

*Wetland Master Plan  
Dan River Steam Station  
Rockingham County, North Carolina  
Project No.7810160559*

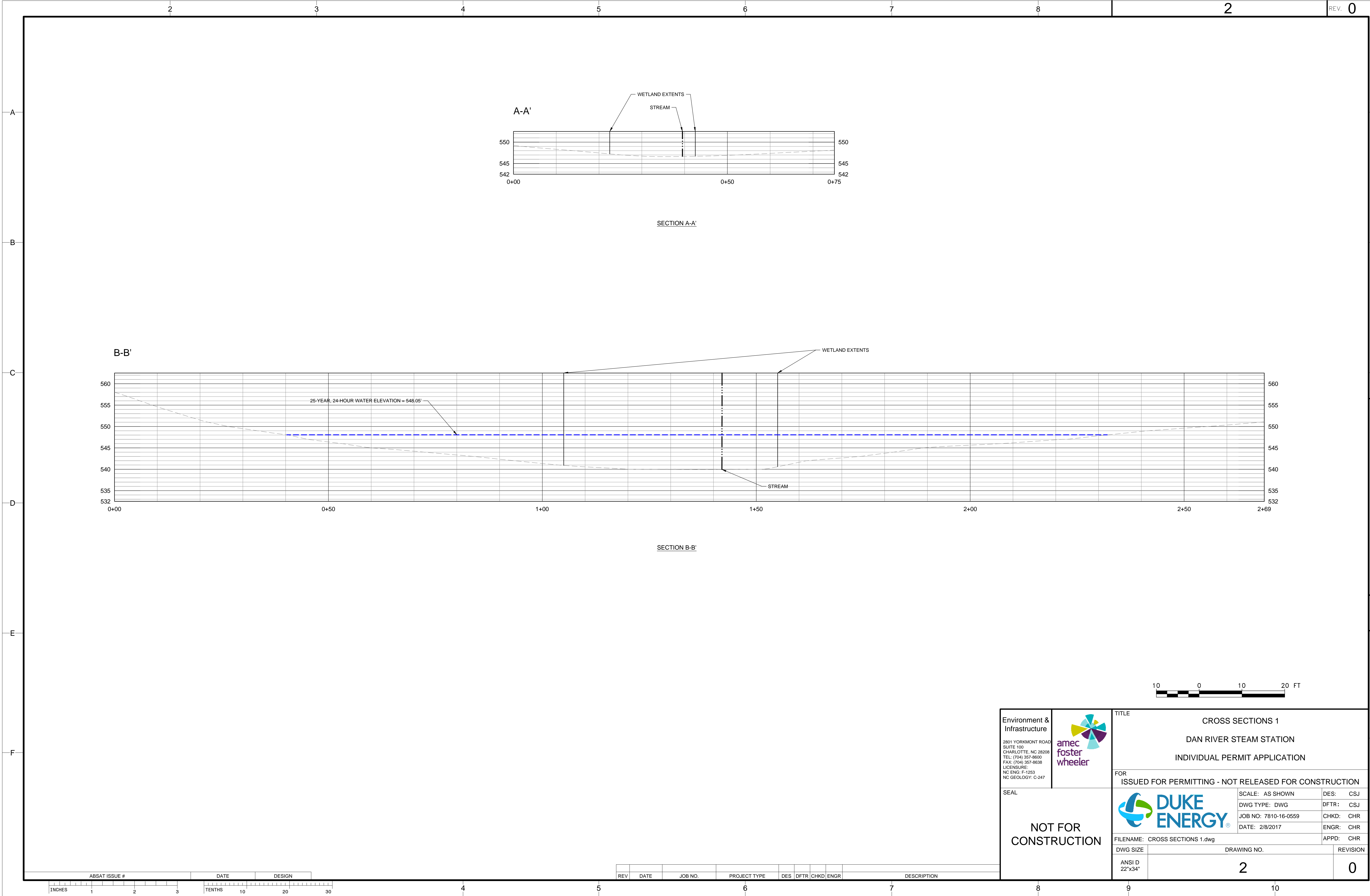
*April 28, 2017  
Stormwater Diversion Project and Associated Projects*

