

P. PREFACE



This Preface lists the lead agencies and their contact information, provides background on the National Environmental Policy Act (NEPA), explains how the Draft Supplemental Final Environmental Impact Statement (EIS) will be used, and describes the organization of this document. A brief history of the project is included, along with an update on activities since the Final EIS.

P.1 LEAD AGENCIES, COOPERATING AGENCIES, AND PARTICIPATING AGENCIES

The lead agencies for this project are the Federal Highway Administration (FHWA) and the North Carolina Department of Transportation (NCDOT). In the Draft EIS, the North Carolina Turnpike Authority (NCTA) also was listed as a lead agency. On July 27, 2009, Session Law 2009-343 was signed, transferring the functions and funds of the NCTA to the NCDOT, and the NCTA became a division of NCDOT. Historical references to NCTA in previous documents now refer to NCDOT.

The following individuals may be contacted for additional information concerning this Draft Supplemental Final EIS. Comments and questions may also be sent to the project's email address: monroe@ncdot.gov.

Federal Highway Administration

Mr. John F. Sullivan, III, PE
Federal Highway Administration
310 New Bern Avenue, Suite 410
Raleigh, NC 27601

Telephone: (919) 856-4346

North Carolina Department of Transportation

Ms. Jennifer Harris, PE
Project Development and Environmental Analysis
1548 Mail Service Center
Raleigh, NC 27699-1548

Telephone: (919) 707-6025

The US Army Corps of Engineers (USACE) is a cooperating agency. The following agencies are participating agencies:

- US Environmental Protection Agency (USEPA)
- US Fish and Wildlife Service (USFWS)
- NC Department of Environment and Natural Resources Division of Water Quality (NCDENR-DWQ)
- NC Wildlife Resources Commission (NCWRC)

- NC Department of Cultural Resources State Historic Preservation Office (SHPO)
- Charlotte Regional Transportation Planning Organization (CRTPO), formerly Mecklenburg-Union Metropolitan Planning Organization (MUMPO)¹

The cooperating and participating agencies are identified in the *Monroe Connector/Bypass Section 6002 Coordination Plan* (NCTA, October 2007), prepared in accordance with Section 6002 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU). The *Section 6002 Coordination Plan*, included in Appendix A-5 of the Draft EIS, describes agency roles and public and agency participation in the planning process.

On July 6, 2012, President Obama signed into law the Moving Ahead for Progress in the 21st Century Act (MAP-21), which creates a streamlined, performance-based, and multimodal program to address the many challenges facing the US transportation system (FHWA Web site: <http://www.fhwa.dot.gov/map21/summaryinfo.cfm>). Several MAP-21 provisions target the environmental review process, including providing for earlier coordination, creating greater linkage between the planning and environmental review processes, using a programmatic approach where possible, and consolidating environmental documents. Section 139(g)(1)(A) of MAP-21 retains provisions for preparing coordination plans.

P.2 HOW THIS DOCUMENT WILL BE USED

On May 3, 2012 the United State Court of Appeals for the Fourth Circuit in North Carolina Wildlife Federation, Clean Air Carolina; Yadkin Riverkeeper v. North Carolina Department of Transportation and Federal Highway Administration, 677 F.3d 596 (4th Cir., 2012), held that the FHWA and the NCDOT had not complied with the provisions of NEPA by failing to disclose critical assumptions underlying their decision to build the proposed project and by providing the public with incorrect information. Specifically, in addressing public comments on the project as to whether the data set used as the project’s no-build scenario for the indirect and cumulative analysis contained the project, the agencies responded “TAZ [Traffic Analysis Zone] socioeconomic forecasts for the No Build Scenario did not include the Monroe Connector. MUMPO confirmed our assumption regarding the reasonableness of the 2030 TAZ forecasts for use as a No Build basis.” The second sentence accurately reflects the agencies’ final conclusion, but the first sentence is not correct. Travel time to employment, one of eight land development factors for Union County used to project no-build growth estimates for the year 2030, presumed the presence of the proposed Monroe Connector/Bypass. As a result, the data relied upon to reflect the no build scenario included a build assumption. In response to the court’s decision FHWA rescinded the Record of Decision (ROD) for this project on July 3, 2012. NCDOT and FHWA then re-initiated the NEPA process which has led to the development of this Draft Supplemental Final EIS.

In response to the opinion of the US Court of Appeals for the Fourth Circuit, this Draft Supplemental Final EIS and supporting technical documentation specifically disclose and evaluate the critical assumptions of the no-build data used in the analysis. In short, the agencies contacted the individual who designed the model used to generate the data set used as the

¹ MUMPO’s governing body approved a new planning area boundary on July 17, 2013. The expansion of the planning area was made necessary by the growth of the Charlotte urbanized area. MUMPO has changed its name to Charlotte Regional Transportation Planning Organization (CRTPO), to better reflect its expanded planning area.

baseline for the indirect and cumulative effects analysis of the project and requested he rerun the model without the project. He was able to do so and the new results showed very little difference in travel times between a road network with the project and without. The rerun model showed no difference in population projections based on the revised travel times.

