



**US Army Corps  
Of Engineers**  
Wilmington District

# PUBLIC NOTICE

Issue Date: October 24, 2014  
Comment Deadline: November 24, 2014  
Corps Action ID Number: SAW-2009-00876

The Wilmington District, Corps of Engineers (Corps) received an application from North Carolina Department of Transportation, ATTN: Mr. Richard W. Hancock, P.E., Manager, Project Development and Environmental Analysis Branch, 1548 Mail Service Center, Raleigh, North Carolina 27699-1548 seeking Department of the Army authorization to discharge dredge or fill material into waters of the US associated with the construction of the US-74 Monroe Connector/Bypass project (STIP R-3329 and STIP R-2559 Division 10).

Specific plans and location information are described below and shown on the attached plans. This Public Notice and attached plans, as well as, additional plans are available on the Wilmington District Web Site at <http://www.saw.usace.army.mil/Missions/RegulatoryPermitProgram.aspx>

**Applicant:** North Carolina Department of Transportation  
Project Development and Environmental Analysis Unit  
Attn: Mr. Richard W. Hancock, P.E., Manager  
1598 Mail Service Center  
Raleigh, North Carolina 27699-1598

## Authority

The Corps evaluates this application and decides whether to issue, conditionally issue, or deny the proposed work pursuant to applicable procedures of the following Statutory Authorities:

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

## Location

Directions to Site: The project area begins at the intersection of US Hwy 74 and I-485 in Mecklenburg County, North Carolina on the western end and terminates on US-74 between the towns of Wingate and Marshville in Union County, North Carolina on the eastern end.

Project Area: Approximately 20 miles in length  
Nearest Town: Charlotte

River Basin: 03040105

Latitude and Longitude: 35.023442N, -80.541029W

Nearest Waterways: North Fork Crooked Creek  
South Fork Crooked Creek  
East Fork Stewarts Creek  
Stewarts Creek  
Richardson Creek  
Ray's Fork (Flag Branch)  
Meadow Branch  
Spring Branch  
Salem Creek

### **Existing Site Conditions**

The topography of the Monroe Connector/Bypass project study area is characterized as gently sloping with steep areas occurring along drainage ways. Elevations range from a high of 640 feet in the west to a low of 450 feet at Richardson Creek near the eastern end. Land use in the study area is characterized by both suburban and rural landscapes. Industrial and commercial uses are predominant along existing US 74. The land surrounding the western end of the proposed project (west of US 601) is largely suburban and contains mostly residential uses and neighborhoods in and around the towns of Stallings, Indian Trail, Lake Park, Hemby Bridge, and Monroe. The land surrounding the project alignments east of US 601 is more rural and includes farms, pastures, woodlands, and rural residential development. The detailed study alternatives are located within both the Catawba (Hydrologic Unit 03050103) and Yadkin (Hydrologic Unit 03040105) River Basins with the majority of the area within the Yadkin Basin. Named streams in the project area within the Yadkin Basin include the North Fork Crooked Creek, South Fork Crooked Creek, Stewarts Creek, Richardson Creek, Stumplick Branch, Rays Fork, Bearskin Creek, Lick Branch, Meadow Branch, and Salem Creek. The only streams within the Catawba Basin are unnamed tributaries to Fourmile Creek. Aquatic communities in the study area include both intermittent and perennial piedmont streams as well as still-water ponds. More than 200 jurisdictional stream segments have been identified within the study area as well as approximately 200 jurisdictional wetlands adjacent to these streams. Approximately 70 ponds have also been identified.

### **Applicant's Stated Purpose**

The purpose of the project is to improve mobility and capacity within the project study area by providing a facility for the US-74 corridor from near I-485 in Mecklenburg County to between the towns of Wingate and Marshville in Union County that allows for high-speed regional travel consistent with the designations of the North Carolina Strategic Highway Corridor (SHC) program and the North Carolina Intrastate System, while maintaining access to properties along existing US-74.

### **Project Description**

The proposed project involves the construction of approximately 20 miles of a four lane controlled-access highway and service roads, the majority of which will be on new location in

Mecklenburg and Union Counties. The project would result in the permanent impact to 6.6 acres of wetlands, the temporary impact to 1.41 acres of wetlands, the permanent impact to 15,495 linear feet of stream channel (13,273 linear feet of fill and 2,222 linear feet of bank stabilization) and the temporary impact to 0.14 acres of stream (1,034 linear feet).

**A Department of the Army Authorization was originally issued for this project on April 15, 2011 and revoked on April 17, 2013. The previous permit authorized total permanent impacts to 7.58 acres of wetlands, total temporary impacts to 1.69 acres of wetlands, total permanent impacts to 18,658 linear feet of stream channel, total temporary impacts to 140 linear feet of stream channel and permanent impacts to surface waters (ponds) total 3.12 acres. The impacts previously authorized were based on quantities derived from a combination of final hydraulic design and functional (preliminary) design. The current project impacts are based on final hydraulic design for the entire project and therefore have changed from the originally authorized impacts.**

The originally authorized permit was revoked as a result of the decision on a lawsuit brought forth by the Southern Environmental Law Center (SELC) on behalf of North Carolina Wildlife Federation, Clean Air Carolina, and Yadkin Riverkeeper. SELC filed suit against the Federal Highway Administration (FHWA) and State of North Carolina alleging that information provided in the Final Environmental Impact Statement (FEIS) was inadequate and incomplete, thereby invalidating FHWA's National Environmental Policy Act (NEPA) documentation and the NC Division of Water Quality's (NCDWQ) Section 401 Water Quality Certification issued for the project. The case reached the 4<sup>th</sup> Circuit Court of Appeals, and on May 3, 2012, the 4<sup>th</sup> Circuit Court of Appeals found that NCDOT and FHWA did violate NEPA by failing to disclose critical assumptions underlying their decision to build the road and instead provided the public with incorrect information. As a result of the courts findings, NCDWQ withdrew the 401 Certification for the Monroe Bypass on June 8, 2012 and the Corps of Engineers revoked NCDOT's 404 permit authorization on April 17, 2013. The Corps decision to revoke the permit was based upon the indeterminate amount of time that would likely pass before NCDOT could re-evaluate and revise their NEPA documentation. On May 15, 2014 FHWA issued the combined Record of Decision (ROD) with the Final Supplemental EIS. With the issuance of the new Final Supplemental EIS and ROD, NCDOT submitted the updated permit application to request the issuance of a new Department of the Army permit to replace the previously provoked permit for the Monroe Bypass Project.

### **Avoidance and Minimization**

The applicant provided the following information in support of efforts to avoid and/or minimize impacts to the aquatic environment:

#### Avoidance and minimization measures include:

- Using best management practices for sediment and erosion control throughout the entire project.