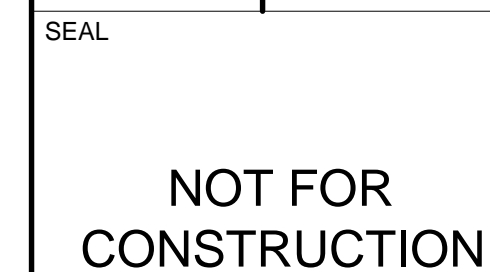
## **APPENDIX E**

### **PERMIT DRAWINGS - PLAN VIEW and CROSS-SECTION DRAWINGS**

**STORMWATER DIVERSION PROJECT PERMIT DRAWINGS**

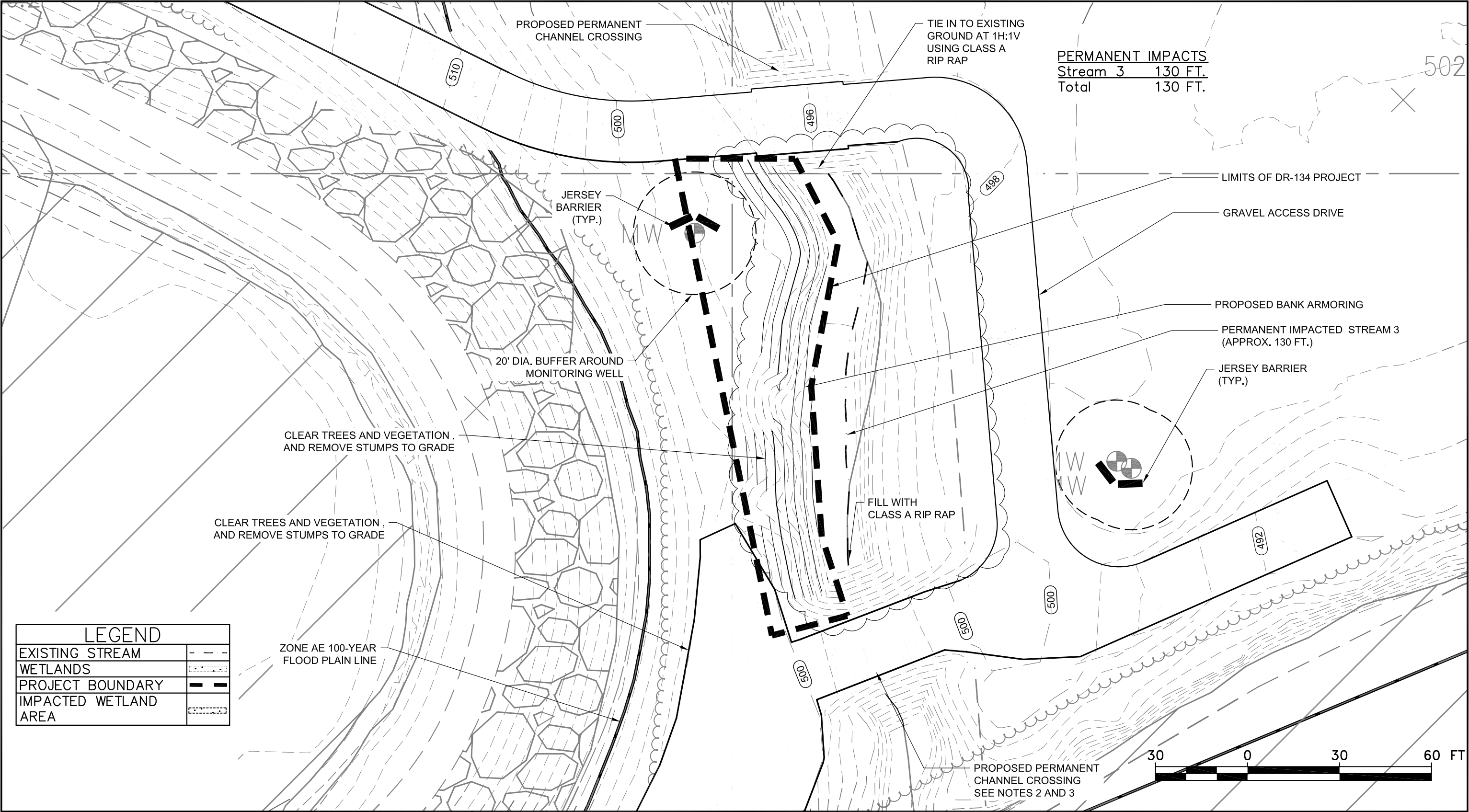








Plotted By: Jordan, Chris Sheet Set: New Sheepshead Shoal and Outer Harbor Channel Sheet Set March 2006 7 00:3 05 59:50 on 07/04/2006 D:\Data\Drawings\2006\10\060303.dwg User: slerns User: wdespiter File Path: L:\firm\pp\l\p\figproj\4\060303\EST10\EST10.dwg

**DR 134 and DR 131 PROJECTS PERMIT DRAWINGS**



		CLIENT: <b>DUKE ENERGY - CAROLINAS</b>		DWN BY: JMB	PROJECT <b>DAN RIVER STEAM STATION DR-134 PROJECT IMPACT AREA</b>	DATE: APRIL 25, 2017
		Amec Foster Wheeler Environment & Infrastructure 2801 YORKMONT ROAD, SUITE 100 CHARLOTTE, NC 28208 PHONE 704-357-8600, FAX 704-357-8638 LICENSURE: NC ENG: F-1253 NC GEOLOGY: C-247		CHK'D BY: XXX		PROJECT NO: 7810-15-0418
				DATUM: NAD99	TITLE <b>PLAN VIEW</b>	REV. NO.: A
				PROJECTION: UTM Zone 0		FIGURE No. FIGURE 01
				SCALE: 1" = 30'		

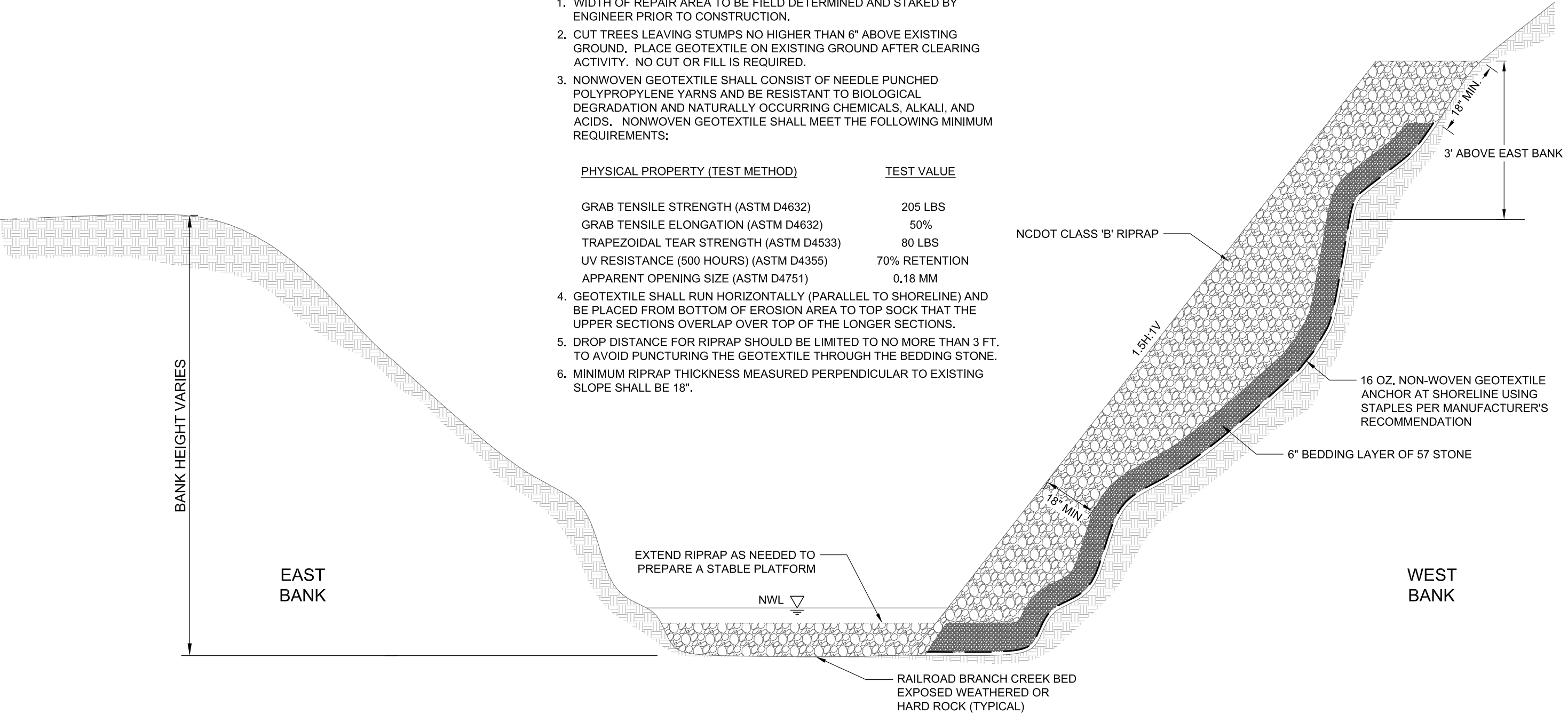
CONSTRUCTION NOTES FOR SLOPE REPAIR:

