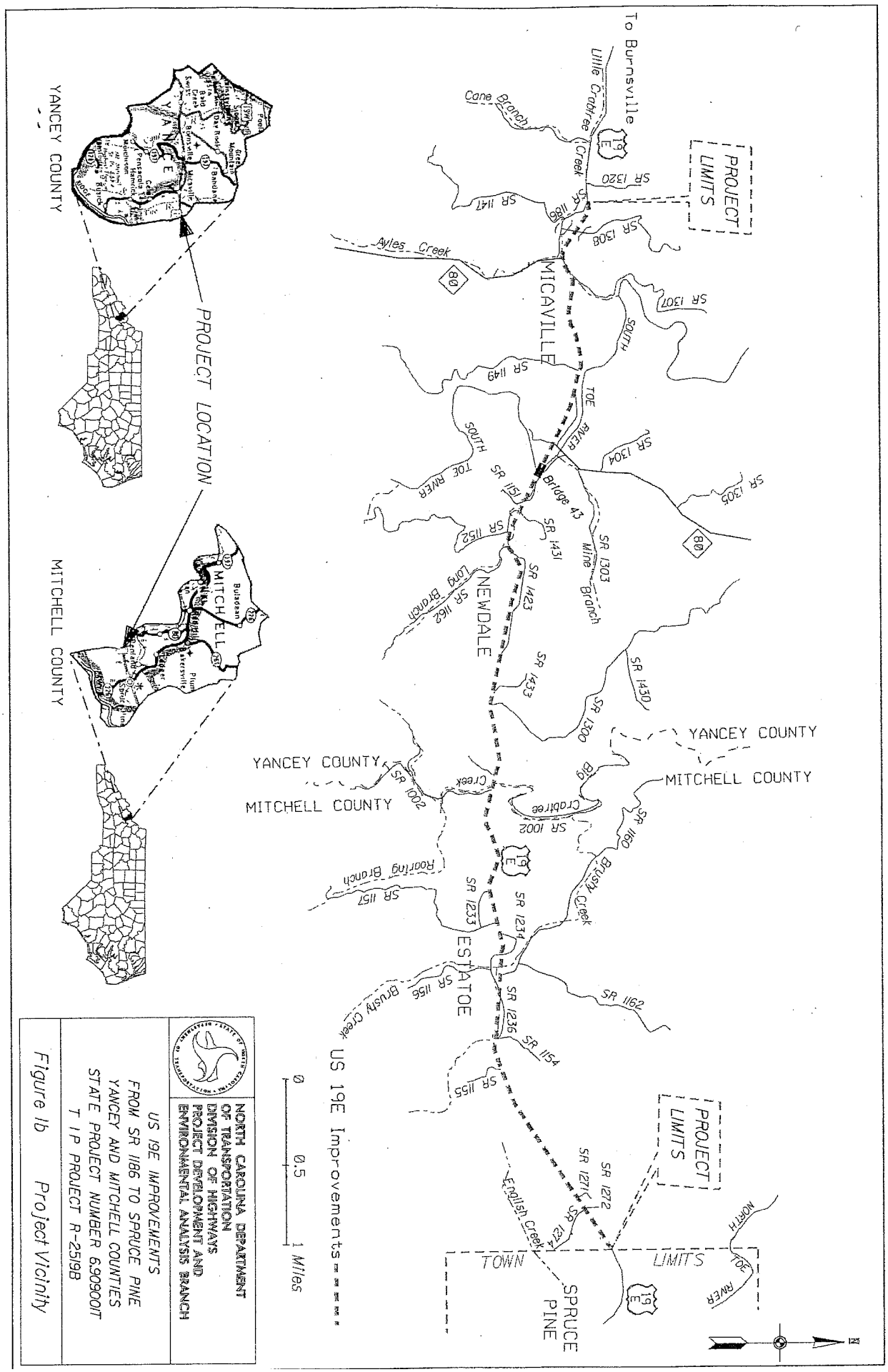
Lori A. Beckwith
Project Manager

REVIEWED AND APPROVED BY:

Scott Jones
Chief, Asheville Field Office
Regulatory Division

Attachment 3: Project Vicinity Map, Map of Bridge Locations, and Culvert Replacement Plans.

PROJECT VICINITY MAP

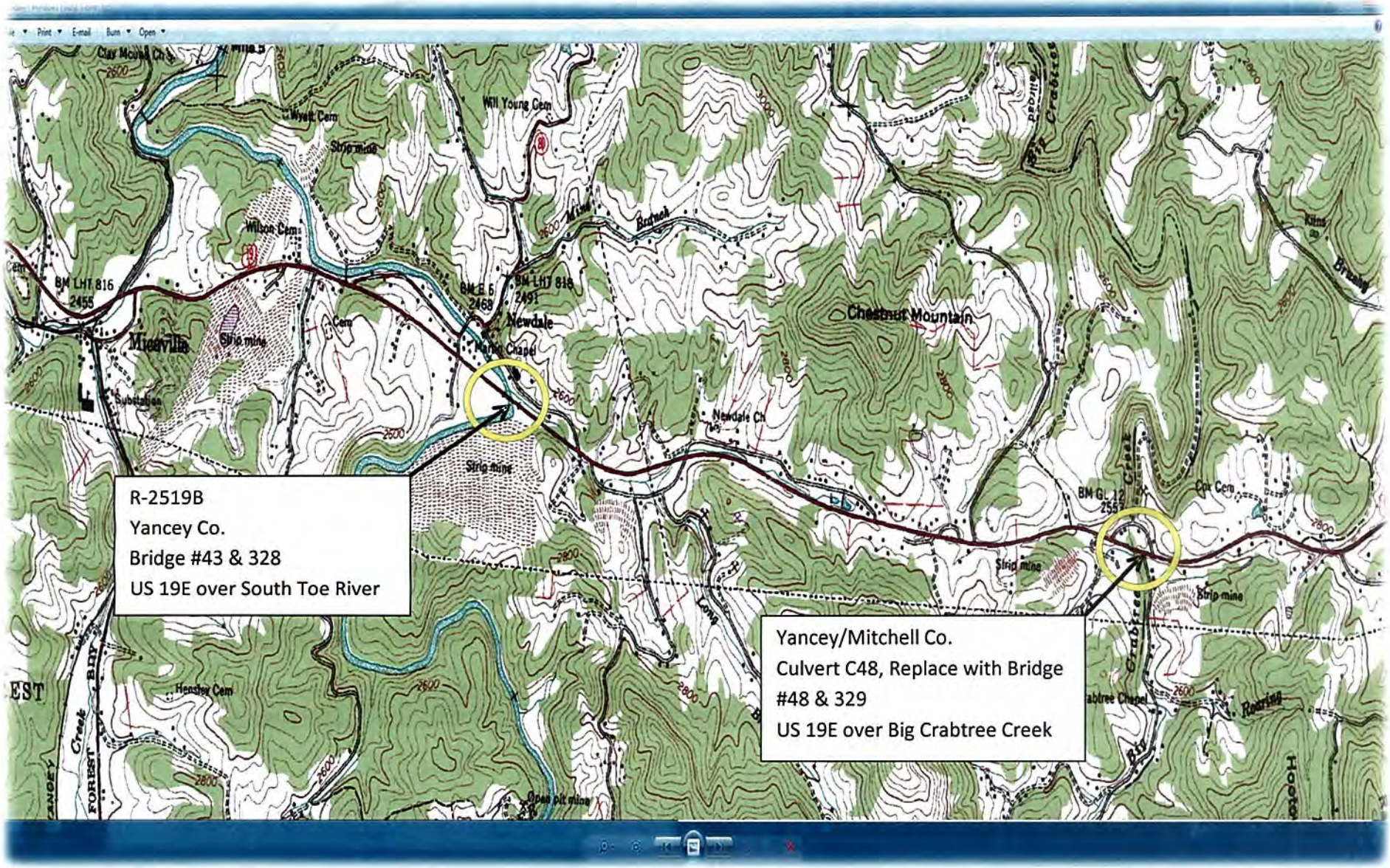


NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH

US 19E IMPROVEMENTS
FROM SR 1186 TO SPRUCE PINE
YANCEY AND MITCHELL COUNTIES
STATE PROJECT NUMBER 6.909001T
T I P PROJECT R-2519B

Figure 1b Project Vicinity

LOCATION OF TWO NEW BRIDGES



Topographic Setting of Project Area - micavl

(3)

CONSTRUCTION SEQUENCE ON R-2519B 4@12'X10' RCBC AT STA 44+11.92-L- LITTLE CRABTREE CREEK

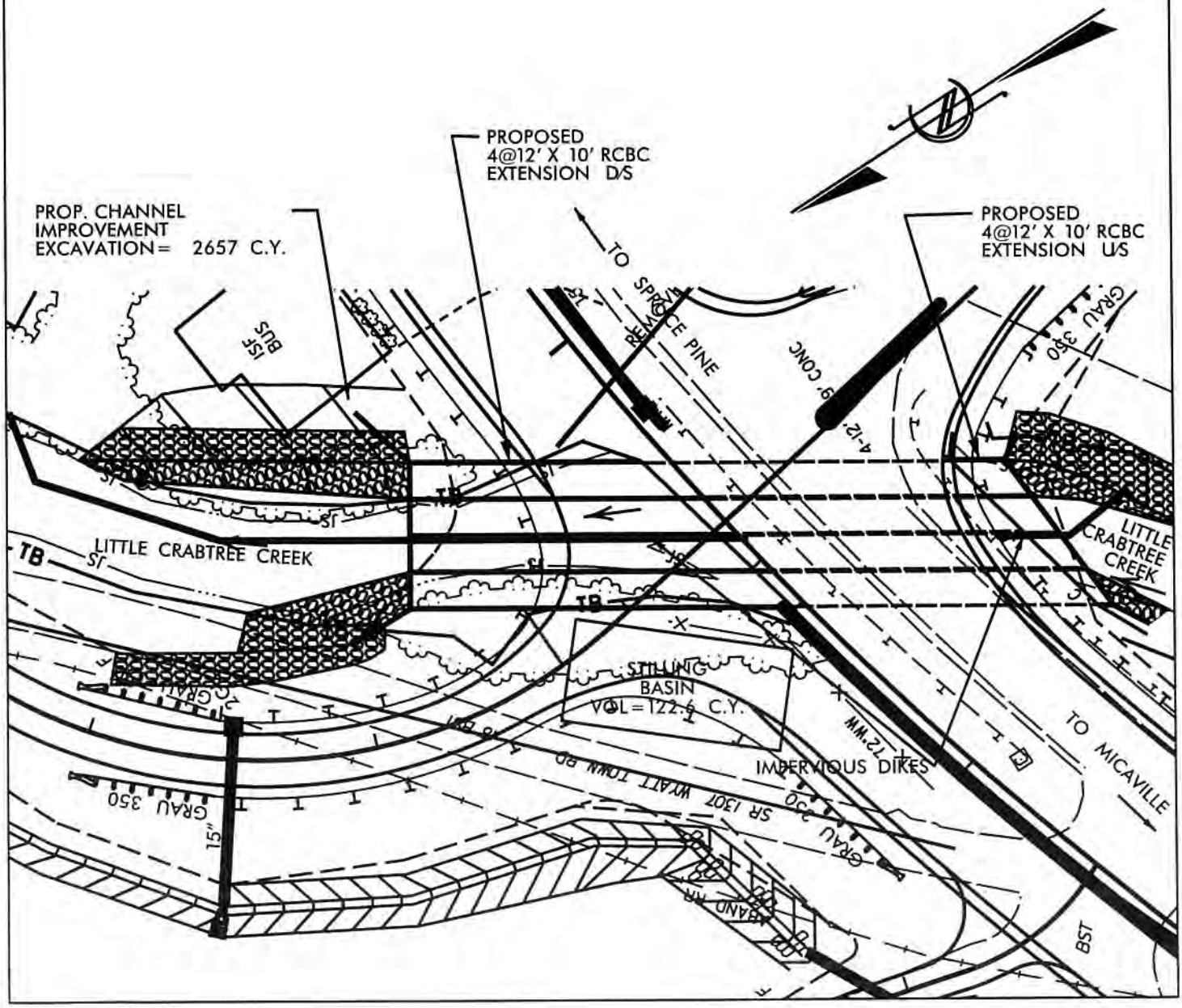
PHASE 1:

1. INSTALL EROSION CONTROL DEVICES INCLUDING STILLING BASIN WITH MINIMUM CAPACITY 122.6 C.Y.(PHASE 1) AND 95.1 C.Y.(PHASE 2)

2. INSTALL IMPERVIOUS DIKES AS SHOWN

3. DRY OUT WORK AREA, PUMPING EFFLUENT INTO STILLING BASIN

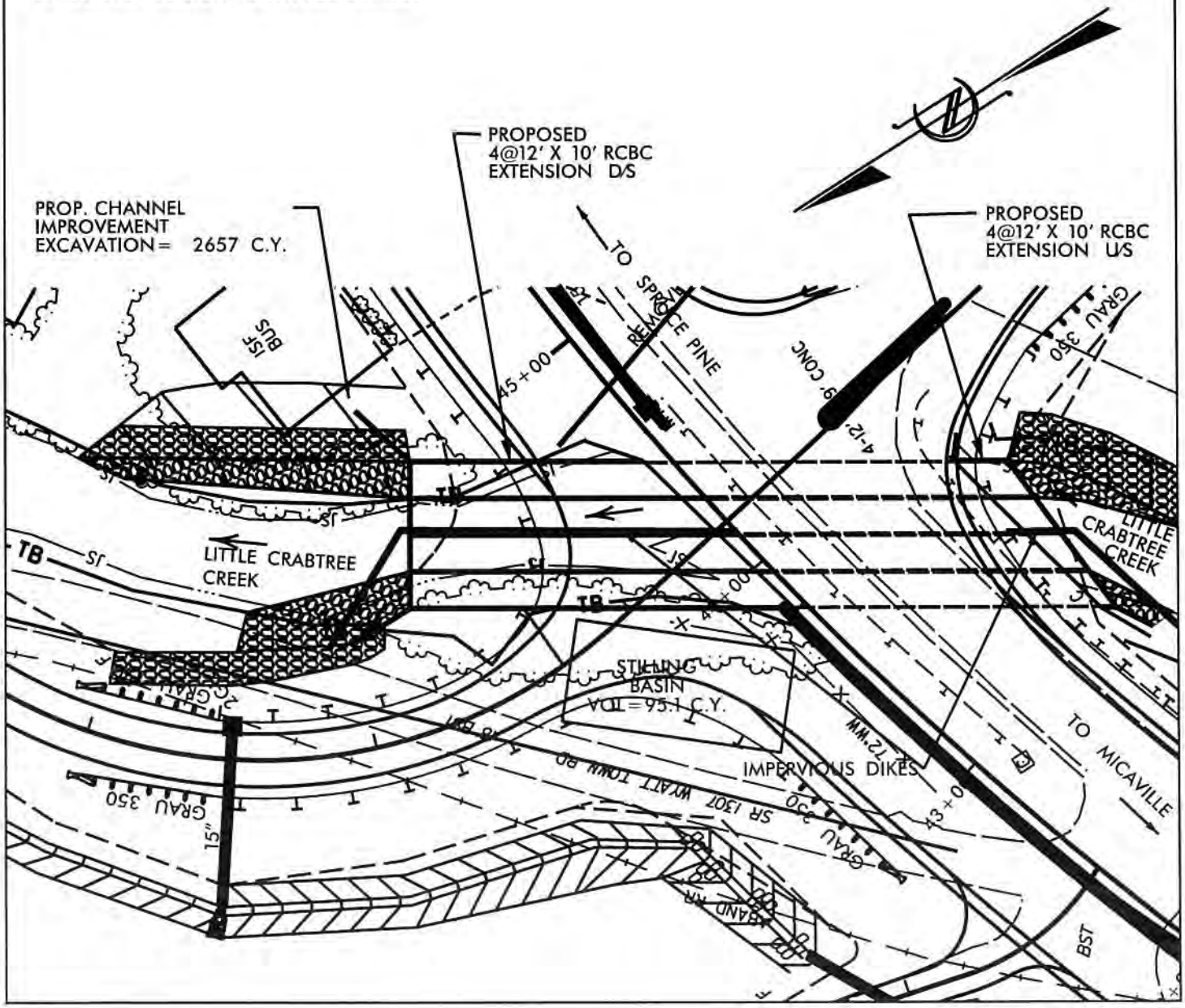
4. CONSTRUCT TWO EASTERN MOST BARRELS EXTENSIONS AND CHANNEL IMPROVEMENT



③ CONSTRUCTION SEQUENCE ON R-2519B 4@12'X10' RCBC AT STA 44+11.92-L- LITTLE CRABTREE CREEK

PHASE 2:

