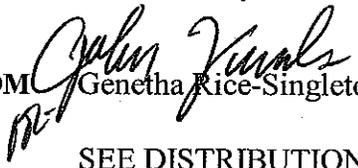


**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE P. I. No. 0007694, Coweta County **OFFICE** Preconstruction
CSSTP-0007-00(694)
Newnan Bypass Extension
From Turkey Creek Road to SR 16 **DATE** June 10, 2009

FROM  Genetha Rice-Singleton, Assistant Director of Preconstruction

TO SEE DISTRIBUTION

SUBJECT APPROVED PROJECT CONCEPT REPORT

Attached for your files is the approval for subject project.

Attachment

DISTRIBUTION:

Ron Wishon
Glenn Bowman
Ken Thompson
Michael Henry
Keith Golden
Rachel Brown
Paul Liles
Thomas Howell
David Millen
Bill Rountree
BOARD MEMBER

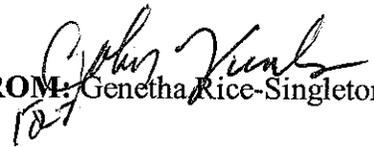
**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENTAL CORRESPONDENCE

FILE: P.I. No. 0007694, Coweta County
CSSTP-0007-00(694)
Newnan Bypass Extension
From Turkey Creek Road to SR 16

OFFICE: Preconstruction

DATE: May 26, 2009


FROM: Genetha Rice-Singleton, Assistant Director of Preconstruction

TO: Gerald M. Ross, P.E., Chief Engineer

SUBJECT: PROJECT CONCEPT REPORT

This project is an extension of the existing Newnan Bypass which currently terminates at Turkey Creek Road. This segment of the overall Newnan Bypass will extend approximately 1.60 miles on new alignment between Turkey Creek Road and SR 16. The Newnan Bypass (SR 34 Bypass) was originally contemplated as a 7 mile long perimeter road to function as an alternate route around the city of Newnan in Coweta County. The construction of the Bypass has been advanced in segments which have been phased over time and opened to traffic as segments are completed. Approximately one-half of the overall Bypass is currently constructed and open to traffic. The completion of this proposed segment of the Bypass will improve accessibility to I-85 at Interchange 41 via SR 16 and US 29/27 Alt. and provide a parallel facility to I-85 between Interchange 40 at SR 34(Bullsboro Road) and Interchange 41 at US 29/27 Alt.

The project begins at SR 16 with an at grade signalized T-type intersection. The typical section of the proposed bypass consists of four 12' lanes, a 20' wide raised grass median, and 10' rural shoulders (4' paved). The proposed alignment heads north to a point where the alignment crosses Gordon Road. From there, the alignment turns towards the north-northeast to pass just east of the East Newnan Lake. The alignment turns back towards the north where it crosses Turkey Creek. After crossing Turkey Creek, the alignment turns back towards the north-northeast passing to the west of an unnamed pond. At this point, the typical section transitions to a rural section with a 44' depressed grassed median and 10' shoulders (4' paved). This typical matches the existing Newnan Bypass section to provide continuity at the project terminus at Turkey Creek Road. The alignment then crosses over the Norfolk Southern Railroad and turns back to the north to terminate at an at-grade intersection of Turkey Creek Road and the existing Newnan Bypass.

The base year traffic (2013) is 5,457 VPD and the design year traffic (2033) is 26,700 VPD. Access will be by permit along the mainline. The proposed speed design is 45 MPH and traffic will be maintained on existing roads during construction. This project is being developed and coordinated with the SR 16 widening (PI 0006877) that begins just west of the I-85 overpass and extends to its intersection with SR 14/US 29/27 Alt. The intersection of SR 16 at SR 14/US 29/27 is being improved as a separate project-PI 0006293.

Environmental concerns include requiring a COE 404 permit; an Environmental Assessment will be prepared; a FEMA no-rise certification is anticipated; a Public Information Open House was held on 3-6-2008; a Public Hearing Open House will be held as part of the EA approval process; time saving procedures are not appropriate.

The estimated costs for this project are:

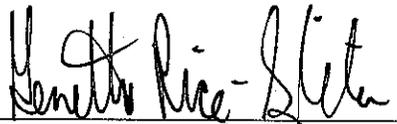
	<u>PROPOSED</u>	<u>APPROVED</u>	<u>FUNDING</u>	<u>PROG DATE</u>
Construction (includes E&C)	\$23,581,000	\$21,485,833	L230	2013(proposed)
Right-of-way & Utilities	Local	Local	Local	Local

* Coweta County signed PFA on 5-04-2007 for PE, ROW, UTIL & 20% CST.

I recommend this project concept be approved.

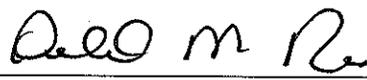
GRS: JDQ
Attachment

CONCUR



Director of Preconstruction

APPROVED



Gerald M. Ross, P.E., Chief Engineer

Recommendation for approval:

DATE 4/1/09

Project Manager

DATE 4/1/09

District Engineer

The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Improvement Program (RTP) and the State Transportation Improvement Program (STIP).

DATE 4-3-09

State Transportation Planning Administrator

DATE _____

State Transportation Financial Management Administrator

DATE _____

State Environmental/Location Engineer

DATE _____

State Traffic Safety & Design Engineer

DATE _____

Project Review Engineer

DATE _____

State Bridge Engineer

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

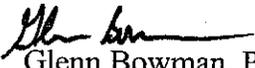
FILE: P.I. No. 0007694

OFFICE: Environment/Location

**PROJECT No. CSSTP-0007-00(694) / COWETA
County**

DATE: 5/11/09

Newnan Bypass from Turkey Creek Road to SR 16

FROM: 
Glenn Bowman, P.E., State Environmental/Location Engineer
TO: Genetha Rice-Singleton, Assistant Director of Preconstruction
SUBJECT: PROJECT CONCEPT REPORT REVIEW

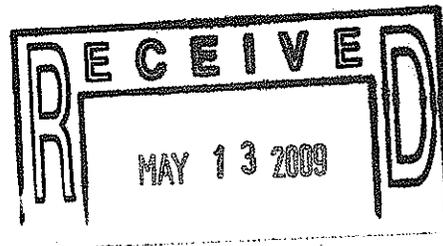
The Concept Report for the above project has been reviewed and appears satisfactory subject to the following comments:

1. Please list environmental responsibilities in Project Responsibilities section of the report.
2. The proposed project is not on track for January 2010 ROW. To meet this date, the FONSI would need to be approved in July 09. At this point, it appears the draft EA will not go to FHWA until June/July 2009 and four (4) to six (6) months is typically needed to get the FONSI approved. It is requested that the PM and OEL better coordinate the schedule and develop an action plan to ensure the project advances in a timely manner.
3. The TIP years need to be corrected. It currently reads: "The project is proposed as a new facility on new alignment and is included as a roadway capacity improvement in the 2030 Regional Transportation Plan (RTP) and FY 2006-2011..."
4. Seven (7) historic resources are located adjacent to the project corridor, one of which is the Newnan Cotton Mill Village District (containing numerous contributing structures). The proposed corridor also crosses the Central of Georgia Railroad, an individually, national register eligible resource that also contributes to the Historic District. If significant impacts to historic 4(f) resources cannot be avoided, then the proposed environmental schedule must be revised significantly.
5. Surveys for and coordination with FHWA and USFWS for the White Fringeless Orchid will also need to be included in the schedule.

If you have any questions, please contact Glenn Bowman at (404) 699-4401.

GB:lc

cc: Ron Wishon
Angela Whitworth
Keith Golden
Angela Alexander
Thomas Howell
Paul Liles



Recommendation for approval:

DATE 4/1/09

William R. ...
Project Manager

DATE 4/1/09

J. S. ...
District Engineer

The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Improvement Program (RTP) and the State Transportation Improvement Program (STIP).

DATE _____

State Transportation Planning Administrator

DATE _____

State Transportation Financial Management Administrator

DATE _____

State Environmental/Location Engineer

DATE _____

State Traffic Safety & Design Engineer

DATE _____

Project Review Engineer

DATE 5/1/09

Paul V. ... Jr.
State Bridge Engineer

Recommendation for approval:

DATE 4/1/09

Project Manager

DATE 4/1/09

District Engineer

The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Improvement Program (RTP) and the State Transportation Improvement Program (STIP).

DATE _____

State Transportation Planning Administrator

DATE _____

State Transportation Financial Management Administrator

DATE 5/11/09

State Environmental/Location Engineer

DATE _____

State Traffic Safety & Design Engineer

DATE _____

Project Review Engineer

DATE _____

State Bridge Engineer

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

District 3 Design

PROJECT CONCEPT REPORT

Project Number: CSSTP-0007-00(694)

