

North Carolina Department of Transportation
PROJECT ENVIRONMENTAL CONSULTATION FORM
I.D. No. U-4909

I. GENERAL INFORMATION

- a. Consultation Phase: Construction Consultation
- b. Project Description SR 2643 (Union Cross Road) from SR 2691 (Wallburg Road) to SR 2632 (Sedge Garden Road), Forsyth County
- c. WBS Element Number: 40278.1.1
Federal Project Number: STP-2643(2)
- d. Document Type: Finding of No Significant Impact, May 8, 2008

II. CONCLUSIONS

The above environmental document has been reevaluated as required by 23 CFR 771. It was determined that the current proposed action is essentially the same as the original proposed action. Proposed changes, if any, are noted below in Section III. It has been determined that anticipated social, economic, and environmental impacts were accurately described in the above referenced document(s) unless noted otherwise herein. Therefore, the original Administration Action remains valid.

III. CHANGES IN PROPOSED ACTION AND ENVIRONMENTAL CONSEQUENCES

A. DESIGN CHANGES

Various minor design changes were made since the completion of the Finding of No Significant Impact (FONSI) in 2008. The following minor design changes were made:

- 1) The original preliminary designs called for the I-40 / Union Cross Road interchange to be converted to a Single Point Urban Interchange (SPUI). An Interchange Modification Report was completed for the proposed SPUI. Due to substantial cost savings and improvements in overall capacity, NCDOT has proposed to convert this interchange to a Diverging Diamond Interchange (DDI). Additional capacity analyses were performed in order to compare the Levels of Service (LOS) and queuing for each type of interchange design. The DDI has the same overall LOS and less queuing lengths at the eastbound and westbound I-40

off-ramps when compared to the SPUI. The IMR addendum report and approval letter from FHWA are attached.

- 2) The Weatherstone Development was not constructed until after the FONSI was completed; however, the FONSI noted that evaluations would be completed for access issues during final design. Based on these evaluations, the Woodway Drive entrance has a full movement median opening, and Weatherton Drive has right in / right out access.
- 3) The preliminary designs shown in the EA and FONSI showed Kenosha Drive offset away from the Biloxi Avenue / Union Cross Road intersection. The design has been modified to shift both Kenosha Drive and Biloxi Avenue to align across from each other, and a full movement, signalized intersection is proposed.
- 4) Construction easements, drainage easements and utility easements were added to the plans within the Smith-Tucker Farms Historic District and near the Boone Trail Highway Marker. These easements were discussed with SHPO and FHWA and were approved. See Section III-B for further information.

The above minor design changes did not result in additional impacts to the human and natural environments. The revisions were discussed between NCDOT and FHWA, and based on this discussion, the revisions to the design were considered minor.

B. SECTION 4(F)

A HPO Review meeting was held in October 2010 to discuss the construction easements, drainage easements and utility easements added to the plans within the Smith-Tucker Farms Historic District and other issues related to historic resources. The SHPO and FHWA approved the easements. A request was made to utilize orange safety fence to provide tree protection along the construction limits at the David Smith Farm from -L- Station 96+40 to 97+70. Also, safety fence should be used along the 10-foot boundary line around the log well house at -L- Sta. 180+20. Questions arose concerning who would continue to maintain the Boone Trail Highway Marker located on High Point Road. Forsyth County currently maintains the marker. An agreement was reached that an MOA addendum would not be necessary if the above items were added to the project plans and contract.

C. WATER RESOURCES

Water resource classifications have not changed since the EA and FONSI were completed.

D. FEDERALLY PROTECTED SPECIES

As of September 22, 2010, the US Fish and Wildlife Service (USFWS) lists two federally protected species for Forsyth County; Small-anthered bittercress, and Red-cockaded woodpecker. No species have been added or deleted from this list since the completion of the EA or FONSI. The Biological Conclusion for Small-anthered bittercress and Red-cockaded woodpecker remains No Effect.

E. NOISE

The noise analysis for U-4909 was completed in compliance with the 2004 Traffic Noise Abatement Policy and the FONSI was signed in 2008. Neither of these documents is impacted by the 2011 Policy. The only review needed, relative to the 2011 Policy, is to determine whether or not the 2011 Policy's abatement criteria would cause noise barriers to be feasible and reasonable when they were found not to be so in the original analysis.

A large number of noise receptors are predicted to be impacted by Design Year traffic noise along Union Cross Road, but the numerous driveways and at-grade intersecting roads throughout the project's length as well as the geometric requirements of noise barriers would cause them to be unfeasible in adequately reducing the increases in traffic noise. In conclusion, berms or noise walls as noise mitigation measures along Union Cross Road are not possible due to uncontrolled access, regardless of whether the 2004 or 2011 Traffic Noise Abatement Policy is applied. No further review of this noise analysis is necessary.