There was little difference in travel times with and without the project in the road network, because the model’s travel time measured the time to travel from population centers to the nearest employment center, not for example, travel time from one end of the project area to the other.² Although the agencies had argued before the Court of Appeals for the Fourth Circuit that they anticipated the project’s inclusion in the travel-time factor minimally impacted the no-build scenario, their explanations were discounted, because the agencies had failed to provide them during the NEPA process. Furthermore, the agencies’ explanations were based on estimations, not an actual rerunning of the model at issue. The agencies’ basis for determining MUMPO’s data set reasonably represents the no build scenario is thus based on new and more detailed analysis than the agencies presented in the prior litigation. This document also contains a more detailed explanation regarding the flawed 2035 no-build projections originally included in the Final EIS. Those projections are traffic forecasts, which are based on modeling separate from that at issue in determining whether MUMPO’s data better represented a build or no build scenario. The error with those projections was not the result of mistakenly including the project in the no-build scenario as discussed in further detail in **Section 2.5.2** of the Draft Supplemental Final EIS. A summary of all the resources reevaluated in this document is provided in **Table P-1** at the end of this section. The steps taken to revisit modeling are discussed in detail in the revised quantitative indirect and cumulative effects analysis prepared in conjunction with this Draft Supplemental Final EIS.

In addition, this Draft Supplemental Final EIS addresses current environmental conditions and focuses on any changes that have occurred with regards to the project (note: there have been no changes in the proposed action), the alternatives analysis, the affected environment and impacts, and any new issues or information identified since the Final EIS was published. Field reviews, additional environmental studies, and coordination with environmental resource and regulatory agencies and the public have been undertaken, the results of which are reported in this document.

The FHWA intends to use this Draft Supplemental Final EIS, together with public and agency input and comments received on this document, as the basis for a Combined Final Supplemental Final EIS/ Record of Decision (SFEIS/ROD), which will be the final document prepared under the NEPA process. Section 1319(b) of MAP-21 directs the lead agency, to the maximum extent practicable, to expeditiously develop a single document that consists of a Final EIS and ROD, unless certain conditions exist. This provision is applicable to all FHWA projects for which a Final EIS is issued on or after October 1, 2012. The SFEIS/ROD will identify the Selected Alternative corridor and present the basis for the decision. It should be noted that the SFEIS/ROD will identify a corridor, not a specific design. The functional design for the Preferred Alternative presented in this document may change during final design activities occurring after the SFEIS/ROD, provided the modifications are within the Selected Alternative corridor.

² Different modeling was used to estimate travel times for purposes of traffic forecasting. Traffic forecasting is associated with the project’s need and purpose and alternatives analysis and is discussed in further detail in **Sections 1 and 3** of this document.

The National Environmental Policy Act of 1969, as amended, requires federal agencies to consider the potential environmental consequences of their proposals, document their analyses, and make this information available to the public for comment prior to project or program implementation (FHWA Web site: <http://environment.fhwa.dot.gov/projdev/index.asp>). FHWA and NCDOT are making this document available for a period of at least 30 days from the publication of the notice of availability in the Federal Register to provide resource agencies and the public an opportunity for review.

The FHWA NEPA process for transportation projects fosters project decisions that balance engineering and transportation needs with social, economic, and natural environmental factors. During the process, a wide range of partners (including the public, businesses, interest groups, and agencies at all levels of government) provides input into project and environmental decisions (FHWA Web site: <http://environment.fhwa.dot.gov/projdev/pd3tdm.asp>).

P.3 ORGANIZATION OF THIS DOCUMENT

This Draft Supplemental Final EIS follows the guidelines for format and content described in FHWA's Technical Advisory T6640.8A, *Guidance for Preparing and Processing Environmental and Section 4(f) Documents* (FHWA Web site: <http://environment.fhwa.dot.gov/projdev/impTA6640.asp>). This approach avoids repetition of material from the Draft EIS and Final EIS by incorporating these documents by reference, and instead allows the focus of the Supplemental Final EIS to be on important changes that have occurred since the Final EIS, comments received on the Final EIS and responses to those comments, and new information that has been considered.

As described in the Technical Advisory, "the supplemental EIS should provide sufficient information to briefly describe the proposed action, the reason(s) why a supplement is being prepared, and the status of the previous draft or final EIS. The supplemental EIS needs to address only those changes or new information that are the basis for preparing the supplement and were not addressed in the previous EIS. Reference to and summarizing the previous EIS is preferable to repeating unchanged, but still valid, portions of the original document." The Draft EIS and Final EIS, incorporated by reference, are available for download on the NCDOT Web site (www.ncdot.gov/projects/monroeconnector/) and are included on a CD with all hard copies of this Draft Supplemental Final EIS.

This Draft Supplemental Final EIS is divided into ten sections, as described briefly below:

- **Section P** is this Preface.
- **Section PC** lists the special project commitments that NCDOT has agreed to implement for the Preferred Alternative.
- **Section 1** explains the proposed action, the purpose of the project, and the need for the project. Updates to supporting information since the Final EIS was published are described, including new Census data, updated land use plans, and recent improvements along existing US 74. Data and information that have not changed since the Final EIS are summarized, and in these instances, the reader is referred to the Final EIS for additional details. The purpose and need for the project have not changed.
- **Section 2** summarizes the alternatives considered for the project. It discusses the development and screening of alternatives, including alternatives eliminated from detailed study and the reasons for elimination. It also describes the Detailed Study

Alternatives (DSA), the Recommended Alternative identified in the Draft EIS, the Preferred Alternative identified in the Final EIS, and additional consideration of alternatives after the Final EIS. The Preferred Alternative identified in the Final EIS is still the Preferred Alternative.