County: Coweta

P. I. Number: 0007694

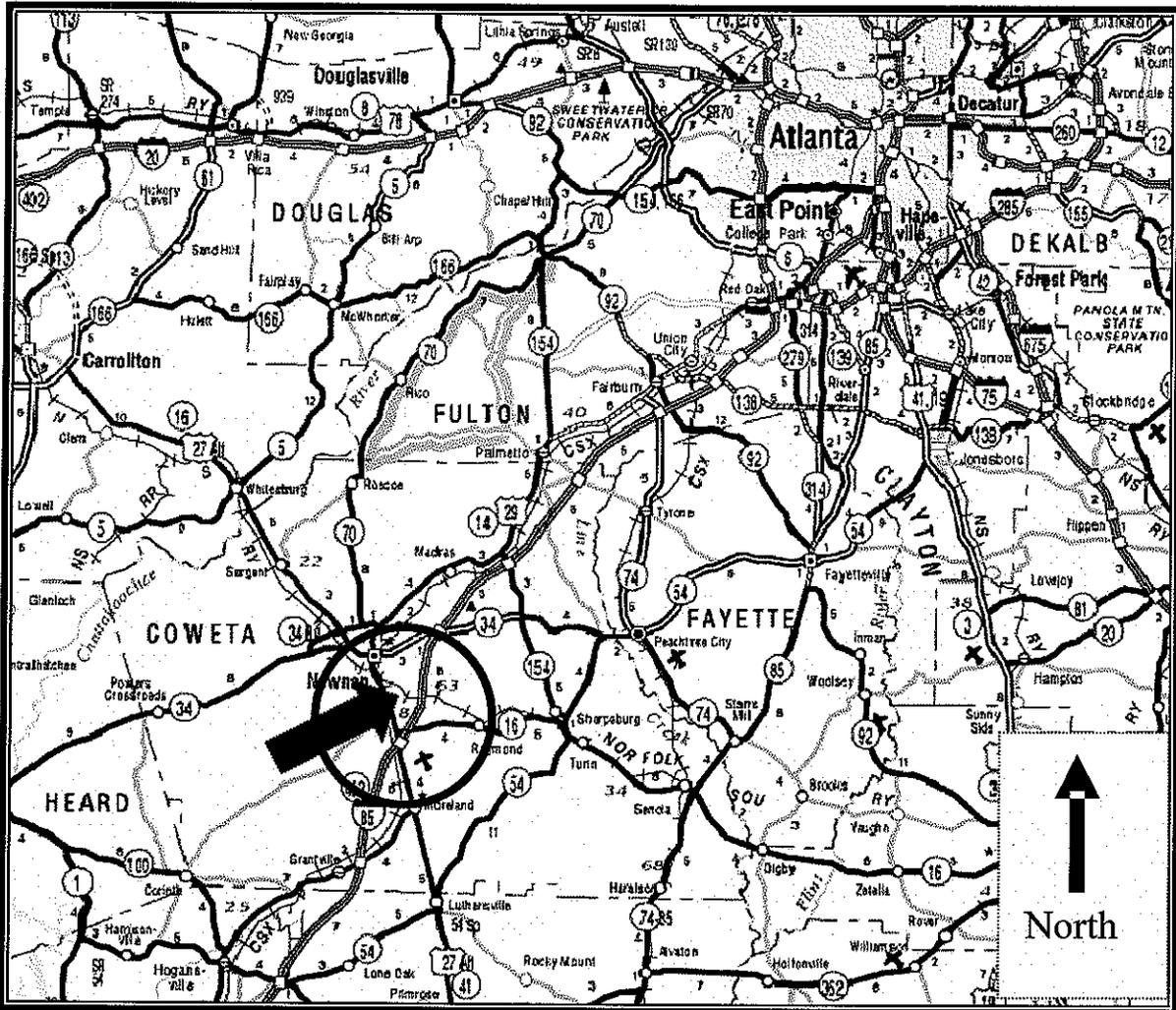
Federal Route Number: N/A

State Route Number: 16

Regional Location Sketch

Newnan Bypass from Turkey Creek Road to SR 16

Coweta County, GA



Recommendation for approval:

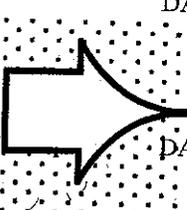
DATE 4/1/09

William P. ...
Project Manager

DATE 4/1/09

J. B. ...
District Engineer

The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Improvement Program (RTP) and the State Transportation Improvement Program (STIP).



DATE _____

State Transportation Planning Administrator

DATE 4-16-09

Angela D. Whitworth
Financial Management Administrator

DATE _____

State Environmental/Location Engineer

DATE _____

State Traffic Safety & Design Engineer

DATE _____

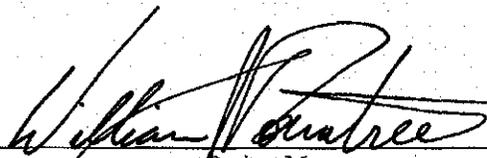
Project Review Engineer

DATE _____

State Bridge Engineer

Recommendation for approval:

DATE 4/1/09


Project Manager

DATE 4/1/09


District Engineer

The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Improvement Program (RTP) and the State Transportation Improvement Program (STIP).

DATE _____

State Transportation Planning Administrator

DATE _____

State Transportation Financial Management Administrator

DATE _____

State Environmental/Location Engineer

DATE _____

State Traffic Safety & Design Engineer

DATE _____

Project Review Engineer

DATE _____

State Bridge Engineer

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

District 3 Design

PROJECT CONCEPT REPORT

Project Number: CSSTP-0007-00(694)

County: Coweta

P. I. Number: 0007694

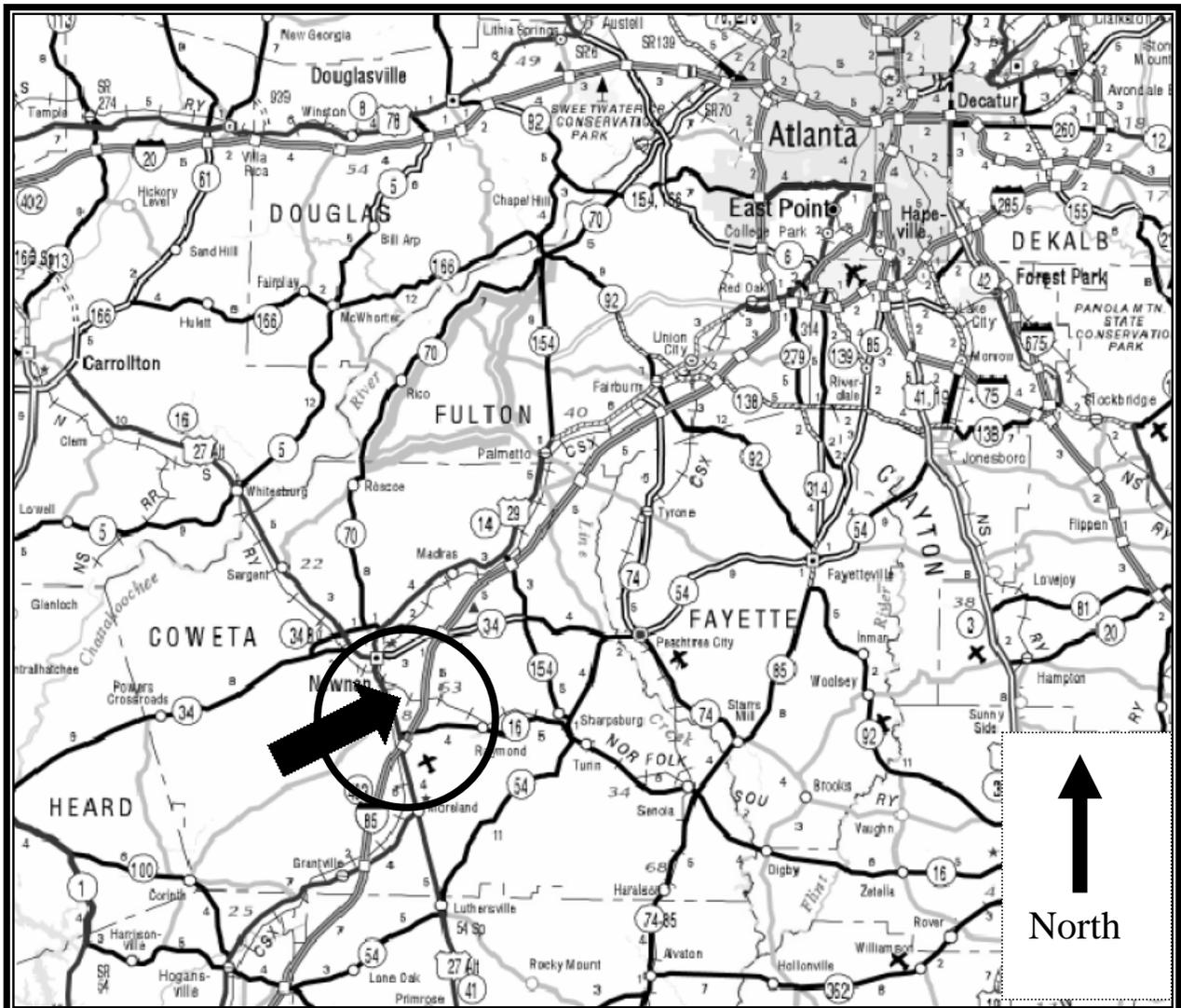
Federal Route Number: N/A

State Route Number: 16

Regional Location Sketch

Newnan Bypass from Turkey Creek Road to SR 16

Coweta County, GA



Recommendation for approval:

DATE 4/1/09

Project Manager

DATE 4/1/09

District Engineer

The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Improvement Program (RTP) and the State Transportation Improvement Program (STIP).

DATE _____

State Transportation Planning Administrator

DATE _____

State Transportation Financial Management Administrator

DATE _____

State Environmental/Location Engineer

DATE _____

State Traffic Safety & Design Engineer

DATE _____

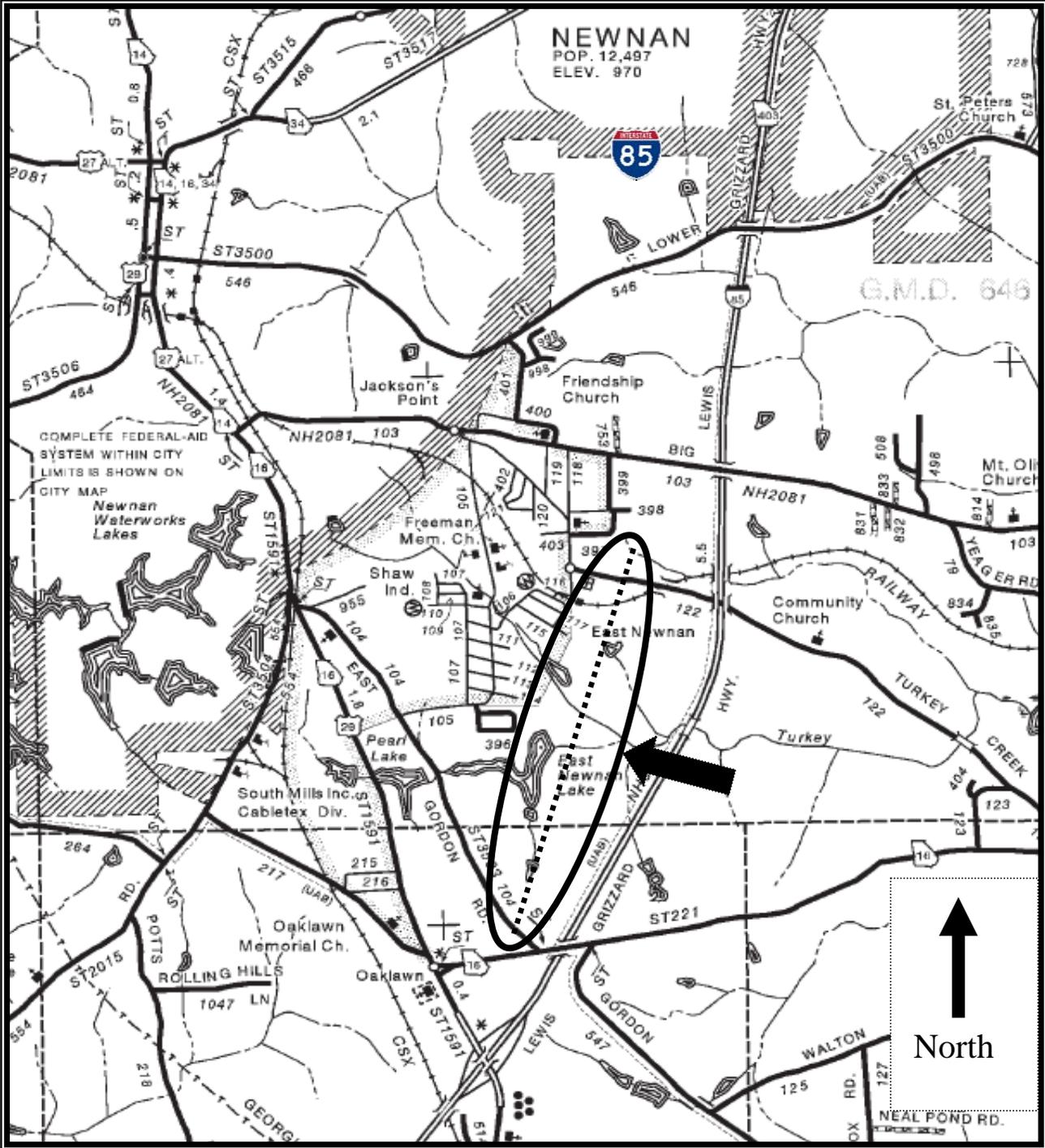
Project Review Engineer

DATE _____

State Bridge Engineer

PROJECT LOCATION MAP

Project: CSSTP-0007-00(694) Coweta County PI No.: 0007694
Description: Newnan Bypass from Turkey Creek Road to SR 16



Need and Purpose:

The Newnan Bypass (SR 34 Bypass) was originally contemplated as a 7 mile long circumferential road to function as an alternate route around the City of Newnan in Coweta County. The construction of the Bypass has been advanced in segments which have been phased over time and opened to traffic as segments are completed. Approximately one-half of the overall Bypass is currently constructed and open to traffic. The Department of Transportation, under separate contract is currently advancing separate segments of the Bypass (PI 322400 and PI 322405) in the northern quadrant of the City.