- Consideration of the locations of critical habitat of the federally endangered Carolina heelsplitter and avoidance of the watersheds in which they are located in determining the proposed alignment.
- A financial contribution by NCDOT to the conservation of a population of Carolina heelsplitter in a nearby watershed in South Carolina
- Changes to the interchange at Indian Trail – Fairview Road to a compressed diamond which avoided impacts to populations EO #77 and EO #230 of Schweinitz’s sunflower. Further, these populations are afforded protection from indirect and cumulative impacts by being entered into Union Power’s Schweinitz’s Sunflower Restricted Sites Plan and NCDOT’s Roadside Vegetation Management Guidelines in Marked Areas.
- An effort to minimize impacts to the Savannah Lilliput, including specially designed grassed swales to be utilized at the bridge crossing of South Fork Crooked Creek (**Site 19**) and the nearby UT to South Fork Crooked Creek (**Site 20**) crossings to reduce water velocity, promote infiltration and provide treatment for discharge before runoff enters streams. NCDOT is also investigating the expenditure to obtain the triangular shaped land bordered to the south by proposed US 74 and South Fork Crooked Creek and the UT to South Fork Crooked Creek to their confluence. If deemed plausible, this area will be allowed to vegetate naturally providing additional wooded buffer for these streams.
- Multiple methods are being used (including methods to diffuse the concentration of flow from storm drain outlet pipes into non-erosive sheet flow, rip rap apron/pads, junction boxes, and culvert design) to reduce velocity and erosion at pipe outlets.
- Baffles and/or sills will be installed in culverts at **Sites 1, 4, 9, 12, 14, 16, 20, 23, 28, 50, 53, 55, and 55** to mimic low flow conditions and help streams retain their geometry.
- At sites where it was determined appropriate, culverts have been designed to be buried 1’ to allow for natural substrate to fill the bottoms of the structures.
- Hand clearing will be performed at the wetland near the outlet of the cross pipes at **Site 2** when installing the dissipater pad.
- The project has been designed to minimize and avoid impacts to waters of the US in several locations using such methods as a curb and gutter system instead of roadside ditch and adjusting proposed right-of-way locations and road and culvert designs and locations.
- In several areas streams will be restored to a more natural condition by removing existing culverts.
- Hazardous Spill Basins will be added at **Sites 34, 35, 37, and 38** as they are in the Lake Twitty Watershed and to either side of the bridge over Stewarts Creek.
- Turbidity water quality testing program will be implemented in Stewarts Creek throughout construction.
- **Site 54**, the bridge over Meadow Branch and associated high quality wetlands, will be constructed using barge segments supported by timber mats as a temporary bridge to construct the permanent bridge. This method should eliminate potential overtopping of the temporary bridge. Just prior to installation of the temporary bridge, a meeting will be held onsite to locate the mats in areas that will have the least environmental impacts. Minimization to the amount of time wetlands and floodplain will be temporarily impacted was considered in the determination of the schedule for the bridge construction. Upon removal, if mats have changed the surface elevation by more than three inches, that area will be re-vegetated with a native wetland seed mix to help restore it to preconstruction conditions.

- At **Site 62**, Construction will be either timed to avoid nesting and fledgling periods of birds in the culvert, or started prior to these periods and netting installed to deter entry.

### **Compensatory Mitigation**

The applicant offered the following compensatory mitigation plan to offset unavoidable functional loss to the aquatic environment: Compensatory mitigation for the unavoidable impacts to 14,781 lf of warm-water stream and 6.6 acres of wetlands provided by the Ecosystem Enhancement Program (EEP).

### **Essential Fish Habitat**

The project area occurs in the inland counties of Union and Mecklenburg, North Carolina, and therefore contains no Essential Fisheries Habitat. No adverse impacts to Essential Fish Habitat will result from the proposed project

### **Cultural Resources**

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

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

- The proposed work takes place in an area known to have the potential for the presence of prehistoric and historic cultural resources; however, the area has not been formally surveyed for the presence of cultural resources. No sites eligible for inclusion in the National Register of Historic Places are known to be present in the vicinity of the proposed work. Additional work may be necessary to identify and assess any historic or prehistoric resources that may be present.

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

### **Endangered Species**

Pursuant to the Endangered Species Act of 1973, the Corps reviewed the project area, examined all information provided by the applicant and consulted the latest North Carolina Natural Heritage Database. Based on available information, the Corps determines that the proposed project may affect federally listed endangered or threatened species or their formally designated critical habitat. By letter dated December 16, 2013 the US Fish and Wildlife Service concurs that the proposed project is "not likely to adversely affect" the Carolina heelsplitter (*Lasmigona decorata*) or the Schweinitz's sunflower (*Helianthus schweinitzii*).

### **Other Required Authorizations**

The Corps forwards this notice and all applicable application materials to the appropriate State agencies for review.

**North Carolina Division of Water Resources (NCDWR):** The Corps will generally not make a final permit decision until the NCDWR issues, denies, or waives the state Certification as required by Section 401 of the Clean Water Act (PL 92-500). The receipt of the application and this public notice, combined with the appropriate application fee, at the NCDWR Central Office in Raleigh constitutes initial receipt of an application for a 401 Certification. A waiver will be deemed to occur if the NCDWR fails to act on this request for certification within sixty days of receipt of a complete application. Additional information regarding the 401 Certification may be reviewed at the NCDWR Central Office, Transportation Permitting Unit, 512 North Salisbury Street, Raleigh, North Carolina 27604-2260. All persons desiring to make comments regarding the application for a 401 Certification should do so, in writing, by November 24, 2014 to:

NCDWR Central Office  
Attention: Ms. Amy Chapman, Transportation Permitting Unit  
(USPS mailing address): 1617 Mail Service Center, Raleigh, NC 27699-1617

Or,

(physical address): 512 North Salisbury Street, Raleigh, North Carolina 27604

**North Carolina Division of Coastal Management (NCDCM):**

The application did not include a certification that the proposed work complies with and would be conducted in a manner that is consistent with the approved North Carolina Coastal Zone Management Program. Pursuant to 33 CFR 325.2(b)(2) the Corps cannot issue a Department of Army (DA) permit for the proposed work until the applicant submits such a certification to the Corps and the NCDCM, and the NCDCM notifies the Corps that it concurs with the applicant's consistency certification. As the application did not include the consistency certification, the Corps will request, upon receipt,, concurrence or objection from the NCDCM.

Based upon all available information, the Corps determines that this application for a Department of Army (DA) permit does not involve an activity which would affect the coastal zone, which is defined by the Coastal Zone Management (CZM) Act (16 U.S.C. § 1453).

**Evaluation**

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

**Commenting Information**

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

(NEPA). Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider the application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. Requests for a public hearing shall be granted, unless the District Engineer determines that the issues raised are insubstantial or there is otherwise no valid interest to be served by a hearing.

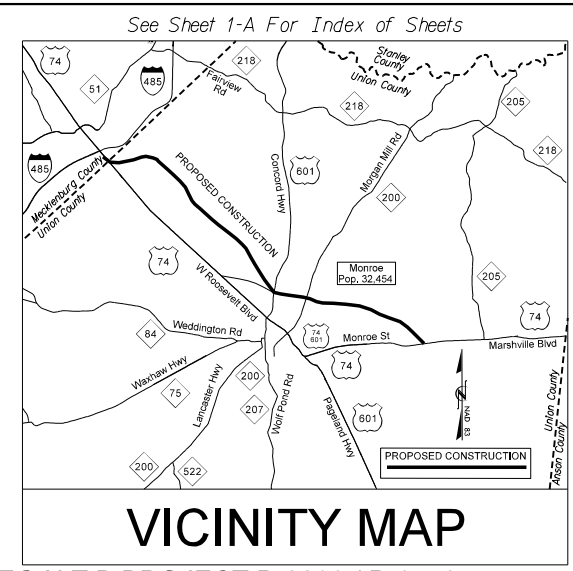
The Corps of Engineers, Wilmington District will receive written comments pertinent to the proposed work, as outlined above, until 5pm, November 24, 2014. Comments should be submitted to Crystal Amschler, Asheville Regulatory Field Office, 151 Patton Avenue, Room 208, Asheville, North Carolina, 28801-5006, at (828) 271-7980 ext 231.