- **Section 3** describes the Preferred Alternative and the reasons it was selected. This section also describes additional design work, other studies conducted for the Preferred Alternative, and updates to impacts associated with the Preferred Alternative that have been developed since the Final EIS was prepared.
- **Section 4** describes the existing conditions and projected impacts of the DSAs on the human, physical, cultural, and natural environments. The existing conditions for a resource are described, followed by projected impacts of the Preferred Alternative, an explanation of how the other DSAs may or may not be affected by any changes since the Final EIS, and discussion, where appropriate, on how these changes would or would not affect the decision on the Preferred Alternative.
- **Section 5** details continued coordination efforts with the public, as well as federal, state, and local agencies, since the Final EIS was issued for public review. All comments and responses are included in **Appendix A**.
- **Sections 6, 7, and 8** provide lists of the following: the preparers of the Draft Supplemental Final EIS; agencies, organizations, and persons sent a copy of the Draft Supplemental Final EIS; and the references and supporting documentation used in the preparation of the Draft Supplemental Final EIS. **Section 8** also includes a list of acronyms used in this Draft Supplemental Final EIS.

The Draft Supplemental Final EIS also includes appendices that are referenced throughout the document. The Draft Supplemental Final EIS, including figures and appendices, is available for download on the NCDOT Web site (www.ncdot.gov/projects/monroconnector/). The supporting documentation listed in **Section 8** is comprised of technical memoranda and reports incorporated by reference into this Draft Supplemental Final EIS. This reference material is available for review upon request and also available on the NCDOT Web site.

Note that throughout the Draft Supplemental Final EIS, references to sections, tables, figures, and appendices included in this document are in bold text, while references to these elements from the Draft EIS, Final EIS, and other documents are not in bold text.

P.4 HISTORY OF PROJECT

NCDOT previously studied two projects in this area – the Monroe Bypass (North Carolina State Transportation Improvement Program [STIP] Project R-2559) and the Monroe Connector (STIP Project R-3329). They are now being advanced by NCDOT as a single project, which was the subject of the Draft EIS (March 2009), Final EIS (May 2010), and now this Draft Supplemental Final EIS. Previous studies are summarized below.

P.4.1 PREVIOUS STUDIES OF MONROE BYPASS

The Monroe Bypass project was the first of the two projects studied by NCDOT. The western terminus of this project was US 74 near Rocky River Road (Secondary Road [SR] 1514). From there, the project extended east around the north side of Monroe, and connected to US 74 between the towns of Wingate and Marshville.

NCDOT completed the original planning and environmental process for the Monroe Bypass in 1997. The process included an Environmental Assessment (EA) issued on March 14, 1996, and a Finding of No Significant Impact (FONSI) issued on June 20, 1997. The process resulted in the selection of a Preferred Alternative. **Figure P-1** shows the previous Monroe Bypass Detailed Study Alternatives (DSAs) and the Preferred Alternative that was identified in the 1997 FONSI.

For right-of-way acquisition and construction purposes, the Monroe Bypass project was divided into three sections (**Figure P-1**):

- Section A from US 74 near Rocky River Road (SR 1514) east to US 601
- Section B from US 601 to just east of Walkup Avenue (SR 1751)
- Section C from just east of Walkup Avenue and connecting with US 74 west of Marshville

In May 1997, a Public Hearing was held to present final designs for Sections B and C. It was determined that Section A would be replaced by NCDOT’s Monroe Connector project; therefore, Section A was temporarily suspended at that time while feasibility studies for the Monroe Connector were initiated by NCDOT. In 2000 and 2001, right of way was purchased for Sections B and C. However, during the environmental permitting process (prior to construction), issues arose regarding the federally-endangered Carolina heelsplitter mussel, and construction was postponed.

P.4.2 PREVIOUS STUDIES OF MONROE CONNECTOR

NCDOT began the planning process for the Monroe Connector in 1999. As the name suggests, the Monroe Connector was intended to “connect” the Monroe Bypass (Sections B and C) from US 601 west to I-485. **Figure P-2** shows the Preliminary Study Corridors and DSAs for NCDOT’s Monroe Connector project. A Draft EIS for the Monroe Connector was issued on October 17, 2003, and released for review and comment by the public and environmental resource and regulatory agencies in November 2003. However, a Public Hearing was not held following completion of the Draft EIS. FHWA elected to suspend the process in order to consider the project in relation to issues associated with the Monroe Bypass.

The 2003 Draft EIS for the Monroe Connector was rescinded on January 30, 2006, by notice in the Federal Register (Vol. 71, No. 19, page 4958). The notice stated: *“Based on the comments received from various Federal and state agencies and the public and a recent decision to change the eastern terminus of the project from US 601 to the proposed Monroe Bypass, the FHWA and NCDOT have agreed not to prepare a Final EIS for the proposed US 74 improvements from I-485 to US 601. FHWA, NCDOT, and the North Carolina Turnpike Authority (NCTA) plan to prepare a new Draft EIS for the proposed project. A notice of intent to prepare the EIS will be issued subsequent to this rescinding notice. The new Draft EIS will include a toll alternative among the full range of alternatives that will be analyzed as well as a change in the location of the eastern terminus.”*

P.4.3 MONROE BYPASS AND MONROE CONNECTOR COMBINED

In February 2005, at the request of the MUMPO, NCTA adopted the Monroe Connector as a candidate toll facility. At that time, the *2005–2011 STIP* included funding for construction of Sections B and C of the Monroe Bypass and NCDOT was moving forward with the Monroe Bypass as a separate project. However, due to the age of the original EA/FONSI for the Monroe Bypass (approximately 10 years), FHWA required a reevaluation of the document prior to the start of any construction. All sections of the Monroe Bypass (A, B, and C) needed to be

considered in the reevaluation because they provide the logical endpoints for the project, enabling it to function as a stand-alone bypass.