1. WIDTH OF REPAIR AREA TO BE FIELD DETERMINED AND STAKED BY ENGINEER PRIOR TO CONSTRUCTION.
2. CUT TREES LEAVING STUMPS NO HIGHER THAN 6" ABOVE EXISTING GROUND. PLACE GEOTEXTILE ON EXISTING GROUND AFTER CLEARING ACTIVITY. NO CUT OR FILL IS REQUIRED.
3. NONWOVEN GEOTEXTILE SHALL CONSIST OF NEEDLE PUNCHED POLYPROPYLENE YARNS AND BE RESISTANT TO BIOLOGICAL DEGRADATION AND NATURALLY OCCURRING CHEMICALS, ALKALI, AND ACIDS. NONWOVEN GEOTEXTILE SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS:

PHYSICAL PROPERTY (TEST METHOD)	TEST VALUE
---------------------------------	------------

GRAB TENSILE STRENGTH (ASTM D4632)	205 LBS
GRAB TENSILE ELONGATION (ASTM D4632)	50%
TRAPEZOIDAL TEAR STRENGTH (ASTM D4533)	80 LBS
UV RESISTANCE (500 HOURS) (ASTM D4355)	70% RETENTION
APPARENT OPENING SIZE (ASTM D4751)	0.18 MM

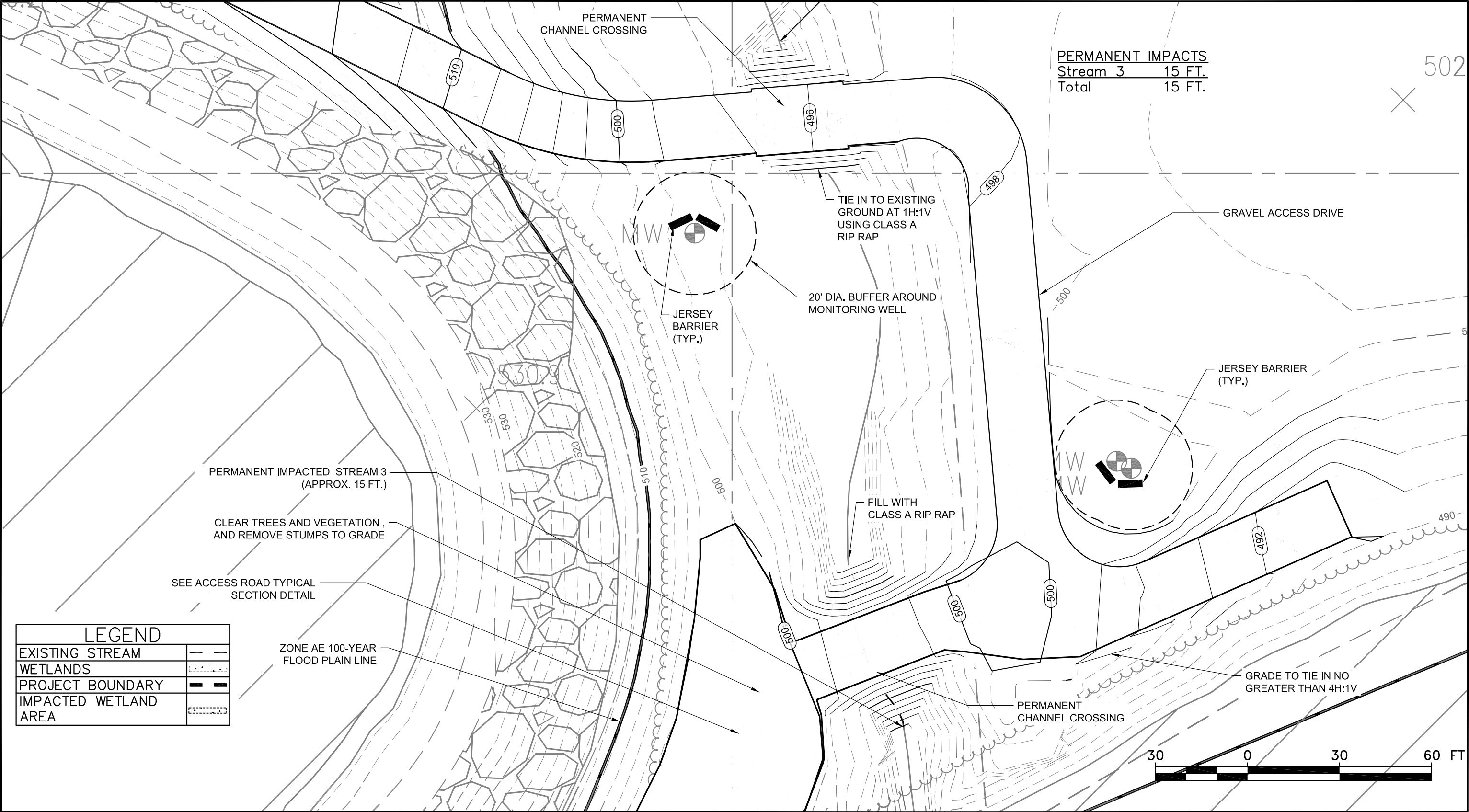
4. GEOTEXTILE SHALL RUN HORIZONTALLY (PARALLEL TO SHORELINE) AND BE PLACED FROM BOTTOM OF EROSION AREA TO TOP SOCK THAT THE UPPER SECTIONS OVERLAP OVER TOP OF THE LONGER SECTIONS.
5. DROP DISTANCE FOR RIPRAP SHOULD BE LIMITED TO NO MORE THAN 3 FT. TO AVOID PUNCTURING THE GEOTEXTILE THROUGH THE BEDDING STONE.
6. MINIMUM RIPRAP THICKNESS MEASURED PERPENDICULAR TO EXISTING SLOPE SHALL BE 18".