This project's proposed segment of the Bypass (approximately 1.6 miles) is a connecting link on new alignment. This segment has independent utility and function which will provide connectivity and access between one of the previously constructed segments of the Bypass and the existing state highway system at SR 16 in the southeasterly quadrant of the City. The previously constructed adjoining segment of the Bypass extends from SR 34 (Bullsboro Road) through Lower Fayetteville Road to Turkey Creek Road. Terminating at Turkey Creek Road, the existing Bypass is a four-lane median divided arterial roadway that provides access between the central commercial district on SR 34 (Bullsboro Road) and Turkey Creek Road. Completion of this proposed segment of the Bypass will improve accessibility to I-85 at Interchange 41 via SR 16 and US 29/27 Alt. and provide a parallel facility to I-85 between Interchange 40 at SR 34 (Bullsboro Road) and Interchange 41 at US 29/27 Alt.

The project is proposed as a new facility on new alignment and is included as a roadway capacity improvement in the 2030 Regional Transportation Plan (RTP) and FY 2006-2011 Transportation Improvement Program (TIP) as Project CW-007 SR 34 Bypass (Newnan Bypass Southeast Segment), and identified by GDOT PI 0007694. The project is approximately 1.6 miles in length, with the northern terminus being at Turkey Creek Road and the southern terminus at SR 16. As currently programmed, Project CW-007 is sponsored by Coweta County with an anticipated construction date of 2013.

The termini of the project have been established to provide connectivity, continuity and consistency with the local and regional transportation initiatives that are currently underway or programmed through GDOT and the ARC. At the northern terminus, the existing Newnan Bypass is a four-lane arterial roadway and Turkey Creek Road is a two-lane local, rural roadway, both with posted 45 mph speed limits. Turkey Creek Road is approximately two miles in length, running northwest to southeast, from Poplar Road west of I-85 to SR 16 on the east side of I-85. Turkey Creek Road crosses under I-85 but does not provide access to I-85 at this crossing. The existing intersection of the Newnan Bypass with Turkey Creek Road is a T-type intersection. The proposed project will extend the Newnan Bypass through the Turkey Creek Road intersection and convert the T-type intersection into a traffic signal controlled 4-way intersection.

At the southern terminus SR 16 is a two-lane roadway with a posted speed limit of 45 mph in the vicinity of US 29/27 Alt. SR 16 extends diagonally across central Coweta County and runs primarily east-west from its westerly intersection with US 29/27 Alt. to Senoia in the easterly part of the county. Within the County, SR 16 provides primary surface transportation access between the populated centers of Newnan, Sharpsburg and Senoia. SR 16 crosses over I-85 slightly to the east of this proposed segment of the Bypass, but does not provide access to I-85 at the crossing. The nearest access to I-85 is provided at the US29/SR14 Interchange 41, a distance of approximately 0.4 miles from the intersection of SR 16 with US 29/27 Alt. The proposed project will bring the Newnan Bypass into a T-type intersection with SR 16. The

intersection will be traffic signal controlled with additional lanes added to SR 16 on the approaches as part of a coordinated project with GDOT PI 0006877.

The termini of the proposed project are consistent with the local and regional transportation initiatives that are currently underway. Those projects are included in the RTP and TIP as Project CW-006A (GDOT PI 322400) SR 34 Bypass (from SR 16/US 27A to Jefferson Parkway); Project CW 006B (GDOT PI 322405) SR 34 Bypass (from Jefferson Parkway to SR 34 east of Newnan); Project CW-034 (GDOT PI 0006877) SR 16 (from I-85 south to US 29); and Project CW-033C (GDOT PI 0006293) Coweta County Intersection Improvements, Phase III (specifically the improvements to SR 16 and Pine Road at US 29/SR 14).

Coweta County experienced significant population growth in the years between 2000 and the present. According to the U.S. Census, Coweta County had a population growth rate of almost 25% between 2000 and 2005. In response to the rapid population growth and the transportation and land use related issues that accompanied, resulted from, or are anticipated to happen as a result of that prosperity, in 2004 the County embarked on the first of its kind comprehensive planning initiative. The initiative was a regional application of a simultaneous and coordinated effort for the development of a long range transportation plan in conjunction with a comprehensive land use plan. The study, *Coweta County Joint Comprehensive Transportation Plan and Implementation Program*, was commissioned in 2004 and was completed in the summer of 2006.

In addition to that comprehensive planning study, there have been several more specific transportation planning and traffic operational studies that have been conducted for the SR34 Newnan Bypass corridor and surrounding areas. The purpose of those studies has been to identify and quantify the traffic impacts and modal changes resulting from continued land use development and traffic growth, as well as from the implementation of capital improvements to the transportation network. Those studies have included or been contained within:

Traffic Operations Study for the Newnan Bypass Extension, December 2004
Draft Interchange Justification Report, Poplar Road at I-85, September 2005
Design Traffic Analysis Memorandum, SR16 & Newnan Bypass, May 2007
Piedmont Newnan Hospital DRI #1655, January 2008
Poplar Road Interchange Analysis, July 2008
Value Engineering (VE) Study Response Recommendations, May 2008
Newnan Bypass Traffic Analysis, July 2008
VE Study Supplemental Recommendation Responses, August 2008

The above-referenced studies have been conducted in accordance with widely-accepted methodologies and assumptions applied to a number of land use development and traffic-generating scenarios for different target years. The preparation and evaluation of the studies has resulted in the generation of traffic volumes and directional movements for various key intersections and segments in the corridor study area for the existing and future conditions under various build and no-build conditions.

Existing traffic information and design year forecasting had originally been developed from the travel demand model used in the preparation of the *Coweta County Joint Comprehensive Transportation Plan and Implementation Program (CCCTP)*. The travel demand modeling files were obtained from the ARC for the years 2005, 2010 and 2030. The 2005 forecast model was used as the base year. From 2005, the

Estimated Time of Completion (ETC) was then forecasted to 2010 for use as the existing condition. From the 2010 (ETC) existing condition, the design year was forecasted ahead 20 years to 2030 (ETC + 20) for this project, the Newnan Bypass Southeast Segment.

However, during 2004 and advancing concurrently with the *CCCTP* development, a separate traffic forecasting and modeling exercise was commissioned by Coweta County specific to the Newnan Bypass Southeast Segment. That specific study was the *Traffic Operations Study for the Newnan Bypass Extension*, December 2004. That separate and more specific study was intended to be used as a basis for developing initial capacity (lane) and operational (intersection) requirements to be proposed as part of the Newnan Bypass Southeast Segment concept and design development process. As an outcome of those efforts, a project specific report (*Traffic Operations Study for the Newnan Bypass Extension*) for the Southeast Segment was prepared with proposed lane and intersection recommendations along with the supporting analysis.

Included within the *Traffic Operations Study* were excerpts from the *CCCTP*. The initial analysis of the *CCCTP* model results included in the *Traffic Operations Study* for the base year indicated low traffic volumes in the study area of the proposed Newnan Bypass Southeast Segment. Intuitively, the traffic volumes on the proposed Bypass Southeast Segment were expected to be higher than the modeled results provided. In recognition of this anomaly, and to make the model more representative of the actual proposed conditions which would be expected with the construction of the Bypass, the model was modified through the addition of a new centroid connection point and a new Traffic Analysis Zone (TAZ). The new centroid and TAZ were incorporated into the travel demand model with the provision for direct access to the Bypass Southeast segment being included. For traffic forecasting, the model used an annual growth rate of 1% for 2005-2010 and a 1% growth rate from 2010-2030. The resulting 2030 Average Annual Daily Traffic projected by the "adjusted" model for the Bypass Southeast segment was 10,394 vehicles per day.

Since the time of that analysis, two very significant developments occurred within the project which strongly indicated and supported a need to re-visit the traffic analysis and modeling for the Newnan Bypass Southeast Segment. First, the proposed interchange at the Poplar Road crossing of I-85 had advanced through the initial approval process at the state and federal levels. And second, Piedmont Healthcare announced their plans to develop and construct a regional medical and dental complex in the area immediately adjacent to the proposed location of the Poplar Road Interchange, and in close proximity to the Newnan Bypass.

This proposed interchange and regional medical and dental complex are to be located slightly to the east of the existing Newnan Bypass where it crosses Poplar Road and adjacent to the proposed I-85 and Poplar Road interchange. The existing intersection of Poplar Road and the Newnan Bypass is located approximately ½ mile to the north of the proposed project terminus for the Newnan Bypass Southeast Segment. The *Traffic Operations Study* did recognize the proposed Poplar Road Interchange and the effects that the proposed interchange would have on traffic distribution and re-assignments were taken into account in the travel demand model modifications.

The *Interchange Justification Report/Poplar Road at I-85 (IJR)*, which was under review by FHWA at the time of the initial *Traffic Operations Study* had been approved with a recommendation supporting a new fully-directional diamond-type interchange providing access between I-85 and Poplar Road.

Immediately following the GDOT and FHWA approval of the IJR, Piedmont Healthcare announced their plans to construct a regional medical and dental complex adjacent to the Poplar Road Interchange. The proposed Piedmont Newnan Hospital is of such scale that it required the preparation of a Development of Regional Impact (DRI) study and report as part of their project approval process. Within the DRI, the full buildout of the Piedmont Newnan Hospital complex is to be complete by 2020 and will consist of 800,000 square feet of hospital and 240,000 square feet of medical-dental facilities. As indicated in the DRI report, these facilities alone, when complete in 2020, will generate 18,856 vehicles per day. As an interim step, the 2010 Phase 1 medical complex buildout is projected to generate 10,036 vehicles per day.

Due to the close proximity of the proposed Piedmont Newnan Hospital complex to the Newnan Bypass, this new regional medical and dental facility will have a significant impact on future traffic volumes and operational characteristics on the Bypass. The medical and dental complex itself is expected to generate almost twice as much traffic in 2020 as was previously projected along the proposed new section of the Bypass in the year 2030 (18,856 vehicles per day in 2020 versus 10,394 vehicles per day in 2030) without the influence of the hospital as presented in the *Traffic Operations Study*.