During the course of the reevaluation, it was discovered that the MUMPO *2030 Long Range Transportation Plan* (LRTP) did not include Section A of the Monroe Bypass; it included the Monroe Connector instead. A project must be in the LRTP in order for it to receive FHWA approval and funding. As originally envisioned, the Monroe Connector was meant to function as a replacement for Section A of the Monroe Bypass. Without the Monroe Bypass Sections B and C, the Monroe Connector did not have a logical eastern terminus. Likewise, without Section A (or the Monroe Connector serving as a replacement for Section A), Sections B and C of the Monroe Bypass did not have a logical western terminus and could not serve as a stand-alone bypass. FHWA and NCDOT elected to discontinue the reevaluation process to consider combining the Monroe Bypass and Monroe Connector projects into a single viable project with logical termini.

On September 20, 2006, MUMPO adopted a resolution recommending that the Monroe Bypass and Monroe Connector be combined into a single environmental study under the administration of NCTA. On January 19, 2007, FHWA issued a Notice of Intent (NOI) in the Federal Register announcing its intention to prepare a Draft EIS for the combined Monroe Connector/Bypass project (Federal Register, Vol. 72, No. 12, pages 2582 to 2583).

P.4.4 ACTIVITIES BETWEEN THE DRAFT EIS AND FINAL EIS

The *Monroe Connector/Bypass Administrative Action Draft Environmental Impact Statement* was signed on March 31, 2009 and made available for public and agency review on April 2, 2009 on NCTA’s Web site. Copies of the document were distributed to public review locations and agencies on April 17, 2009. The public comment period for the Draft EIS ended on June 15, 2009.

Public and Agency Coordination. Four Pre-Hearing Open Houses, two of which were followed by Combined Corridor Design Public Hearings, were held in May 2009. Comment sheets were made available at all Pre-Hearing Open Houses and Public Hearings and on the project Web site.

The NCTA/NCDOT conducted regularly scheduled agency coordination meetings throughout the project development process. These Turnpike Environmental Agency Coordination (TEAC) meetings were held to review the status of current NCTA projects, to discuss and agree upon study methodologies, and to discuss and resolve environmental concerns and adherence to permitting requirements. TEAC meetings held since the Draft EIS included discussions on the selection of the Preferred Alternative for the Monroe Connector/Bypass project.

Additional information on coordination efforts with the public, as well as federal, state, and local agencies, between the Draft EIS and Final EIS is included in Section 3 of the Final EIS.

Updates and Refinements to the Preferred Alternative. Refinements were made to the functional design of the Preferred Alternative prior to the Final EIS based on input received from state and federal agencies and the public. Refinements included changes to interchange configurations and further consideration of potential service road locations (*Monroe Connector/Bypass Service Road Study*, PBS&J, April 2010). These are summarized in **Sections 3.3.1 and 3.3.2** of this document and described in detail in Section 2.3 of the Final EIS. Cost estimates also were updated for the Preferred Alternative in the Final EIS Section 2.3.4.

Additional Studies of the Preferred Alternative in the Final EIS. Additional studies prepared for the Preferred Alternative and presented in the Final EIS included updated traffic forecasts, an updated traffic noise study, an updated hazardous materials evaluation, an additional archaeological assessment, an assessment of critical habitat and preparation of a Biological Assessment for federally protected species, a review of potential on-site mitigation for jurisdictional resources impacts, and a quantitative indirect and cumulative effects analysis, which includes a water quality analysis. These additional studies are summarized below.

- **Updated Traffic Forecasts.** After publication of the Draft EIS, a re-evaluation of traffic volumes and operations was prepared based on the refined functional design of the Preferred Alternative's interchanges with the US 74 Frontage Road, Unionville-Indian Trail Road, and Austin Chaney Road (SR 1758). Detailed information is presented in the *Final Addendum to Year 2035 Build Traffic Operations Technical Memorandum* (PBS&J, February 2010) and summarized in Section 2.3.5 of the Final EIS and **Section 3.3.5** of this Draft Supplemental Final EIS.
- **Traffic Noise Study Addendum.** A noise study was prepared for all DSAs as part of the Draft EIS, and documented in the *Final Traffic Noise Technical Memorandum for Administrative Action Environmental Impact Statement* (PBS&J, March 2009). Between the Draft EIS and the Final EIS, design modifications were made to the Preferred Alternative, and projected traffic volumes were updated. Therefore, an updated noise study for the Preferred Alternative was prepared, as documented in the *Addendum Traffic Noise Technical Memorandum* (PBS&J, January 2010). Results of the updated study are presented in Section 2.5.2.1 of the Final EIS.
- **Hazardous Materials Study Update.** An updated hazardous materials evaluation was prepared for the Preferred Alternative to investigate potentially contaminated parcels in the project corridor. The results were reported in a memorandum from the NCDOT Geotechnical Engineering Unit dated December 11, 2009, and are presented in Section 2.5.2.6 of the Final EIS.
- **Archaeological Assessment.** An additional intensive archaeological assessment was prepared for the Preferred Alternative to identify archaeological resources that may be impacted. The *Final Archaeological Inventory and Evaluation for the US 74 Monroe Connector* (New South Associates, March 2010) examined archaeological resources within the 11.4-mile Monroe Connector portion of the project, between I-485 and US 601. In total, the Area of Potential Effects (APE) encompassed 696 acres. (Note: An updated archaeological evaluation for the Monroe Bypass portion of the project was not required since archaeological resources have not changed since the completion of prior studies.) A total of 1,034 shovel tests and eight test units were excavated for the evaluation. The results of the updated archaeological assessment are presented in Section 2.5.3.2 of the Final EIS.
- **Biological Assessment.** A Biological Assessment was prepared to evaluate endangered species that may be impacted by the Preferred Alternative: *Biological Assessment for the Monroe Connector-Bypass Project (R-3329/R-2559)* (The Catena Group, May 2010). Results are presented in Section 2.5.4.5 of the Final EIS. The Biological Assessment addressed the following endangered plant species: Michaux's Sumac (*Rhus michauxii*), Schweinitz's Sunflower (*Helianthus schweinitzii*), and Smooth Coneflower (*Echinacea laevigata*).