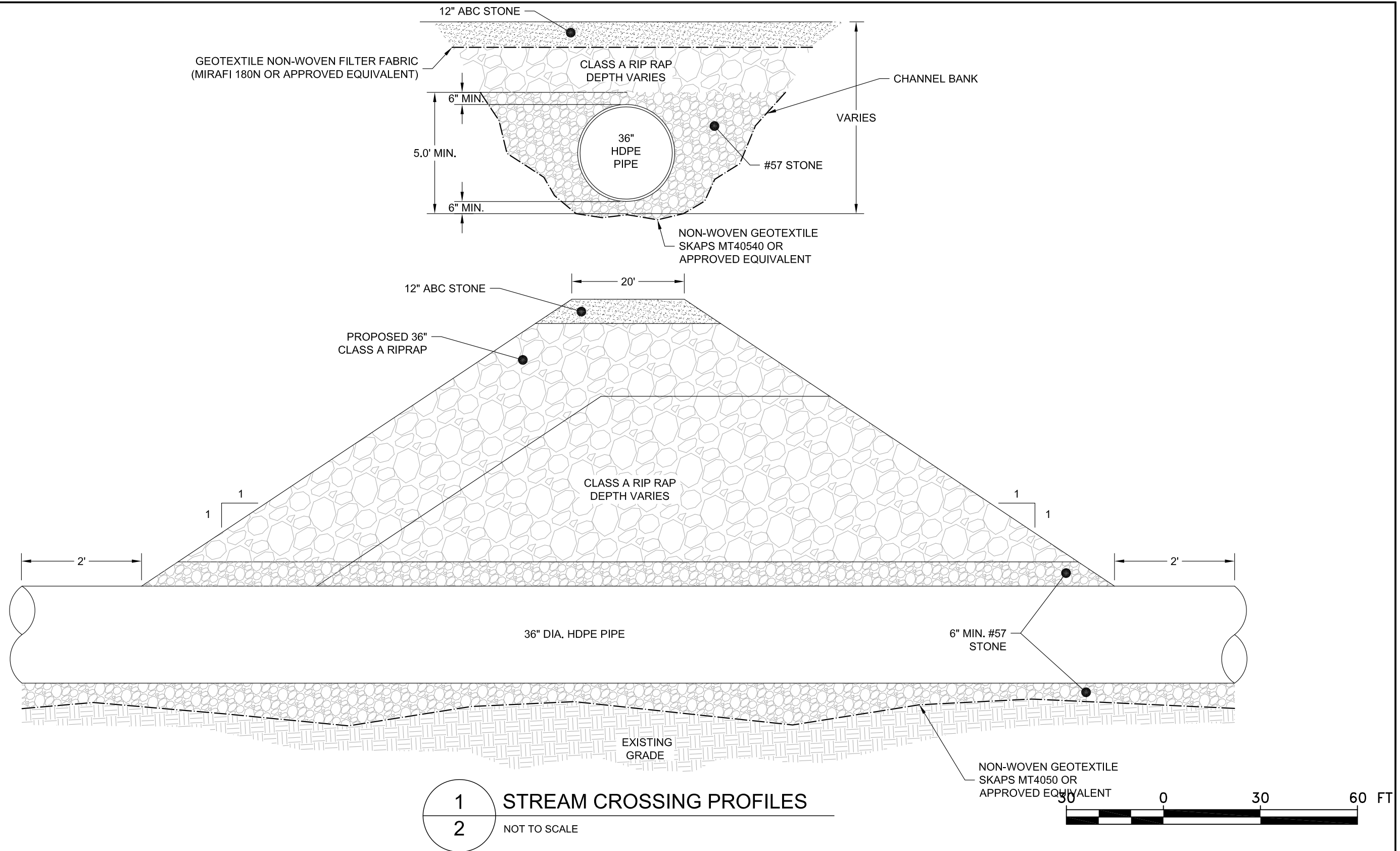
1 BEDDING STONE AND RIP RAP INSTALLATION  
2 NOT TO SCALE




	CLIENT: <b>DUKE ENERGY - CAROLINAS</b>  Amec Foster Wheeler Environment & Infrastructure 2801 YORKMONT ROAD, SUITE 100 CHARLOTTE, NC 28208 PHONE 704-357-8600, FAX 704-357-8638 LICENSURE: NC ENG: F-1253 NC GEOLOGY: C-247		DWN BY: JMB	PROJECT <b>DAN RIVER STEAM STATION DR-134 PROJECT IMPACT AREA</b>	DATE: APRIL 25, 2017
			CHK'D BY: XXX		PROJECT NO: 7810-15-0418
			DATUM: NAD99	TITLE <b>SECTION DETAIL</b>	REV. NO.: A
			PROJECTION: UTM Zone 0 SCALE: 1" = 30'		FIGURE No. FIGURE 02