To determine how the medical and dental complex would affect the traffic volumes on the Bypass, in 2008 Coweta County authorized a location specific traffic sub-area study for the Newnan Bypass. For the sub-area study, traffic data was collected from the *CCCTP (2004-2006)* travel demand model, the *Traffic Operations Study (2005)*, the *Interchange Justification Report (2008)*, the *Piedmont Newnan Hospital DRI (2008)* study, and from adjacent project PI No. 0006293 (US 29/SR 14 @ SR16 and Pine Rd). The sub-area traffic study also made use of the most current and readily available 1) existing and proposed county land use information, 2) proposed or approved site plan information, 3) industry-accepted reference materials and guidance, and 4) regional and local knowledge of the corridors and surrounding areas. Following the collection of traffic volumes, the next element of the traffic sub-area study was to identify proposed major traffic generators. The recently approved Piedmont Newnan Hospital is a regional medical complex which will have direct access to Poplar Road slightly to the east of the Newnan Crossing Bypass.

The new regional medical and dental complex will also have a significant impact on the surrounding land use and development (type and density). The development which is anticipated to be spurred by the new medical and dental complex will result in subsequent and significant growth in the traffic volumes in the area along Poplar Road and the Newnan Bypass. This new supporting development resulting from, or in support of, the medical and dental complex development will also generate a significant amount of traffic in the area, much of which would be in addition to the hospital generated traffic. One such development identified was a proposed medical/office which is in the conceptual approval process with Coweta County, and which will be located directly across Poplar Road from the Piedmont Newnan Hospital. Using forecasting methods and tools contained within the current edition of the ITE Trip Generation Manual, these two facilities alone have the potential to generate almost 42,000 trips per day at full build-out.

The next step was to identify potential traffic generators based upon the County's current land use and zoning requirements. There are a number of large undeveloped land tracts abutting the proposed Bypass alignment on both sides of the road corridor. For undeveloped land uses the ITE Trip Generation Manual provides a limited number of trip generation categories based upon acreage, these categories are limited as more definitive trip generation categories are based upon square footage of structure. Based upon the land uses and demographics of the area, the most appropriate per acreage categories are office park (the

highest trip generator), business park (a moderate to high trip generator) and single family detached residential (the lowest trip generator).

For the purposes of the sub-area traffic study effort, and in the absence of any formal development plans for the land areas abutting the proposed Bypass corridor between Turkey Creek Road and SR 16, potential trip generators have been based upon an assumption that the land uses will develop over time in accordance with the in-place zoning requirements. Those zoning requirements or modifications to them will allow for the development of office park, business park and single family residential land uses.

To the east of the Bypass corridor and extending to the I-85 right of way there are approximately 230 acres of undeveloped land, and to the west of the Bypass there are approximately 90 acres of undeveloped land. Based upon the County's current land use plan these tracts are zoned commercial. With the current commercial zoning, the combined tracts have the potential to develop completely as office park as a "worst case scenario" for trip generation. Under that scenario, there is the potential to generate a maximum of approximately 62,000 trips per day in the full build-out scenario. Recognizing the boundaries of these parcels (i.e. I-85, Turkey Creek Road), there are limited opportunities for access to the local, regional or Interstate transportation network other than through the proposed Bypass. Consequently, the potential exists for a significant number of daily trips from these parcels alone to use the Bypass.

In the absence of any formal proposals under consideration by the County on those same tracts of land identified above, at the other end of the trip generation potential would be the development of all single family detached residential housing. Under this scenario it is calculated that slightly more than 8,200 trips per day would be generated in the full build-out scenario.

And lastly, for the sake of comparison, an analytical exercise was conducted to quantify an intermediate growth scenario if all of the acreage were to develop as business park, it is anticipated that slightly more than 47,500 trips per day would be generated at full build-out.

For the purposes of the sub-area traffic study it was assumed that the tracts would develop as a mixture of the three land use categories with 1/3 of the acreage being developed as each of the above stated categories. This combination would result in a combined trip generation at full build-out of nearly 39,500 trips per day.

Not all of the trips generated by the abutting acreages would result in additional trips on the proposed Bypass. Some of those trips would be internal trips that would go from origin to destination within the developments without accessing the Bypass, and another component of the trips would be from vehicles already passing along the proposed Bypass. Taken together, and based upon experience and understanding of the land use and traffic distribution patterns, internal capture and pass-by trips could reasonably be expected to reduce the generated trips by as much as 30%. This results in a reduction of approximately 11,800 trips. The resulting adjusted trip generation from the abutting land uses which would use the Newnan Bypass is approximately 27,700 daily trips.

The next traffic component is the identification and quantification of that traffic which would use the Bypass from external areas and without the development of the abutting land uses. Using the peak hour traffic figures contained within the approved *Piedmont Newnan Hospital DRI*, and assuming that peak

hour traffic is assumed to be 10% of the daily traffic, the 2020 background traffic would be conservatively estimated at approximately 5,000 vehicles per day.

In late 2008 it was recognized that the completion date (ETC) of 2010 was not going to be realized because of delays in obtaining approval and funding. Best estimates indicate that 2013 is more realistic for a completion date, thereby making 2013 the project's ETC. With that, the 20 year future traffic date (ETC+20) becomes 2033. Further, Piedmont Newnan Hospital has recently announced an indefinite postponement of construction of the hospital and the recession, combined with a general reduction in development makes it unlikely that 2013 traffic will be as great as was originally forecast for 2010. Traffic on the Bypass is expected to be 5,457 vehicles per day with those reductions.

It is expected that by 2033 the hospital and medical complex will be built and development will have resumed historical growth rates. With that in mind, 2033 traffic volumes on the bypass are expected to be 26,700 vehicles per day.

The existing project corridor is undeveloped or sparsely developed open land. The adjacent and abutting environs are of a rural character with land uses generally being undeveloped open space or agricultural with limited commercial uses and low-density residential subdivisions.

The Newnan Bypass has been, and still remains a priority transportation initiative for Coweta County to improve access around the City of Newnan and be a catalyst to promote and support economic development. This segment of the Bypass has no known or readily identified community concerns. The project has received support from the community for its continuation. Completion of this segment of the Bypass will support and promote economic development in this quadrant of Coweta County by providing 1) an additional and alternate route for access between I-85 at Interchange 41 and commercial and industrial land uses in Newnan, 2) access to previously undeveloped land in close proximity to I-85, 3) additional capacity to supplement US 29/27 Alt., and 4) advancing the completion of the full circumferential route around Newnan.

The proposed project will be coordinated with project PI 0006877 (SR 16 from I-85 to US 29/27 Alt.) as it moves through environmental review and the design development process.

The project will be consistent with Executive Order 12898 as it pertains to environmental justice. The project will include 1) feasible and prudent design decisions to avoid, minimize and/or mitigate adverse human health and environmental effects, including social and economic effects, 2) the design development process will provide opportunities for full and fair public participation of potentially effected individuals or groups of individuals, and 3) the process will not discriminate against any individual or group of individuals in the receipt of benefits.

Description of the proposed project:

The project is located near the center of Coweta County, to the southeast of the City of Newnan, and slightly northwest of Interstate 85 Interchange 41 for SR 14/US 29. The project is an extension of the existing Newnan Bypass which currently terminates at Turkey Creek Road from the north. This segment of the overall Newnan Bypass will extend approximately 1.6 miles on new alignment between Turkey Creek Road and SR 16, and will include traffic signal controlled intersections at its termini with both Turkey Creek Road and SR 16. The project will cross over the Central of Georgia Railway near the approach to Turkey Creek Road at its northerly terminus; and will cross over wetlands, floodplains, a

discharge stream of East Newnan Lake, and Turkey Creek through the central segment of the project before connecting to SR 16 at its southerly terminus. This project will be coordinated with the SR 16 widening (PI 0006877) that begins just before the I-85 overpass to its intersection with US 29/27 Alt.

Is the project located in a Non-attainment area? Yes. This project is within Coweta County, a Non-attainment area according to the Region's Air Quality Conformity Analysis

PDP Classification: Major

Federal Oversight: Exempt

Functional Classification:

Turkey Creek Road – Urban Local Street (within the Newnan Urban Area Boundary)/Rural Local Road (outside of the Newnan Urban Area Boundary)

Newnan Bypass – Urban Principal Arterial - the proposed Turkey Creek to SR 16 segment is partial controlled access

SR 16 – Urban Minor Arterial – partial controlled access

U. S. Route Number(s): N/A

State Route Number(s): 16

Traffic (AADT): Traffic Diagrams are attached.

Turkey Creek Road – Current Year: (2013) 1,857 Design Year: (2033) 6,896

Newnan Bypass – Current Year: (2013) 5,457 Design Year: (2033) 26,700

SR 16 – Current Year: (2013) 17,693 Design Year: (2033) 37,321

Existing design features: This is a new location project.

The existing design features which are provided are representative of the abutting section of the Newnan Bypass (from Lower Fayetteville Road to Turkey Creek Road) which was previously constructed under separate contract and which is currently operational and open to traffic.

- Typical Section: The bypass is a four-lane rural cross-section with 12 foot lanes, 10 foot shoulders (4' paved), and a 44 foot depressed median.
- Posted speed: 45 mph
- Maximum degree of curvature: 3° / Minimum Radius; 1909 ft

- Major intersections and interchanges:
 - SR 34 Newnan Bypass at Turkey Creek Road (signalized)
 - SR 34 Newnan Bypass at SR 16 (signalized) PI 0007694/ PI 0006877
- Traffic control during construction: The construction is primarily off-line since it is new construction. The termini and connections at the existing roads (Turkey Creek Road and SR 16) will affect existing travel lanes and will require on-site traffic control and minimal staged construction.
- Design Exceptions to controlling criteria anticipated:

	<u>UNDETERMINED</u>	<u>YES</u>	<u>NO</u>
HORIZONTAL ALIGNMENT:	()	()	(x)
ROADWAY WIDTH:	()	()	(x)
SHOULDER WIDTH:	()	()	(x)
VERTICAL GRADES:	()	()	(x)
CROSS SLOPES:	()	()	(x)
STOPPING SIGHT DISTANCE:	()	()	(x)
SUPERELEVATION RATES:	()	()	(x)
HORIZONTAL CLEARANCE:	()	()	(x)
SPEED DESIGN:	()	()	(x)
VERTICAL CLEARANCE:	()	()	(x)
BRIDGE WIDTH:	()	()	(x)
BRIDGE STRUCTURAL CAPACITY:	()	()	(x)

- Design Variances: None
- Environmental concerns: An environmental scan letter is attached.
 - An Individual 404 Permit is anticipated for unavoidable impacts to wetlands and streams in the project corridor.
 - One closed UST site was found within ¼ mile of the project corridor, and two listed LUST sites were identified within a ½ mile radius of the project corridor. The closed UST was installed in 1978, closed in-place in 1988, and is not listed in the EPD’s Leaking UST (LUST) Database. Two listed LUST sites were also identified within ½ mile of the project corridor. Both sites have been monitored and reviewed by EPD and no further regulatory action has been required for either site. All three UST sites are located down gradient of the project corridor and are not an environmental concern.
 - The following invasive species were found: Common Privet and Parrot’s Feather (aquatic plant species).
 - There are approximately 29 acres of wetlands located within the proposed project corridor, located primarily south and west of Turkey Creek between I-85 and East Newnan Lake. Non-wetland waters of the U.S. associated with the project corridor consist of East Newnan Lake, the discharge stream from the lake, two farm ponds, Turkey Creek and several smaller streams and creeks that are tributaries of Turkey Creek.
 - No archaeological sites considered eligible for inclusion on the National Register of Historic Places (NRHP) were identified in the corridor. A history survey of the corridor identified three potential NRHP eligible historic resources including the East Newnan Cotton Mill District, the Greison Trail Marker, and the Central of Ga. Railroad. The final historical survey for 50 years of age or older, archaeological shovel testing, and Assessment of Effects reviews will be completed

as part of the comprehensive environmental review process for the selection of a preferred alternate.