The Biological Assessment also addressed freshwater mussels, in particular the federally endangered Carolina heelsplitter (*Lasmigona decorate*). A *Freshwater Mussel Survey Report* (The Catena Group, June 2009) identified existing populations of freshwater mussels within the project study area and is also discussed in Section 2.5.4.5 of the Final EIS.

- **Mitigation.** A conceptual mitigation plan for impacts to jurisdictional resources (e.g. wetlands, streams, and ponds) was prepared for the Preferred Alternative. *Review for Potential On-Site Mitigation* (ESI, January 2010), summarized in Section 2.5.4.4 of the Final EIS, documents potential on-site mitigation opportunities within the project study area that may assist in meeting compensatory mitigation requirements of the project.
- **Quantitative Indirect and Cumulative Effects Study.** A quantitative indirect and cumulative effects study was prepared for the Preferred Alternative to expand on the qualitative analysis previously prepared for the project. The *Indirect and Cumulative Effects Quantitative Analysis* (Michael Baker Engineering, April 2010) examined potential indirect and cumulative effects with respect to land use changes in more detail for the Preferred Alternative, particularly for the Goose Creek Watershed area (critical habitat for the endangered Carolina heelsplitter). The analysis is summarized in Section 2.5.5 of the Final EIS.

In addition, a water quality modeling analysis was prepared to determine if induced land use change resulting from the project would affect water quality within the project study area. The results of this analysis are presented in the *Monroe Connector/Bypass (STIP R-3329/R-2559) Indirect and Cumulative Effects Water Quality Analysis* (PBS&J, April 2010) and summarized in Section 2.5.5 of the Final EIS.

P.4.5 ACTIVITIES SINCE THE FINAL EIS

Following publication of the Final EIS in May 2010, the Preferred Alternative (Alternative D) was selected for implementation, as documented in the Record of Decision (ROD) (August 2010) for the project. The Selected Alternative is a controlled-access toll facility on approximately 20 miles of new location.

After the August 2010 ROD was published, the Southern Environmental Law Center (SELC), on behalf of Clean Air Carolina, NC Wildlife Federation, and Yadkin Riverkeeper, brought suit against the FHWA and NCDOT regarding the project's environmental documentation, alleging that the study did not comply with the requirements of NEPA. FHWA and NCDOT prevailed in a federal District Court decision issued on October 24, 2011. SELC then filed an appeal to the 4th US Circuit Court of Appeals, and a three-judge panel of the court overturned the lower court's decision on May 3, 2012, ruling that "*the Agencies failed to take the required "hard look" at environmental consequences*" and remanded the case "*so that the Agencies and the public can fully (and publicly) evaluate the 'no-build' data.*" On June 15, 2012, NCDOT filed a petition for rehearing, seeking a review by the full circuit court of the legal analysis arising out of technical data/facts that NCDOT believes the higher court panel misunderstood. This petition for rehearing was denied on June 29, 2012, and the ROD was subsequently rescinded by FHWA on July 3, 2012.

The following updated studies and coordination have occurred since the publication of the Final EIS in May 2010, and are summarized in this document.

- *US 74 Corridor Analysis Scenarios* (HNTB, December 2010, finalized in October 2013)

- with no substantive changes)
- *Union County Growth Factors Technical Report* (Michael Baker Engineering, September 2012, finalized November 2013)
- *Memo to File – Review of US 74 Corridor Study* (Stantec Consulting Services, Inc., July 2007) (NCDOT, October 2012)
- *Monroe Connector/Bypass Forecasts and Modeling* (Michael Baker Engineering, October 2012)
- *Summary of Alternatives Analysis Process* (Atkins, October 2012)
- *Updated Census Tables for Monroe Connector/Bypass* (Atkins, October 2012)
- *Freshwater Mussel Survey Report Update* (Catena Group, October 2012)
- *Surveys for Schweinitz’s sunflower, Michaux’s sumac, and Georgia Aster at Monroe Bypass* (Atkins, October 2012)
- *US 74 Corridor Travel Time Comparison* (HNTB, October 2013)
- *Crash Data for US 74 from I-485 to Forest Hills School Road for April 1, 2020 through March 31, 2013* (NCDOT Traffic Safety Unit, June 2013)
- *Indirect and Cumulative Effects Quantitative Analysis Update* (Michael Baker Engineering, Inc., November 2013)
- *Traffic Noise Analysis Update* (Atkins, November 2013)
- *Monroe Connector/Bypass Traffic Forecast Summary* (HNTB, November 2013)
- *Technical Report on Direct, Indirect, and Cumulative Impacts to Federally Listed Species* (Michael Baker Engineering, Draft October 2013).
- *Biological Assessment* (The Catena Group, Draft October 2013)
- Additional public involvement and agency coordination:
 - Two community workshops held in June 2012
 - Small group meetings with regional and local agencies and elected officials
 - Coordination meetings with environmental resource and regulatory agencies
 - Re-initiation of Section 7 informal consultation with USFWS (NCDOT and FHWA are currently working with USFWS to reach concurrence on the biological conclusions presented in the new Biological Assessment. USFWS consultation will be complete prior to issuance of the Combined Final Supplemental Final EIS/ROD.)

Table P-1 presents a summary of changes in the affected environment or impacts since the Final EIS was published.