1. INSTALL IMPERVIOUS DIKES AS SHOWN
2. DRY OUT WORK AREA, PUMPING EFFLUENT INTO STILLING BASIN
3. CONSTRUCT TWO WESTERN MOST BARRELS EXTENSIONS
4. REMOVE IMPERVIOUS DIKES
5. CONSTRUCT ROADWAY FILL
6. REMOVE EROSION CONTROL DEVICES



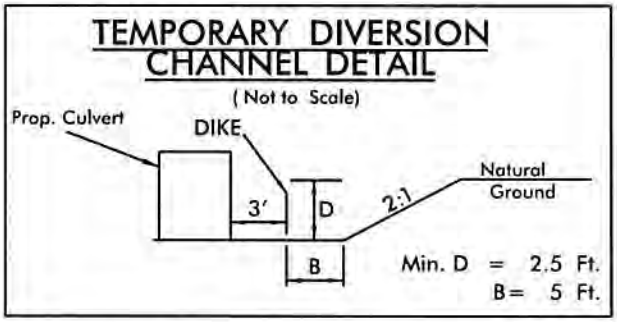
(4.) CONSTRUCTION SEQUENCE ON R-2519B 2@6'X6' RCBC AT STA 134+80.45-L- AND STA 10+51.64-Y14- LONG BRANCH CREEK

PHASE 1:

1. INSTALL EROSION CONTROL DEVICES INCLUDING SPECIAL STILLING BASIN WITH MINIMUM CAPACITY 37.4 C.Y.(PHASE 1) AND 35.1 C.Y.(PHASE 2)
2. INSTALL TEMPORARY DIVERSION CHANNELS WITH TEMPORARY LINERS
3. INSTALL IMPERVIOUS DIKES AS SHOWN, USE SILT BAG
4. DRY OUT WORK AREA, PUMPING EFFLUENT INTO STILLING BASIN
5. CONSTRUCT WESTERN MOST BARREL CULVERT EXTENSIONS

TEMPORARY DIVERSION CHANNEL DETAIL

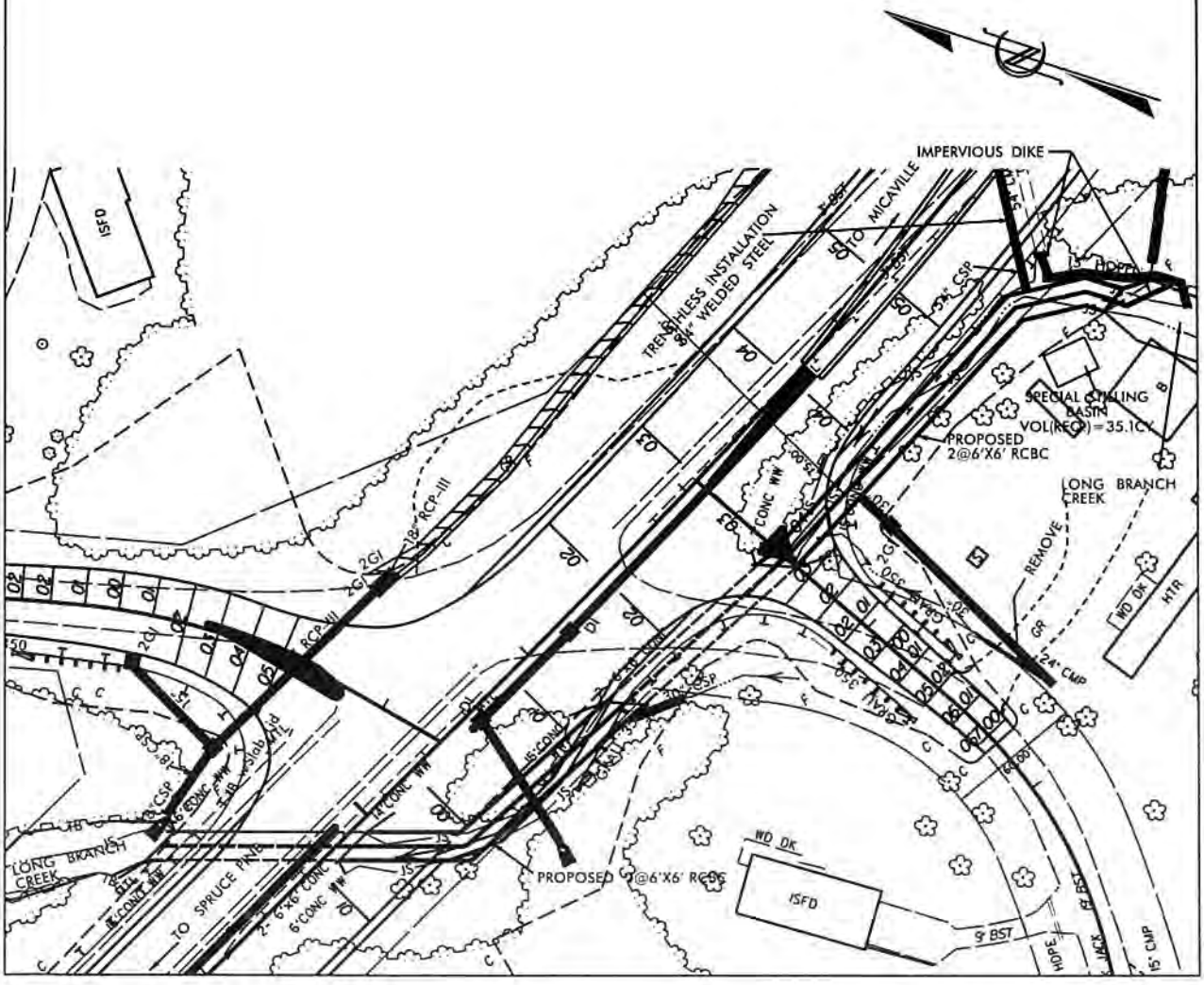
(Not to Scale)



④ CONSTRUCTION SEQUENCE ON R-2519B 2@6'X6' RCBC AT STA 134+80.45-L- AND STA 10+51.64-Y14- LONG BRANCH CREEK

PHASE 2:

1. INSTALL IMPERVIOUS DIKES AS SHOWN, USE SILT BAG
2. INSTALL 15" HDPE AS SHOWN
3. DIVERT FLOW THROUGH WESTERN MOST BARREL
4. DRY OUT WORK AREA, PUMPING EFFLUENT INTO STILLING BASIN
5. CONSTRUCT EASTERN MOST BARREL CULVERT EXTENSIONS AND 54" WELDED STEEL PIPE AS SHOWN
6. REMOVE IMPERVIOUS DIKES AND EROSION CONTROL DEVICES
6. CONSTRUCT ROADWAY FILL

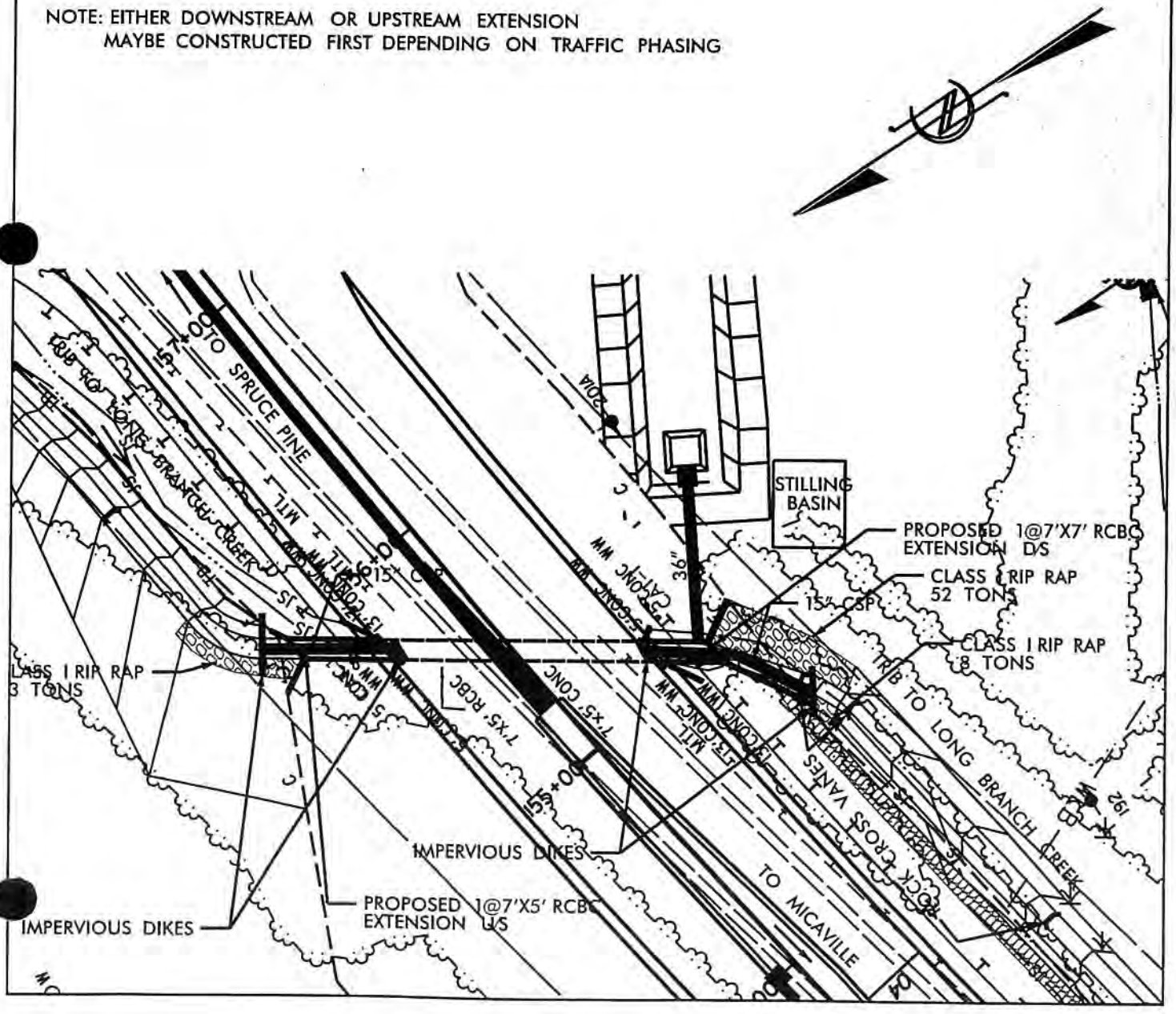


(5)

CONSTRUCTION SEQUENCE ON R-2519B 1@7'X5' RCBC AT STA 155+44.57-L- LONG BRANCH CREEK

1. CONSTRUCT UPSTREAM AND DOWNSTREAM CHANNEL RELOCATIONS IN THE DRY AND STABILIZE
2. INSTALL EROSION CONTROL DEVICES INCLUDING STILLING BASIN WITH MINIMUM CAPACITY 6.0 C.Y. UPSTREAM AND 5.2 C.Y. DOWNSTREAM
3. INSTALL IMPERVIOUS DIKES WITH 15" CSP TO CONVEY NORMAL FLOW
4. DRY OUT WORK AREA, PUMPING EFFLUENT INTO STILLING BASIN
5. CONSTRUCT CULVERT EXTENSIONS
6. REMOVE IMPERVIOUS DIKES AND 15" CSP
7. REMOVE ALL TEMPORARY EROSION CONTROL DEVICES

NOTE: EITHER DOWNSTREAM OR UPSTREAM EXTENSION MAYBE CONSTRUCTED FIRST DEPENDING ON TRAFFIC PHASING

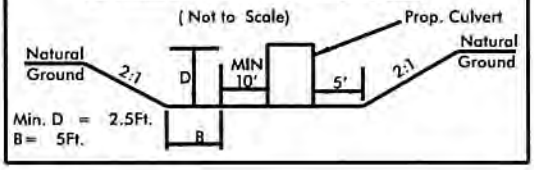


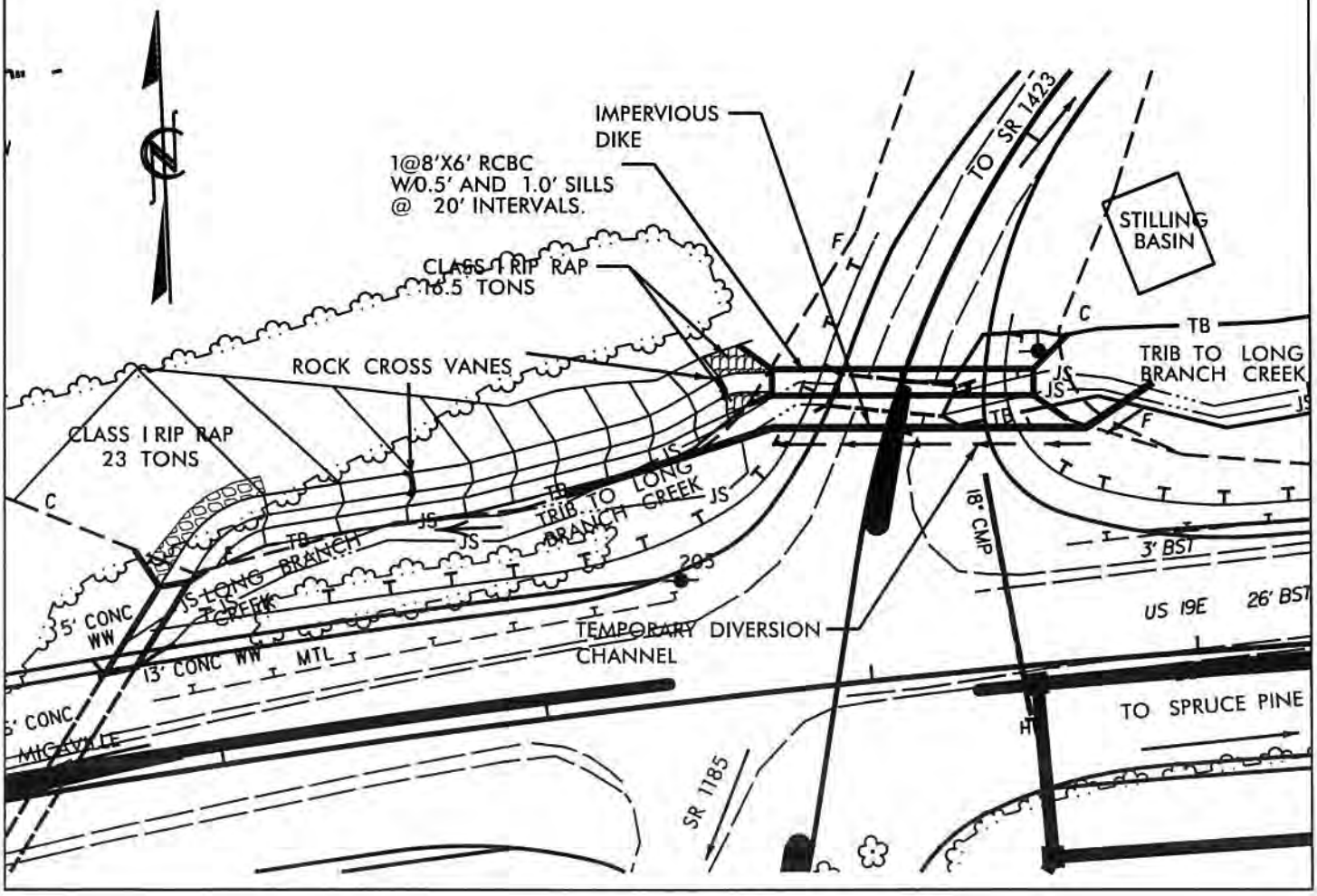
CONSTRUCTION SEQUENCE ON R-2519B
1@8'X6' RCBC WITH 0.5' AND 1.0' SILLS
AT STA 14+90.30-Y17-
TRIBUTARY TO LONG BRANCH CREEK

(6)

1. CONSTRUCT CHANNEL RELOCATION IN THE DRY AND STABILIZE
2. INSTALL EROSION CONTROL DEVICES INCLUDING STILLING BASIN WITH MINIMUM CAPACITY 9.4 C.Y.
3. CONSTRUCT TEMPORARY DIVERSION CHANNEL WITH TEMPORARY LINER
4. INSTALL IMPERVIOUS DIKES
5. DIVERT FLOW THROUGH TEMPORARY DIVERSION CHANNEL
6. DRY OUT WORK AREA, PUMPING EFFLUENT INTO STILLING BASIN
7. REMOVE EXISTING CULVERT
8. CONSTRUCT NEW CULVERT
9. REMOVE IMPERVIOUS DIKES
10. DIVERT FLOW THROUGH NEW CULVERT
11. UPON PERMANENT STABILIZATION OF ALL DISTURBED AREA, REMOVE ALL TEMPORARY EROSION CONTROL DEVICES