09/08/99

TIP PROJECT: R-3329 / R-2559

CONTRACT: C202587



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# MECKLENBURG & UNION COUNTY

LOCATION: US 74 BYPASS FROM US 74 JUST EAST OF I-485 NEAR MATTHEWS AND STALLINGS TO US 74 JUST EAST OF WINGATE AND WEST OF MARSHVILLE

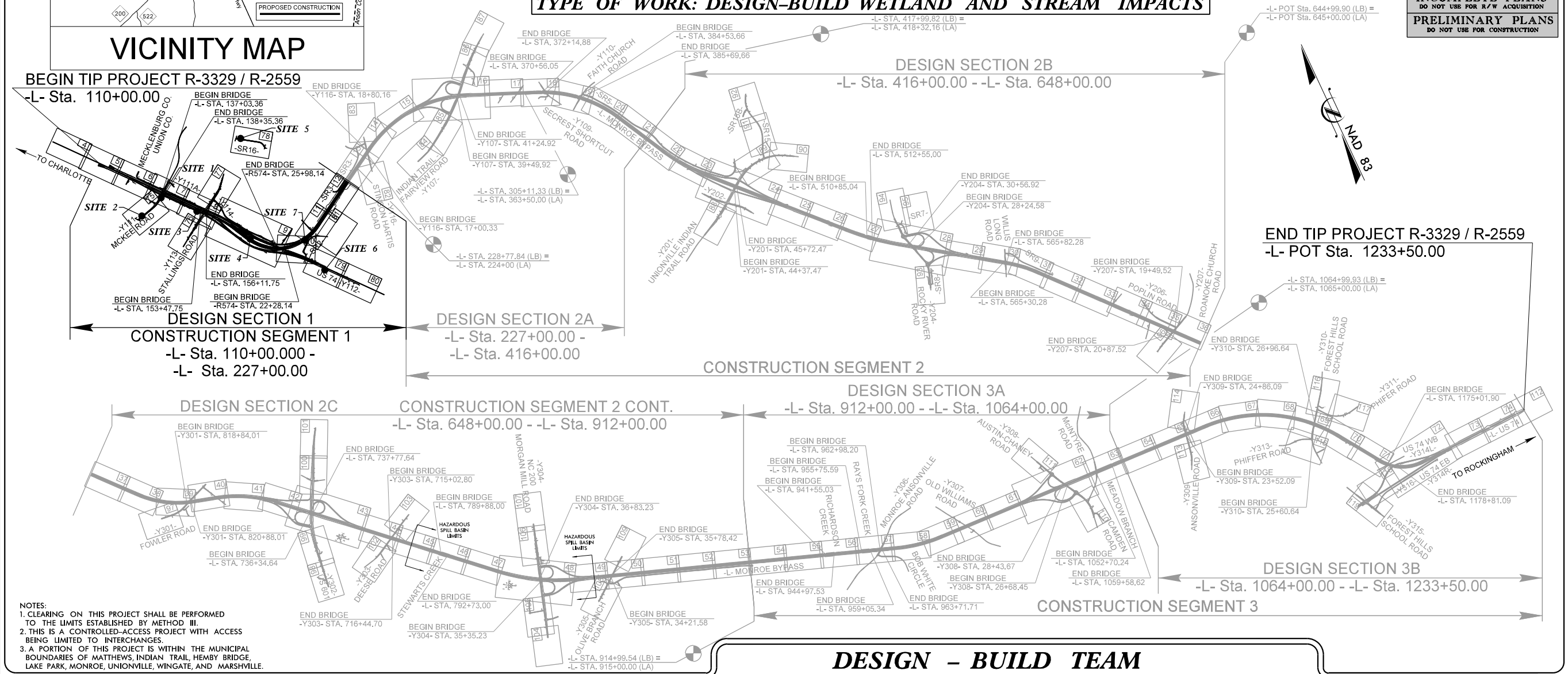
TYPE OF WORK: DESIGN-BUILD WETLAND AND STREAM IMPACTS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-3329 /R-2559	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34533.5.TA1			

PERMIT DRAWING  
SHEET 1 OF 267

INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION



- NOTES:
- CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
  - THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.
  - A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF MATTHEWS, INDIAN TRAIL, HEMBY BRIDGE, LAKE PARK, MONROE, UNIONVILLE, WINGATE, AND MARSHVILLE.

## DESIGN - BUILD TEAM

PLANS PREPARED BY :



RUMMEL, KLEPPER & KAHL, LLP  
900 RIDGEFIELD DRIVE, SUITE 350  
RALEIGH, NORTH CAROLINA 27609  
NC LICENSE NO. F-012

2012 STANDARD SPECIFICATIONS

LETTING DATE:  
OCTOBER 28, 2010

J.T. Peacock, Jr., P.E.  
PROJECT ENGINEER

Stephen E. Roberts, P.E.  
PROJECT DESIGN ENGINEER

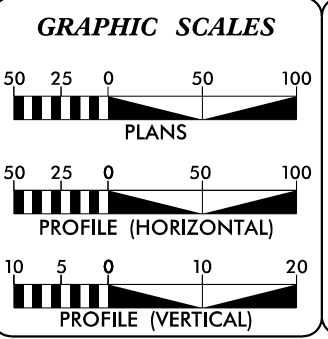
CONTRACTOR :



HYDRAULICS ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.  
ROADWAY DESIGN ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.



DESIGN DATA

ADT 2013 =	64,100
ADT 2035 =	95,600
DHV =	8%
D =	55%
T =	18%*
V =	70 mph

\*TTST 11% DUAL 7%  
FUNCTIONAL CLASS.: FREEWAY

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-3329 /R-2559.....	18.1 mi
LENGTH STRUCTURE TIP PROJECT R-3329 /R-2559.....	*1.6 mi
TOTAL LENGTH TIP PROJECT R-3329 /R-2559.....	19.7 mi

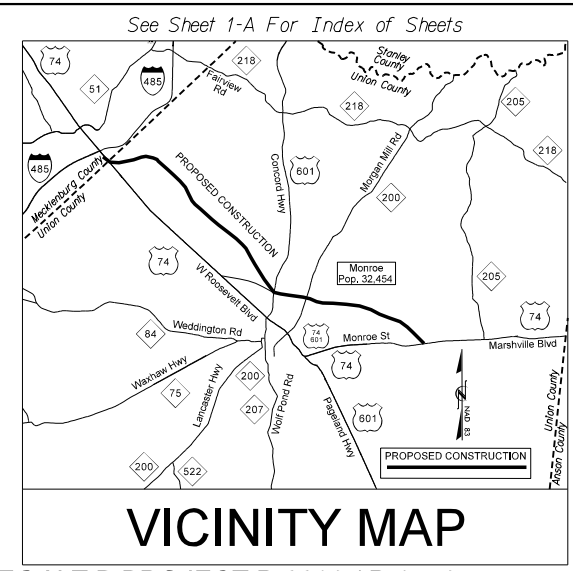
\* LENGTH OF STRUCTURES BASED ON WB LANES