F. COMMENTS FROM RESOURCE AGENCIES REGARDING THE FONSI

Comments regarding the FONSI were received from two resources agencies and are attached to the consultation. Below is a summary of their comments and our response to their concerns.

North Carolina Department of Agriculture

Comment: Apply any pesticides at labeling instructions and take measures to preserve native and endangered plant species.

Response: These items are included in NCDOT standard operating procedures.

The United States Environmental Protection Agency

Comment: EPA does not have substantial environmental concerns for the proposed project as it relates to aquatic and natural resources. However, we continue to have technical concerns regarding the lack of a site-specific NEPA analysis for MSAT's. With the proximity of the proposed widening to existing schools, NCDOT and FHWA should

consider a project specific NEPA assessment and analysis. If background MSAT concentrations near identified sensitive receptors is 'unavailable' or 'incomplete' based on emission or dispersion models, NCDOT and FHWA might consider performing post-construction monitoring at these sensitive receptor locations to determine the near-roadway emission levels of MSAT's.

Response: MSAT text provided in the project's Air Quality Analysis is obtained from the FHWA memorandum entitled *Interim Guidance on Mobile Source Air Toxic Analysis in NEPA*, issued in February 2006. This guidance advises FHWA Division offices and, by association, state transportation agencies on when and how to analyze mobile source air toxics (MSAT) in the National Environmental Policy Act (NEPA) process for highways. NCDOT fully understands that the USEPA does not agree with the FHWA's approach to project-level MSAT analyses. It is our belief that the two federal agencies should initiate a discussion of their respective needs and opinions to reach agreement on exactly how MSAT analyses are to be addressed in the future. Until such an agreement occurs or there is a compelling reason to do otherwise, NCDOT will continue to follow the FHWA guidance. Please note that the FHWA guidance was updated on September 30, 2009. This update does not impact the U-4909 Air Quality Analysis because both it and the project FONSI were completed before the issuance date.

IV. LIST OF ENVIRONMENTAL COMMITMENTS

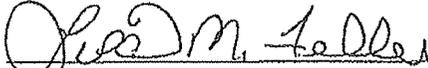
NCDOT will implement all practical measures and procedures to minimize and avoid environmental impacts. See attached green sheets for Project Commitments.

V. COORDINATION

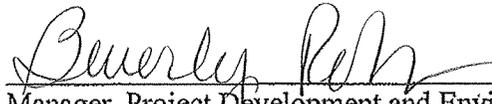
Current project proposals have been discussed with others as follows:

Design Engineer:	<u>Clayton Walston</u>	<u>October 10, 2011</u> Date
FHWA Engineer:	<u>Felix Davila, P.E.</u>	<u>October 20, 2011</u> Date
Permits Section:	<u>Sara Easterly</u>	<u>August 5, 2011</u> Date

VI. NCDOT CONCURRENCE

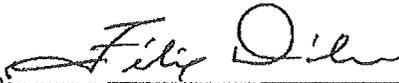

Project Planning Engineer

10/20/11
Date


Manager, Project Development and Environmental
Analysis Branch

10/20/11
Date

VII. FHWA CONCURRENCE


Federal Highway Administration
Division Administrator

10/20/11
Date

PROJECT COMMITMENTS

SR 2643 (Union Cross Road)
From SR 2691 (Wallburg Road) to SR 2632 (Sedge Garden Road)
Forsyth County
WBS No. 40278.1.1
Federal Aid No. STP-2643(2)
S.T.I.P. PROJECT NO. U-4909

Current status, changes, or additions to the project commitments as shown in the environmental document for the project are printed in bold italics.

Commitments Developed Through Project Development and Design

Bicycle and Pedestrian Division, Project Development and Environmental Analysis Branch (PDEA), and Roadway Design Unit

Accommodations for bicycle use will be reviewed and coordinated further with the county and municipalities prior to completing the final design.

Bicycles will be accommodated with 14-foot-wide outside lanes.

Note: The design plans show 14-foot wide outside lanes.

Bicycle and Pedestrian Division, Project Development and Environmental Analysis Branch, Right-of-Way Branch, and Structure Design Unit

The need for pedestrian access and accommodations through the US 311 and I-40 interchanges will be reviewed further following the public hearing and prior to completing the final design.

Five-foot-wide sidewalks will be provided on both sides of Union Cross Road. Further coordination with the Town of Kernersville and the City of Winston-Salem will be initiated to determine the exact locations of the sidewalks and to prepare municipal agreements.

Note: The municipal agreement with Kernersville is awaiting the Highway Administrator's signature. The draft agreements for sidewalk within the Winston-Salem municipal limits and outside of the Winston-Salem municipal limits that Winston-Salem will maintain have not been received at this time.

Project Development and Environmental Analysis Branch and Roadway Design Unit

The intersections with Biloxi Avenue, Glenview Drive (future entrance to the Shops at Glenn Crossing), and the entrance to Weatherstone Development will be reviewed and evaluated further during final design.