- No cemeteries are located within the project corridor. One church, the East Newnan Baptist Church, is located on East Gordon Road near the intersection of SR 16.
- No parklands are located within the project corridor.
- No Section 6(F) lands or properties have been identified within the project corridor.
- Level of environmental analysis:
 - Are Time Savings Procedures appropriate? Yes (), No (X),
 - Categorical Exclusion (),
 - Environmental Assessment/Finding of No Significant Impact (FONSI) (X), or Environmental Impact Statement (EIS) ().

Note: This project will be combined with PI 0006877 in a common environmental approval document.

Utility involvements:

- | | |
|-------------------------------------|------------------------|
| ● Georgia Power | Power |
| ● Coweta Fayette EMC | Power |
| ● Atlanta Gas Light | Natural Gas |
| ● Charter Communications | Cable TV |
| ● Comcast | Cable TV |
| ● Bellsouth | Telephone |
| ● Coweta County Water & Sewer Dept. | Water & Sewer |
| ● Newnan Utilities | Power, Water, Cable TV |
| ● Norfolk Southern | Railroad |

Project responsibilities:

- Design – Coweta County
- Right-of-Way Acquisition – Coweta County
- Relocation of Utilities – Coweta County
- Letting to contract – GDOT
- Supervision of construction – GDOT
- Providing material pits – Contractor to secure
- Providing detours – None Required

Coordination

- Initial Concept Meeting held 1/23/06. Meeting Minutes attached.
- Draft Concept Team Meeting held 4/14/06. Meeting Minutes attached.
- Concept Team Meeting held 8/28/07. Meeting Minutes attached.
- FEMA, USCG, and/or TVA: This project may require FEMA coordination as it is located in the 100 year floodplain.
- Public involvement. A Public Information Open House was held. (3-06-08) See the attached summary. A Public Hearing will be held as part of the Environment Assessment approval process.

- Local government comments. Coordination with Coweta County is in progress and will be ongoing throughout the life of the project.
- Other projects in the area:
 - PI #0006293 (Pine Road & SR 16 @ US 29 intersection improvements)
 - PI #0006877 (SR 16 widening) Note: This project will be coordinated with PI 0007694
 - PI #322400 (Newnan Bypass – SR 16/US 27A to Jefferson Parkway)
 - CW-AR-003 (Poplar Road – New Interchange)
- Railroads: Central of Georgia Railway (Norfolk Southern). Norfolk Southern has informed GDOT of their intentions to add an additional parallel track within this location. (7-02-08)
- Value Engineering Study – (3-25-08)
- Traffic Management Plan (TMP) – Since this project is on new location, it will not have a significant impact to traffic. A TMP is not required and it will be classified as a non-significant project to workzone safety and mobility .

Scheduling – Responsible Parties' Estimate

- Time to complete the environmental process: 16 Months
- Time to complete preliminary construction plans: 6 Months
- Time to complete right-of-way plans: 3 Months
- Time to complete the Section 404 Permit: 3 Months (following selection of a Preferred Alternative)
- Time to complete final construction plans: 5 Months
- Time to complete to purchase right-of-way: 9 Months
- List other major items that will affect the project schedule: Railroad coordination – 24 months

Other alternates considered:

No Build:

The No Build Alternative has been considered, but not selected due to its inability to satisfy the Need and Purpose.

Build Alternative 1 (East Alternate Alignment):

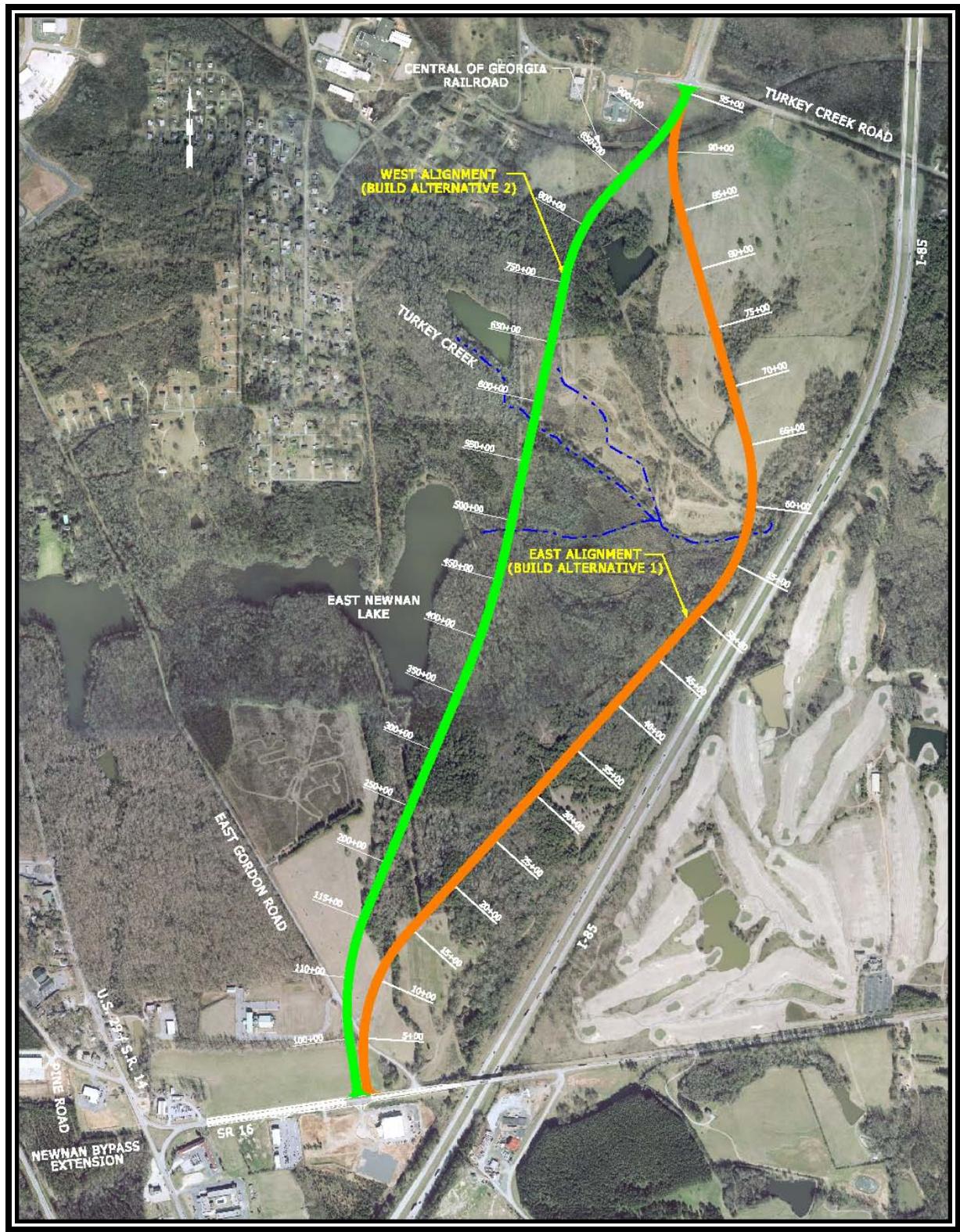
The East Alternate Alignment (see Alignment Alternates Figure) was originally conceptualized as a curvilinear alignment which would be biased toward the easterly side of the project study area. The project study area is bounded by East Newnan Lake to the west, I-85 to the east, Turkey Creek Road to the north and SR16 to the south. Beginning at the southerly terminus, the East Alternate Alignment begins as an at-grade T-intersection with SR 16, intersecting SR16 approximately 2/3 of the distance between the SR16 intersection with US 29 to the west and the overpass crossing of I-85 to the east. From the intersection with SR16 the proposed Bypass would begin by heading in a northerly direction. The alignment would then cross and bisect East Gordon Road at a distance of approximately 500 feet north of the intersection with SR16. After crossing East Gordon Road, the alignment would then curve slightly to the east and follow along a tangent alignment in a northeasterly direction for approximately 3500 feet, allowing the Bypass to come in close proximity to the I-85. As the Bypass alignment approached I-85, it would then curve back toward the west, departing away from I-85. From its near point with I-85, the alignment progressed along a north, northwesterly course for approximately 2000 feet toward its intersection with Turkey Creek Road. As the alignment approached Turkey Creek Road it curved slightly back toward a more northerly direction as it crossed over the Central of Georgia Railroad approximately 500 feet south of Turkey Creek Road. The northerly terminus for the East Alternate Alignment was an at-grade intersection with Turkey Creek Road. The East Alternate Alignment would be aligned directly across from the previously constructed segment of the Newnan Bypass which extends up to and through SR34 (Bullsboro Road). The northerly terminus of the East Alternate Alignment at the intersection with Turkey Creek Road would become the fourth leg of the existing Newnan Bypass/Turkey Creek Road intersection. The East Alternate Alignment has been dismissed from further consideration because it is not the least environmentally damaging, practicable alternative which satisfies the goals and objectives of the project.

Build Alternative 2 (West Alternate Alignment):

The West Alternate Alignment (see Alignment Alternates Figure) was developed as a concept which would reduce the number, degree and extent of environmental consequences when compared against the East Alternate Alignment. Beginning at the same southerly terminus as the East Alternate Alignment, the West Alternate Alignment forms an at-grade T-intersection with SR 16, intersecting SR16 approximately 2/3 of the distance between the SR16 intersection with US 29 to the west and the overpass crossing of I-85 to the east. From the intersection with SR16 the proposed West Alternate Alignment would begin by heading in a more northerly direction than the East Alternate Alignment. The alignment then crosses and bisects East Gordon Road at a distance of approximately 500 feet north of the intersection with SR16. After crossing East Gordon Road, the alignment then curves very slightly to the east and follows along a tangent alignment in a northerly direction along a course slightly to the east of East Newnan Lake. The tangent section from East Gordon Road along East Newnan Lake is approximately 2000 feet. From there the West Alternate Alignment follows a more northerly direction for 2200 feet crossing over Turkey Creek just to the east of an unnamed pond. Just to the north of the unnamed pond, the alignment then curves to the east and continues on a northeasterly course for approximately 500 feet toward its terminus

at Turkey Creek Road. As the alignment approaches Turkey Creek Road it curves back slightly toward a more northerly direction as it crossed over the Central of Georgia Railroad approximately 500 feet south of Turkey Creek Road. The northerly terminus for the West Alternate Alignment is the same as the terminus for the East Alternate Alignment. The West Alternate Alignment forms an at-grade intersection with Turkey Creek Road, aligned directly across from the previously constructed segment of the Newnan Bypass which extends up to and through SR34 (Bullsboro Road). The northerly terminus of the West Alternate Alignment at the intersection with Turkey Creek Road becomes the fourth leg of the existing Newnan Bypass/Turkey Creek Road intersection. The West Alternate Alignment has less environmental consequences than the East Alternate Alignment, but impacts are enough to require a Practical Alternative Report. The West Alternate Alignment is the Preferred Alternate.