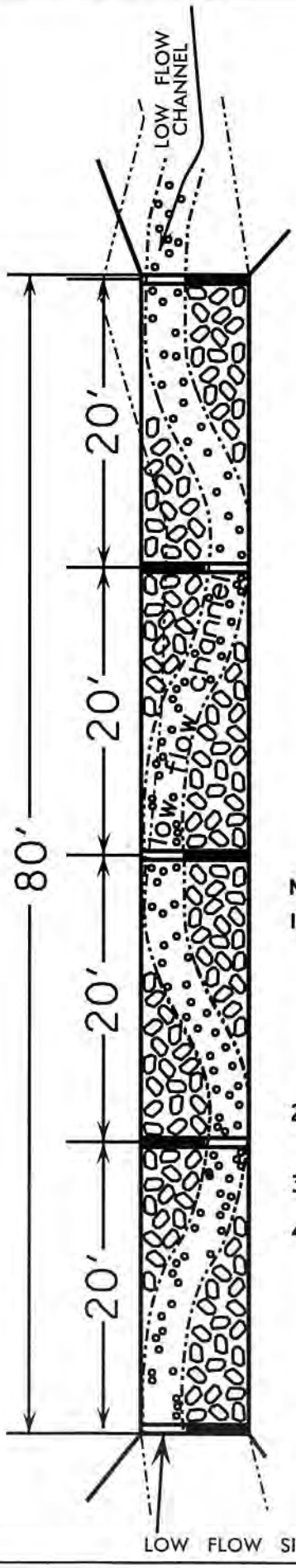
DIVERSION CHANNEL DETAIL



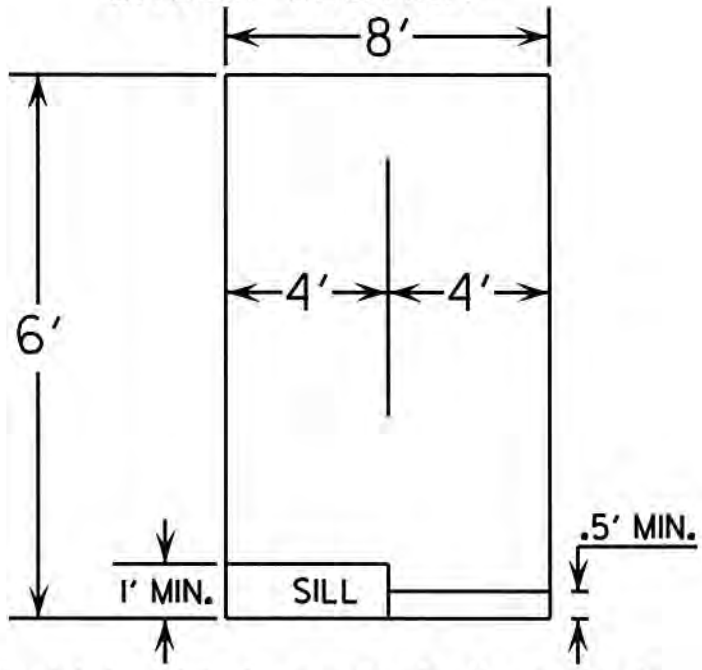


(6.)

DETAIL OF LOW FLOW CHANNEL AND SILLS –Y17– STA. 14+90.30 8'x6' RCBC LONG BRANCH CREEK (not to scale)



CROSS SECTION



NOTE:

1. Bed material placed between sills in the culvert shall provide a continuous low flow channel between the lower sills. The material shall be natural stone with a gradation size similar to that of Class B riprap. Stones larger than 6 inches shall not be placed within the low flow channel. Bed material is subject to approval by the Engineer.
2. Sills are to be 1' wide and cast separately and attached by dowels.
3. The 1' high and 0.5' high sills are to be separate units.
4. Top of low flow sill should match stream bed elevation in low flow channel of stream.

NCDOT

DIVISION OF HIGHWAYS
YANCEY/MITCHELL COUNTIES

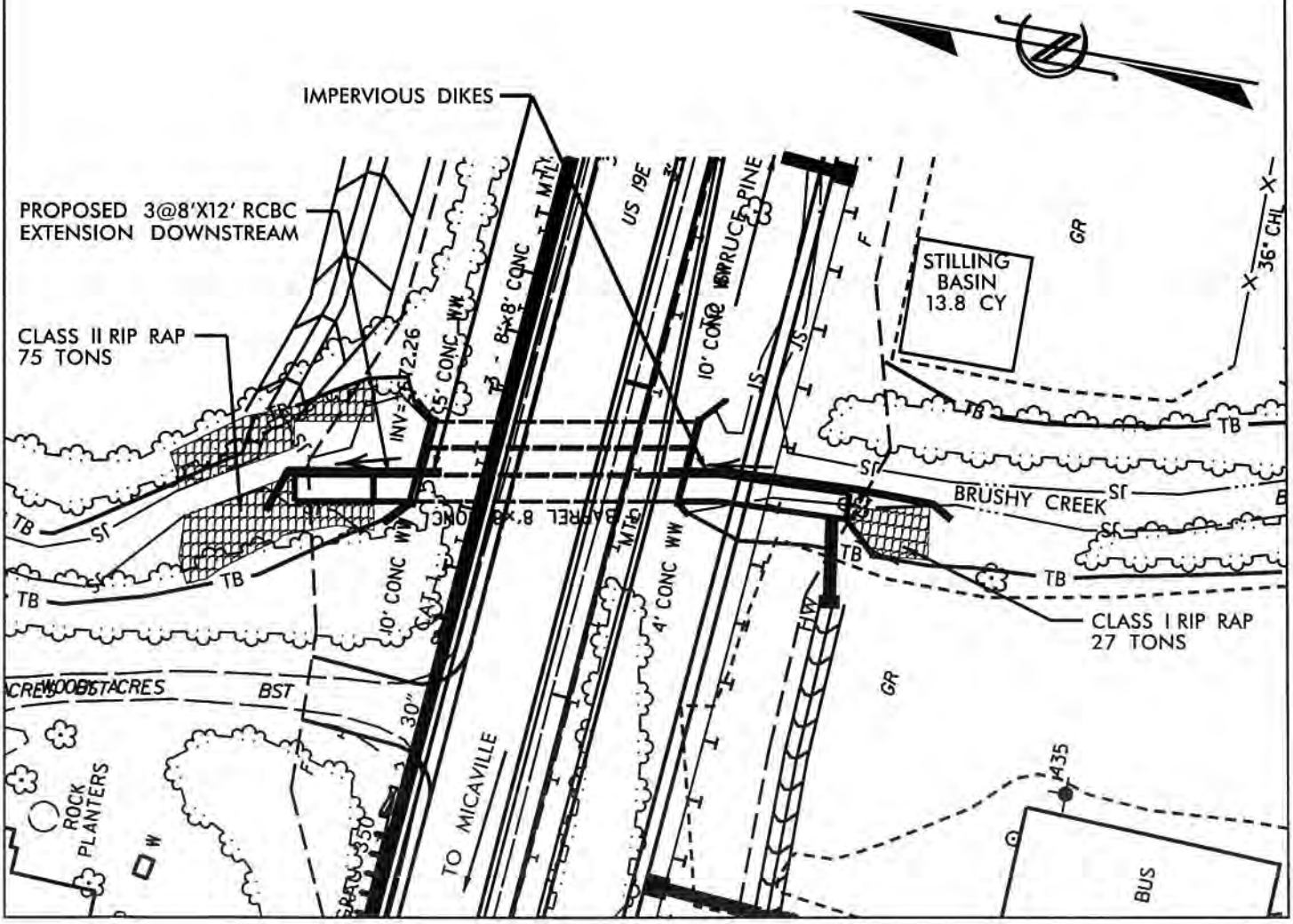
PROJECT: 35609.1.1 (R-2519B)
US 19E FROM SR1186 (OLD US 19) IN YANCEY COUNTY TO MULTI-LANE SECTION WEST OF SPRUCE PINE IN MITCHELL COUNTY

SHEET 1 OF 1 *03/03/09*

(7.) CONSTRUCTION SEQUENCE ON R-2519B 3@8'X12' RCBC AT STA 319+76.16-L- BRUSHY CREEK

PHASE 1:

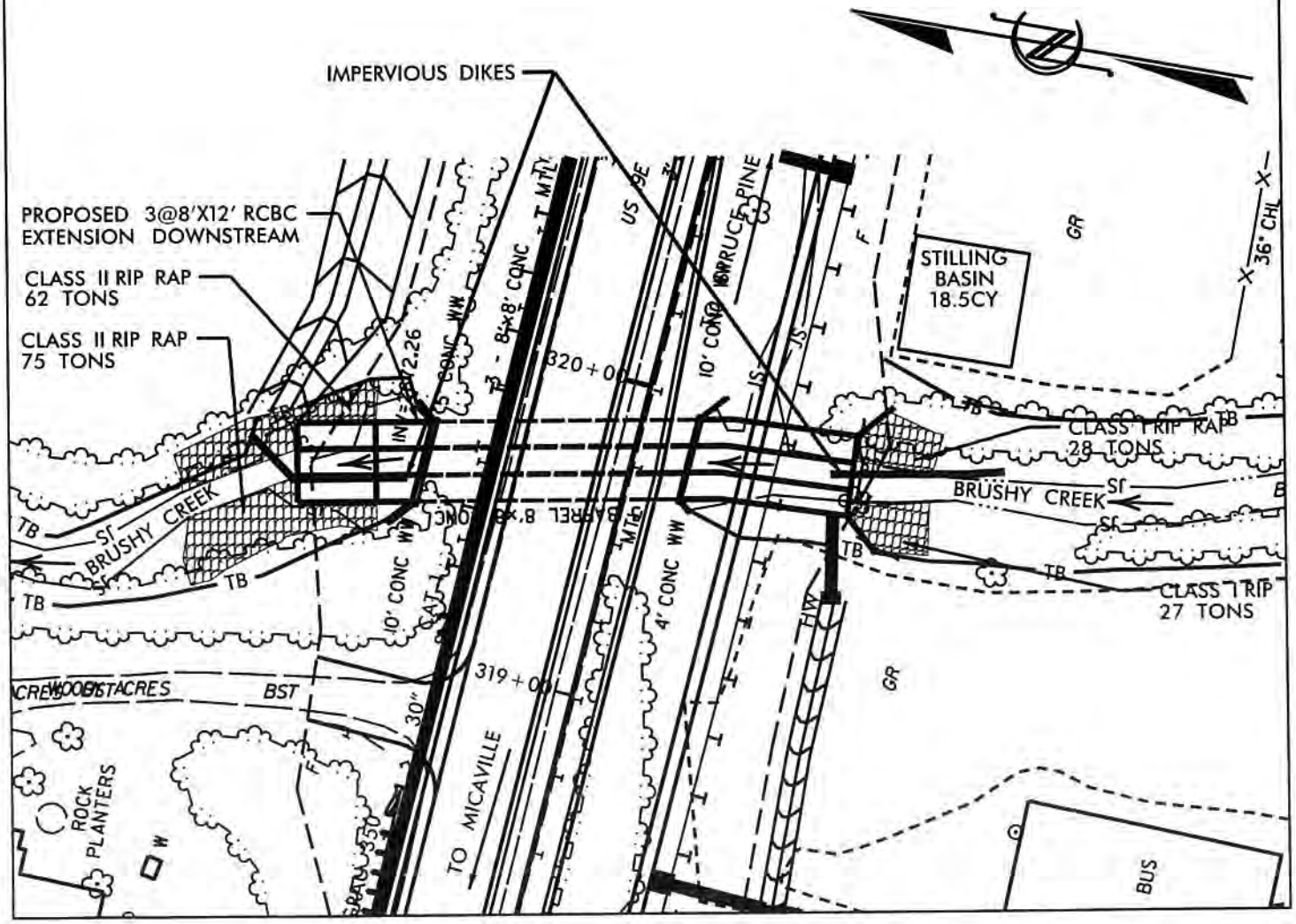
1. INSTALL EROSION CONTROL DEVICES INCLUDING STILLING BASIN WITH MINIMUM CAPACITY 13.8 C.Y. PHASE 1, AND 18.5 C.Y. PHASE 2
2. INSTALL IMPERVIOUS DIKES AS SHOWN
3. DIVERT FLOW THROUGH TWO EASTERN MOST BARRELS
4. DRY OUT WORK AREA, PUMPING EFFLUENT INTO STILLING BASIN
5. CONSTRUCT WESTERN MOST BARREL EXTENSION AND PROPOSED FISH LADDER



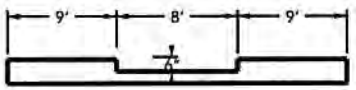
(7.) CONSTRUCTION SEQUENCE ON R-2519B 3@8'X12' RCBC AT STA 319+76.16-L- BRUSHY CREEK

PHASE 2:

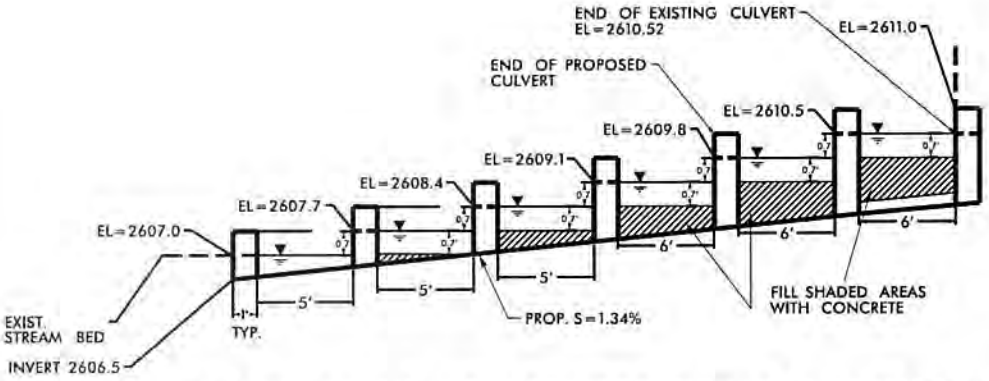
1. INSTALL IMPERVIOUS DIKES AS SHOWN
2. DIVERT FLOW THROUGH WESTERN MOST BARREL
3. DRY OUT WORK AREA, PUMPING EFFLUENT INTO STILLING BASIN
4. CONSTRUCT TWO EASTERN MOST BARRELS EXTENSIONS AND PROPOSED FISH LADDER
5. REMOVE IMPERVIOUS DIKES
6. CONSTRUCT ROADWAY FILL
7. REMOVE EROSION CONTROL DEVICES