Note: The Weatherstone Development was evaluated further during final design, and the design for the Woodway Drive entrance shows a full movement median opening, and the design for the Weatherton Drive entrance shows right in / right out access. The preliminary designs shown in the EA and FONSI showed Kenosha Drive offset away from the Biloxi Avenue / Union Cross Road intersection. Based on further evaluation, the design has been modified to shift both Kenosha Drive and Biloxi Avenue to align across from each other, and a full movement, signalized intersection is proposed. No changes were made to the Glenview Drive (future entrance to the Shops at Glenn Crossing) intersections. Glenview Drive is proposed to have right in/right out access, and a directional crossover is proposed for the entrance to the Shops at Glenn Crossing.

PDEA - Project Development, PDEA - Human Environment Unit, and Roadway Design Unit

A Memorandum of Agreement (MOA) will be prepared and coordinated with the NC Historic Preservation Office to ensure impacts to the Smith-Tucker Rural Historic District are minimized.

The MOA was signed July 24, 2007, and filed with the Advisory Council on Historic Preservation on July 31, 2007. A copy of the MOA is located in Appendix D of the FONSI. Per the MOA, the following measures will be taken to minimize impacts to the historic district:

- *Asymmetrical Widening: Within the historic district, NCDOT will widen the road asymmetrically to minimize the project's impact on the district's contributing resources.*
- *Median: A thirty-foot-wide raised median will control access to the surrounding land and may discourage unsympathetic development within the historic district.*
- *Temple School Road Extension: For the purposes of this undertaking, NCDOT will not participate in the extension of Temple School Road.*
- *Recordation: Prior to the initiation of construction, NCDOT will record the existing condition of the Smith-Tucker Farms Rural Historic District and its surroundings in accordance with the Historic Structures and Landscape Recordation Plan.*

Note: The above measures remain valid. Photo-recordation was completed in 2007, and this information was forwarded to the State Historic Preservation Office.

Right of Way Branch – Utilities

Forsyth County Fire Department requests installation of fire hydrants on both sides of Union Cross Road.

Note: Fire hydrants are a betterment to the project; therefore, either Forsyth County, the City of Winston-Salem or the Town of Kernersville would be responsible for the cost, and an agreement was not finalized between these municipalities.

Structure Design Unit

Bridge Maintenance recommends replacement of the joints for Bridge No. 392 (US 311) to bring them up to date for design standards and to match joints used in new construction for bridge widening.

NCDOT does not plan to widen Bridge No. 392 or replace the existing joints as a part of this project.

Note: Bridge No. 392 will not be widened, and the existing joints will not be replaced as a part of this project.

Roadside Environmental Unit, Project Services Unit, Project Development and Environmental Analysis Branch

The contract for this project will include a special provision that will prohibit the burning of all clearing, grubbing, and demolition debris generated from the project. All debris will be disposed of by other means, according to state or local rules and regulations.

Note: A provision will be included in the project construction proposal available in the Fall of 2011. This provision should include the following, “Any burning of materials resulting from clearing and grubbing must be performed in accordance with applicable local laws and ordinances and regulations of the North Carolina State Implementation Plan (SIP) for air quality in compliance with 15 NCAC 2D.0520. Care will be taken to insure burning will be done at the greatest distance practical from dwellings and not when atmospheric conditions are such as to create a hazard to the public. Burning will be performed under constant surveillance.”

Division 9 and Roadside Environmental Unit

Landscaping will be provided at the I-40 and US 311 interchanges and coordinated with the local municipalities.

Note: After the project is let for construction, the Division will request landscaping funds and coordinate with the Roadside Environmental Unit and local municipalities to formulate a landscape plan. This plan will be implemented after project completion.

Division 9

The implementation of construction mitigation measures for MSAT emissions listed in Appendix B of the FONSI will be closely coordinated with environmental resource agencies, including EPA, prior to project construction to ensure all appropriate measures are incorporated into the project.

Note: Lessening the effects of mobile source air toxics should be considered for projects with substantial construction-related MSAT emissions that are likely to occur over an extended building period. Such mitigation efforts should be evaluated based on the circumstances associated with individual projects, and they may not be appropriate in all cases. We do not believe the construction-related MSAT emissions for this project will be substantial and that special effort for lessening these effects is unnecessary. Standard precautions for minimizing air pollutants during construction will be followed. Under standard operating procedures, the Contractor is responsible to keep himself fully informed of, and fully comply with, all State or local air pollution regulations throughout the life of the project, including those related to vehicle and equipment emissions. Additionally, the Contractor is required to control dust throughout the life of the project within the project area and at all other areas affected by the construction of the project, including, but not specifically limited to, unpaved secondary roads, haul roads, access roads, disposal sites, borrow and material sources, and production sites.