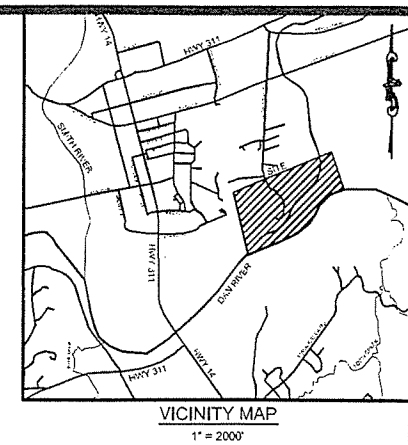
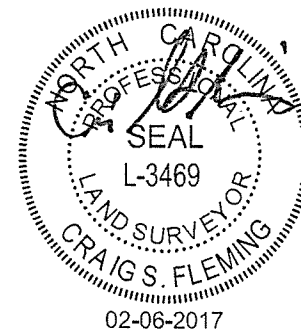
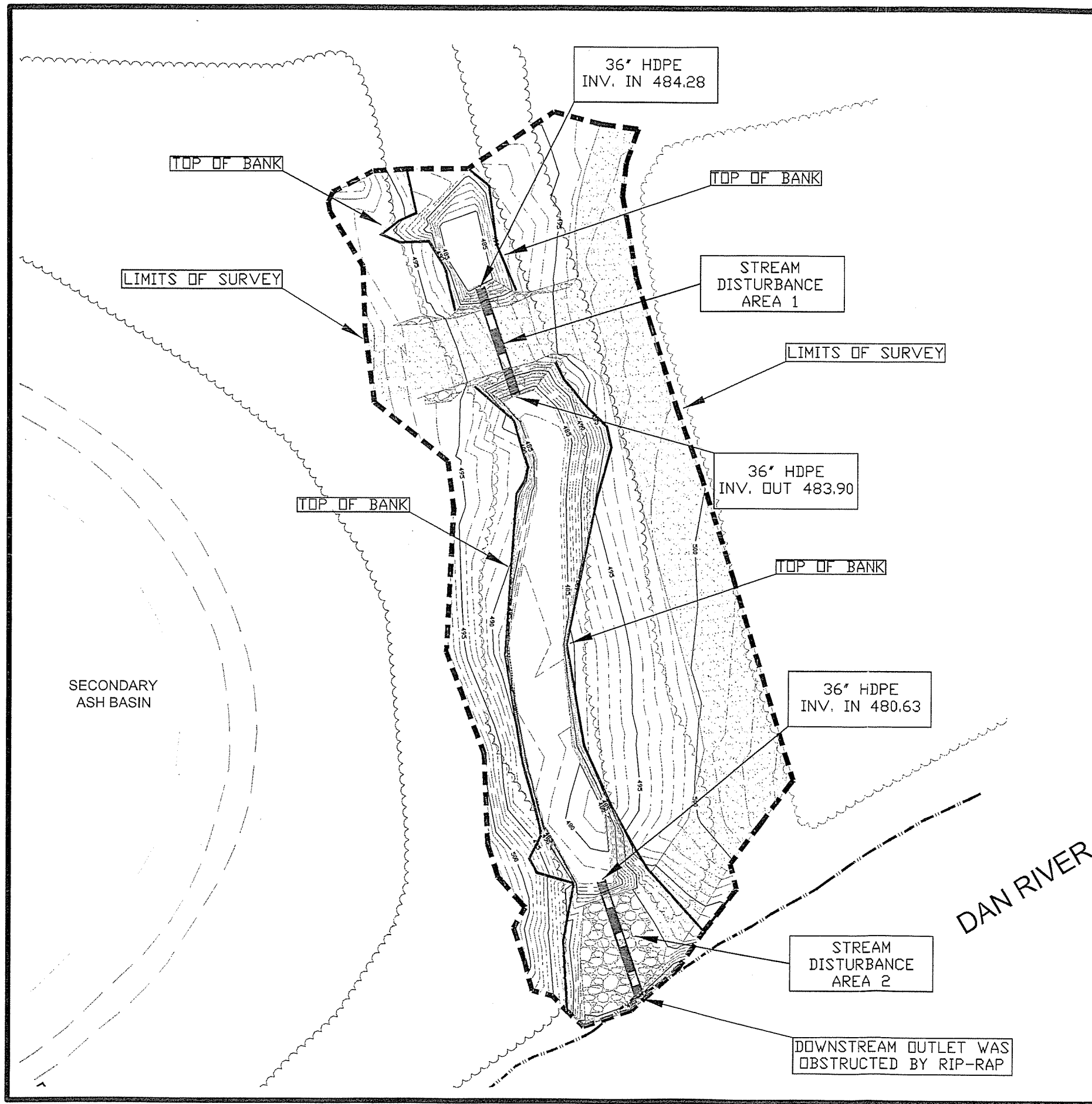


		CLIENT: <b>DUKE ENERGY - CAROLINAS</b>		DWN BY: JMB	PROJECT <b>DAN RIVER STEAM STATION DR-131 PROJECT IMPACT AREA</b>	DATE: APRIL 25, 2017
		Amec Foster Wheeler Environment & Infrastructure 2801 YORKMONT ROAD, SUITE 100 CHARLOTTE, NC 28208 PHONE 704-357-8600, FAX 704-357-8638 LICENSURE: NC ENG: F-1253 NC GEOLOGY: C-247		CHK'D BY: XXX		PROJECT NO: 7810-15-0418
				DATUM: NAD99	TITLE <b>PLAN VIEW</b>	REV. NO.: A
				PROJECTION: UTM Zone 0		FIGURE No. FIGURE 01
				SCALE: 1" = 30'		



		CLIENT:		DWN BY:	JMB	PROJECT	DAN RIVER STEAM STATION DR-131 PROJECT IMPACT AREA		DATE:	APRIL 25, 2017	
		DUKE ENERGY - CAROLINAS		CHK'D BY:	XXX				PROJECT NO:	7810-15-0418	
		Amec Foster Wheeler Environment & Infrastructure 2801 YORKMONT ROAD, SUITE 100 CHARLOTTE, NC 28208 PHONE 704-357-8600, FAX 704-357-8638 LICENSURE: NC ENG: F-1253 NC GEOLOGY: C-247			DATUM:	NAD99	TITLE	SECTION DETAILS		REV. NO.:	A
					PROJECTION:	UTM Zone 0				FIGURE No.	FIGURE 02
										SCALE:	1" = 30'

**SURVEY PLAT OF NORTH AND SOUTH STREAM/ROAD CROSSINGS  
(CULVERTED IMPACTS - MARCH 2016)**



**STREAM DISTURBANCE AREA 1**

STREAM DISTURBANCE AREA 1: 42.60 LF / 1,040 SF

36" HDPE PIPE: 40.59 LF

**STREAM DISTURBANCE AREA 2**

STREAM DISTURBANCE AREA 2: 42.53 LF / 1,801 SF

- LEGEND**
- [Dashed line] = LIMITS OF SURVEY
  - [Solid line] = MAJOR CONTOUR LINES
  - [Dotted line] = MINOR CONTOUR LINES
  - [Thick solid line] = TOP BANK
  - [Line with cross-ticks] = DAN RIVER WATER LINE
  - [Stippled pattern] = GRAVEL
  - [Pattern of circles] = RIP-RAP

**GENERAL NOTES:**

THIS MAP DOES NOT MEET G.S. 47-30 AND IS NOT FOR RECORDING OR CONVEYANCE.

AREAS BY COORDINATE COMPUTATION.

ALL DISTANCES SHOWN ARE HORIZONTAL GROUND DISTANCES.

HORIZONTAL DATUM: NAD83(2011).

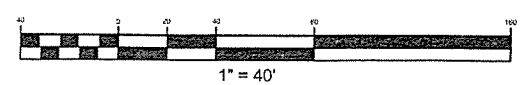
VERTICAL DATUM: NAVD88.