FISH LADDER DETAIL

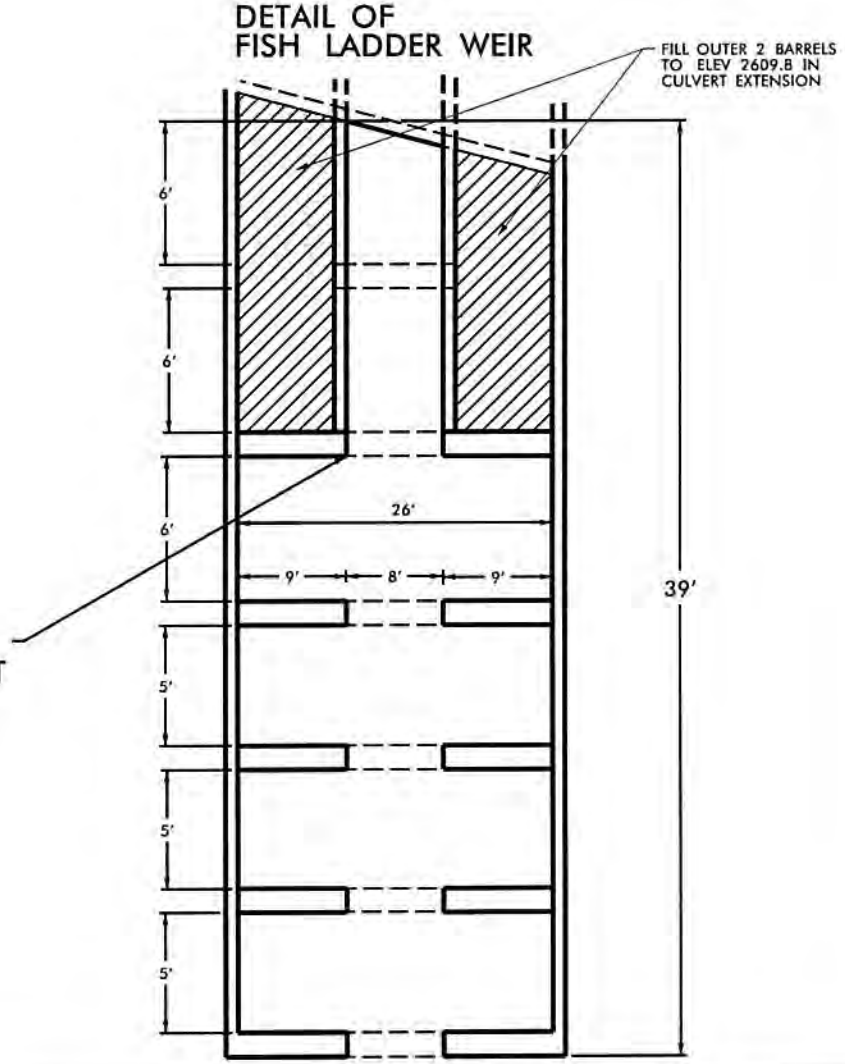


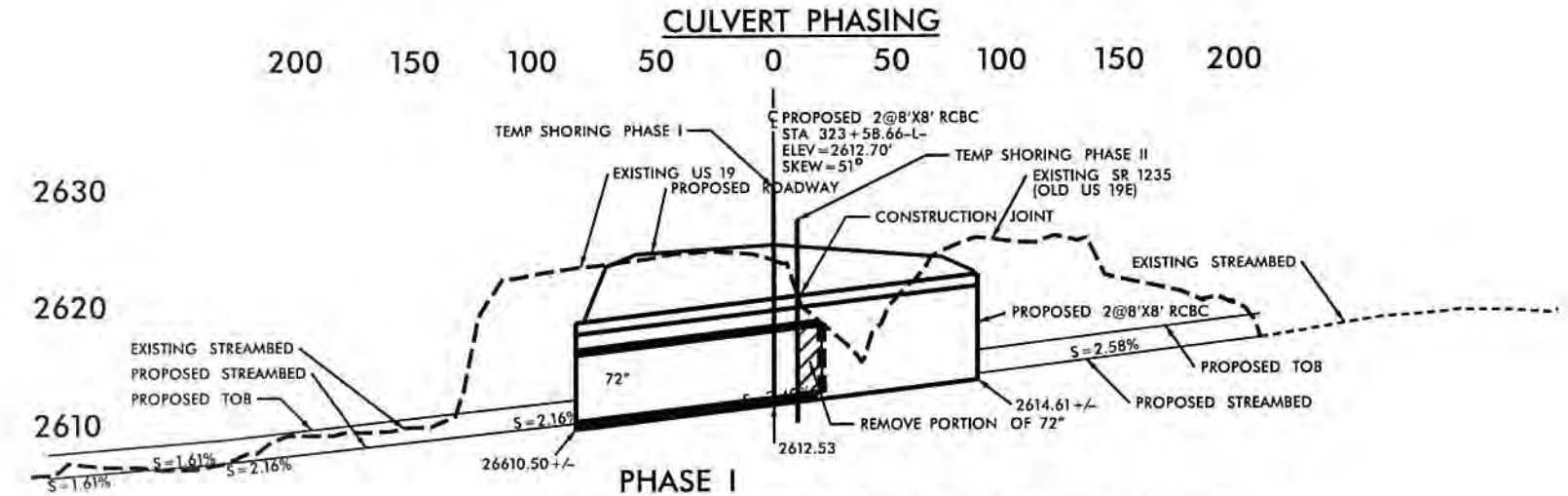
NOT TO SCALE



PROFILE ALONG CENTERLINE OF CULVERT

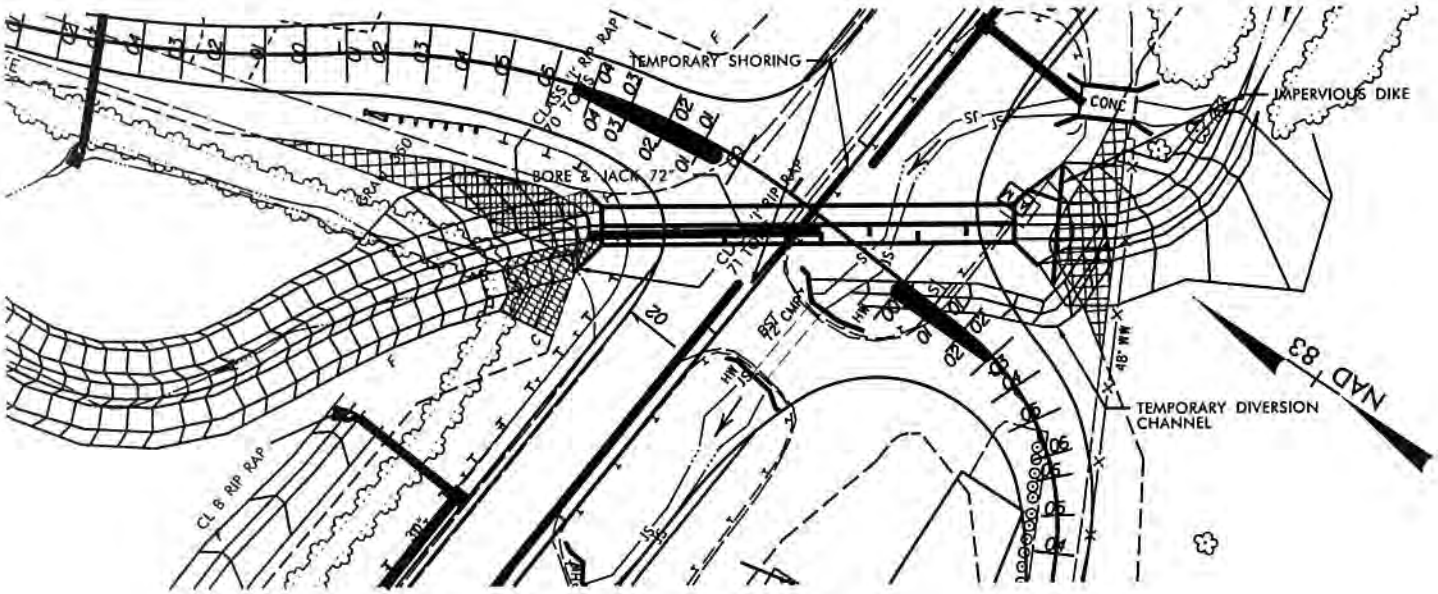
DETAIL OF FISH LADDER WEIR





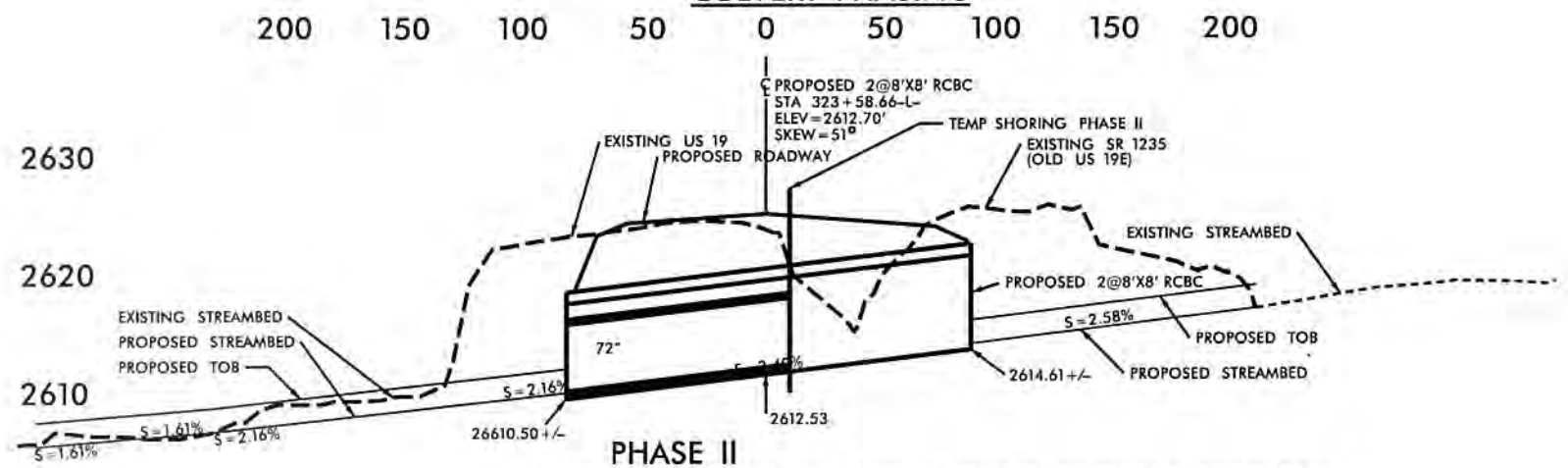
PHASE I

1. REALIGN -Y31- LINE.
2. CONSTRUCT DOWNSTREAM AND UPSTREAM CHANNEL RELOCATION AND STABILIZE.
3. CONSTRUCT TEMPORARY DIVERSION CHANNEL UPSTREAM AND IMPERVIOUS DIKE.
4. BORE AND JACK 72" PIPE.
5. INSTALL TEMPORARY SHORING, REMOVE PORTION OF 72" BACK TO SHORING.
6. CONSTRUCT UPSTREAM PORTION OF 2 @ 8' X 8' RCBC.
7. REMOVE PORTION OF IMPERVIOUS DIKE AND DIVERT FLOW THROUGH SINGLE BARREL OF 8'X8' RCBC AND 72" PIPE.
8. FINISH CONSTRUCTING EASTBOUND LANE. USE SHORING AT CULVERT TO HOLD BACK FILL.



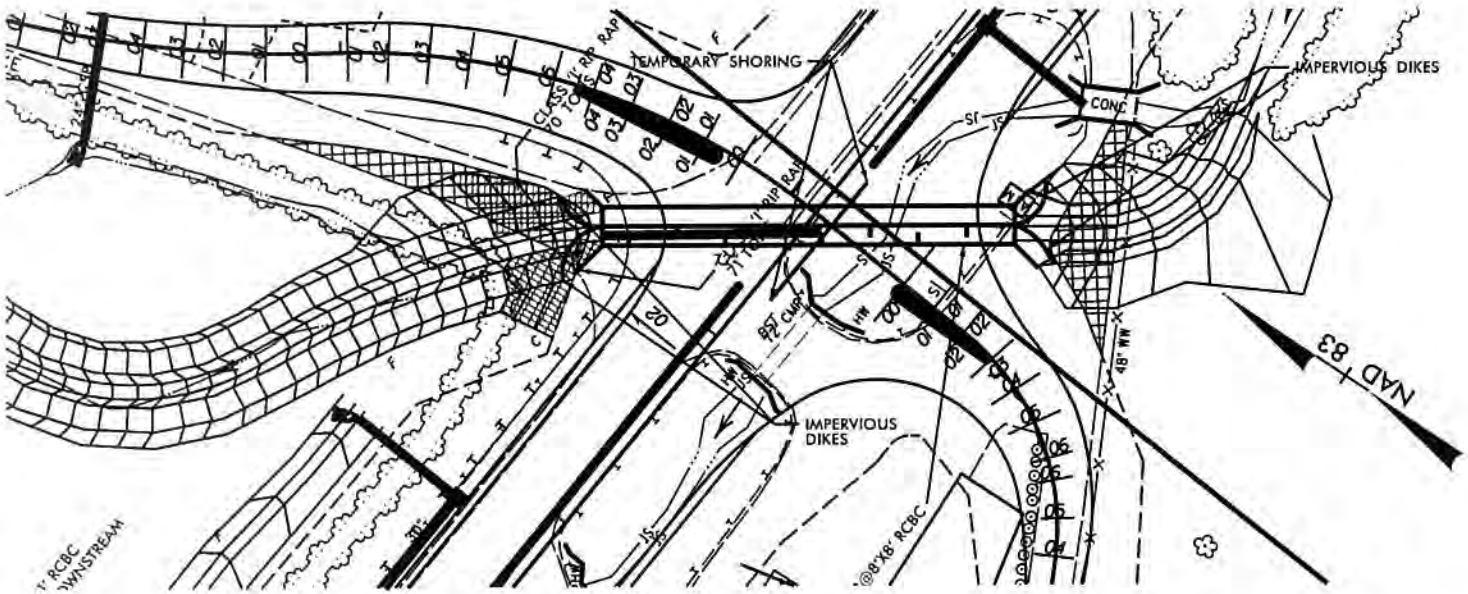
Culvert Replacement - Site 8

CULVERT PHASING



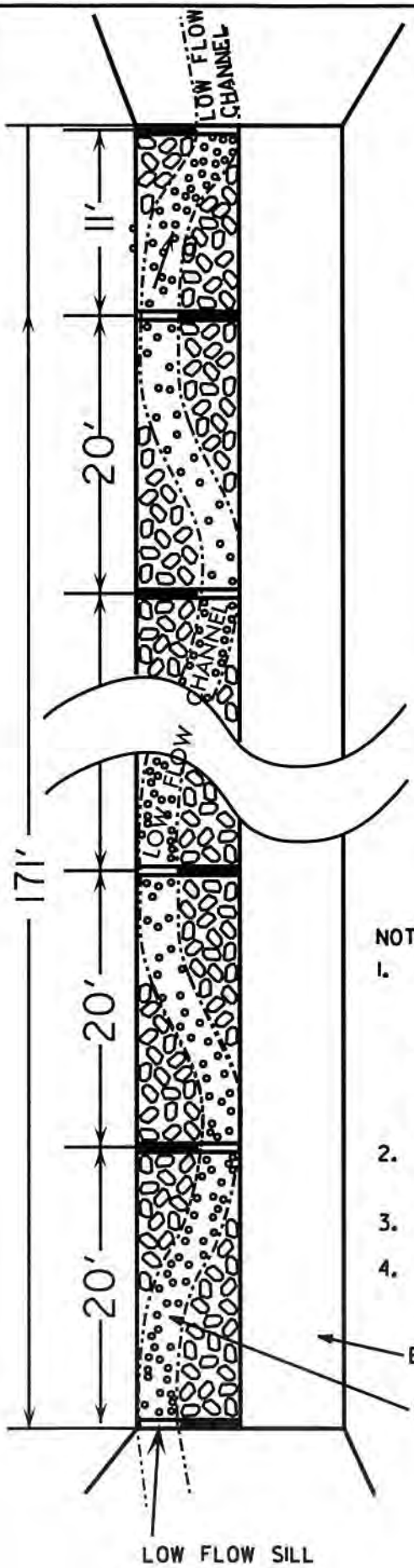
PHASE II

1. CONSTRUCT EASTERN MOST CULVERT BARREL (IN WESTBOUND DIRECTION) AND MAINTAIN FLOW IN 72" PIPE.
2. CONSTRUCT IMPERVIOUS DIKES.
3. DIVERT FLOW INTO EASTERN MOST CULVERT BARREL USING IMPERVIOUS DIKES.
4. CONSTRUCT WESTERN MOST CULVERT BARREL.
5. REMOVE IMPERVIOUS DIKES.
6. COMPLETE ROADWAY CONSTRUCTION.

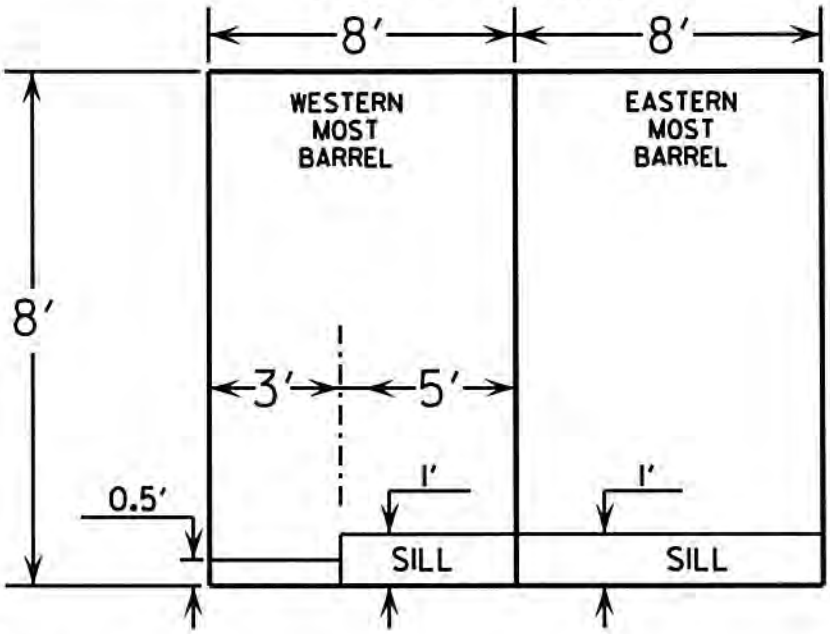


(8)

DETAIL OF LOW FLOW CHANNEL AND SILLS -L- STA. 323+58.66 2 @ 8'x8' RCBC UT to BRUSHY CREEK (not to scale)



CROSS SECTION



NOTE:

1. Bed material placed between sills in the culvert shall provide a continuous low flow channel between the lower sills. The material shall be natural stone with a gradation size similar to that of Class B riprap. Stones larger than 6 inches shall not be placed within the low flow channel. Bed material is subject to approval by the Engineer.
2. Sills are to be 1' wide and cast seperately and attached by dowels.
3. The 1' high and 0.5' high sills are to be seperate units.
4. Top of low flow sill should match stream bed elevation in low flow channel of stream.