Traffic Engineering Branch

NCDOT will conduct a school safety study for Union Cross Elementary School.

Note: A school safety study was completed in August 2007.

Traffic Engineering Branch

NCDOT will investigate the installation of flashing “School Zone” lights near Union Cross Elementary School and R.B. Glenn High School.

Note: After the project is constructed and open to traffic, the areas near the schools will be reviewed for any additional signage warrants. The schools may pay for and maintain flashers if they desire.

NCDOT, Federal Highway Administration, N.C. Department of Cultural Resources - State Historic Preservation Office

Development, independent of and unrelated to this highway improvement project, is occurring within the Smith-Tucker Farms Rural Historic District along Union Cross Road. Prior to the authorization of right of way, NCDOT will determine whether development has occurred in the historic district, and if so, reevaluate the proposed alignment for the project.

Note: No potential development plans within the historic district were finalized when right of way acquisition was authorized in 2008.

Project Services Unit, Project Development and Environmental Analysis Branch

Provide approximately 130 linear feet of safety fence for tree protection along the construction limits at the David Smith Farm within the Smith-Tucker Farms Historic District from –L- Station 96+40 to Station 97+70. Also, provide approximately 140 linear feet of safety fence for protection along the 10-foot boundary line around the historic log well house located at –L- Station 180+20.

Commitments Developed Through 404/401 Permitting

No special permit conditions are associated with this project.



U.S. Department
of Transportation
**Federal Highway
Administration**

North Carolina Division 310 New Bern Avenue, Suite 410
Raleigh, NC 27601
August 8, 2011 (919) 856-4346
(919) 747-7030
<http://www.fhwa.dot.gov/ncdiv/>

In Reply Refer To:
HDA-NC

Mr. James Dunlop, P.E.
Congestion Management Engineer
Transportation Mobility & Safety Division
North Carolina Department of Transportation (NCDOT)
1561 Mail Service Center
Raleigh, NC 27699-1561

Dear Mr. Dunlop:

Attached is the FHWA-NC approval for the I-40/Union Cross Road interchange modification addendum report respective to project U-4909 in Forsyth County. The FHWA-NC Division concurs that the Diverging Diamond Interchange matches or improves the operation of the Single Point Urban Interchange originally proposed in the Interchange Modification Report approved by this office in 2008.

Please contact Mr. Joe Geigle (919-747-7007) in our office if you have questions.

Sincerely,

For John F. Sullivan, III, P.E.
Division Administrator

Attachment

cc: Mr. J Kevin Lacy, PE
Mr. Pat Ivey, PE



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

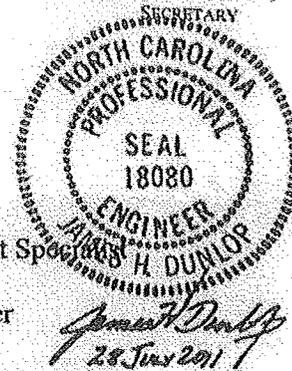
July 28, 2011

MEMORANDUM

TO: John F. Sullivan, III, P.E., Division Administrator
Federal Highway Administration
Attention: Joe Geigle, P.E., Congestion/ITS Management Specialist

FROM: James H. Dunlop, P.E., Congestion Management Engineer
Congestion Management Section

SUBJECT: SR 2643 (Union Cross Road) from SR 2691 (Wallburg Road) to SR 2632 (Sedge Garden Road), Forsyth County
F. A. Project No. STP-2643(2), WBS No. 40278.1.1,
TIP Project No. U-4909



This memorandum supplements the Interchange Modification Report (IMR) that was performed by Mulkey Engineers and Consultants, Inc. (sealed and dated 8/27/08) for U-4909.

U-4909 proposes to widen Union Cross Road from Wallburg Road to Sedge Garden Road in southeastern Forsyth County. A four-lane, divided curb-and-gutter facility is proposed south of I-40, and a six-lane, divided curb-and-gutter facility is proposed north of I-40. The project is approximately 3.6 miles long. The purpose of this proposed action is to provide sufficient capacity for the 20-year projected traffic by improving traffic flow through the study area. Under this project the I-40 and Union Cross Road interchange is proposed to be modified.

In the original planning process a Single Point Urban Interchange (SPUI) was proposed at this location. An IMR was performed by Mulkey Engineers and Consultants, Inc. (sealed and dated 8/27/08) for the proposed SPUI. Due to substantial cost savings and improvements in overall capacity the NCDOT has proposed to convert this location to a Diverging Diamond Interchange (DDI). This memorandum compares the Levels of Service (LOS) and queuing for the SPUI and the DDI. Tables 1 and 2 show a summary of the capacity analysis.