ELEVATIONS ARE BASED ON NAVD88 AND NCGS MONUMENT "DUKE" ELEVATION 641.37 FEET.

THIS MAP DOES NOT MEET G.S. 47-30 AND IS NOT FOR RECORDING OR CONVEYANCE OR PROPERTY.

THIS MAP IS SUBJECT TO ANY EASEMENTS, AGREEMENTS OR RIGHTS OF WAY RECORDED PRIOR TO THE DATE OF THIS MAP WHICH WERE NOT VISIBLE AT THE TIME OF INSPECTION.

THIS MAP WAS PREPARED WITHOUT THE BENEFIT OF A TITLE INVESTIGATION. THEREFORE, THIS MAP IS SUBJECT TO ANY AND ALL FACTS AN ACCURATE TITLE INVESTIGATION MAY DISCLOSE.



**Fleming Engineering, Inc.**  
CONSULTING ENGINEERS & LAND SURVEYORS  
8518 Triad Drive Colfax, NC 27235  
Phone (336) 852-9797 License No. C-0030  
www.flemingengineering.com

**DUKE: DAN RIVER STEAM STATION**

**STREAM DISTURBANCE SURVEY**

OWNER INFORMATION:  
DUKE ENERGY OF NORTH CAROLINA  
610 TODDVILLE RD  
CHARLOTTE, NC 28214

PROJECT LOCATION:  
CITY: EDEN  
COUNTY: FAYETTE  
STATE: NORTH CAROLINA

NO.	DATE	REVISION NOTE
1	02-06-2017	ISSUED FOR PERMIT

DRAWN BY: STW

CHECKED BY: JAS

DATE: 02-06-2017

PROJECT NO.: 01460.002

REF. NO.:

SCALE: 1"=40'

**SHEET**

**1 OF 1**

SECONDARY  
ASH BASIN

DAN RIVER

DOWNSTREAM OUTLET WAS  
OBSTRUCTED BY RIP-RAP

## **APPENDIX F**

### **USFWS and NCNHP DATABASE SEARCH QUERIES**

**IPaC****U.S. Fish & Wildlife Service**

# IPaC resource list

**Location**     Dan River Steam Station  
Rockingham County, North Carolina



## Local office

Raleigh Ecological Services Field Office

☎ (919) 856-4520

📠 (919) 856-4556

**MAILING ADDRESS**

Post Office Box 33726  
Raleigh, NC 27636-3726

**PHYSICAL ADDRESS**

551 Pylon Drive, Suite F  
Raleigh, NC 27606-1487

# Endangered species

**This resource list is for informational purposes only and should not be used for planning or analyzing project level impacts.**

[Section 7](#) of the Endangered Species Act **requires** Federal agencies to “*request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action*” for any project that is conducted, permitted, funded, or licensed by any Federal agency.

**A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list either from the Regulatory Review section in IPaC or from the local field office directly.**

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by creating a project and making a request from the Regulatory Review section.

## Listed species

<sup>1</sup> are managed by the [Endangered Species Program](#) of the U.S. Fish and Wildlife Service.

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.

The following species are potentially affected by activities in this location:

## Clams

NAME	STATUS
James Spiny mussel <i>Pleurobema collina</i> No critical habitat has been designated for this species. <a href="http://ecos.fws.gov/ecp/species/2212">http://ecos.fws.gov/ecp/species/2212</a>	Endangered

# Flowering Plants

NAME	STATUS
Smooth Coneflower <i>Echinacea laevigata</i> No critical habitat has been designated for this species. <a href="http://ecos.fws.gov/ecp/species/3473">http://ecos.fws.gov/ecp/species/3473</a>	Endangered

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

## Migratory birds

Birds are protected under the Migratory Bird Treaty Act

<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any activity that results in the take (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service

<sup>3</sup>. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Conservation measures for birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Year-round bird occurrence data <http://www.birdscanada.org/birdmon/default/datasummaries.jsp>

The migratory birds species listed below are species of particular conservation concern (e.g. [Birds of Conservation Concern](#)) that may be potentially affected by activities in this location, not a list of every bird species you may find in this location. Although it is important to try to avoid and minimize impacts to all birds, special attention should be made to avoid and minimize impacts to birds of priority concern. To view available data on other bird species that may occur in your project area, please visit the [AKN Histogram Tools](#) and [Other Bird Data Resources](#).

NAME	SEASON(S)
American Bittern <i>Botaurus lentiginosus</i> <a href="http://ecos.fws.gov/ecp/species/6582">http://ecos.fws.gov/ecp/species/6582</a>	Wintering
Bald Eagle <i>Haliaeetus leucocephalus</i> <a href="http://ecos.fws.gov/ecp/species/1626">http://ecos.fws.gov/ecp/species/1626</a>	Year-round
Blue-winged Warbler <i>Vermivora pinus</i>	Breeding
Brown-headed Nuthatch <i>Sitta pusilla</i>	Year-round
Chuck-will's-widow <i>Caprimulgus carolinensis</i>	Breeding
Fox Sparrow <i>Passerella iliaca</i>	Wintering
Kentucky Warbler <i>Oporornis formosus</i>	Breeding
Least Bittern <i>Ixobrychus exilis</i> <a href="http://ecos.fws.gov/ecp/species/6175">http://ecos.fws.gov/ecp/species/6175</a>	Breeding

Loggerhead Shrike	<i>Lanius ludovicianus</i>	Year-round
	<a href="http://ecos.fws.gov/ecp/species/8833">http://ecos.fws.gov/ecp/species/8833</a>	
Prairie Warbler	<i>Dendroica discolor</i>	Breeding
Prothonotary Warbler	<i>Protonotaria citrea</i>	Breeding
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	Year-round
Rusty Blackbird	<i>Euphagus carolinus</i>	Wintering
Short-eared Owl	<i>Asio flammeus</i>	Wintering
	<a href="http://ecos.fws.gov/ecp/species/9295">http://ecos.fws.gov/ecp/species/9295</a>	
Wood Thrush	<i>Hylocichla mustelina</i>	Breeding
Worm Eating Warbler	<i>Helmitheros vermivorum</i>	Breeding

**What does IPaC use to generate the list of migratory bird species potentially occurring in my specified location?**

#### **Landbirds:**

Migratory birds that are displayed on the IPaC species list are based on ranges in the latest edition of the National Geographic Guide, Birds of North America (6th Edition, 2011 by Jon L. Dunn, and Jonathan Alderfer). Although these ranges are coarse in nature, a number of U.S. Fish and Wildlife Service migratory bird biologists agree that these maps are some of the best range maps to date. These ranges were clipped to a specific Bird Conservation Region (BCR) or USFWS Region/Regions, if it was indicated in the 2008 list of Birds of Conservation Concern (BCC) that a species was a BCC species only in a particular Region/Regions. Additional modifications have been made to some ranges based on more local or refined range information and/or information provided by U.S. Fish and Wildlife Service biologists with species expertise. All migratory birds that show in areas on land in IPaC are those that appear in the 2008 Birds of Conservation Concern report.