TABLE P-1: Summary of Evaluation of Changes Since the Final EIS

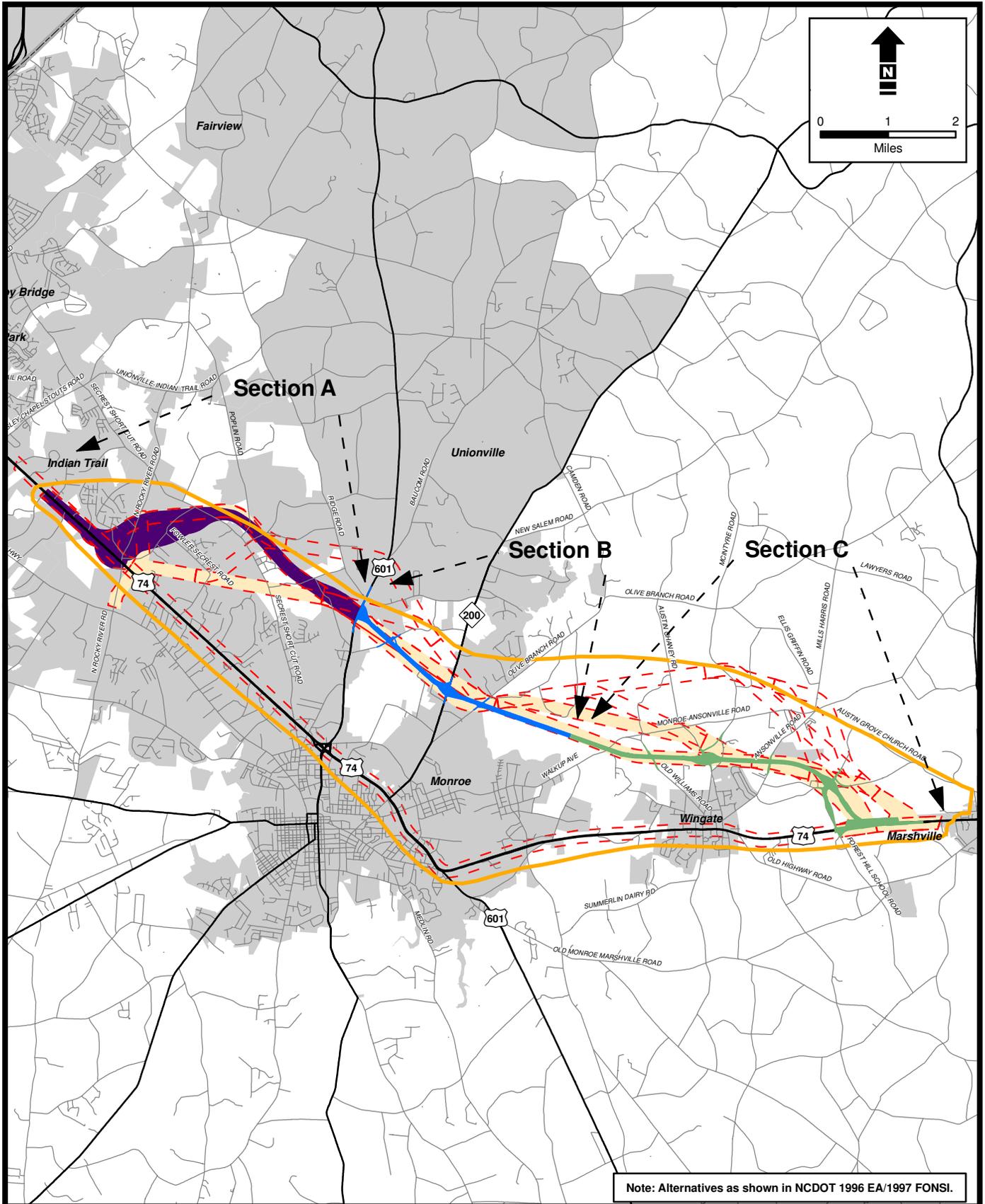
Environmental Resource/Issue		Change in Affected Environment or Impacts
Purpose and Need for Action	<i>Proposed Action (Section 1.1)</i>	No change. Review of current underlying transportation conditions and public comments received indicates that original purpose and need remains valid.
	Project Setting and History <i>(Section 1.2)</i>	No change.
	Social and Economic Conditions <i>(Section 1.2.2)</i>	Yes. Updated 2010 census data now available and included in Appendix D . This new data does not change any conclusions or findings.
	Transportation and Land Use Plans <i>(Section 1.2.3)</i>	Yes. Several land use plans have been updated. Monroe Connector/Bypass continues to be consistent with all updated plans.
	Roadway Conditions and Operations <i>(Section 1.2.4)</i>	Yes. Updated travel time analysis and updated crash data. The updated information does not change the purpose and need for the project.
Alternatives Considered <i>(Section 2)</i>		Yes. Additional review confirms that the alternatives development process used for the project was appropriate.
Preferred Alternative <i>(Section 3)</i>		Yes. Minor updates to impacts of Preferred Alternative based on updated information since the Final EIS, but DSA D remains the Preferred Alternative after consideration of new and updated information and public and agency comments documented in this Draft Supplemental Final EIS. Updated cost estimates provided in Section 3.3.4.
Socioeconomic Characteristics <i>(Section 4.1.1)</i>		Yes. Updated 2010 census data now available and included in Appendix D . This new data identified trends similar to what was presented in the Final EIS (based on 2000 Census data) and did not change any conclusions or findings.
Neighborhoods <i>(Section 4.1.2)</i>		No change.
Community Resources <i>(Section 4.1.2)</i>	Churches	Yes. One additional church was identified in the project corridor – Sardis Baptist Church. The church and its property would not be impacted.
	Schools and Colleges	No change.
	Parks and Recreational Facilities	No change.
Land Use and Transportation Plans <i>(Section 4.1.3)</i>		Yes. Several land use plans have been updated. Monroe Connector/Bypass continues to be consistent with all updated plans.
Right of Way Acquisition & Relocations <i>(Section 4.1.4)</i>		No change in number of acquisitions and relocations reported in Final EIS. Some right-of-way acquisition has been initiated for hardship situations.
Environmental Justice <i>(Section 4.1.5)</i>		Yes. Updated 2010 census data available. However, the conclusion remains that there would be no disproportionately high and adverse impact on minority or low-income populations.
Traffic Noise <i>(Section 4.2.1)</i>		Yes. FHWA's updated noise standard (23 CFR Part 772) and NCDOT's updated <i>Traffic Noise Abatement Policy</i> were considered. The <i>Traffic Noise Analysis Update</i> recommends more noise barriers than previously recommended (5 vs. 3). This is due to an increase in the number of predicted impacts as a result of changes in the way reasonableness is determined.
Air Quality <i>(Section 4.2.2)</i>	NAAQS & Existing Conditions	Yes. There have been some changes to the standards listed for lead, nitrogen dioxide, ozone, and sulfur dioxide. None of these changes affect the analysis of air quality for the project.
	Transportation Conformity	Yes. There have been three amendments to the MUMPO's 2035 Long Range Transportation Plan and the latest conformity determination is May 29, 2013. The proposed project remains in a conforming plan.