ALIGNMENT ALTERNATES



Comments:

As an outcome of the **Draft Concept Team Meeting**, it was concluded that the continued concept development of this PI 0007694 would be delayed and the concept development for PI 0006877 would be expedited. This determination was made so that the intersection geometry of the southern terminus of this project and geometry and lane configurations of PI 0006877 could be effectively coordinated and advanced concurrently through the design development process.

It is intended that the design development of PI 0007694 (SR 34 Bypass from Turkey Creek Road to SR 16) and PI 0006877 (SR 16 from I-85 to US 29/27 Alt.) will be coordinated.

From the **Concept Team Meeting**, it was determined that a Practical Alternative Report (PAR) would be required due to the amount of wetland impacts of the preferred alternate alignment.

Attachments:

1. Cost Estimates:
 - a. Construction including E&C,
 - b. Right-of-Way, and
 - c. Utilities.
2. Typical sections
3. Traffic Operations Study
4. URS Traffic Analysis Memorandum
5. Piedmont Hospital DRI traffic estimates
6. Traffic Sub-Study Output Data
7. Environmental Scan Letter
8. Project Framework Agreement
9. Minutes of Initial Concept Team Meeting (1-23-06)
10. Minutes of Draft Concept Meeting (4-14-06)
11. Minutes of Concept Team Meeting (8-28-07)
12. Practical Alternative Report

Estimate Report for file "0007694"

Section Roadway					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
150-1000	Lump	LS	100000.00	TRAFFIC CONTROL - CSSTP-0007-00(694)	100000.00
201-1500	1	LS	500000.00	CLEARING & GRUBBING -	500000.00
206-0002	650000	CY	10.00	BORROW EXCAV, INCL MATL	6500000.00
318-3000	2000	TN	25.00	AGGR SURF CRS	50000.00
441-0740	300	SY	40.00	CONCRETE MEDIAN, 4 IN	12000.00
441-7011	15	EA	1500.00	CURB CUT WHEELCHAIR RAMP, TYPE A	22500.00
444-1000	300	LF	5.00	SAWED JOINTS IN EXIST PAVEMENTS - PCC	1500.00
634-1200	100	EA	125.00	RIGHT OF WAY MARKERS	12500.00
641-1100	200	LF	70.00	GUARDRAIL, TP T	14000.00
641-1200	5000	LF	20.00	GUARDRAIL, TP W	100000.00
641-5001	6	EA	700.00	GUARDRAIL ANCHORAGE, TP 1	4200.00
641-5012	10	EA	2200.00	GUARDRAIL ANCHORAGE, TP 12	22000.00
643-8200	1000	LF	3.50	BARRIER FENCE (ORANGE), 4 FT	3500.00
647-1000	1	LS	100000.00	TRAFFIC SIGNAL INSTALLATION NO -	100000.00
Section Sub Total:					\$7,442,200.00

Section Drainage					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
207-0203	20000	CY	70.00	FOUND BK FILL MATL, TP II	1400000.00
500-3101	3000	CY	550.00	CLASS A CONCRETE	1650000.00
511-1000	220000	LB	1.00	BAR REINF STEEL	220000.00
550-1180	5000	LF	40.00	STORM DRAIN PIPE, 18 IN, H 1-10	200000.00
550-1240	1500	LF	50.00	STORM DRAIN PIPE, 24 IN, H 1-10	75000.00
550-2180	500	LF	35.00	SIDE DRAIN PIPE, 18 IN, H 1-10	17500.00
550-3318	10	EA	750.00	SAFETY END SECTION 18 IN, STORM DRAIN, 4:1 SLOPE	7500.00
550-3518	10	EA	800.00	SAFETY END SECTION 18 IN, STORM DRAIN, 6:1 SLOPE	8000.00
550-4218	15	EA	625.00	FLARED END SECTION 18 IN, STORM DRAIN	9375.00
550-4224	15	EA	730.00	FLARED END SECTION 24 IN, STORM DRAIN	10950.00
668-1100	30	EA	2500.00	CATCH BASIN, GP 1	75000.00
668-2100	5	EA	2500.00	DROP INLET, GP 1	12500.00
668-4300	8	EA	2500.00	STORM SEWER MANHOLE, TP 1	20000.00
Section Sub Total:					\$3,705,825.00

Section Pavement					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
310-1101	30000	TN	21.00	GR AGGR BASE CRS, INCL MATL	630000.00
402-1812	500	TN	80.00	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	40000.00
402-3121	30000	TN	80.00	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	2400000.00
402-3130	6500	TN	80.00	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	520000.00
402-3190	9000	TN	80.00	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	720000.00
413-1000	7000	GL	3.00	BITUM TACK COAT	21000.00
441-6012	15000	LF	40.00	CONC CURB & GUTTER, 6 IN X 24 IN, TP 2	600000.00
446-1100	300	LF	5.50	PVMT REINF FABRIC STRIPS, TP 2, 18 INCH WIDTH	1650.00
Section Sub Total:					\$4,932,650.00

Section Bridge & Wall					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
543-1100	2	Lump Sum	450000.00	Bridge Sta. -	900000.00
627-1030	16000	SF	70.00	MSE WALL FACE, GTR THAN 30 FT HT, WALL NO -	1120000.00
627-1100	600	LF	70.00	COPING A, WALL NO -	42000.00
Section Sub Total:					\$2,062,000.00

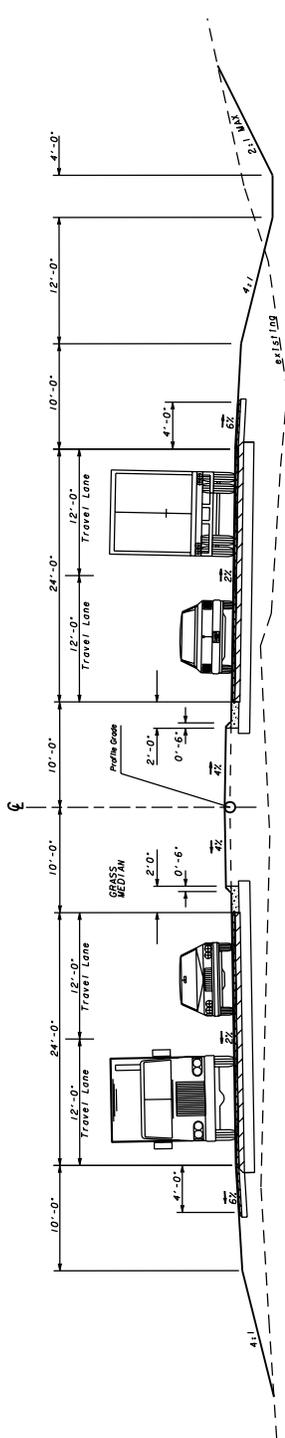
Section Traffic Signs & Marking					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
636-1020	300	SF	17.00	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 3	5100.00
636-1033	500	SF	25.00	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING,	12500.00

				TP 9	
636-2070	400	LF	10.00	GALV STEEL POSTS, TP 7	4000.00
636-2090	250	LF	10.00	GALV STEEL POSTS, TP 9	2500.00
636-5010	50	EA	45.00	DELINEATOR, TP 1	2250.00
652-0120	40	EA	50.00	PAVEMENT MARKING, ARROW, TP 2	2000.00
653-0160	2	EA	125.00	THERMOPLASTIC PVMT MARKING, ARROW, TP 6	250.00
653-0210	2	EA	125.00	THERMOPLASTIC PVMT MARKING, WORD, TP 1	250.00
653-0220	2	EA	130.00	THERMOPLASTIC PVMT MARKING, WORD, TP 2	260.00
653-1704	200	LF	3.50	THERMOPLASTIC SOLID TRAF STRIPE, 24 IN, WHITE	700.00
653-2501	4	LM	1500.00	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	6000.00
653-2502	4	LM	1500.00	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	6000.00
653-4501	4	GLM	1000.00	THERMOPLASTIC SKIP TRAF STRIPE, 5 IN, WHITE	4000.00
653-6004	2000	SY	3.50	THERMOPLASTIC TRAF STRIPING, WHITE	7000.00
653-6006	250	SY	3.50	THERMOPLASTIC TRAF STRIPING, YELLOW	875.00
654-1001	200	EA	5.00	RAISED PVMT MARKERS TP 1	1000.00
654-1003	200	EA	5.00	RAISED PVMT MARKERS TP 3	1000.00
657-1085	100	LF	8.00	PREFORMED PLASTIC SOLID PVMT MKG, 8 IN, CONTRAST (BLACK-WHITE), TP PB	800.00
Section Sub Total:					\$56,485.00