#### **Atlantic Seabirds:**

Ranges in IPaC for birds off the Atlantic coast are derived from species distribution models developed by the National Oceanic and Atmospheric Association (NOAA) National Centers for Coastal Ocean Science (NCCOS) using the best available seabird survey data for the offshore Atlantic Coastal region to date. NOAA/NCCOS assisted USFWS in developing seasonal species ranges from their models for specific use in IPaC. Some of these birds are not BCC species but

were of interest for inclusion because they may occur in high abundance off the coast at different times throughout the year, which potentially makes them more susceptible to certain types of development and activities taking place in that area. For more refined details about the abundance and richness of bird species within your project area off the Atlantic Coast, see the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other types of taxa that may be helpful in your project review.

About the NOAANCCOS models: the models were developed as part of the NOAANCCOS project: [Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#). The models resulting from this project are being used in a number of decision-support/mapping products in order to help guide decision-making on activities off the Atlantic Coast with the goal of reducing impacts to migratory birds. One such product is the [Northeast Ocean Data Portal](#), which can be used to explore details about the relative occurrence and abundance of bird species in a particular area off the Atlantic Coast.

All migratory bird range maps within IPaC are continuously being updated as new and better information becomes available.

### **Can I get additional information about the levels of occurrence in my project area of specific birds or groups of birds listed in IPaC?**

#### **Landbirds:**

The [Avian Knowledge Network \(AKN\)](#) provides a tool currently called the "Histogram Tool", which draws from the data within the AKN (latest, survey, point count, citizen science datasets) to create a view of relative abundance of species within a particular location over the course of the year. The results of the tool depict the frequency of detection of a species in survey events, averaged between multiple datasets within AKN in a particular week of the year. You may access the histogram tools through the [Migratory Bird Programs AKN Histogram Tools](#) webpage.

The tool is currently available for 4 regions (California, Northeast U.S., Southeast U.S. and Midwest), which encompasses the following 32 states: Alabama, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin.

In the near future, there are plans to expand this tool nationwide within the AKN, and allow the graphs produced to appear with the list of trust resources generated by IPaC, providing you with an additional level of detail about the level of occurrence of the species of particular concern potentially occurring in your project area throughout the course of the year.

#### **Atlantic Seabirds:**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results

files underlying the portal maps through the NOAA NCCOS [Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project](#) webpage.

## Facilities

### Wildlife refuges

Any activity proposed on [National Wildlife Refuge](#) lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGES AT THIS LOCATION.

### Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

## Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

#### Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

### **Data exclusions**

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

### **Data precautions**

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.



**PAT McCrory**  
*Governor*

**SUSAN KLUTTZ**  
*Secretary*

NCNHDE-2702

January 5, 2017

Julia Tillery  
Amec Foster Wheeler Environment & Infrastructure, Inc.  
5710 Oleander Dr., Ste 110  
Wilmington, NC 28403  
RE: Duke Energy Dan River Station IP

Dear Julia Tillery:

The North Carolina Natural Heritage Program (NCNHP) appreciates the opportunity to provide information about natural heritage resources for the project referenced above.

A query of the NCNHP database indicates that there are records for rare species, important natural communities, natural areas, or conservation/managed areas within the proposed project boundary. These results are presented in the attached 'Documented Occurrences' tables and map.

The attached 'Potential Occurrences' table summarizes rare species and natural communities that have been documented within a one-mile radius of the property boundary. The proximity of these records suggests that these natural heritage elements may potentially be present in the project area if suitable habitat exists and is included for reference. Tables of natural areas and conservation/managed area within a one-mile radius of the project area, if any, are also included in this report.

Please note that natural heritage element data are maintained for the purposes of conservation planning, project review, and scientific research, and are not intended for use as the primary criteria for regulatory decisions. Information provided by the NCNHP database may not be published without prior written notification to the NCNHP, and the NCNHP must be credited as an information source in these publications. Maps of NCNHP data may not be redistributed without permission.

Also please note that the NC Natural Heritage Program may follow this letter with additional correspondence if a Dedicated Nature Preserve (DNP), Registered Heritage Area (RHA), Clean Water Management Trust Fund (CWMTF) easement, or an occurrence of a Federally-listed species is documented near the project area.

If you have questions regarding the information provided in this letter or need additional assistance, please contact Suzanne Mason at [suzanne.mason@ncdcr.gov](mailto:suzanne.mason@ncdcr.gov) or 919.707.8637.

Sincerely,  
NC Natural Heritage Program



State of North Carolina | Department of Natural and Cultural Resources  
109 East Jones Street | Raleigh, NC 27601  
919-807-7300

**Natural Heritage Element Occurrences, Natural Areas, and Managed Areas Intersecting the Project Area**  
**Duke Energy Dan River Station IP**  
**January 5, 2017**  
**NCNHDE-2702**

**Element Occurrences Documented Within Project Area**

<b>Taxonomic Group</b>	<b>EO ID</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>Last Observation Date</b>	<b>Element Occurrence Rank</b>	<b>Accuracy</b>	<b>Federal Status</b>	<b>State Status</b>	<b>Global Rank</b>	<b>State Rank</b>
Freshwater Bivalve	3622	Lasmigona subviridis	Green Floater	2014-09-03	E	3-Medium	Species of Concern	Endangered	G3	S2
Freshwater Fish	11787	Moxostoma ariommum	Bigeye Jumprock	2008-08-18	E	3-Medium	---	Threatened	G4	S2

**Natural Areas Documented Within Project Area**

<b>Site Name</b>	<b>Representational Rating</b>	<b>Collective Rating</b>
ROA/Dan River Aquatic Habitat	8-Not Applicable	2-Very High

**No Managed Areas Documented within the Project Area**

Definitions and an explanation of status designations and codes can be found at <https://ncnhde.natureserve.org/content/help>. Data query generated on January 5, 2017; source: NCNHP, Q3 October 2016. Please resubmit your information request if more than one year elapses before project initiation as new information is continually added to the NCNHP database.