NCDOT
DIVISION OF HIGHWAYS
YANCEY/MITCHELL COUNTIES

PROJECT: 35609.1.1 (R-2519B)
US 19E FROM SR1186 (OLD US 19) IN YANCEY COUNTY TO MULTI-LANE SECTION WEST OF SPRUCE PINE IN MITCHELL COUNTY

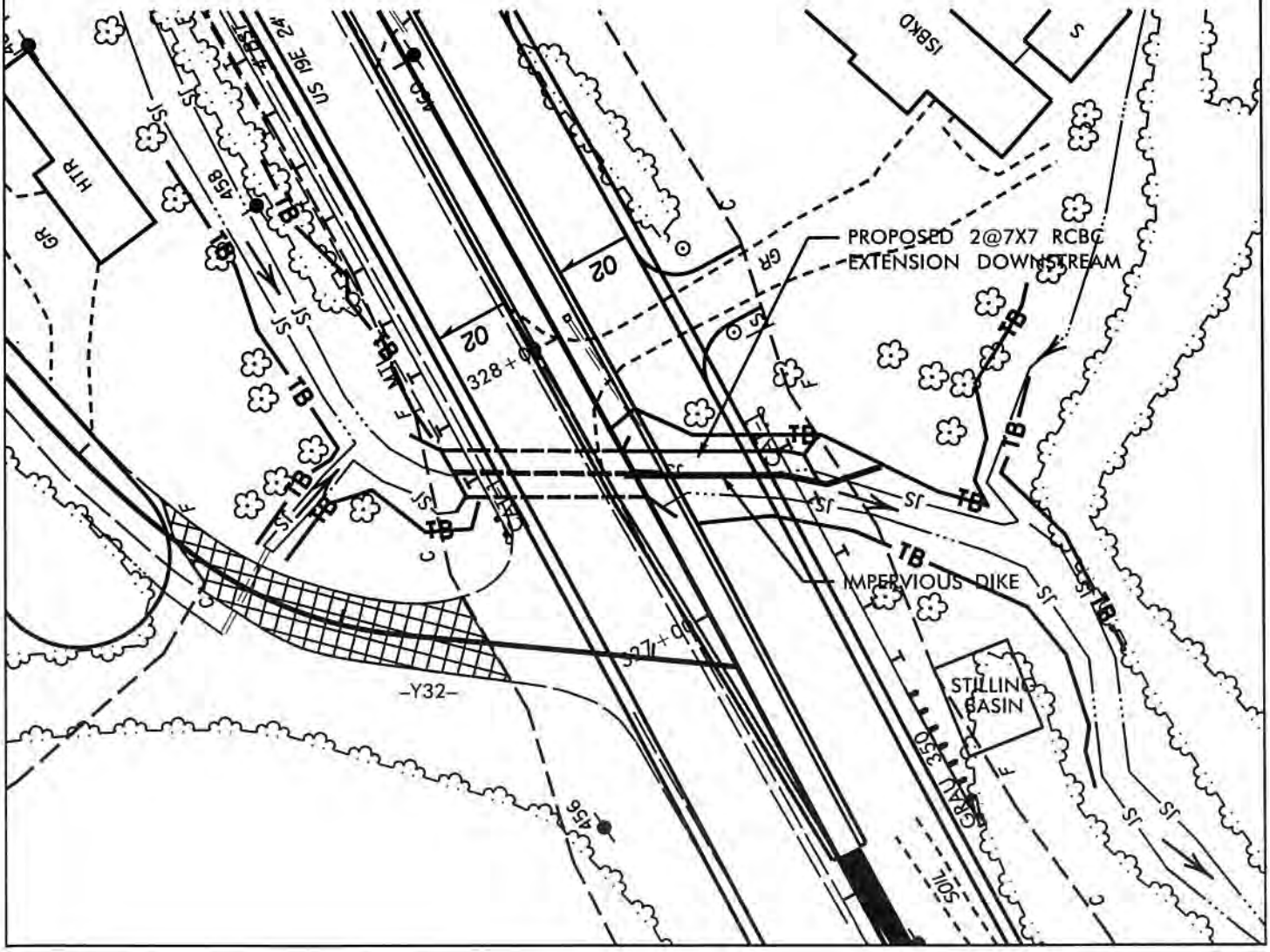
SHEET OF

(9)

CONSTRUCTION SEQUENCE ON R-2519B 2@7'X7' RCBC EXTENSION DOWNSTREAM AT STA 327+50.47-L- UT TO BRUSHY CREEK

PHASE 1:

1. INSTALL STILLING BASIN, CAPACITY= 1.0 CY (PHASE 2 CAPACITY=5.5 CY)
2. INSTALL IMPERVIOUS DIKE AS SHOWN
3. DIVERT FLOW THROUGH WESTERN MOST BARREL
4. DRY OUT WORK AREA, PUMPING EFFLUENT INTO STILLING BASIN
5. CONSTRUCT EASTERN CULVERT EXTENSION

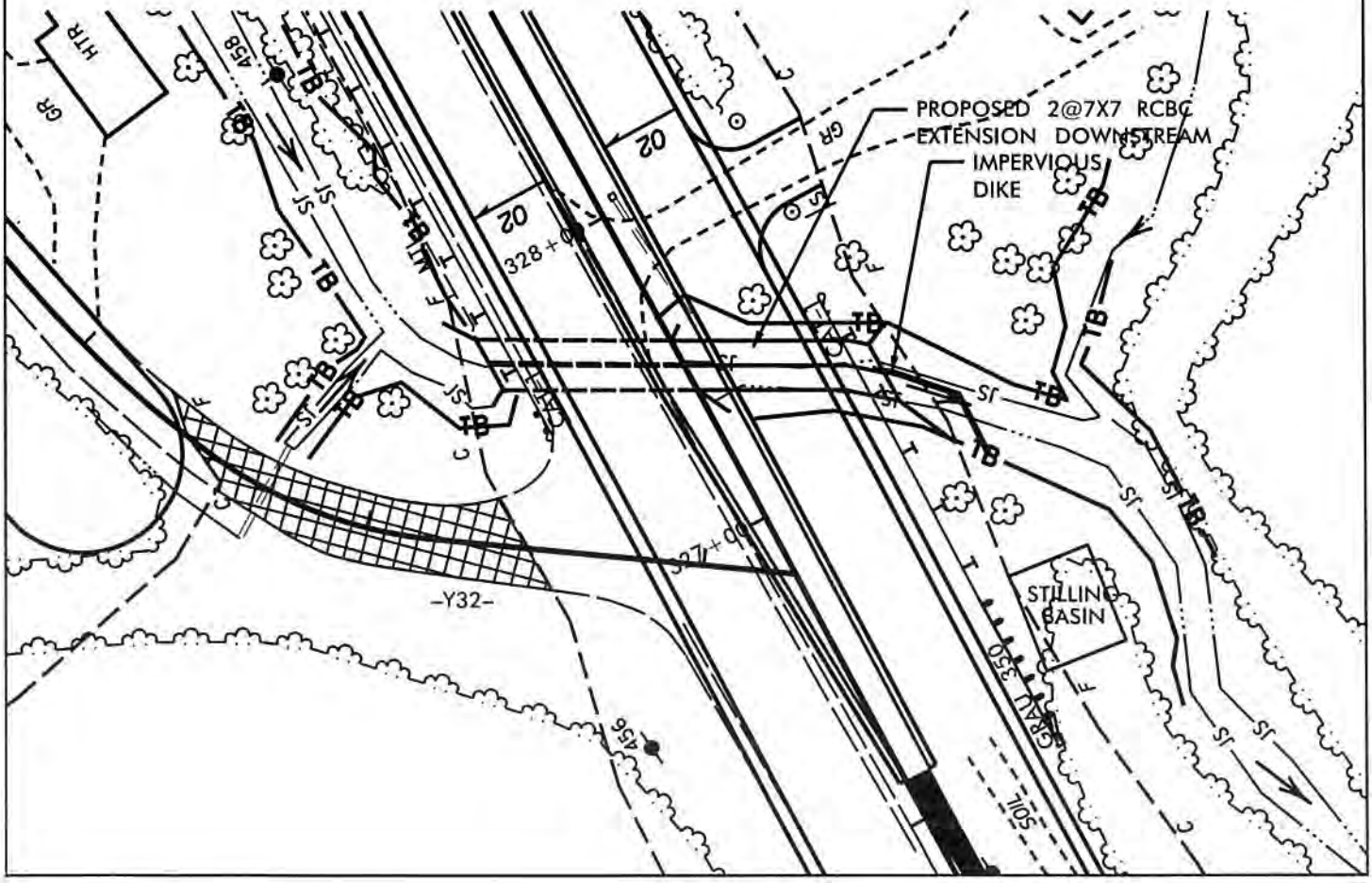


(9)

CONSTRUCTION SEQUENCE ON R-2519B
2@7'X7' RCBC EXTENSION DOWNSTREAM
AT STA 327+50.47-L-
UT TO BRUSHY CREEK

PHASE 2:

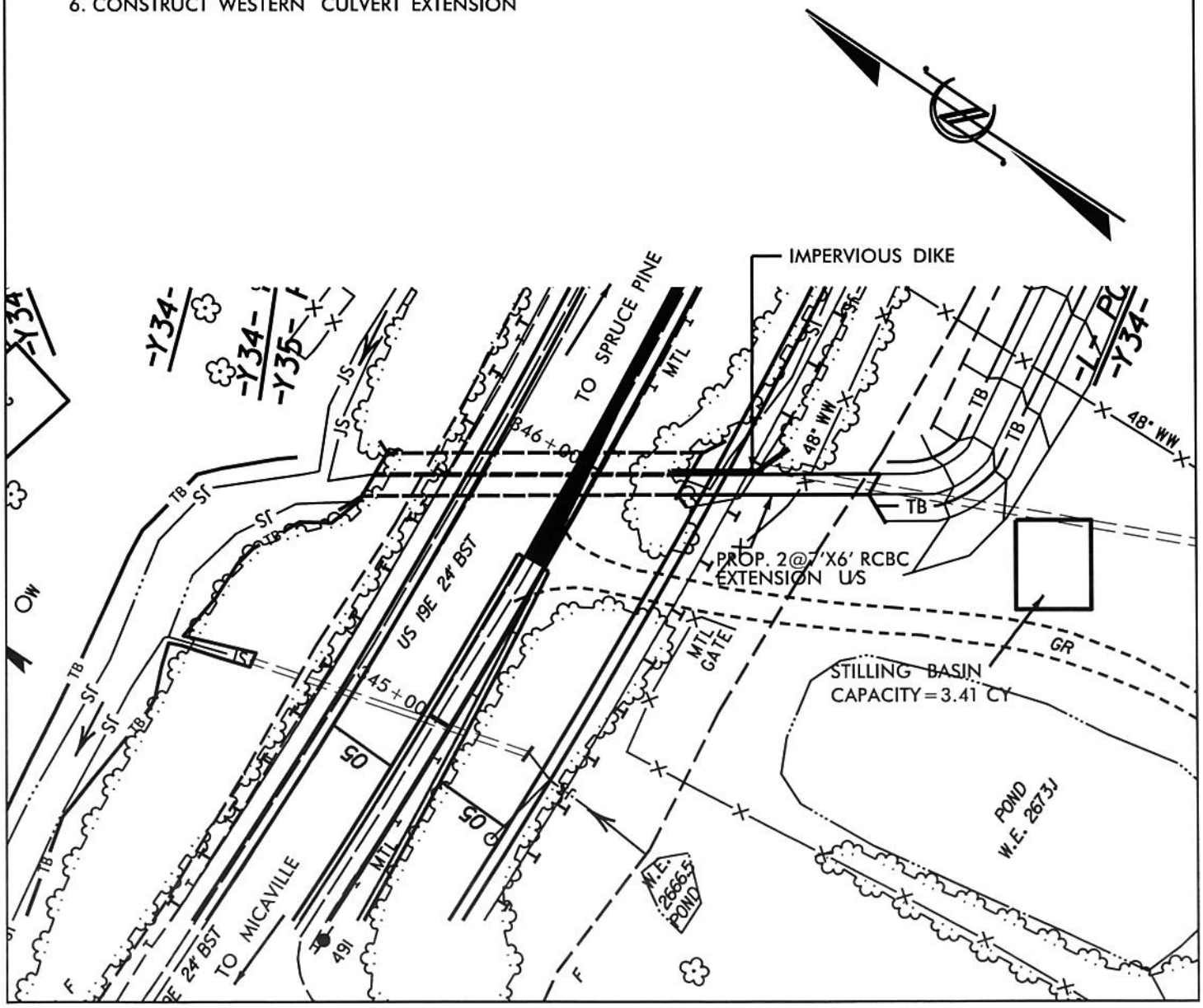
1. INSTALL IMPERVIOUS DIKE AS SHOWN
2. DIVERT FLOW THROUGH EASTERN MOST BARREL
3. DRY OUT WORK AREA, PUMPING EFFLUENT INTO STILLING BASIN
4. CONSTRUCT WESTERN CULVERT EXTENSION
5. REMOVE IMPERVIOUS DIKE
6. CONSTRUCT ROADWAY FILL
7. REMOVE EROSION CONTROL DEVICES



CONSTRUCTION SEQUENCE ON R-2519B
2@7'X6' RCBC AT STA 345+98.42 -L-
UT TO BRUSHY CREEK

PHASE 1:

1. CONSTRUCT STREAM RELOCATION IN THE DRY AND STABILIZE
2. INSTALL STILLING BASIN, CAPACITY = 3.41 CY UPSTREAM (USE FOR BOTH PHASES)
3. INSTALL IMPERVIOUS DIKE AS SHOWN
4. DIVERT FLOW THROUGH EASTERN MOST BARREL
5. DRY OUT WORK AREA, PUMPING EFFLUENT TO STILLING BASIN
6. CONSTRUCT WESTERN CULVERT EXTENSION

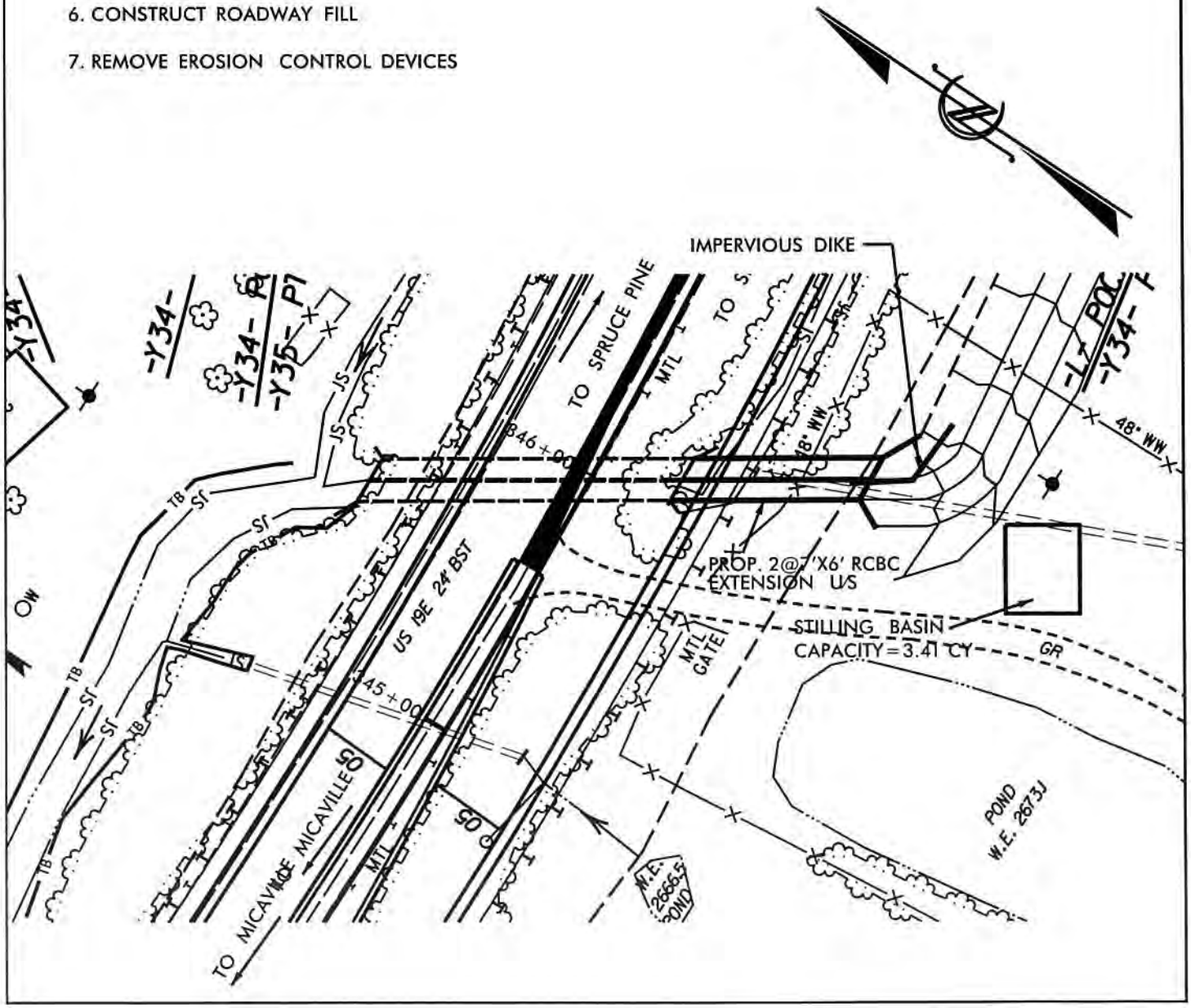


(10)