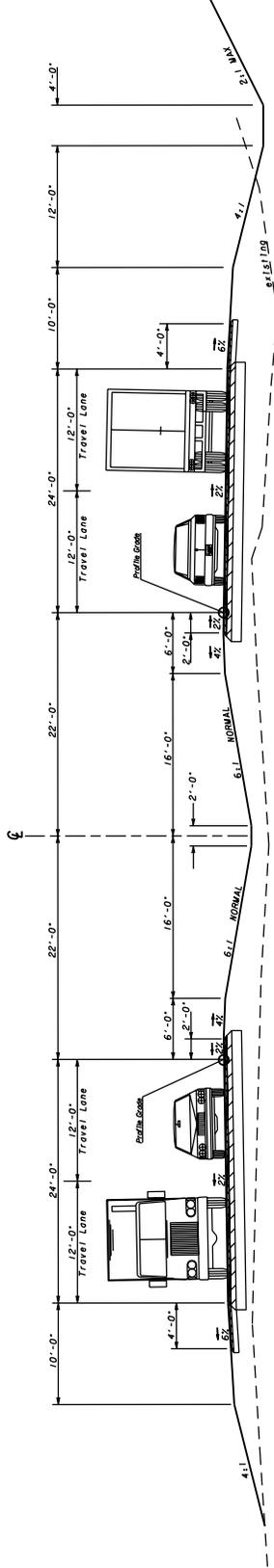
Section Erosion Control					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
163-0232	30	AC	600.00	TEMPORARY GRASSING	18000.00
163-0240	5000	TN	250.00	MULCH	1250000.00
163-0300	4	EA	1500.00	CONSTRUCTION EXIT	6000.00
163-0503	10	EA	600.00	CONSTRUCT AND REMOVE SILT CONTROL GATE, TP 3	6000.00
163-0520	5000	LF	20.00	CONSTRUCT AND REMOVE TEMPORARY PIPE SLOPE DRAIN	100000.00
163-0528	2000	LF	4.00	CONSTRUCT AND REMOVE FABRIC CHECK DAM - TYPE C SILT FENCE	8000.00
163-0529	800	LF	5.00	CONSTRUCT AND REMOVE TEMPORARY SEDIMENT BALED STRAW CHECK DAM	4000.00
163-0531	10	EA	10000.00	CONSTRUCT AND REMOVE SEDIMENT BASIN, TP 1, STA NO -	100000.00
163-0550	43	EA	275.00	CONSTRUCT AND REMOVE INLET SEDIMENT TRAP	11825.00
165-0010	2000	LF	0.75	MAINTENANCE OF TEMPORARY SILT FENCE, TP A	1500.00
165-0030	10000	LF	2.00	MAINTENANCE OF TEMPORARY SILT FENCE, TP C	20000.00
165-0040	100	EA	200.00	MAINTENANCE OF EROSION CONTROL CHECKDAMS/DITCH CHECKS	20000.00
165-0060	10	EA	1500.00	MAINTENANCE OF TEMPORARY SEDIMENT BASIN, STA NO -	15000.00
165-0070	4000	LF	3.00	MAINTENANCE OF BALED STRAW EROSION CHECK	12000.00
165-0087	10	EA	200.00	MAINTENANCE OF SILT CONTROL GATE, TP 3	2000.00
165-0101	4	EA	700.00	MAINTENANCE OF CONSTRUCTION EXIT	2800.00
165-0105	43	EA	100.00	MAINTENANCE OF INLET SEDIMENT TRAP	4300.00
166-0650	1	EA	12500.00	RESTORATION OF LAKE, STA -	12500.00
167-1000	1	EA	1000.00	WATER QUALITY MONITORING AND SAMPLING	1000.00
167-1500	30	MO	1000.00	WATER QUALITY INSPECTIONS	30000.00
171-0010	4000	LF	2.50	TEMPORARY SILT FENCE, TYPE A	10000.00
171-0030	20000	LF	4.00	TEMPORARY SILT FENCE, TYPE C	80000.00
603-2012	500	SY	50.00	STN DUMPED RIP RAP, TP 1, 12 IN	25000.00
603-7000	500	SY	5.50	PLASTIC FILTER FABRIC	2750.00
700-6910	60	AC	900.00	PERMANENT GRASSING	54000.00
700-7000	225	TN	65.00	AGRICULTURAL LIME	14625.00
700-7010	150	GL	25.00	LIQUID LIME	3750.00
700-8000	70	TN	550.00	FERTILIZER MIXED GRADE	38500.00
700-8100	3000	LB	2.50	FERTILIZER NITROGEN CONTENT	7500.00
710-9000	20000	SY	5.00	PERMANENT SOIL REINFORCING MAT	100000.00
716-1000	8000	SY	2.00	EROSION CONTROL MATS, WATERWAYS	16000.00
716-2000	40000	SY	2.00	EROSION CONTROL MATS, SLOPES	80000.00
Section Sub Total:					\$2,057,050.00

Total Estimated Cost: \$20,256,210.00

Subtotal Construction Cost	\$20,256,210.00
E&C Rate 10.0 %	\$2,025,621.00
Inflation Rate 0.0 % @ 0 Years	\$0.00
<hr/>	
Total Construction Cost	\$22,281,831.00
Right Of Way	\$4,437,000.00
ReImb. Utilities	\$300,000.00
<hr/>	
Grand Total Project Cost	\$27,018,831.00



URBAN SECTION



RURAL SECTION

REVISION DATES	GEORGIA DEPARTMENT OF TRANSPORTATION TYPICAL SECTIONS
	NEWMAN BYPASS TURKEY CREEK ROAD TO S. R. 16
	DRAWING NO. 5-01

MEMORANDUM

To: Tom Karis, P.E., Clough, Harbor & Associates, LLP

Cc: Wayne Kennedy, Coweta County
Keith Rohling, Georgia Department of Transportation

From: Larry Overn, P.E., P.T.O.E, Street Smarts

RE: Newnan Bypass Update

Date: 28 August 2006

The technical analyses detailed herein was undertaken to provide updated traffic-related findings for the planned Newnan Bypass Extension in a traffic study originally done in December 2004, entitled, *A Traffic Operations Study for Newnan Bypass Extension*, prepared by Street Smarts with Clough Harbor & Associates, LLP. This original study henceforth shall be referred to as the *Newnan Bypass Study*. The Newnan Bypass Study has been updated to include the implications of a planned interstate interchange for I-85 at Poplar Road. The opening year for the new interchange is planned for the Year 2020.

A referenced document used throughout this memorandum is entitled, *Interchange Justification Report, CR 103/Poplar Road at I85, Coweta County*, September 9, 2005; prepared by URS and Parsons Transportation Group. This document henceforth shall be referred to as the *IJR Study*.

The following updates summarized in this memorandum apply to the planned intersections of Newnan Bypass at Turkey Creek Road and at SR 16: Traffic Volume Projections; Collision History; Intersection Capacity Analyses; and Turn Lane Length Analyses.

Since the new interchange will not be in place until the Year 2020, there was no need to update the 2008 analyses. The Signal Warrant Analysis was not updated since traffic signals recommended at both study intersections met the MUTCD warrants using 2008 volumes in the original Newnan Bypass Study.

Traffic Volumes Projections - 2028

Due to the planned interchange at Poplar Rd, the volumes originally estimated in the Newnan Bypass Study at the following study intersections were refined:

- Newnan Bypass at Turkey Creek Road; and
- Newnan Bypass at SR 16.

The assumptions used to develop the refined 2028 volumes at the study intersections are as follows:

- Figures 7-7 and 7-8 in the IJR report illustrate the volumes estimated for the peak hours in 2030 for No-build and Build scenarios, respectively. These two figures are attached to this memorandum for reference. The total peak hour volumes shown at the US 29/I-85 interchange assuming the interchange at Poplar Road in place (Figure 7-8) were subtracted from the scenario assuming no interchange at Poplar Road (Figure 7-7). As a result of the subtraction, the volume reductions due to the new Poplar Road interchange were used as "upper limits" and were not to be exceeded in the refinement/modification of the traffic volumes at the study intersections. During the AM peak hour, the refinement/modification limit was calculated to be 375 vehicles (i.e., the I-85/US 29 interchange saw a total reduction of 375 vehicles due to the new interchange at Poplar Road). During the PM peak hour, the refinement/modification limit was calculated to be 750 vehicles (i.e., the I-85/US 29 interchange saw a total reduction of 750 vehicles due to the new interchange at Poplar Road). As a side note, but nevertheless related, the volumes in the IJR Study are for the design year 2030 and volumes in the original Newnan Bypass Study are for the design year 2028. The two-year difference is probably negligible and so no adjustments were made.
- The estimated reductions in 2030 traffic volumes at the SR 34 and I-85 interchange shown in the IJR Study (see Figures 7-7 and 7-8 in the attachment) due to the planned interchange at Poplar Road were assumed to have no affect on the study intersections primarily because the study intersections are located south of Poplar Road and closer to the US 29/I-85 interchange.
- Not all of the reductions in 2030 volumes estimated in the IJR Study at the US 29/I-85 interchange were assumed to directly affect the study intersections. Some of the redirected volumes to the new Poplar Interchange will likely use other more direct routes to head to/from the new interchange.

The refined/modified 2028 design year volumes assuming the interchange in place are shown in Figure 1. GDOT "spaghetti diagrams" were prepared showing the 2028 peak hour volumes and are attached to this memorandum.

Intersection Capacity Analyses

Using the updated volumes shown in Figure 1, the 2028 AM and PM peak hours were analyzed again in Synchro. It was determined that the recommendations in the original Newnan Bypass Study are optimal and adequate even should traffic be redirected to the planned I-85 interchange at Poplar Road. Figure 2 shows the proposed improvements. The detailed

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capacity analysis worksheets are appended to this memorandum.