9/29/2014 R:\Hydraulics\PERMITS\_Environment\Drawings\Sec10m\R3329\_R2559\_HYD\_PRM\_WET\_sect1\_tsh.dgn Fkeys

09/08/99

TIP PROJECT: R-3329 / R-2559

CONTRACT: C202587



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# MECKLENBURG & UNION COUNTY

LOCATION: US 74 BYPASS FROM US 74 JUST EAST OF I-485 NEAR MATTHEWS AND STALLINGS TO US 74 JUST EAST OF WINGATE AND WEST OF MARSHVILLE

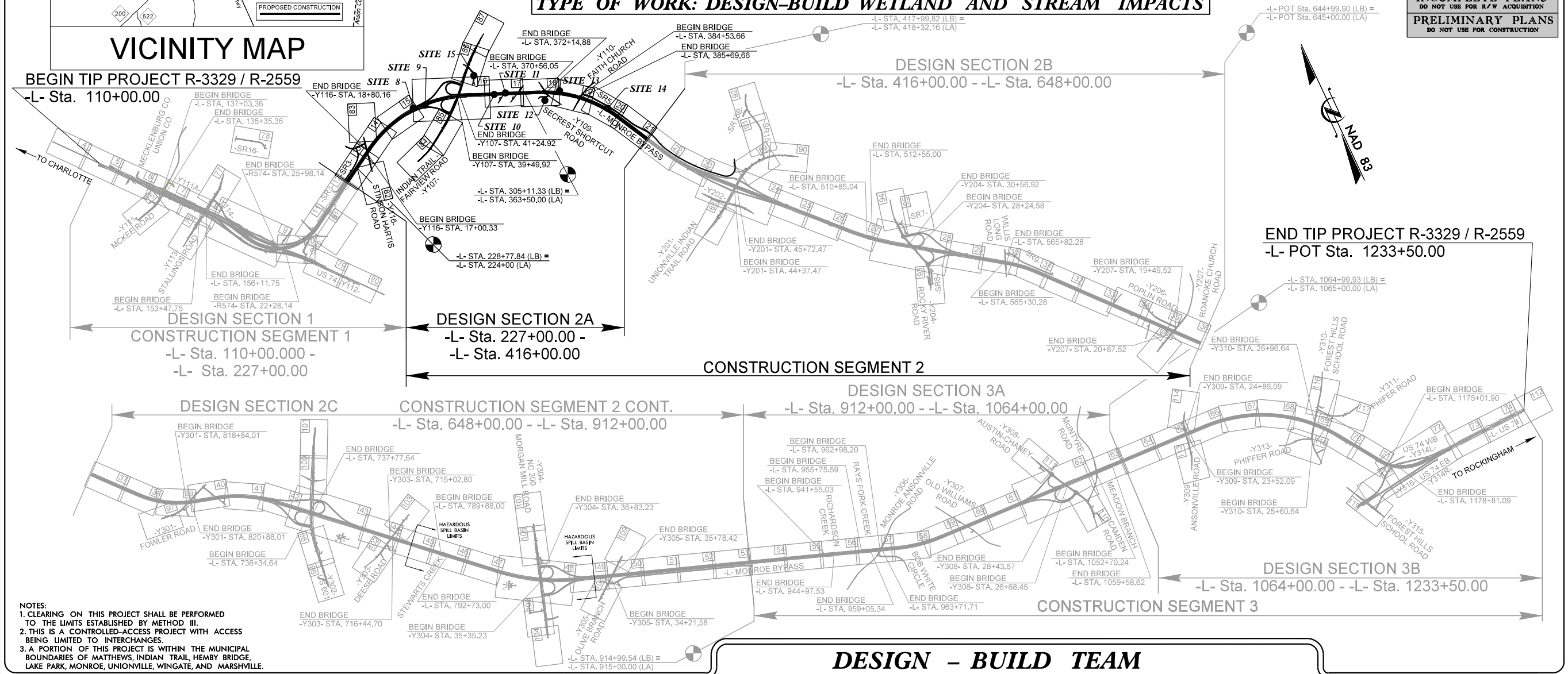
TYPE OF WORK: DESIGN-BUILD WETLAND AND STREAM IMPACTS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-3329 /R-2559	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34533.5.TA1			

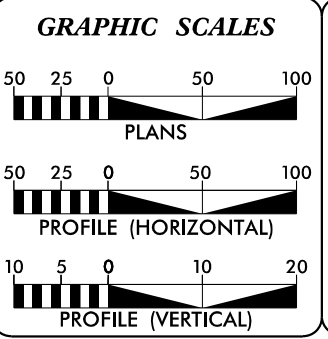
PERMIT DRAWING  
SHEET 39 OF 267

INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION



- NOTES:
- CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
  - THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.
  - A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF MATTHEWS, INDIAN TRAIL, HEMBY BRIDGE, LAKE PARK, MONROE, UNIONVILLE, WINGATE, AND MARSHVILLE.



**DESIGN DATA**

ADT 2013 =	64,100
ADT 2035 =	95,600
DHV =	8%
D =	55%
T =	18%*
V =	70 mph

\*TTST 11% DUAL 7% FUNCTIONAL CLASS.: FREEWAY

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT R-3329 /R-2559.....	18.1 mi
LENGTH STRUCTURE TIP PROJECT R-3329 /R-2559.....	*1.6 mi
TOTAL LENGTH TIP PROJECT R-3329 /R-2559.....	19.7 mi

\* LENGTH OF STRUCTURES BASED ON WB LANES

**DESIGN - BUILD TEAM**

PLANS PREPARED BY :

RUMMEL, KLEPPER & KAHL, LLP  
900 RIDGEFIELD DRIVE, SUITE 350  
RALEIGH, NORTH CAROLINA 27609  
NC LICENSE NO. F-012

2012 STANDARD SPECIFICATIONS

LETTING DATE:  
OCTOBER 28, 2010

J.T. Peacock, Jr., P.E.  
PROJECT ENGINEER

Stephen E. Roberts, P.E.  
PROJECT DESIGN ENGINEER

CONTRACTOR :

HYDRAULICS ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.  
ROADWAY DESIGN ENGINEER

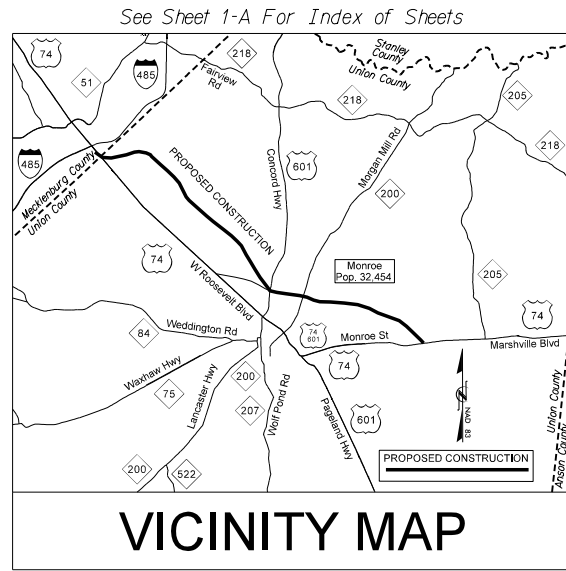
SIGNATURE: \_\_\_\_\_ P.E.