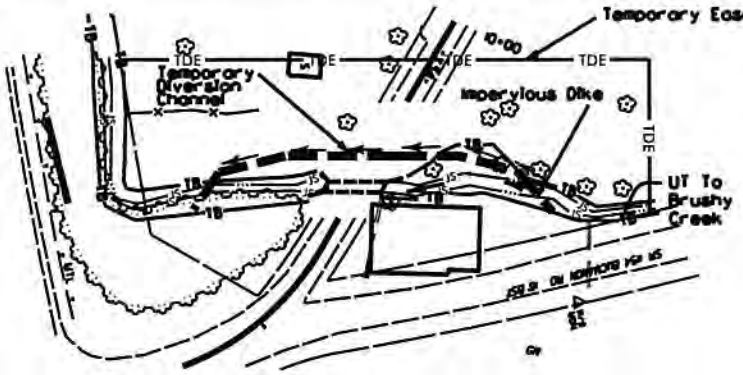
CONSTRUCTION SEQUENCE ON R-2519B
2@7'X6' RCBC AT STA 345+98.42 -L-
UT TO BRUSHY CREEK

PHASE 2:

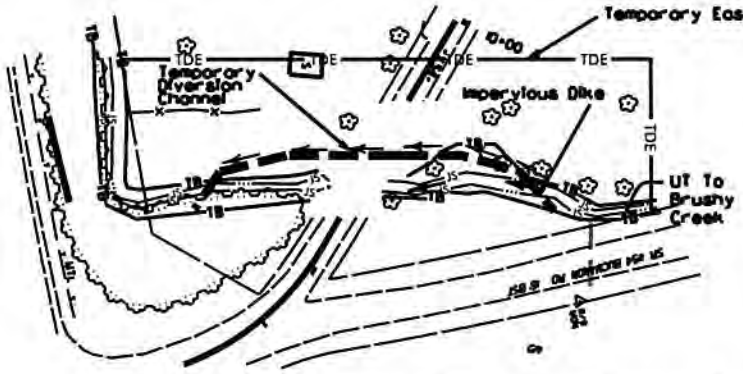
1. INSTALL IMPERVIOUS DIKE AS SHOWN
2. DIVERT FLOW INTO CHANNEL RELOCATION AND THROUGH WESTERN MOST BARREL
3. DRY OUT WORK AREA
4. CONSTRUCT EASTERN CULVERT EXTENSION
5. REMOVE IMPERVIOUS DIKE
6. CONSTRUCT ROADWAY FILL
7. REMOVE EROSION CONTROL DEVICES



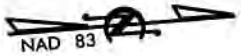
CONSTRUCTION SEQUENCE ON R-2519B, 6'X7' RCBC AT STA. 11+08 -Y34-

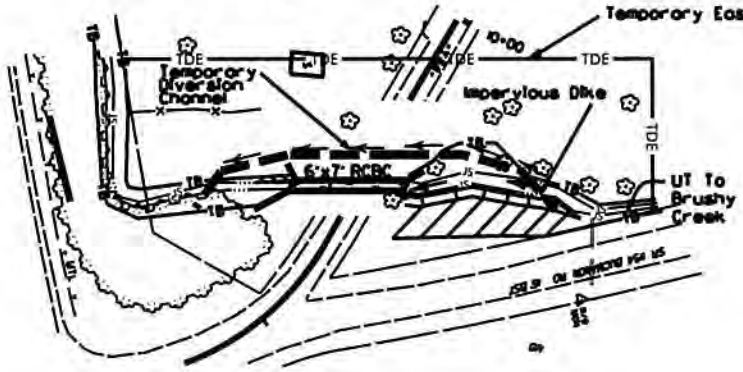


1. Install erosion control devices including stilling basin with minimum capacity 5 c.y. for pumped effluent.
2. Construct temporary diversion channel with temporary liner.
3. Install impervious dikes.
4. Use silt bag.

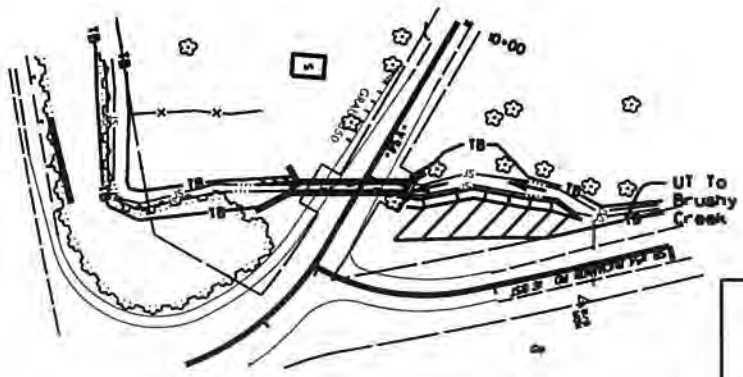


5. Remove existing structures.





6. Construct culvert and channel improvements upstream and downstream of impervious dike.



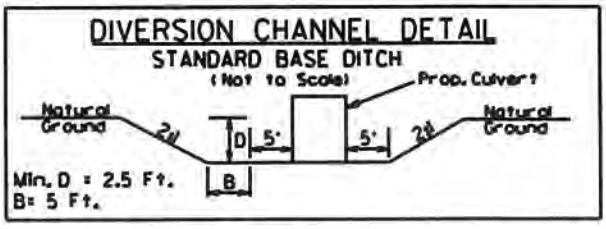
7. Remove impervious dike, diversion channel, backfill temporary, and divert water to new culvert.
8. Upon permanent stabilization of all disturbed areas, remove all temporary erosion control devices.

Diversion Channel Information

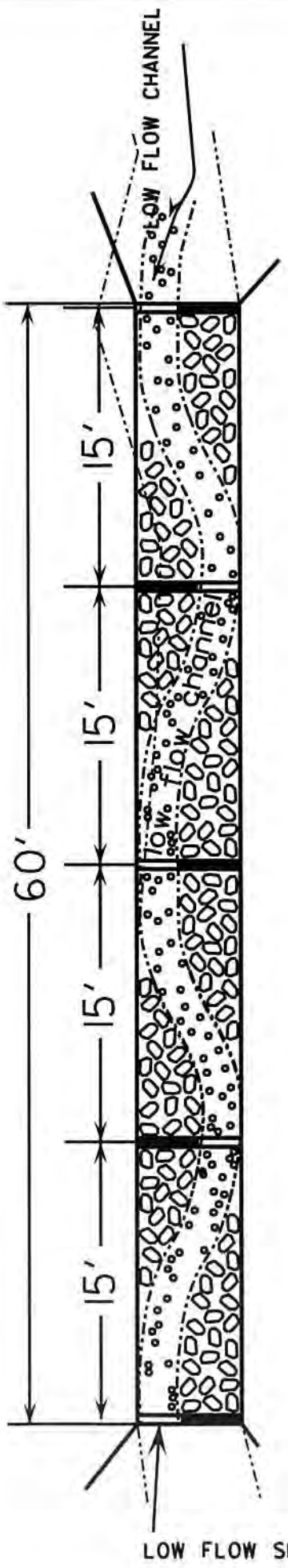
Slope = 3.4%
5yr storm = 85 cfs

5' base with 2:1 sides (preferred)
water depth = 1.41 ft; vel. = 7.1 ft/s

5' base with 1:1 sides
water depth = 1.56 ft; vel. = 8.3 ft/s

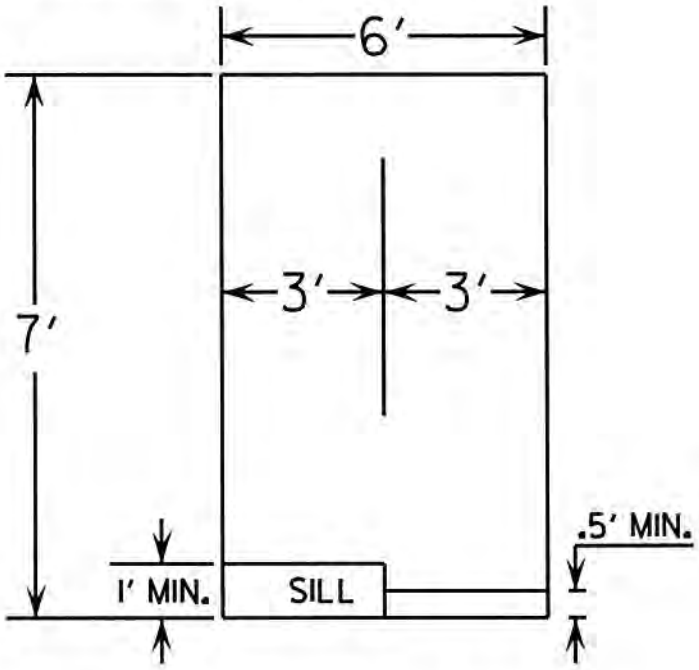


(11)



DETAIL OF LOW FLOW CHANNEL AND SILLS -Y34- STA. 11+07.96 6'x7' RCBC UT to BRUSHY CREEK (not to scale)

CROSS SECTION



NOTE:

1. Bed material placed between sills in the culvert shall provide a continuous low flow channel between the lower sills. The material shall be natural stone with a gradation size similar to that of Class B riprap. Stones larger than 6 inches shall not be placed within the low flow channel. Bed material is subject to approval by the Engineer.
2. Sills are to be 1' wide and cast seperately and attached by dowels.
3. The 1' high and 0.5' high sills are to be seperate units.
4. Top of low flow sill should match stream bed elevation in low flow channel of stream.

NCDOT

DIVISION OF HIGHWAYS
YANCEY/MITCHELL COUNTIES

PROJECT: 35609.1.1 (R-2519B)
US 19E FROM SR1186 (OLD US 19) IN YANCEY COUNTY TO MULTI-LANE SECTION WEST OF SPRUCE PINE IN MITCHELL COUNTY

SHEET OF *5/22/07*

Attachment 4: General and Standard Conditions (TVA) and Project Commitments (USACE Permit Greensheet)

GENERAL AND STANDARD CONDITIONS
Section 26a

General Conditions

1) You agree to make every reasonable effort to construct and operate the facility authorized herein in a manner so as to minimize any adverse impact on water quality, aquatic life, wildlife, vegetation, and natural environmental values.

2) This permit may be revoked by TVA by written notice if:

a) the structure is not completed in accordance with approved plans;

b) if in TVA's judgment the structure is not maintained in a good state of repair and in good, safe, and substantial condition;

c) the structure is abandoned;

d) the structure or work must be altered or removed to meet the requirements of future reservoir or land management operations of the United States or TVA;

e) TVA finds that the structure has an adverse effect upon navigation, flood control, or public lands or reservations;

f) all invoices related to this permit are not timely paid;

g) you no longer have sufficient property rights to maintain a structure at this location; or

h) a land use agreement (e.g., license, easement, lease) for use of TVA land at this location related to this permit expires, is terminated or cancelled, or otherwise ceases to be effective.

3) If this permit for this structure is revoked, you agree to remove the structure, at your expense, upon written notice from TVA. In the event you do not remove the structure within 30 days of written notice to do so, TVA shall have the right to remove or cause to have removed, the structure or any part thereof. You agree to reimburse TVA for all costs incurred in connection with removal.

4) In issuing this Approval of Plans, TVA makes no representations that the structures or work authorized or property used temporarily or permanently in connection therewith will not be subject to damage due to future operations undertaken by the United States and/or TVA for the conservation or improvement of navigation, for the control of floods, or for other purposes, or due to fluctuations in elevations of the water surface of the river or reservoir, and no claim or right to compensation shall accrue from any such damage. By the acceptance of this approval, applicant covenants and agrees to make no claim against TVA or the United States by reason of any such damage, and to indemnify and save harmless TVA and the United States from any and all claims by other persons arising out of any such damage.

5) In issuing this Approval of Plans, TVA assumes no liability and undertakes no obligation or duty (in tort, contract, strict liability or otherwise) to the applicant or to any third party for any damages to property (real or personal) or personal injuries (including death) arising out of or in any way connected with applicant's construction, operation, or maintenance of the facility which is the subject of this Approval of Plans.

6) This approval shall not be construed to be a substitute for the requirements of any federal, state, or local statute, regulation, ordinance, or code, including, but not limited to, applicable building codes, now in effect or hereafter enacted. State 401 water quality certification may apply.

7) The facility will not be altered, or modified, unless TVA's written approval has been obtained prior to commencing work.

8) You understand that covered second stories are prohibited by Section 1304.204 of the Section 26a Regulations.

9) You agree to notify TVA of any transfer of ownership of the approved structure to a third party. Third party is required to make application to TVA for permitting of the structure in their name (1304.10). Any permit which is not transferred within 60 days is subject to revocation.

10) You agree to stabilize all disturbed areas within 30 days of completion of the work authorized. All land-disturbing activities shall be conducted in accordance with Best Management Practices as defined by Section 208 of the Clean Water Act to control erosion and sedimentation to prevent adverse water quality and related aquatic impacts. Such practices shall be consistent with sound engineering and construction principles; applicable federal, state, and local statutes, regulations, or ordinances; and proven techniques for controlling erosion and sedimentation, including any required conditions under Section 6 of the Standard Conditions.

11) You agree not to use or permit the use of the premises, facilities, or structures for any purposes that will result in draining or dumping into the reservoir of any refuse, sewage, or other material in violation of applicable standards or requirements relating to pollution control of any kind now in effect or hereinafter established.

12) The Native American Graves Protection and Repatriation Act and the Archaeological Resources Protection Act apply to archaeological resources located on the premises of land connected to any application made unto TVA. If LESSEE {or licensee or grantee (for easement) or applicant (for 26a permit)} discovers human remains, funerary objects, sacred objects, objects of cultural patrimony, or any other archaeological resources on or under the premises, LESSEE {or licensee, grantee, or applicant} shall immediately stop activity in the area of the discovery, make a reasonable effort to protect the items, and notify TVA by telephone (865-228-1374). Work may not be resumed in the area of the discovery until approved by TVA.

13) You should contact your local government official(s) to ensure that this facility complies with all applicable local floodplain regulations.

14) You agree to abide by the conditions of the vegetation management plan. Unless otherwise stated on this permit, vegetation removal is prohibited on TVA land.

15) You agree to securely anchor all floating facilities to prevent them from floating free during major floods.

16) You are responsible for accurately locating your facility, and this authorization is valid and effective only if your facility is located as shown on your application or as otherwise approved by TVA in this permit. The facility must be located on land owned or leased by you, or on TVA land at a location approved by TVA.

17) You agree to allow TVA employees access to your water use facilities to ensure compliance with any TVA issued approvals.

18) It is understood that you own adequate property rights at this location. If at any time it is determined that you do not own sufficient property rights, or that you have only partial ownership rights in the land at this location, this permit may be revoked. TVA may require the applicant to provide appropriate verification of ownership.

19) In accordance with 18 CFR Part 1304.9, Approval for construction covered by this permit expires 18 months after the date of issuance unless construction has been initiated.

Standard Conditions (Only items that pertain to this request have been listed.)

2) Ownership Rights

b) You are advised that TVA retains the right to flood this area and that TVA will not be liable for damages resulting from flooding.

e) You recognize and understand that this authorization conveys no property rights, grants no exclusive license, and in no way restricts the general public's privilege of using shoreland owned by or subject to public access rights owned by TVA. It is also subject to any existing rights of third parties. Nothing contained in this approval shall be construed to detract or deviate from the rights of the United States and TVA held over this land under the Grant of Flowage Easement. This Approval of Plans does not give any property rights in real estate or material and does not authorize any injury to private property or invasion of private or public rights. It merely constitutes a finding that the facility, if constructed at the location specified in the plans submitted and in accordance with said plans, would not at this time constitute an obstruction unduly affecting navigation, flood control, or public lands or reservations.