**Natural Heritage Element Occurrences, Natural Areas, and Managed Areas Within a One-mile Radius of the Project Area**  
**Duke Energy Dan River Station IP**  
**January 5, 2017**  
**NCNHDE-2702**

**Element Occurrences Documented Within a One-mile Radius of the Project Area**

<b>Taxonomic Group</b>	<b>EO ID</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>Last Observation Date</b>	<b>Element Occurrence Rank</b>	<b>Accuracy</b>	<b>Federal Status</b>	<b>State Status</b>	<b>Global Rank</b>	<b>State Rank</b>
Dragonfly or Damselfly	33770	Somatochlora georgiana	Coppery Emerald	2004-Pre	H?	5-Very Low	---	Significantly Rare	G3G4	S2?
Freshwater Bivalve	3622	Lasmigona subviridis	Green Floater	2014-09-03	E	3-Medium	Species of Concern	Endangered	G3	S2
Freshwater Fish	27492	Carpionodes cyprinus	Quillback	2009-01-21	E	3-Medium		Significantly Rare	G5	S2
Freshwater Fish	11787	Moxostoma ariommum	Bigeye Jumprock	2008-08-18	E	3-Medium	---	Threatened	G4	S2
Vascular Plant	5086	Parthenium auriculatum	Glade Wild Quinine	1956-07-07	H	3-Medium	---	Significantly Rare Throughout	G3G4	S3
Vascular Plant	22121	Polemonium reptans var. reptans	Jacob's Ladder	1956-05	H	3-Medium	---	Threatened	G5T5	S1

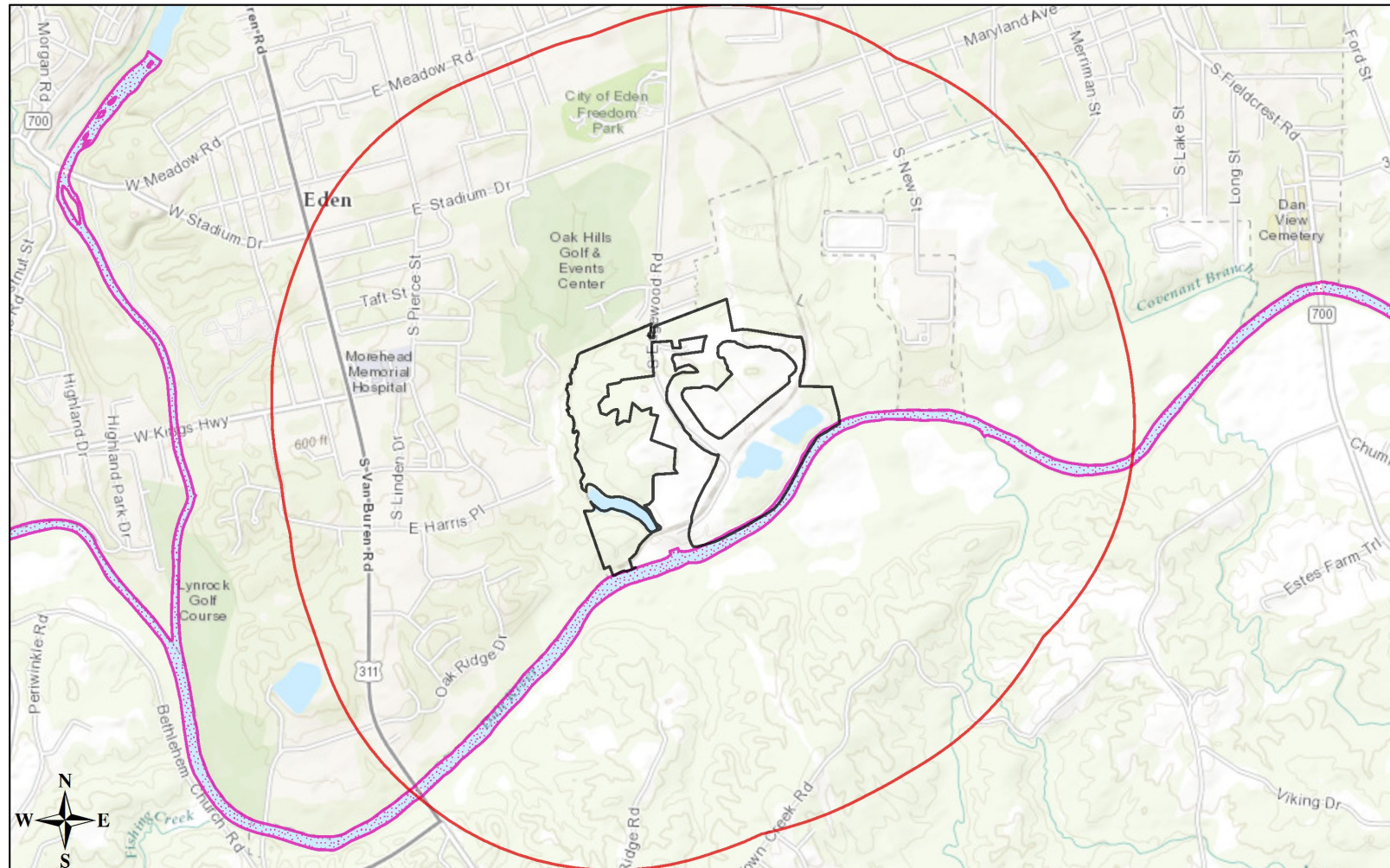
**Natural Areas Documented Within a One-mile Radius of the Project Area**

<b>Site Name</b>	<b>Representational Rating</b>	<b>Collective Rating</b>
ROA/Dan River Aquatic Habitat	8-Not Applicable	2-Very High

**No Managed Areas are Documented Within a One-mile Radius of the Project Area**

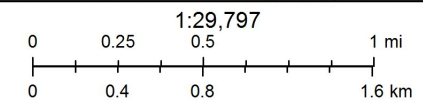
Definitions and an explanation of status designations and codes can be found at <https://ncnhde.natureserve.org/content/help>. Data query generated on January 5, 2017; source: NCNHP, Q3 October 2016. Please resubmit your information request if more than one year elapses before project initiation as new information is continually added to the NCNHP database.

# NCNHDE-2702: Duke Energy Dan River Station IP



January 5, 2017

- Project Boundary
- Buffered Project Boundary
- NHP Natural Area (NHNA)



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community