9/29/2014 R:\Hydraulics\PERMITS\_Environment\Drawings\Sec1on2A\R3329\_R2559\_HYD\_PRM\_WET\_sec2a\_tsh.dgn Fkeys

09/08/09

TIP PROJECT: R-3329 / R-2559

CONTRACT: C202587



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**MECKLENBURG & UNION COUNTY**

LOCATION: US 74 BYPASS FROM US 74 JUST EAST OF I-485 NEAR MATTHEWS AND STALLINGS TO US 74 JUST EAST OF WINGATE AND WEST OF MARSHVILLE

TYPE OF WORK: DESIGN-BUILD WETLAND AND STREAM IMPACTS

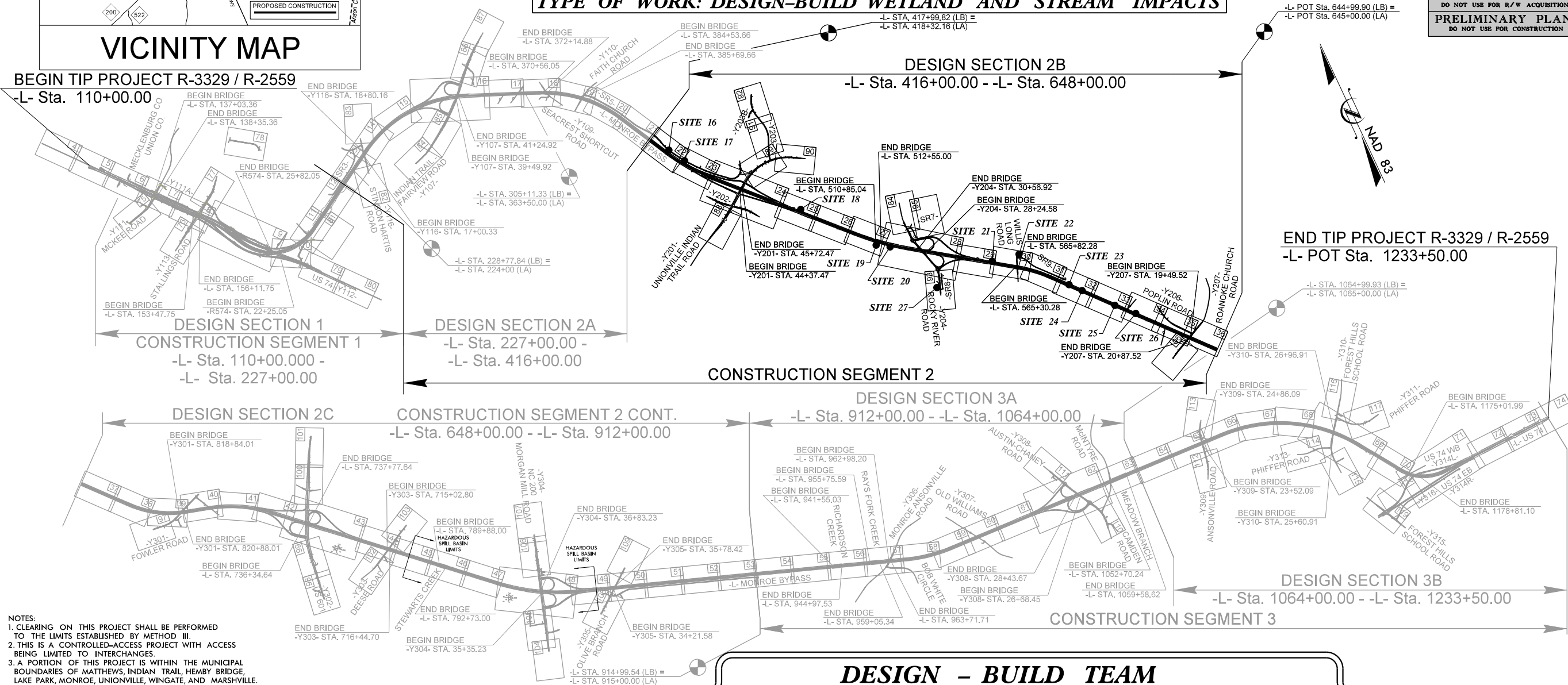
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-3329 /R-2559	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34533.5.TA1			

PERMIT DRAWING  
SHEET 69 OF 267

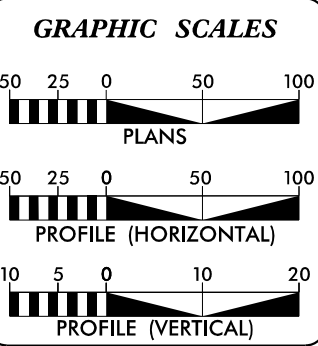
INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION  
PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

BEGIN TIP PROJECT R-3329 / R-2559  
-L- Sta. 110+00.00

END TIP PROJECT R-3329 / R-2559  
-L- POT Sta. 1233+50.00



- NOTES:  
1. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.  
2. THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.  
3. A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF MATTHEWS, INDIAN TRAIL, HEMBY BRIDGE, LAKE PARK, MONROE, UNIONVILLE, WINGATE, AND MARSHVILLE.



**DESIGN DATA**

ADT 2013 =	64,100
ADT 2035 =	95,600
DHV =	8%
D =	55%
T =	18%*
V =	70 mph

\*(TTST 11% + DUAL 7%)  
FUNCTIONAL CLASS.: FREEWAY

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT R-3329 /R-2559.....	18.1 mi
LENGTH STRUCTURE TIP PROJECT R-3329 /R-2559.....	*1.6 mi
TOTAL LENGTH TIP PROJECT R-3329 /R-2559.....	19.7 mi

\* LENGTH OF STRUCTURES BASED ON WB LANES

NCDOT CONTACT: K. ZAK HAMIDI, PE

**DESIGN - BUILD TEAM**

PLANS PREPARED BY :

RUMMEL, KLEPPER & KAHL, LLP  
900 RIDGEFIELD DRIVE, SUITE 350  
RALEIGH, NORTH CAROLINA 27609  
NC LICENSE NO. F-0112

2006 STANDARD SPECIFICATIONS

LETTING DATE:  
OCTOBER 28, 2010

J.T. Peacock, Jr., P.E.  
PROJECT ENGINEER

Stephen E. Roberts, P.E.  
PROJECT DESIGN ENGINEER

**CONTRACTOR :**

MONROE  
BYPASS CONSTRUCTORS

**HYDRAULICS ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.  
ROADWAY DESIGN ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.