3) Shoreline Modification and Stabilization

a) For purposes of shoreline bank stabilization, all portions will be constructed or placed, on average, no more than two feet from the existing shoreline at normal summer pool elevation.

c) Bank, shoreline, and floodplain stabilization will be permanently maintained in order to prevent erosion, protect water quality, and preserve aquatic habitat.

5) Bridges and Culverts

a) You agree to design/construct any instream piers in such a manner as to discourage river scouring or sediment deposition.

b) Applicant agrees to construct culvert in phases, employing adequate streambank protection measures, such that the diverted streamflow is handled without creating streambank or streambed erosion/sedimentation and without preventing fish passage.

c) Concrete box culverts and pipe culverts (and their extensions) must create/maintain velocities and flow patterns which offer refuge for fish and other aquatic life, and allow passage of indigenous fish species, under all flow conditions. Culvert floor slabs and pipe bottoms must be buried below streambed elevation, and filled with naturally occurring streambed materials. If geologic conditions do not allow burying the floor, it must be otherwise designed to allow passage of indigenous fish species under all flow conditions.

d) All natural stream values (including equivalent energy dissipation, elevations, and velocities; riparian vegetation; riffle/pool sequencing; habitat suitable for fish and other aquatic life) must be provided at all stream modification sites. This must be accomplished using a combination of rock and bioengineering, and is not accomplished using solid, homogeneous riprap from bank to bank.

e) You agree to remove demolition and construction by-products from the site for recycling if practicable, or proper disposal--outside of the 100-year floodplain. Appropriate BMPs will be used during the removal of any abandoned roadway or structures.

6) Best Management Practices

a) You agree that removal of vegetation will be minimized, particularly any woody vegetation providing shoreline/streambank stabilization.

b) You agree to installation of cofferdams and/or silt control structures between construction areas and surface waters prior to any soil-disturbing construction activity, and clarification of all water that accumulates behind these devices to meet state water quality criteria at the stream mile where activity occurs before it is returned to the unaffected portion of the stream. Cofferdams must be used wherever construction activity is at or below water elevation.

c) A floating silt screen extending from the surface to the bottom is to be in place during excavation or dredging to prevent sedimentation in surrounding areas. It is to be left in place until disturbed sediments are visibly settled.

d) You agree to keep equipment out of the reservoir or stream and off reservoir or stream banks, to the extent practicable (i.e., performing work "in the dry").

e) You agree to avoid contact of wet concrete with the stream or reservoir, and avoid disposing of concrete washings, or other substances or materials, in those waters.

f) You agree to use erosion control structures around any material stockpile areas.

g) You agree to apply clean/shaken riprap or shot rock (where needed at water/bank interface) over a water permeable/soil impermeable fabric or geotextile and in such a manner as to avoid stream sedimentation or disturbance, or that any rock used for cover and stabilization shall be large enough to prevent washout and provide good aquatic habitat.

h) You agree to remove, redistribute, and stabilize (with vegetation) all sediment which accumulates behind cofferdams or silt control structures.

i) You agree to use vegetation (versus riprap) wherever practicable and sustainable to stabilize streambanks, shorelines, and adjacent areas. These areas will be stabilized as soon as practicable, using either an appropriate seed mixture that includes an annual (quick cover) as well as one or two perennial legumes and one or two perennial grasses, or sod. In winter or summer, this will require initial planting of a quick cover annual only, to be followed by subsequent establishment of the perennials. Seed and soil will be protected as appropriate with erosion control netting and/or mulch and provided adequate moisture. Streambank and shoreline areas will also be permanently stabilized with native woody plants, to include trees wherever practicable and sustainable (this vegetative prescription may be altered if dictated by geologic conditions or landowner requirements). You also agree to install or perform additional erosion control structures/techniques deemed necessary by TVA.

Additional Conditions

PROJECT COMMITMENTS

US 19E Improvements

From SR 1186 in Micaville to the existing multilane section west of Spruce Pine
Yancey and Mitchell Counties
WBS Element 35609.1.1 State Project Number 6.909001T
TIP Project Number: R-2519B
Note: Updates for commitments during design appear in Italics below.

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

Project Development and Environmental Analysis Branch

- Additional surveys are needed for the federally protected Virginia Spiraea. The effect of the proposed action this species will be identified in the project final environmental document.

- Additional surveys for the Virginia Spiraea were performed in June 2006. No plants were found in the project vicinity. A biological conclusion of "No Effect" was rendered by NCDOT and concurred upon by the US Fish and Wildlife Service. This State Finding of No Significant Impact is the final environmental document on the proposed action.

    - Virginia spiraea will be resurveyed in summer 2012.
    A Virginia spiraea survey was conducted on July 3, 2012, with no specimens found.

- The improvements to US 19E will have an adverse effect on archaeological sites 31YC31 and 31YC183. Data Recovery Plans to recover archaeological materials for analysis and interpretation of the occupation of the sites will be drawn-up by the Project Development and Environmental Analysis (PDEA) Branch. Additionally, the Human Environment Unit of PDEA will coordinate with the US Army Corps of Engineers to develop a Memorandum of Agreement (MOA) concerning mitigation for archaeological sites 31YC31 and 31YC183. The recovery plans and the MOA will be completed prior to project letting.

    - *Data recovery on archaeological sites 31YC31 and 31YC183 will be completed prior to the project letting. No portion of the archaeological sites, 31YC31 or 31YC183, outside of the project APE (Area of Potential Effect), will be used for parking or for assembly areas during the construction of this project.*

- NCDOT-PDEA will also coordinate with the Tribal Historic Preservation Officer to develop a Memorandum of Agreement (MOA) concerning mitigation for archaeological sites 31YC31 and 31YC183. *This has been done. No MOA with the Eastern Band of the Cherokee Indians was necessary.*

    - *Although no Native American burials heretofore have been identified at site 31CY31, consideration, study and excavation of any identified burials will be established in consultation with signatories to the MOA, at such time as they are encountered and will follow NCGS Chapter 70, Article 3, regarding "Unmarked Human Burial and Human Skeletal Remains Protection Act."*

Project Development and Environmental Analysis Branch

- The NCDOT will put forth its best effort to suppress the Japanese Knotweed population within the project limits, with the use of aquatic labeled glyphosate; but it cannot guarantee the eradication of the species using this method. Additionally, the construction contract(s) for this project will

stipulate that any knotweed material disturbed through construction activities at the two bridge sites, as well as in identified mitigation sites, will be buried within the project boundaries in fill or waste areas, below the depth of the topsoil.

Project Development and Environmental Analysis Branch, Right-of-Way Branch and Division 13

- The Human Environment Unit will provide the Right-of-Way Branch with notification of the prepared archaeological Data Recovery Plans, so they may acquire parcels that contain eligible sites, as soon as possible after right-of-way authorization. Acquisition of these parcels will occur at least 12 months prior to the let date. No construction activities will be allowed within either site limits, until the data recovery investigations are completed.

    - These parcels have been marked as "culturally sensitive" on the project roadway plans. Notify the PDEA Human Environment Unit Archaeology Group once the NCDOT Right-of-Way Office has acquired the parcels containing archaeological sites.
      This has occurred.

Roadway Design Unit

- The improvements to US 19E will have an effect on the National Register eligible E. W. and Dollie Huskins House (Roadway Station 220+00). The proposed design will include a seeded slope that is feasible for mowing by the owner.

- The Roadway Design Unit will coordinate with the Human Environment Unit (HEU) – Archaeology to accurately depict archaeological sites on the final design plans. If design modifications are required, the Roadway Design Unit will contact and coordinate with the HEU – Archaeology.
  This has occurred.

Roadway Design Unit, Hydraulic Design Unit and Roadside Environmental Unit

- The proposed project is located within a critical habitat area for the federally protected Appalachian Elktoe Mussel. Therefore, the NCDOT will implement erosion and sedimentation control measures, as specified by NCDOT's "Design Standards in Sensitive Watersheds," (15A NCAC 04B.0124 (a)-(e)). Detailed plans for the placement of appropriate hydraulic drainage structures will be determined during the final design of the project.

- Two Concurrence Point 4B Meetings (Hydraulic Design Review) were held with Merger Process Team Members on July 22, 2009, and on September 23, 2009, to review the layout of the proposed drainage structures and stormwater BMP designs for the project. A subsequent field meeting was held with Merger Process Team Members on June 28, 2011, to review bridge alternatives for the South Toe River bridge crossing. As a result of this meeting, the Merger Process Team agreed to investigate another bridge alternative at this location, to further minimize impacts to the federally protected Appalachian Elktoe Mussels. A follow-up meeting to discuss the additional proposed bridge design alternative and to concur on a final bridge design alternative is anticipated to occur in the fall or winter of 2011.

  Follow-up meetings occurred on June 20, 2012, and on August 22, 2012, at which time the Merger Process Project Team agreed on a concrete girder bridge arrangement, with three spans of 100, 140 and 75 feet in length. A follow-up merger process team meeting was held in the field on November 15, 2012, at the site of the South Toe River crossing, during which time the mussel habitat and the proposed bridge alignment were located. Mitigation efforts, constructability and erosion control issues were discussed and agreed upon.

- On the previous sections of this corridor, (Projects R-2518A & R-2518B), for the commitment for "Design Standards in Sensitive Watersheds," the North Carolina Department of the Environment and Natural Resources, Division of Water Quality (NCDENR-DWQ) has granted NCDOT an exemption from part (a) of the "Design Standards in Sensitive Watersheds," referenced above. Part (a) restricts the amount of "uncovered acres" at any one time, to 20 acres. Due to the nature of our construction processes for a project of this magnitude, this restriction is impractical for NCDOT. NCDOT will apply for a similar exemption to part (a) on this project for construction.

Division 13

- In-stream work and land disturbance within the 25-foot wide trout stream buffer zone should be prohibited during the trout spawning season of October 15-April 15, to protect the egg and fry stages of trout from off-site sedimentation during construction.

Updated trout moratoriums for this project include:

- Big Crabtree Creek (& UTs) – October 15 to April 15
- Brushy Creek (& UTs) – January 1 to April 15
- Long Branch (& UTs) - January 1 to April 15
- ~~South Toe River Mussel spawning moratorium April 1 to June 30~~
- *Little Crabtree Creek (& UTs) – January 1 to April 15*

The South Toe River mussel spawning moratorium was rescinded by NCWRC via email on July 18, 2013 and by USFWS via email on July 9, 2013. (Both emails are attached)

Hydraulic Design Unit

- Coordinate with the Federal Emergency Management Agency and local authorities in the final design stage, to ensure compliance with applicable floodplain ordinances.

- The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP), to determine status of project with regard to applicability of NCDOT'S Memorandum of Agreement, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).

Division 13

- This project involves construction activities on or adjacent to FEMA-regulated stream(s). Therefore, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying that the drainage structure(s) and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

Structure Design Unit

- A TVA Section 26a permit or wavier is required for all proposed obstructions involving streams or floodplains in the Tennessee River drainage basin. This permit or wavier will be obtained prior to project construction. The TVA is a cooperating agency for this project.

COMMITMENTS FROM PERMITTING

Natural Environment Unit/Division 13

From the 404 Individual Permit – Special Conditions

WORK LIMITS

1) All work authorized by this permit must be performed in strict compliance with the attached plans (Wetland/Surface Water Permit Drawings) titled "TIP Project: R-2519B," Sheets 1-114, to include the revisions of October 2013, which are a part of this permit. Any modification to these plans must be approved by the U.S. Army Corps of Engineers (USACE) prior to implementation.

2) Except as authorized by this permit or any USACE approved modification to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, within waters or wetlands. This permit does not authorize temporary placement or double handling of excavated or fill material within waters or wetlands outside the permitted area. This prohibition applies to all borrow and fill activities connected with this project.

3) Except as specified in the plans attached to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, in such a manner as to impair normal flows and circulation patterns within waters or wetlands or to reduce the reach of waters or wetlands.

4) The permittee shall schedule a pre-construction meeting between their representatives, the contractor, and the USACE, Wilmington District, Asheville Regulatory Field Office, NCDOT Regulatory Project Manager, prior to any work in jurisdictional waters of the U.S. to ensure that there is a mutual understanding of all terms and conditions contained in this DA permit. The permittee shall provide the NCDOT Regulatory Project Manager with a copy of the final plans at least two (2) weeks prior to the pre-construction meeting along with a description of any changes that have been made to the project's design, construction methodology or construction timeframe. The permittee shall schedule the pre-construction meeting for a time when the USACE and the North Carolina Division of Water Resources (NCDWR) Project Managers can attend. The permittee shall notify the USACE and NCDWR Project Managers a minimum of thirty (30) days in advance of the meeting.

5) The permittee shall advise the USACE in writing at least two (2) weeks prior to beginning the work authorized by this permit and again upon completion of the work authorized by this permit.

RELATED LAWS

6) The permittee shall fully implement and abide by all stipulations identified in the Memorandum of Agreement titled "Memorandum of Agreement Between the Department of the Army, Corps of Engineers and the State Historic Preservation Officer for US 19E Improvements to a Multilane Facility between Micaville and Spruce Pine Yancy *(sic)* and Mitchell Counties, North Carolina Transportation Improvement Project R-2519B," signed June 2012, which is incorporated herein by reference.

7) NCDOT shall comply with its commitments regarding the National Register eligible E.W. and Dollie Huskins House. The final design shall include a seeded slope that is feasible for mowing/is maintainable by the property owner.

8) If the permittee discovers any previously unknown historic or archaeological sites while accomplishing the authorized work, he shall immediately stop work and notify the USACE, Asheville Regulatory Field Office NCDOT Regulatory Project Manager who will initiate the required State/Federal coordination.

9) This USACE permit does not authorize you to take an endangered species, in particular, the Appalachian elktoe mussel (*Alasmidonta raveneliana*). In order to legally take a listed species, you must have separate authorization under the Endangered Species Act (ESA) (e.g., a Biological Opinion under the ESA, Section 7, with "incidental take" provisions with which you must comply). The U.S. Fish and Wildlife Service's (USFWS's) Biological Opinion, dated March 14, 2008, and amended on January 9, 2009, and August 1, 2013 (collectively referred to hereinafter as BO), contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that is specified in the BO. Your authorization under this USACE permit is conditional upon your compliance with all the mandatory terms and conditions associated with incidental take of the BO, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the BO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute non- compliance with your USACE permit. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its BO, and with the ESA.
Biological Opinions are attached

10) NCDOT will conduct winter tree cutting between August 15 and April 15 (of any year) as an avoidance measure for the Northern Long-eared Bat (*Myotis septentrionalis*). Any felled trees that are not part of an active work area during this time shall be left in place until clearing, grubbing and seeding can commence after April 15. Any winter tree cutting conducted in a trout buffer will be cut by hand only and the felled trees will be left in place until the trout moratorium has ended (after April 15 of any year). Within the trout buffer area, dropping trees into the stream must be avoided whenever possible. This condition is project specific and

applies only to the R-2519B, US 19E Widening Project in Yancey and Mitchell Counties of North Carolina.

11) All necessary precautions and measures will be implemented so that any activity will not kill, injure, capture, harass, or otherwise harm any protected federally listed species. While accomplishing the authorized work, if the permittee discovers or observes a damaged or hurt listed endangered or threatened species, the USACE Wilmington District Engineer will be immediately notified to initiate the required Federal coordination.

12) The permittee will comply with all conditions in the attached letter from the North Carolina Wildlife Resources Commission, dated September, 11, 2007, with the exceptions of the in-water work moratorium for the South Toe River and tree removal activities, as long as tree removal activities are conducted in accordance with Special Condition 10 of these conditions. Additionally, the permittee will comply with the moratoria detailed in the WRC letter dated July 19, 2007, for all streams in the R-2519B project corridor, with the exceptions of the in-water work moratorium for the South Toe River and tree removal activities, as long as tree removal activities are conducted in accordance with Special Condition 10 of these conditions. Within the trout buffer area, dropping trees into the stream must be avoided whenever possible.

13) The North Carolina Division of Water Resources has issued a conditioned Water Quality Certification for this project. The conditions of that certification are hereby incorporated as special conditions of this permit. A copy of this certification is attached.

14) This Department of the Army permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

PROJECT MAINTENANCE

15) Unless otherwise authorized by this permit, all fill material placed in waters or wetlands shall be generated from an upland source and will be clean and free of any pollutants except in trace quantities. Metal products, organic materials (including debris from land clearing activities), or unsightly debris will not be used. Soils used for fill shall not be contaminated with any toxic substance in concentrations governed by Section 307 of the Clean Water Act.

16) All mechanized equipment will be regularly inspected and maintained to prevent contamination of waters and wetlands from fuels, lubricants, hydraulic fluids, or other toxic materials. In the event of a spill of petroleum products or any other hazardous waste, the permittee shall immediately report it to the N.C. Division of Water Resources at (919) 733-3300 or (800) 858-0368 and provisions of the North Carolina Oil Pollution and Hazardous Substances Control Act will be followed.