MAILING ADDRESS:
TRANSPORTATION MOBILITY AND SAFETY DIVISION
1561 MAIL SERVICE CENTER
RALEIGH NC 27699-1561

TELEPHONE: 919-773-2800
FAX: 919-771-2745

WEBSITE: WWW.NCDOT.ORG

LOCATION:
750 NORTH GREENFIELD PARKWAY
GARNER NC 27529

Table 1

Peak Hour Intersection Analysis Summary		
Intersection	Level of Service (AM/PM)	
	SPUI 2030 Build	DDI 2030 Build
Eastbound I-40 Ramps and Union Cross Road	C / C	C / C
Westbound I-40 Ramps and Union Cross Road		C / C

-It should be noted that the LOS's for the SPUI were obtained from the IMR performed by Mulkey, Inc. (8/27/2008)

Table 2

Ramp Queue Length Comparison		
Ramp	95% Queue Lengths (AM/PM)	
	SPUI 2030 Build	DDI 2030 Build
Eastbound I-40 Off-Ramp	265' / 430'	118' / 275'
Westbound I-40 Off-Ramp	288' / 171'	174' / 76'

-It should be noted that the queue lengths for the SPUI were obtained from the IMR performed by Mulkey, Inc. (8/27/2008)

As noted in the tables above, the DDI has the same overall LOS and less queuing at both ramp intersections when compared to the SPUI. The DDI should function more than adequately to accommodate the 2030 build-out year traffic and should not have any detrimental effect on I-40. At a minimum, the DDI should have equal capacity on Union Cross Road and less queuing on the ramp terminals.

We request your review and approval of this IMR modification. If you have any questions or concerns, please contact me at 919-773-2800.

JHD:rhg

cc: L. M. Feller, P.E.

8/8/11
 Date
 FHWA Concurs
 For John F. Sullivan
 Division Administrator

NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

STATE NUMBER: 08-E-4220-0353

F02

DATE RECEIVED: 05/20/2008

AGENCY RESPONSE: 06/16/2008

REVIEW CLOSED: 06/20/2008

MS SANDRA CUMMINGS
CLEARINGHOUSE COORDINATOR
DEPT OF AGRICULTURE
1001 MAIL SERVICE CENTER
AGRICULTURE BLDG
RALEIGH NC

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NORTHWEST PIEDMONT COG



PROJECT INFORMATION

APPLICANT: N.C. Dept. of Transportation
TYPE: National Environmental Policy Act
ERD: Finding of No Significant Impact

DESC: Proposes to widen 3.6 miles of SR 2643 (Union Cross Rd) to a multilane facility from SR 2691 (Wallburg Rd) to SR 2632 (Sedge Garden Rd) in Forsyth County. TIP No. U-4909

CROSS-REFERENCE NUMBER: 07-E-4220-0223

The attached project has been submitted to the N. C. State Clearinghouse for intergovernmental review. Please review and submit your response by the above indicated date to 1301 Mail Service Center, Raleigh NC 27699-1301. If additional review time is needed, please contact this office at (919)807-2425.

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED:

NO COMMENT

COMMENTS ATTACHED *below*

SIGNED BY:

Sandi Cummings

DATE:

7-18-08

W/ Maximilian Merrill & DeWitt Nardus: Apply any pesticides at labelling instructions & take measures to preserve native & endangered plant species.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

RECEIVED
Division of Highways

JUN 09 2008

Preconstruction
Project Development and
Environmental Analysis Branch

June 2, 2008

Dr. Gregory J. Thorpe, Ph.D.
Manager, Project Development and Environmental Analysis Branch
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

SUBJECT: EPA Review Comments of the Finding of No Significant Impact (FONSI) for U-4909, Widening of Union Cross Road (SR 2643) from SR 2691 to SR 2632, Forsyth County, North Carolina

Dear Dr. Thorpe:

The U.S. Environmental Protection Agency Region 4 (EPA) has reviewed the subject document and is commenting in accordance with Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act (NEPA). The North Carolina Department of Transportation (NCDOT) and the Federal Highway Administration (FHWA) propose to widen Union Cross Road (SR 2643) to a multi-lane (4 and 6 lanes) facility between SR 2691 and SR 2632 in Forsyth County for an approximate distance of 3.6 miles. The proposed project will incorporate widened outside lanes (14-foot) to accommodate bicycles.

EPA provided e-mail review comments on the November of 2006 Environmental Assessment (EA) and these comments are included in the FONSI. Due to minimal impacts to aquatic resources, the proposed project was not included in the full Merger 01 process.

EPA notes the specific project commitments (i.e., Green sheets pages 1 and 2) including the commitments to minimize adverse effects to the Smith-Tucker Rural Historic District.