TABLE P-1: Summary of Evaluation of Changes Since the Final EIS

Environmental Resource/Issue		Change in Affected Environment or Impacts
Air Quality (cont'd) (Section 4.2.2)	Mobile Source Air Toxics (MSAT)	No change. FHWA issued new MSAT Guidance on December 6, 2012 (<i>Interim Guidance on Mobile Source Air Toxic Analysis in NEPA</i>). The Guidance states "All MSAT analysis beginning on or after December 20, 2012 should use the MOVES model. Any MSAT analysis initiated prior to that date may continue to operate under the previous guidance and utilize MOBILE6.2." The qualitative MSAT analysis for the project was completed in 2009 and need not be updated.
	Greenhouse Gases and Climate Change	No change.
Farmland (Section 4.2.3)		No change.
Utilities and Infrastructure (Section 4.2.4)		Yes. Since the Final EIS was published, Union County completed a <i>Comprehensive Water and Wastewater Master Plan</i> (Black & Veatch, December 2011). This additional water and sewer information does not change the findings of the Draft EIS or Final EIS.
Visual Resources (Section 4.2.5)		No change.
Hazardous Materials (Section 4.2.6)		No change.
Floodplains and Floodways (Section 4.2.7)		No change.
Historic Architectural Resources (Section 4.3.1)		No change.
Archaeological Resources (Section 4.3.2)		No change. An intensive ground penetrating radar survey was conducted at the Hasty-Fowler-Secrest Cemetery in May 2012, as documented in the <i>Ground Penetrating Radar Survey at the Hasty-Fowler-Secrest Cemetery</i> (New South Associates, April 2013). According to the survey, there is no indication of possible burials outside the area with extant markers.
Section 4(f) Resources (Section 4.3.3)		No change.
Section 6(f) Resources (Section 4.3.3)		No change.
Soils and Mineral Resources (Section 4.4.1)		No change. The Natural Resource Conservation Service (NRCS) published updated soil surveys for Union County and Mecklenburg County on July 26, 2012 and July 6, 2012, respectively. Updated soil surveys were reviewed, but they do not include changes to any soils located within the DSA corridors.
Water Resources (Section 4.4.2)		Yes. There have been updates to the Section 303(d)-listed streams in the project area. Stewarts Creek within the project study area is now listed on the <i>2012 Final North Carolina 303(d) List</i> . In addition, there have been updates to the permitted flow for two of the NPDES permits that discharge into streams that run through the project study area. These updates do not change any impacts to water resources as presented in the Final EIS.
Natural Communities and Wildlife (Section 4.4.3)		Yes. Existing natural communities acreages were updated to reflect the conversion of 3.9 acres within the project corridor from hardwood forest to urban/disturbed due to construction activity since the Final EIS. This change does not result in any increase in impacts to natural communities as reported in the Final EIS.
Water Resources in Federal Jurisdiction (Section 4.4.4)		No change.

TABLE P-1: Summary of Evaluation of Changes Since the Final EIS

Environmental Resource/Issue	Change in Affected Environment or Impacts
<p>Federally Protected Species (Section 4.4.5)</p>	<p>No change. New surveys were conducted in 2012 for Carolina heelsplitter, Schweinitz’s sunflower, and Michaux’s sumac. No new specimens or populations were found. Biological conclusions are presented in a new Biological Assessment (October 2013) and remain as presented in the Final EIS:</p> <ul style="list-style-type: none"> • Carolina heelsplitter – May Affect/Not Likely to Adversely Affect • Critical habitat for Carolina heelsplitter – May Affect/Not Likely to Adversely Affect • Michaux’s sumac – No Effect • Smooth coneflower – No Effect • Schweinitz’s sunflower – May Affect/Not Likely to Adversely Affect <p>NCDOT and FHWA are currently working with USFWS to reach concurrence on the biological conclusions presented in the new Biological Assessment. USFWS consultation will be complete prior to issuance of the Combined Final Supplemental Final EIS/ROD.</p>
<p>Land Use Change (Section 4.5)</p>	<p>Yes. There have been updates to local land use plans and census data since the Final EIS, which have been incorporated into an updated ICE analysis. Also, evaluation confirmed the reasonableness of NCDOT’s assumption that the MUMPO TAZ forecasts best represent a future No-Build Scenario.</p> <p>An update of the No-Build and Build Scenarios in the Quantitative ICE based on additional information from the 2010 Census, consideration of additional development activity, updated socioeconomic forecasts, and updated area plans resulted in projected land use changes (i.e., additional development) in less than two percent of the total study area acreage compared to the results of the original Quantitative ICE.</p>