17) The permittee shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project, and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this permit. A copy of this permit, including all conditions, shall be available at the project site during construction and maintenance of this project.

18) The permittee shall remove all sediment and erosion control measures placed in wetlands or waters, and shall restore natural grades in those areas, prior to project completion.

19) No fill or excavation impacts for the purposes of sedimentation and erosion control shall occur within jurisdictional waters, including wetlands, unless the impacts are included on the plan drawings and specifically authorized by this permit.

20) The permittee shall implement Design Standards in Sensitive Watersheds throughout the project corridor. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices. This shall include, but is not limited to, the immediate installation of silt fencing or similar appropriate devices around all areas subject to soil disturbance or the movement of earthen fill, and the immediate stabilization of all disturbed areas. Additionally, the project must remain in full compliance with all aspects of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statutes Chapter 113A Article 4). Adequate sedimentation and erosion control measures must be implemented prior to any ground disturbing activities to minimize impacts to downstream aquatic resources. These measures must be inspected and maintained regularly, especially following rainfall events. All fill material must be adequately stabilized at the earliest practicable date toprevent sediment from entering into adjacent waters or wetlands.

21) The permittee shall ensure that all excavation and/or construction areas in waters of the U.S. are temporarily dewatered during work.

22) Prior to commencing construction within jurisdictional waters of the U.S. for any portion of the project, the permittee shall forward the latest version of project construction drawings to the USACE, Asheville Regulatory Field Office NCDOT Regulatory Project Manager. Half-size drawings will be acceptable.

23) During the clearing phase of the project, heavy equipment must not be operated in surface waters or stream channels. Temporary stream crossings will be used to access the opposite sides of stream channels. All temporary diversion channels and stream crossings will be constructed of non-erodible materials. Grubbing of riparian vegetation will not occur until immediately before construction begins on a given segment of stream channel.

24) The permittee shall take measures to prevent live or fresh concrete, including bags of uncured concrete, from coming into contact with any water in or entering into waters of the

U.S. Water inside coffer dams or casings that has been in contact with concrete shall only be returned to waters of the U.S. when it no longer poses a threat to aquatic organisms (concrete is set and cured).

25) Unless otherwise requested in the application and depicted on the approved work plans, culverts greater than 48 inches in diameter will be buried at least one foot below the bed of the stream. Culverts 48 inches in diameter and less shall be buried or placed on the stream bed as practicable and appropriate to maintain aquatic passage, and every effort shall be made to maintain existing channel slope. The bottom of the culvert must be placed at a depth below the natural stream bottom to provide for passage during drought or low flow conditions. Destabilizing the channel and head cutting upstream should be considered in the placement of the culvert.

26) Measures will be included in the construction/installation that will promote the safe passage of fish and other aquatic organisms. The dimension, pattern, and profile of the stream above and below a pipe or culvert should not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. The width, height, and gradient of a proposed opening should be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. Spring flow should be determined from gauge data, if available. In the absence of such data, bankfull flow can be used as a comparable level.

27) To ensure that all borrow and waste activities occur on high ground and do not result in the degradation of adjacent wetlands and streams, except as authorized by this permit, the permittee shall require its contractors and/or agents to identify all areas to be used to borrow material, or to dispose of dredged, fill, or waste material. The permittee shall provide the USACE with appropriate maps indicating the locations of proposed borrow or waste sites as soon as the permittee has that information. The permittee will coordinate with the USACE before approving any borrow or waste sites that are within 400 feet of any streams or wetlands.

28) Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in the disequilibrium of wetlands, streambeds or stream banks adjacent to, upstream of or downstream of the structures. Riprap armoring of streams at culvert inlets and outlets shall be minimized above ordinary high water elevation in favor of bioengineering techniques such as bank sloping, erosion control matting and revegetation with deep-rooted native woody plants.

29) The permittee shall implement all reasonable and practicable measures to ensure that equipment, structures, fill pads, work, and operations associated with this project do not adversely affect upstream and/or downstream reaches. Adverse effects include, but are not limited to, channel instability, flooding, and/or stream bank erosion. The permittee shall routinely monitor for these effects, cease all work when detected, take initial corrective

measures to correct actively eroding areas, and notify this office immediately. Permanent corrective measures may require additional authorization by the USACE.

30) As noted in the Project Commitments for this project, the permittee will put forth its best effort to suppress the Japanese Knotweed population within the project limits, with the use of aquatic labeled glycophosate. Additionally, the construction contract(s) for this project will stipulate that any knotweed material disturbed through construction activities at the two bridge sites, as well as in identified mitigation sites, will be buried within the project boundaries in fill or waster areas, below the depth of topsoil.

31) Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

32) The permittee, upon receipt of a notice of revocation of this permit or upon its expiration before completion of the work will, without expense to the United States and in such time and manner as the Secretary of the Army or his authorized representative may direct, restore the water or wetland to its pre-project condition.

33) All reports, documentation and correspondence required by the conditions of this permit shall be submitted to the following address: U.S. Army Corps of Engineers, Asheville Regulatory Field Office, NCDOT Regulatory Project Manager (Division 13), 151 Patton Avenue, Room 208, Asheville, NC 28801-5006, and by telephone at: (828) 271-7980. The Permittee shall reference the following permit number, SAW-2004-9987181/ 2004-30631, TIP No. R-2519B, on all submittals.

COMPENSATORY MITIGATION

34) The Permittee shall fully implement the compensatory mitigation plan titled "Mitigation Plan, US 19E Widening, Yancey & Mitchell Counties, North Carolina, T.I.P. Number R-2519, WBS No. 35609.1.1, May 6, 2013 (Revised November 4, 2013)," in order to compensate for a portion of the unavoidable impacts to waters of the U.S. associated with this project. Activities prescribed by this plan shall be initiated prior to, or concurrently with, commencement of any construction activities within jurisdictional areas authorized by this permit. The permittee shall conduct all mitigation and monitoring activities in accordance with the above referenced plan and with the following conditions:

a) As the permittee, NCDOT is the party responsible for the implementation, performance and long term management of the on-site compensatory mitigation project.

b) Any changes or modifications to the mitigation plan must be approved by the USACE.

c) The permittee shall maintain the entire mitigation site in its natural condition, as altered by the work in the mitigation plan, in perpetuity. Prohibited activities within the mitigation site specifically include, but are not limited to: filling; grading; excavating; earth movement of any kind; construction of roads, walkways, buildings, signs, or any other structure; any activity that may alter the drainage patterns on the property; the destruction, cutting, removal, mowing, or other alteration of vegetation on the property; disposal or storage of any garbage, trash, debris or other waste material; graze or water animals, or use for any agricultural or horticultural purpose; or any other activity which would result in the property being adversely impacted or destroyed, except as specifically authorized by this permit.

35) The permittee shall not sell or otherwise convey any interest in the mitigation property used to satisfy the mitigation requirements for this permit to any third party, without written approval from the Wilmington District USACE.

36) In order to compensate for a portion of the impacts associated with this permit, mitigation shall be provided in accordance with the provisions outlined on the most recent version of the attached Compensatory Mitigation Responsibility Transfer Form. The requirements of this form, including any special conditions listed on this form, are hereby incorporated as special conditions of this permit.

ENFORCEMENT

37) A representative of the USACE will periodically and randomly inspect the work for compliance with these conditions. Deviations from these procedures may result in an administrative financial penalty and/or directive to cease work until the problem is resolved to the satisfaction of the USACE.

38) Violation of these conditions or violation of Section 404 of the Clean Water Act of Section 10 of the Rivers and Harbors Act must be reported in writing to the Wilmington District USACE within 24 hours of the permittee's discovery of the violation.

Division 13

Prosecution of work:

The Contractors attention is directed to the fact that there are specific Permit requirements included in this contract that sets specific time frames for the construction, demolition, and completion of the structures located over the South Toe River on US 19, station XX+XX. At the Preconstruction conference, the contractor shall submit a schedule for approval by the Engineer for the construction, demolition, and completion of these structures, including mile stone dates that will be used to determine if work is being pursued in a continuous manner and with sufficient effort to comply with permit requirements.

The Contractor shall prosecute the work in a continuous and uninterrupted manner from the time he begins the work until completion of each phase of structure construction, demolition and completion. The contractor will not be permitted to suspend his operations except for reasons beyond his control or except where the Engineer has authorized a suspension of the Contractors' operations in writing.

In the event that the Contractor's operations are suspended in violation of the above provisions or it is determined the Contractor is not deemed to be pursuing the work in a continuous manner in accordance with his submitted and approved schedule, the sum of $800.00 will be charged the Contractor for each and every calendar day that such suspensions take place. The said amount is hereby agreed upon as liquidated damages due to extra engineering and maintenance costs and due to increased public hazard, and violation of contract permit requirements. Liquidated damages chargeable due to suspension of the work will be additional to any liquidated damages that may become chargeable due to failure to complete the work on time.

Division 13/Natural Environment Section
From the 401 Water Quality Certification – the following Condition of Certification:

1) The permittee shall visually monitor the vegetative plantings to assess and ensure complete stabilization of the mitigation stream segments. Riparian area success shall be determined by conducting stem counts to ensure tree survival rate of 320 stems/acre. The monitoring shall be conducted annually for a minimum of 3 years after planting. Photo documentation shall be utilized to document the success of the riparian vegetation and submitted to NCDWR to schedule a site visit to "close out" the mitigation site.

Attachment 5: Memorandum of Agreement Between the Department of the Army, Corps of Engineers and the State Historic Preservation Officer for US 19E Improvements to a Multilane Facility between Micaville and Spruce Pine Yancey and Mitchell Counties, North Carolina Transportation Improvement Project R-2519B.

MEMORANDUM OF AGREEMENT
BETWEEN THE
DEPARTMENT OF THE ARMY, CORPS OF ENGINEERS
AND THE
STATE HISTORIC PRESERVATION OFFICER
FOR
US 19E IMPROVEMENTS TO A MULTILANE FACILITY
BETWEEN MICAVILLE AND SPRUCE PINE
YANCY and MITCHELL COUNTIES,
NORTH CAROLINA
TRANSPORTATION IMPROVEMENT PROJECT R-2519B

WHEREAS, the United States Army Corps of Engineers (USACE) has determined that the construction of the US 19E Improvements from Micaville to Spruce Pine (the Undertaking) will have an adverse effect upon archaeological sites 31YC31, 31YC183 and 31ML80, properties determined eligible for listing on the National Register of Historic Places (NRHP); and

WHEREAS, the USACE has consulted with the North Carolina State Historic Preservation Officer (SHPO) pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f); and

WHEREAS, the USACE has notified the Advisory Council on Historic Preservation (Council) of the adverse effect and the Council has declined to comment or participate in the consultation; and

WHEREAS, the North Carolina Department of Transportation (NCDOT) has participated in the consultation and been invited to participate as a consulting party in the development of this Memorandum of Agreement (MOA); and

WHEREAS, the Eastern Band of the Cherokee Indians (EBCI) has participated in the consultation and been invited to participate as a consulting party in the development of this Memorandum of Agreement (MOA); and

WHEREAS, to the best of our knowledge and belief, no human remains, associated or unassociated funerary objects or sacred objects, or objects of cultural patrimony as defined in the Native American Graves Protection and Repatriation Act (25 U.S.C. 3001), are expected to be encountered in the archaeological work ;

NOW, THEREFORE, the USACE and the SHPO agree that the Undertaking shall be implemented in accordance with the following stipulations in order to take into account the effects of the Undertaking on archaeological sites 31YC31, 31YC183 and 31ML80.

STIPULATIONS

I. Archaeological Data Recovery Investigations

A. The NCDOT will develop site specific Data Recovery Plans (DRPs) for sites 31YC31, 31YC183 and 31ML80, which will be affected by the Undertaking, in consultation with the SHPO and the EBCI.

B. The NCDOT will ensure that the DRPs will be implemented after Right-of-Way is acquired or once Right-of-Entry is secured from the property owners and prior to construction activities within the site location as shown in the DRPs.

C. Upon completion of the Data Recovery efforts, the NCDOT will prepare and forward a Management Summary to the SHPO and the EBCI detailing the results of the Data Recovery field investigations. The Management Summary will contain sufficient information to demonstrate that the field investigation portion of the DRPs has been implemented.

D. Upon receipt of the Management Summary, the SHPO and the EBCI will respond within ten (10) days to the recommendations contained within the document.

E. Upon acceptance of the recommendations contained in the Management Summary, the SHPO and the EBCI will issue the NCDOT documentation that the Data Recovery field investigations have been completed.

F. The NCDOT or their consultants will complete the analysis and report preparation detailing sites 31YC31, 31YC183 and 31ML80, within twelve (12) months after completion of the fieldwork.

II. Unanticipated Discovery

In accordance with 36 CFR 800.II(a), if NCDOT identifies any additional cultural resource(s) during construction and determines it (them) to be eligible for the NRHP, all work will be halted within the limits of the NRHP-eligible resources(s) and the USACE, SHPO and the EBCI THPO will be contacted. If after consultation with the Signatory and Concurring Party(ies) additional mitigation is determined necessary, the NCDOT, in consultation with the Signatory and Concurring Party(ies), will develop and implement appropriate protection/mitigation measures for the resource(s). Inadvertent or accidental discovery of human remains will be handled accordance with North Carolina General Statutes 65 and 70.

III. Amendments

If any Signatory to this MOA believes that its terms cannot be carried out or that an amendment to the terms must be made, that party(ies) shall immediately consult with the other party(ies) to develop amendments in accordance with 36 CFR 800.6(c)(7). If an amendment cannot be agreed upon, the dispute resolution process set forth in Stipulation IV will be followed.

IV. Dispute Resolution

Should any of the Signatories object within thirty (30) days to any plans or documentation provided for review pursuant to this MOA, the USACE shall consult with the objecting party(ies) to resolve the objection. If the USACE or the objecting party(ies) determines that the objection cannot be resolved, the USACE will forward all documentation relevant to the dispute to the Council. Within thirty (30) days after receipt of all pertinent documentation, the Council will either:

I) Provide the USACE with recommendations which the USACE will take into account in reaching a final decision regarding the dispute, or

2) Notify the USACE that it will comment pursuant to 36 CFR 800.7(c) and proceed to comment. Any Council comment provided in response to such a request will be taken into account by the USACE, in accordance with 36 CFR 800.7(c)(4) with reference to the subject of the dispute. Any recommendations or comments provided by the Council will be understood to pertain only to the subject of the dispute; USACE's responsibility to carry out all of the actions under this agreement that are not the subject of the dispute will remain unchanged.

V. Termination

Any Signatory to this MOA may terminate the agreement by providing notice to the other parties, provided that the signatories and concurring parties will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination. Termination of this MOA will require compliance with 36 CFR 800. This MOA may be terminated by the execution of a subsequent MOA that explicitly terminates or supersedes its terms.

VI. Duration

Unless terminated as detailed above, this MOA will be in effect until the USACE, in consultation with the other Signatories, determines that all of its terms have satisfactorily been fulfilled or if NCDOT is unable or decides not to construct the Undertaking.

Execution of this Memorandum of Agreement by the USACE and the North Carolina SHPO, its subsequent filing with the Council, and implementation of its terms evidence that the USACE has afforded the Council an opportunity to comment on the Undertaking and that the USACE has taken into account the effects of the Undertaking on the archaeological sites31YC31, 31YC183 and 31ML80 .

AGREE:

United States Army Corps of Engineers:

Dale E. Bates

Date: 6/12/2012

Steven A. Baker
Colonel, U. S. Army
District Commander

State Historic Preservation Officer:

Jeffrey J. Crow

Date: 5/30/12

Jeffrey J. Crow

North Carolina Department of Transportation:

Date: 5/25/12

Robert Andrew Joyner, P.E.
Human Environment Section Head

Eastern Band of the Cherokee Indians:

Date: 6-18-12

Michell Hicks
The Honorable Principal Chief
Eastern Band of Cherokee Indians

MEMORANDUM OF AGREEMENT
BETWEEN THE
DEPARTMENT OF THE ARMY, CORPS OF ENGINEERS
AND THE
STATE HISTORIC PRESERVATION OFFICER
FOR
US 19E IMPROVEMENTS TO A MULTILANE FACILITY
BETWEEN MICAVILLE AND SPRUCE PINE
YANCY and MITCHELL COUNTIES,
NORTH CAROLINA
TRANSPORTATION IMPROVEMENT PROJECT R-2519B

Execution of this Memorandum of Agreement by the USACE and the North Carolina SHPO, its subsequent filing with the Council, and implementation of its terms evidence that the USACE has afforded the Council an opportunity to comment on the Undertaking and that the USACE has taken into account the effects of the Undertaking on the archaeological sites31YC31, 31YC183 and 31ML80 .

FILED:

_____ Date:_____
Advisory Council on Historic Preservation