Project Impacts

EPA notes the following project impacts to key natural and human resources:
Residential/Business Relocations: 23/5
Hazardous Material Sites: 1
Sections 106/4(f) Properties: 1 (Adverse Effect/1 @ 4.3 acres)
Churches/Schools: 1/0
Wetlands: 0.015 acres
Streams: 187 linear feet
Riparian buffers: 0
Terrestrial forests: 11.5 acres

Prime farmlands: 79 acres
Noise receptors: 51
EJ Communities: 0
Endangered species: 0
Archaeological sites: 0
Critical water supplies: None
Air quality: CO and Ozone non-attainment

MSATs

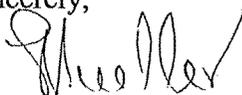
EPA continues to have environmental concerns regarding the 'qualitative' Mobile Source Air Toxics (MSATs) analysis in the FONSI. The EA and FONSI do not document the existence of any near-roadway sensitive receptors, prevailing winds, and other site-specific characteristics that could influence MSAT emissions and potential exposure issues. FHWA's current guidance suggests that the existing environment be described during the NEPA analysis on MSATs. From Figure 4 of the FONSI, there appears to be two sensitive receptors located near the existing roadway, including the Union Cross Traditional Academy (Elementary School) and the R.B. Glenn High School. These sensitive receptors (or any others) are not identified or described in the FONSI. See the attached detailed comments.

Summary

EPA does not have substantial environmental concerns for the proposed project as it relates to aquatic resources and natural resources. However, we continue to have technical concerns regarding the lack of a site-specific NEPA analysis for MSATs. With the proximity of the proposed widened multi-lane facility to existing schools, NCDOT and FHWA should consider a project specific NEPA assessment and analysis. If background MSAT concentrations near identified sensitive receptors is 'unavailable' or 'incomplete' based upon emission or dispersion models, NCDOT and FHWA might consider performing post-construction monitoring at these sensitive receptor locations to determine the near-roadway emission levels of MSATs.

Please also include Ms. Kathy Matthews on any proposed Concurrence point 4B or 4C meetings. Should your staff have any questions, please have them contact Mr. Chris Militscher of my staff at 919-856-4206. Thank you for the opportunity to comment.