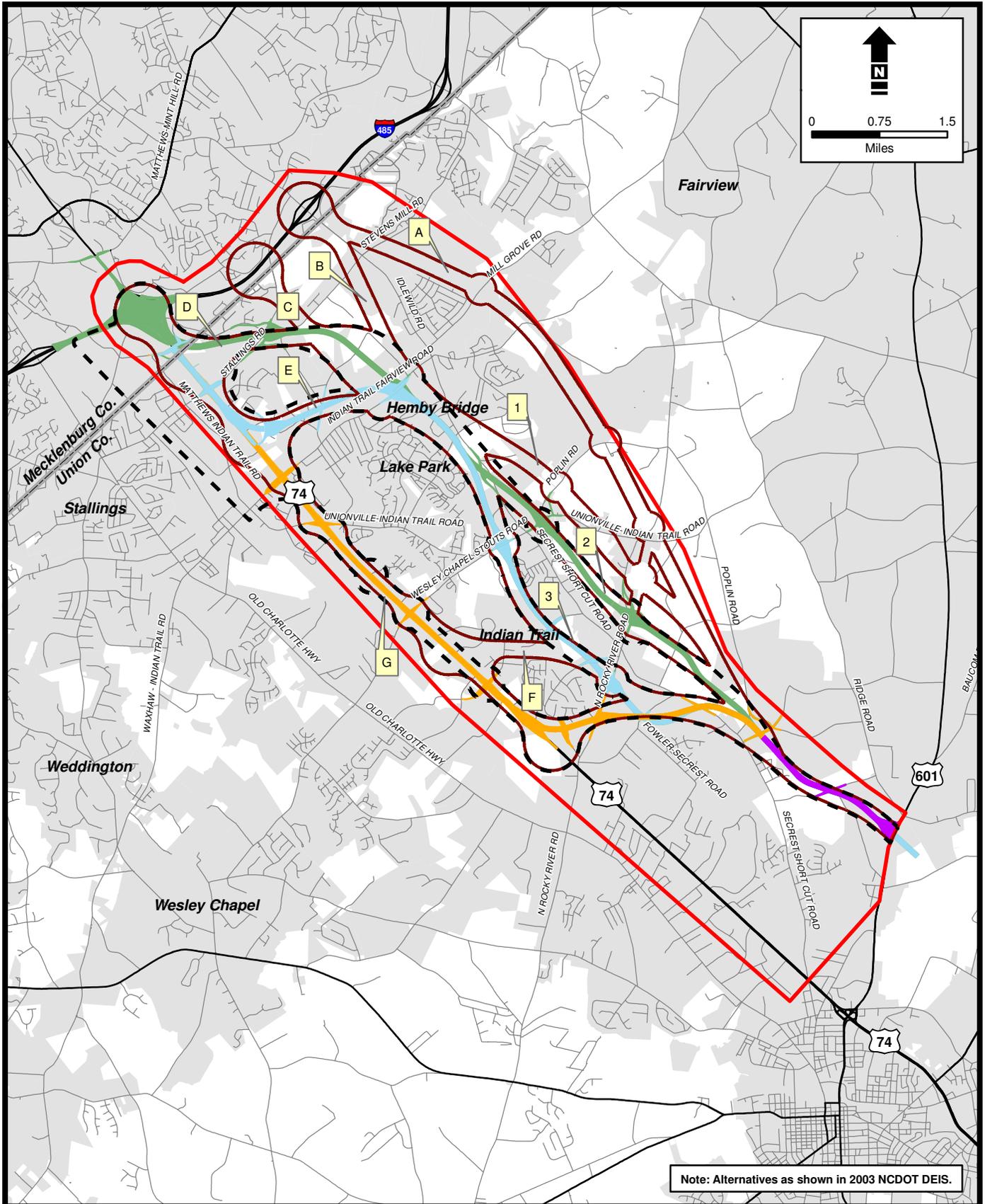


Note: Alternatives as shown in NCDOT 1996 EA/1997 FONSI.

NORTH CAROLINA
Turnpike Authority
MONROE CONNECTOR / BYPASS
 STIP PROJECT NO. R-3329 / R-2559
 Mecklenburg County and Union County

- Legend**
- Preferred Alternative - Project R-2559 (Section A)
 - Preferred Alternative and Final Design - Project R-2559 (Section B)
 - Preferred Alternative and Final Design - Project R-2559 (Section C)
 - Monroe Bypass Detailed Study Alternatives
 - Preliminary Study Area - Project R-2559
 - Preliminary Study Corridor Boundaries - Project R-2559

MONROE BYPASS DETAILED STUDY ALTERNATIVES and PREFERRED ALTERNATIVE
Figure P-1



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NORTH CAROLINA
Turnpike Authority
MONROE CONNECTOR / BYPASS
 STIP PROJECT NO. R-3329 / R-2559
 Mecklenburg County and Union County

- Legend**
- Preliminary Designs Within the Detailed Study Corridors - Project R-3329
 - Preliminary Study Corridor Boundary - Project R-3329
 - Monroe Connector Preliminary Corridor - Project R-3329
 - Detailed Study Alternative Corridor Boundary - Project R-3329
 - Segment Identification

**MONROE CONNECTOR
 PRELIMINARY CORRIDORS and
 DETAILED STUDY ALTERNATIVES**

Figure P-2