\$\$\$\$\$TIMES\$\$\$\$\$  
C:\Users\jzaki\Documents\PERMITS\_Environmental\Drawings\Section2B\R-3329\_r-2559\_HYD\_PRM\_sec2b\_tsh.dgn

09/28/09

TIP PROJECT: R-3329 / R-2559

CONTRACT: C202587

R:\Hydraulics\PERMITS\_Environmental\Drawings\Section2\C\R3329\_R2559\_HYD\_PRM\_WET\_sec2c\_+sh.dgn

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

MECKLENBURG & UNION COUNTY

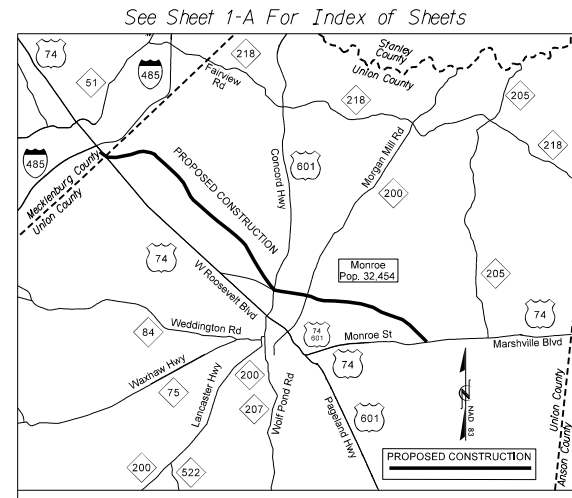
LOCATION: US 74 BYPASS FROM US 74 JUST EAST OF I-485 NEAR MATTHEWS AND STALLINGS TO US 74 JUST EAST OF WINGATE AND WEST OF MARSHVILLE

TYPE OF WORK: DESIGN-BUILD WETLAND AND STREAM IMPACTS

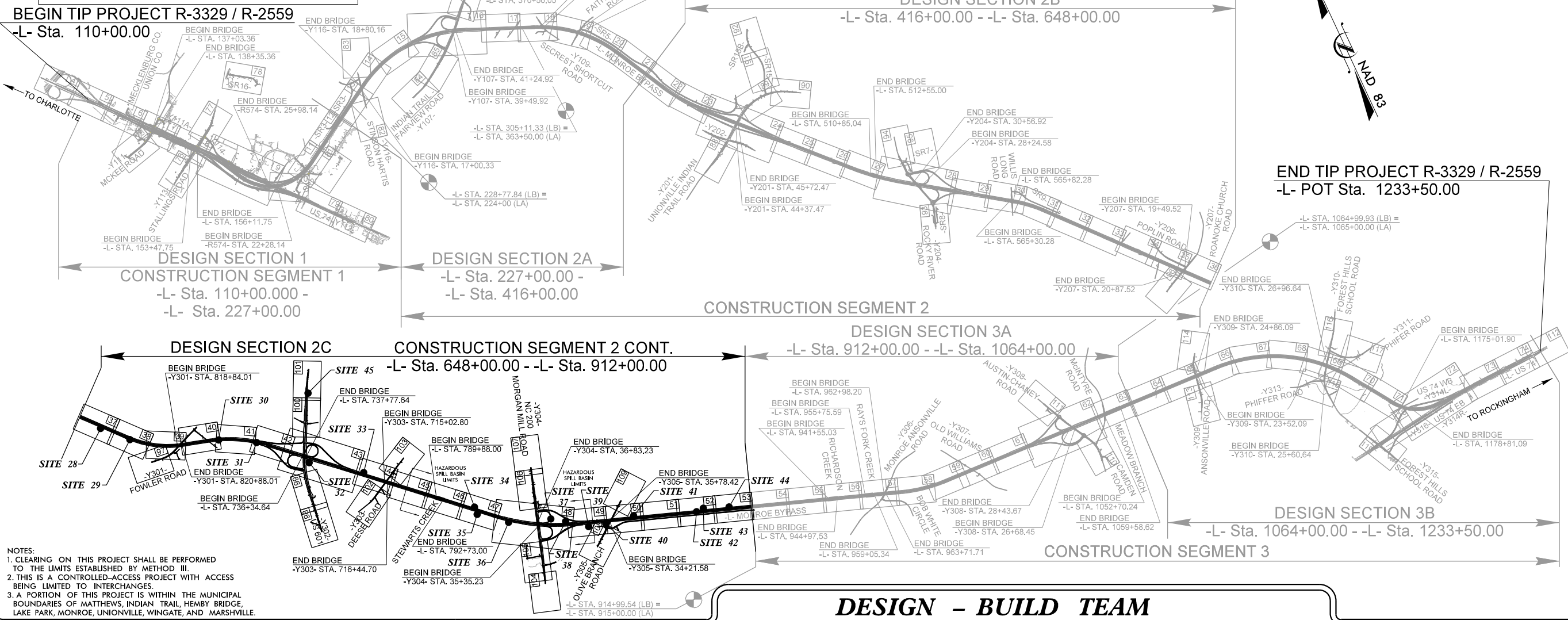
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-3329 /R-2559	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34533.5.TA1			

PERMIT DRAWING  
SHEET 113 OF 267

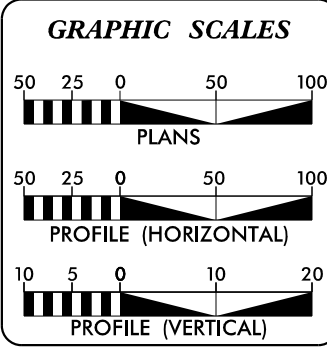
INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION  
PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION



VICINITY MAP



NOTES:  
 1. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.  
 2. THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.  
 3. A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF MATTHEWS, INDIAN TRAIL, HEMBY BRIDGE, LAKE PARK, MONROE, UNIONVILLE, WINGATE, AND MARSHVILLE.



**DESIGN DATA**

ADT 2013 =	64,100
ADT 2035 =	95,600
DHV =	8%
D =	55%
T =	18%*
V =	70 mph

\*TTST 11% DUAL 7%  
FUNCTIONAL CLASS.: FREEWAY

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT R-3329 /R-2559.....	18.1 mi
LENGTH STRUCTURE TIP PROJECT R-3329 /R-2559.....	*1.6 mi
TOTAL LENGTH TIP PROJECT R-3329 /R-2559.....	19.7 mi

\* LENGTH OF STRUCTURES BASED ON WB LANES

**DESIGN - BUILD TEAM**

PLANS PREPARED BY :

RUMMEL KLEPPER & KAHL, LLP  
900 RIDGEFIELD DRIVE, SUITE 350  
RALEIGH, NORTH CAROLINA 27609  
NC LICENSE NO. F-0112

2012 STANDARD SPECIFICATIONS

LETTING DATE:  
OCTOBER 28, 2010

J.T. Peacock, Jr., P.E.  
PROJECT ENGINEER

Stephen E. Roberts, P.E.  
PROJECT DESIGN ENGINEER

CONTRACTOR :

HYDRAULICS ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.  
ROADWAY DESIGN ENGINEER

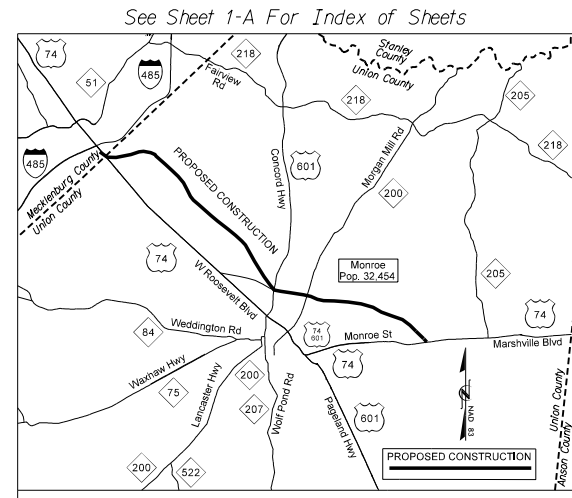
SIGNATURE: \_\_\_\_\_ P.E.