Sincerely,

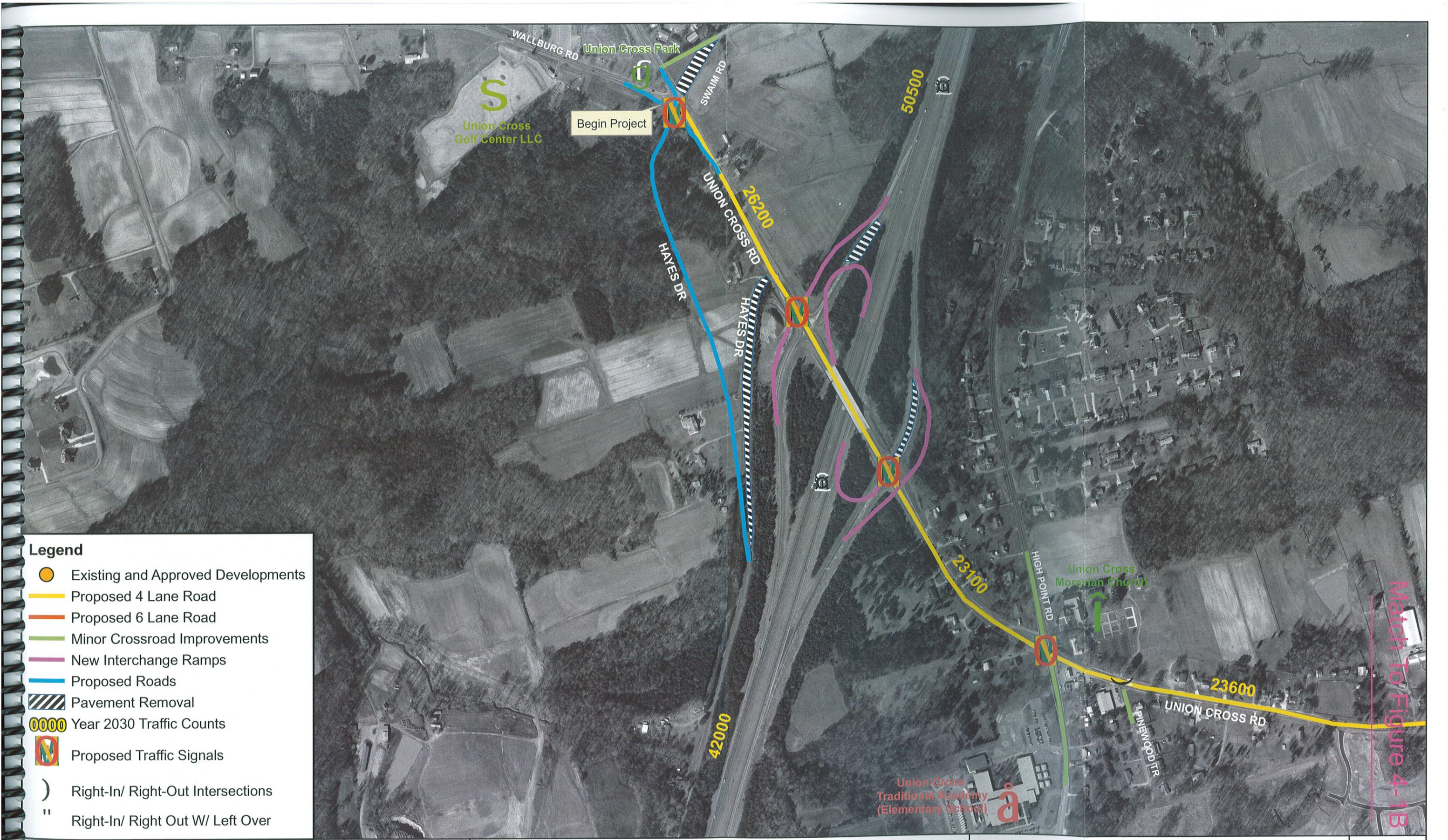


Heinz J. Mueller, Chief
EPA Region 4 NEPA Program Office

cc: Scott McClendon, USACE
Clarence Coleman, FHWA
Brian Wrenn, NCDWQ

Detailed Comments

The discussion on Pages 8 and 9 of the 'revised' air quality addendum to the FONSI is confusing and not based upon a project specific analysis or assessment. EPA does not understand the following contradictory statement: *"Upon completion of the widen[ing] of SR 2643, the localized increases in MSAT concentrations would most likely decrease on SR 2643, due to decrease in speed and the existence of SR 2643 (Union Cross Road)".* According to FHWA and EPA studies, MSATs are a potentially localized, near-roadway air quality problem. MSATs concentrations would be expected to decrease with increased speed and reduced congestion. The statement that, *"However, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover will, over time, cause substantial reductions that, in almost all cases, will cause region-wide MSAT levels to be significantly lower than today"*, is not technically germane to a project specific NEPA analysis on MSATs. Furthermore, the statement, *"Lessening the effects should be considered for projects with substantial construction-related MSAT emissions that are likely to occur over an extended building period, and for post-construction scenarios where the NEPA analysis indicates potentially meaningful MSAT levels"*, is not supported by criteria for what 'an extended building period' is, or what the 'meaningful MSAT levels' are for the Union Cross Road widening project. The last sentence in this paragraph, *"However, there are a number of available mitigation strategies and solutions for countering the effects of MSAT emissions"*, is not elaborated upon. EPA is unsure specifically as to what these available mitigation strategies and solutions are for 'countering the effects of MSAT emissions' once the existing roadway is widened. This sentence regarding mitigation also appears to be counter-intuitive to the previous FONSI comment: *"As discussed above, technical shortcomings of emissions and dispersion models and uncertain science with respect to health effects prevent meaningful or reliable estimates of MSAT emissions and the effects of this project."* Page 5 [Unavailable Information for Project Specific MSAT Impact Analysis] of the FONSI also refers to this 'EA'. NCDOT and FHWA do not describe what information is currently available in the form of identifying near-roadway sensitive receptors, estimated distances between the current roadway and proposed widened facility to these receptors, prevailing wind conditions, localized topographical features, existing background MSAT concentrations, etc.



Legend

- Existing and Approved Developments
- Proposed 4 Lane Road
- Proposed 6 Lane Road
- Minor Crossroad Improvements
- New Interchange Ramps
- Proposed Roads
- Pavement Removal
- Year 2030 Traffic Counts
- Proposed Traffic Signals
- Right-In/ Right-Out Intersections
- Right-In/ Right Out W/ Left Over