09.08/09

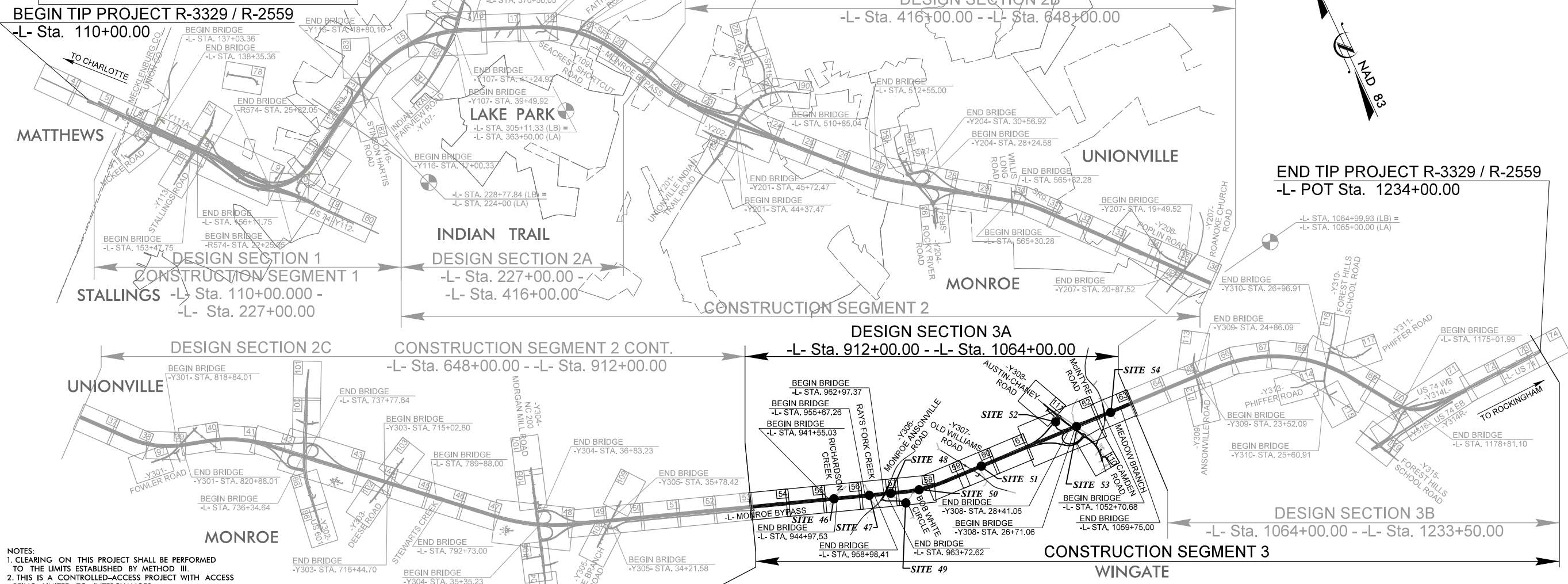
TIP PROJECT: R-3329 / R-2559

CONTRACT: C202587

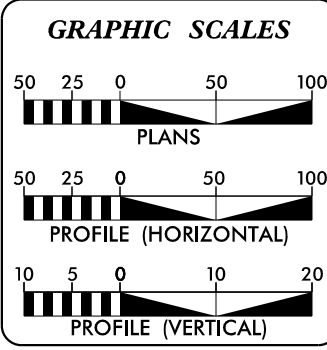
R:\Hydraulics\Permit Environmental\R-3329\_r-2559\_rdy\_tsh\_Sec3a-permit.dgn



VICINITY MAP



NOTES:  
 1. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.  
 2. THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.  
 3. A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF MATTHEWS, INDIAN TRAIL, HEMBY BRIDGE, LAKE PARK, MONROE, UNIONVILLE, WINGATE, AND MARSHVILLE.



**DESIGN DATA**

ADT 2013 =	64,100
ADT 2035 =	95,600
DHV =	8%
D =	55%
T =	18%*
V =	70 mph

\*TTST 11% DUAL 7%  
FUNCTIONAL CLASS.: FREEWAY

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT R-3329 / R-2559	18.1 mi
LENGTH STRUCTURE TIP PROJECT R-3329 / R-2559	*1.6 mi
TOTAL LENGTH TIP PROJECT R-3329 / R-2559	19.7 mi

\* LENGTH OF STRUCTURES BASED ON WB LANES

2006 STANDARD SPECIFICATIONS

**LETTING DATE:**  
OCTOBER 28, 2010

**DESIGN - BUILD TEAM**

PLANS PREPARED BY:  
**MULKEY**  
 ENGINEERS & CONSULTANTS  
 PO Box 33127  
 RALEIGH, N.C. 27636  
 (919) 851-1912  
 (919) 851-1918 (FAX)  
 WWW.MULKEYINC.COM  
 NC LICENSE NO. C-1021

**Steve A. Drum, P.E.**  
PROJECT ENGINEER

**Michael A. Holt, P.E.**  
PROJECT DESIGN ENGINEER

**CONTRACTOR :**

**MONROE**  
BYPASS CONSTRUCTORS

**HYDRAULICS ENGINEER**

\_\_\_\_\_  
 SIGNATURE: ROADWAY DESIGN ENGINEER

\_\_\_\_\_  
 SIGNATURE: P.E.

STATE OF NORTH CAROLINA  
 DIVISION OF HIGHWAYS

**MECKLENBURG & UNION COUNTY**

**LOCATION: US 74 BYPASS FROM US 74 JUST EAST OF I-485 NEAR MATTHEWS AND STALLINGS TO US 74 JUST EAST OF WINGATE AND WEST OF MARSHVILLE**

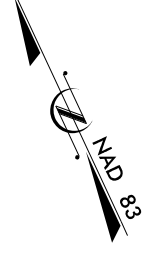
**TYPE OF WORK: DESIGN-BUILD**

**WETLAND & STREAM IMPACTS**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-3329 /R-2559	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34533.5.TA1			

PERMIT DRAWINGS  
 SHEET 177 OF 267

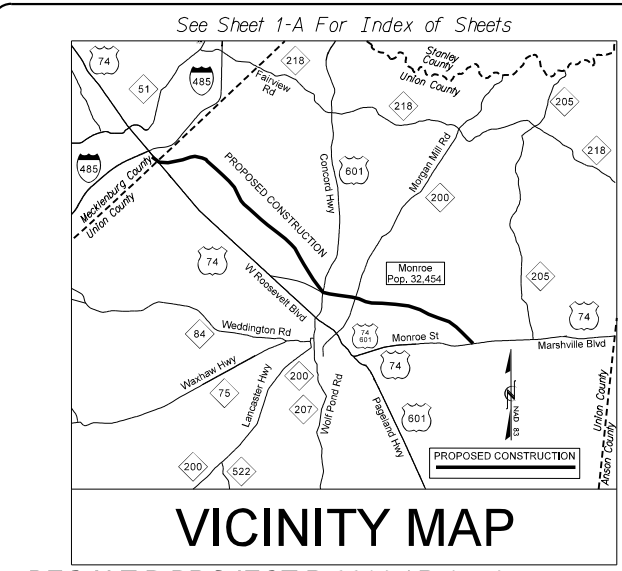
**PRELIMINARY PLANS**  
 DO NOT USE FOR CONSTRUCTION



09/08/99

TIP PROJECT: R-3329 / R-2559

CONTRACT: C202587



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# MECKLENBURG & UNION COUNTY

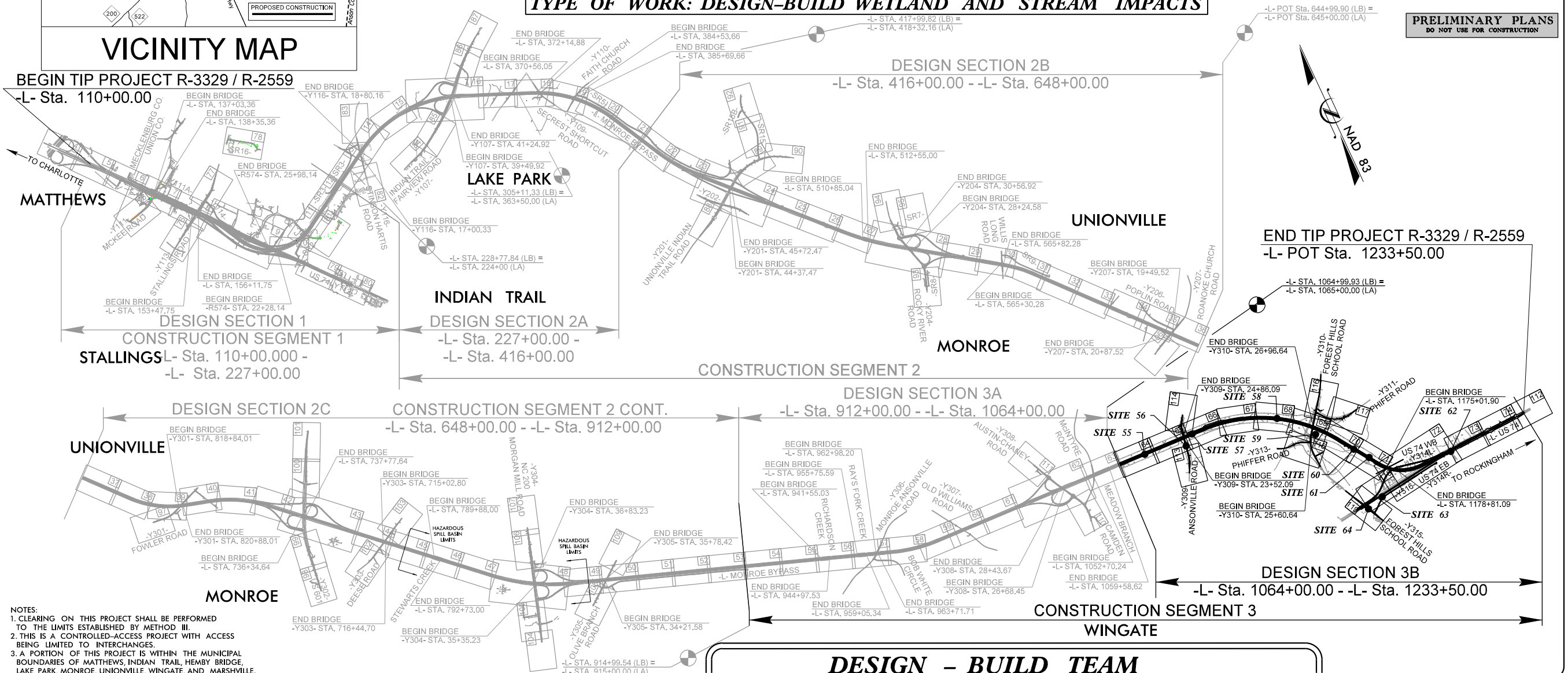
LOCATION: US 74 BYPASS FROM US 74 JUST EAST OF I-485 NEAR MATTHEWS AND STALLINGS TO US 74 JUST EAST OF WINGATE AND WEST OF MARSHVILLE

TYPE OF WORK: DESIGN-BUILD WETLAND AND STREAM IMPACTS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-3329 /R-2559	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34533.5.TA1			

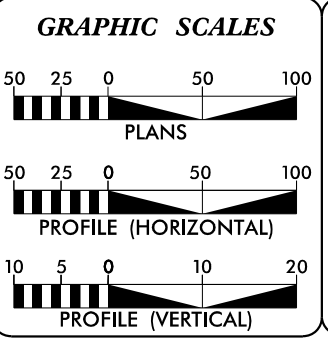
PERMIT DRAWING  
SHEET 217 OF 267

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION



- NOTES:
- CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
  - THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.
  - A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF MATTHEWS, INDIAN TRAIL, HEMBY BRIDGE, LAKE PARK, MONROE, UNIONVILLE, WINGATE, AND MARSHVILLE.

## DESIGN - BUILD TEAM



**DESIGN DATA**

ADT 2013 =	64,100
ADT 2035 =	95,600
DHV =	8%
D =	55%
T =	18%*
V =	70 mph

\*TTST 11% DUAL 7% FUNCTIONAL CLASS.: FREEWAY

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT R-3329 /R-2559.....	18.1 mi
LENGTH STRUCTURE TIP PROJECT R-3329 /R-2559.....	*1.6 mi
TOTAL LENGTH TIP PROJECT R-3329 /R-2559.....	19.7 mi

\* LENGTH OF STRUCTURES BASED ON WB LANES

PLANS PREPARED BY :

**RK&K**  
RUMMEL, KLEPPER & KAHL, LLP  
900 RIDGEFIELD DRIVE, SUITE 350  
RALEIGH, NORTH CAROLINA 27609  
NC LICENSE NO. F-012

2012 STANDARD SPECIFICATIONS

LETTING DATE:  
OCTOBER 28, 2010

**J.T. Peacock, Jr., P.E.**  
PROJECT ENGINEER

**Stephen E. Roberts, P.E.**  
PROJECT DESIGN ENGINEER

CONTRACTOR :

HYDRAULICS ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.  
ROADWAY DESIGN ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.

9/29/2014 R:\Hydraulics\PERMITS\_Env\environmental\Drawings\N3329\_R2559\_HYD\_PRM\_WET\_SECO3B\_TSH.dgn