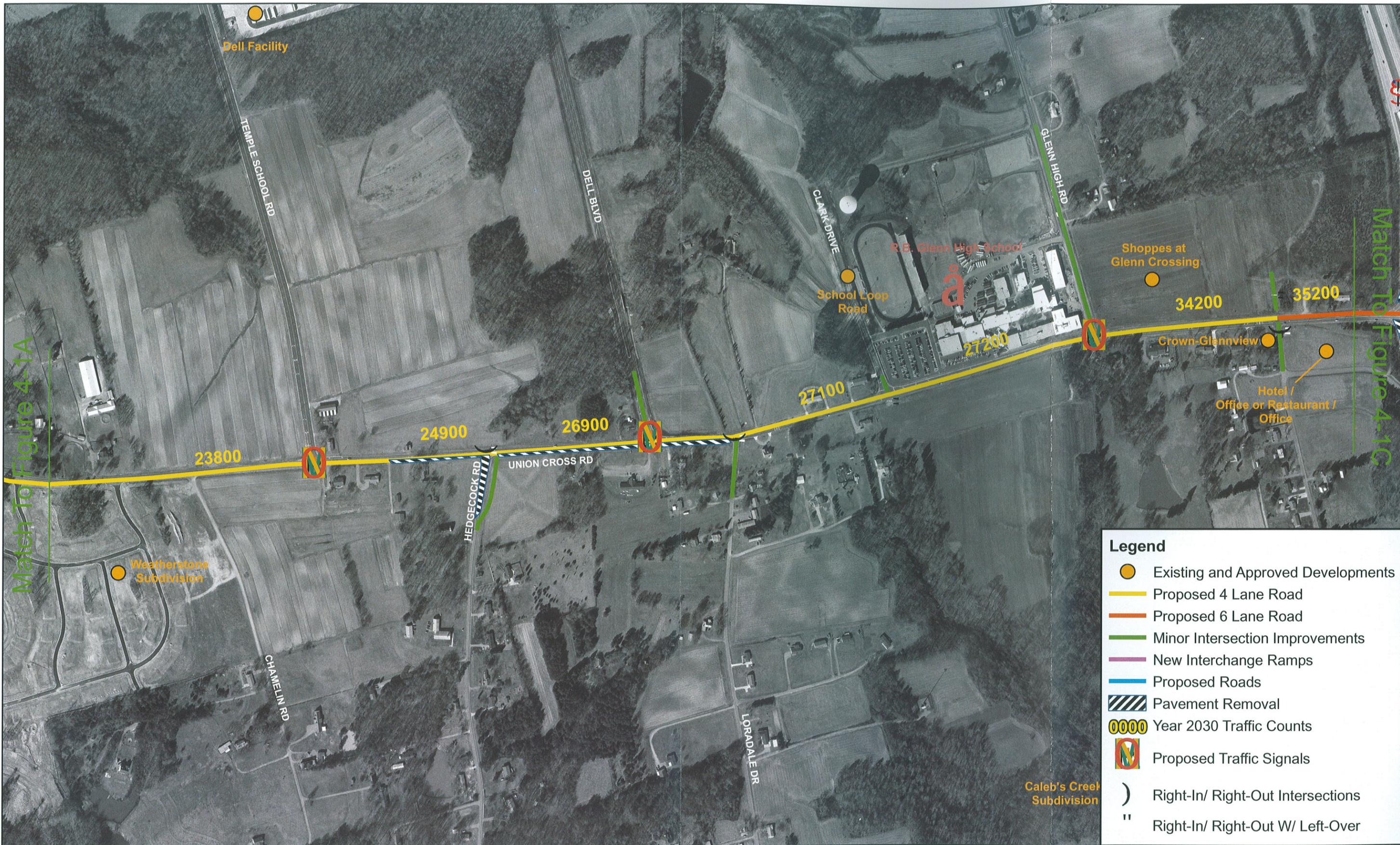


PROPOSED ROADWAY IMPROVEMENTS
 U-4909 Union Cross Road
 From Wallburg Road to Sedge Garden Road
 Forsyth County, North Carolina



Figure No.
4-1A

Match To Figure 4-1B



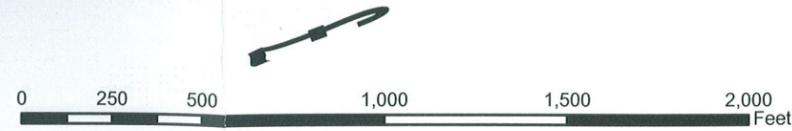
Match To Figure 4-1A

Match To Figure 4-1C

- Legend**
- Existing and Approved Developments
 - Proposed 4 Lane Road
 - Proposed 6 Lane Road
 - Minor Intersection Improvements
 - New Interchange Ramps
 - Proposed Roads
 - Pavement Removal
 - Year 2030 Traffic Counts
 - Proposed Traffic Signals
 - Right-In/ Right-Out Intersections
 - Right-In/ Right-Out W/ Left-Over



PROPOSED ROADWAY IMPROVEMENTS
 U-4909 Union Cross Road
 From Wallburg Road to Sedge Garden Road
 Forsyth County, North Carolina



Digital Orthographic Photos From North Carolina Department Of Transportation, Flown: February 15, 2006

Figure No.
4-1B



PROPOSED ROADWAY IMPROVEMENTS
 U-4909 Union Cross Road
 From Wallburg Road to Sedge Garden Road
 Forsyth County, North Carolina

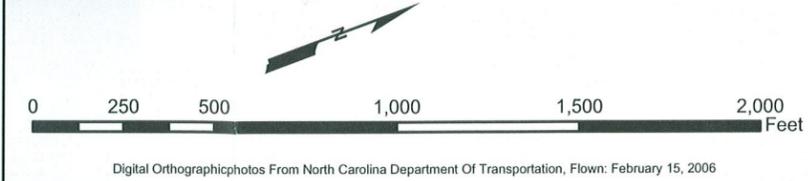


Figure No.
4-1C