Figure 1. Refined/Modified 2028 AM and PM Peak Hour Volumes

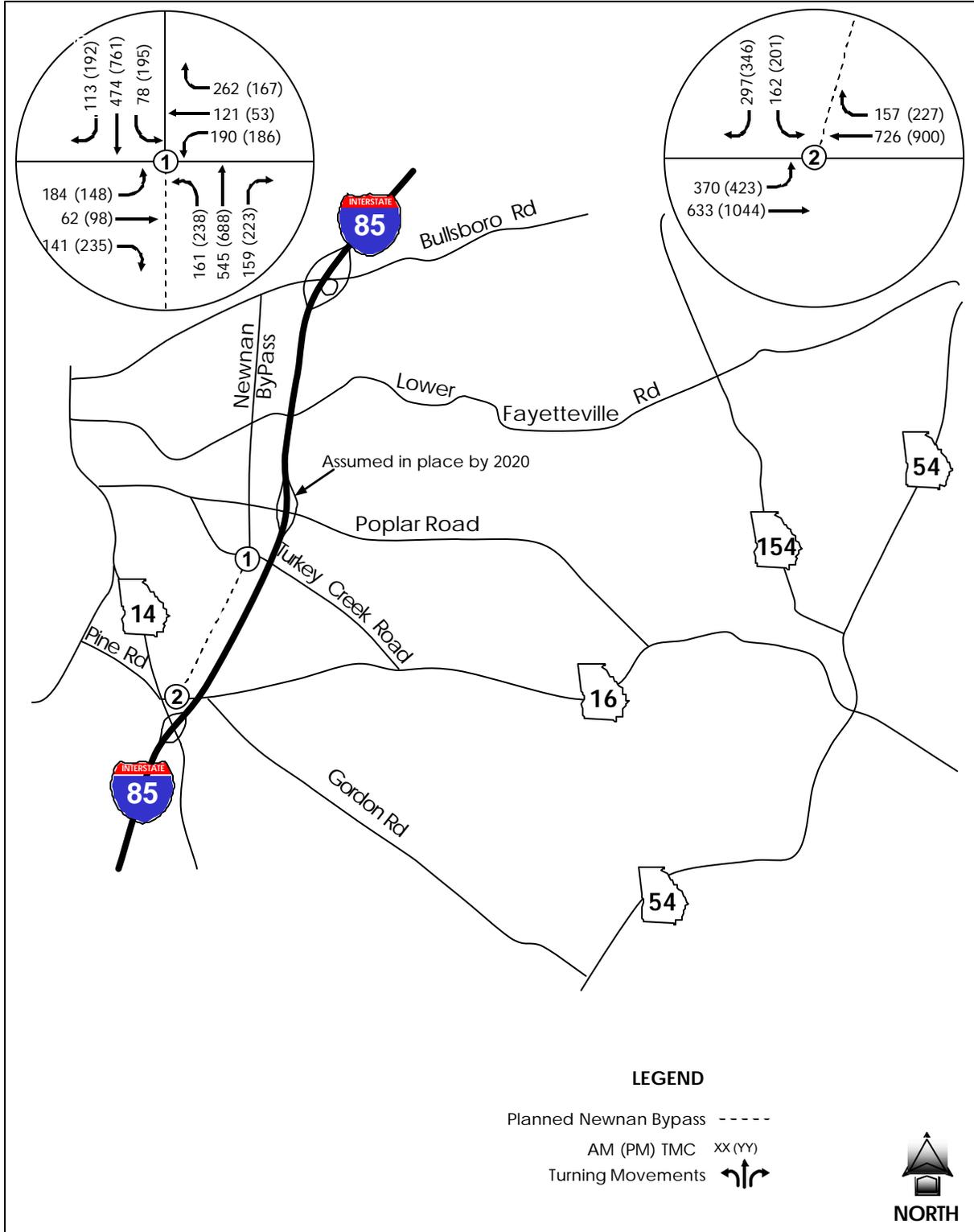
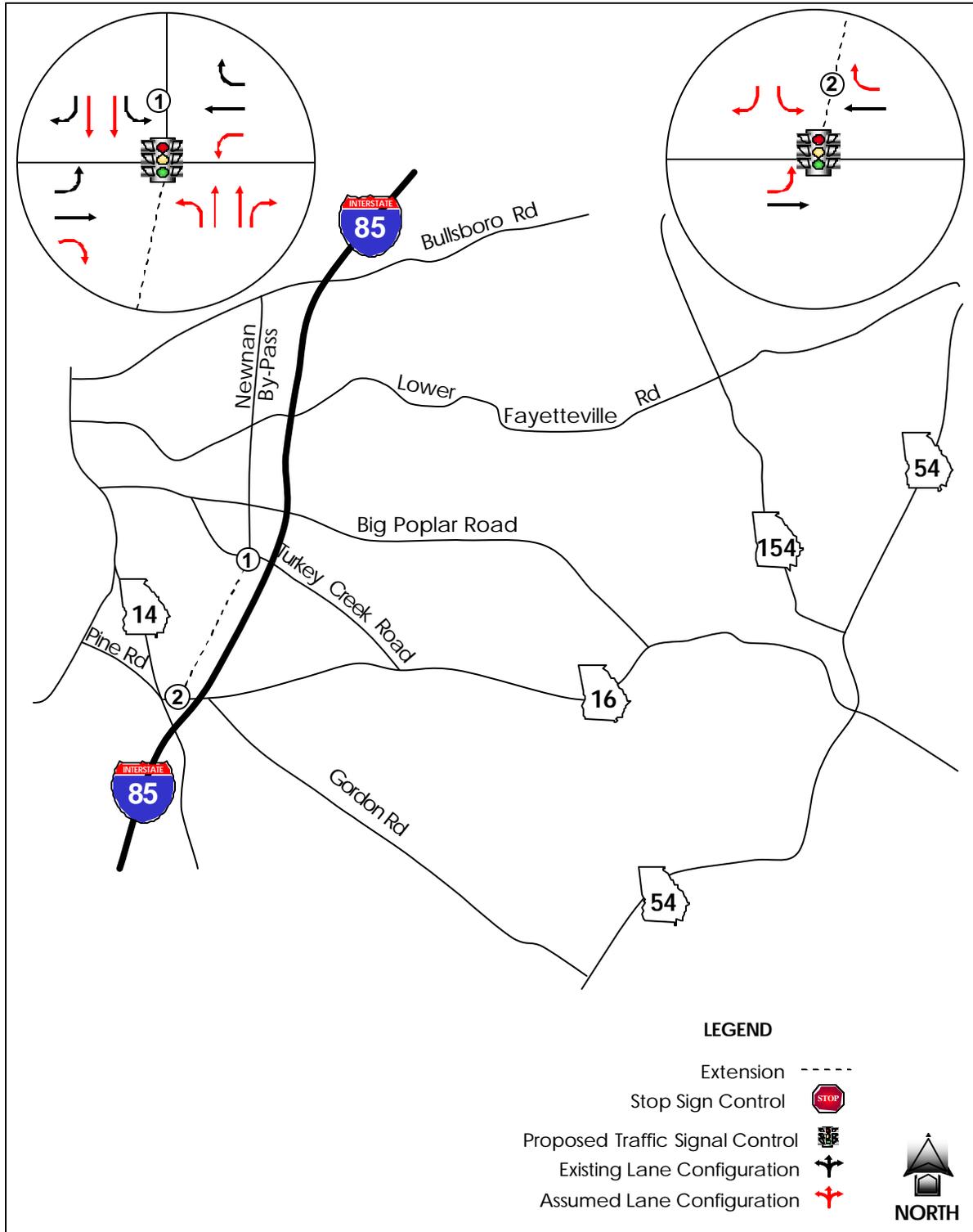


Figure 2. Proposed Intersection Improvements



Crash History

Historical collision records in the vicinity of the study intersections were obtained from the Office of Traffic Safety and Design Department of Georgia DOT and the Georgia State Patrol.

From the Georgia State Patrol, historical crash data from the Year 2004 to the current year were obtained for the following intersections:

- Newnan Bypass at Poplar Road;
- Newnan Bypass at Turkey Creek Road; and
- SR 16 at Gordon Road.

Crash history for the intersection of SR 14 and SR 16 was obtained from the Office of Traffic Safety and Design Department of Georgia DOT for the years 2002, 2003, and 2004. The Original Study looked at data for this intersection from earlier years.

The crash records for each intersection have been summarized in the table below.

Table 1. Summary of Crashes

Intersection	Year	Rear End	Angle	Side Swipe	Other ¹	Total Crashes	Injuries	Fatalities
Newnan Bypass @ Poplar Rd	2004-2006	1	11	0	2	14	28	0
SR 16 @ Gordon Rd	2004-2006	2	1	0	1	4	1	0
Turkey Creek Rd @ Newnan Bypass	2004-2006	0	0	1	1	2	0	0
SR 16 @ SR 14	2002-2004	22	37	9	10	78	39	0

¹"Other" represents a crashes not involving another vehicle.

It is important to note that the intersection of Newnan Bypass and Poplar Road accommodates more daily traffic than compared to the other two intersections shown in Table 1. The higher traffic volumes found at Newnan Bypass and Poplar Road could be part of the explanation for the higher number of traffic collisions at the intersection. A collision diagram was created for Newnan Bypass and Poplar Road and is shown in Figure 2.

Angle crashes at Newnan Bypass and Poplar Road seem to be more prevalent than other types of crashes. This could be due to a combination of high traffic volumes and relatively high posted speed limit (45 mph) on Newnan Bypass. The intersection is currently an All-Way Stop. Potential countermeasures to improve the safety at Newnan Bypass and Poplar Road are as follows:

- Add a traffic signal;

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- Reduce the posted speed limit;
- Install rumble strips on the approaches to the intersection;
- Investigate potential sight distance issues.

Further study and empirical data would be required to validate such potential countermeasures as a solution for this particular intersection.

Due to the amount of crashes at SR 14 and SR 16, diagrams were developed to illustrate the details and are presented in Figures 3, 4, 5, and 6. Major transportation improvements are programmed for SR 14 at SR 16 in the near future.

Figure 3. Crash Diagram for Newnan Bypass at Poplar Road

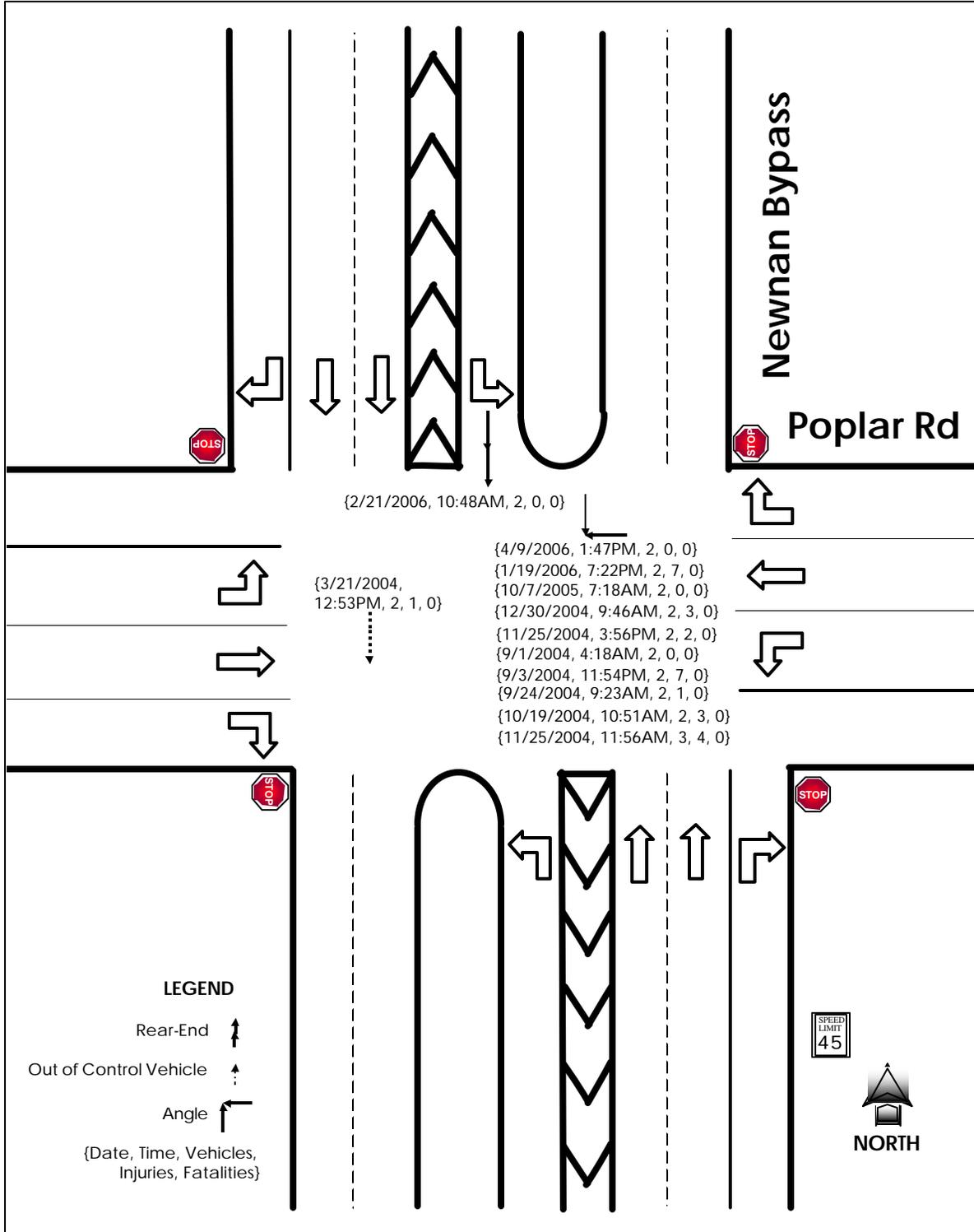


Figure 4. Crash Diagram for SR 14 at SR 16 for 2002

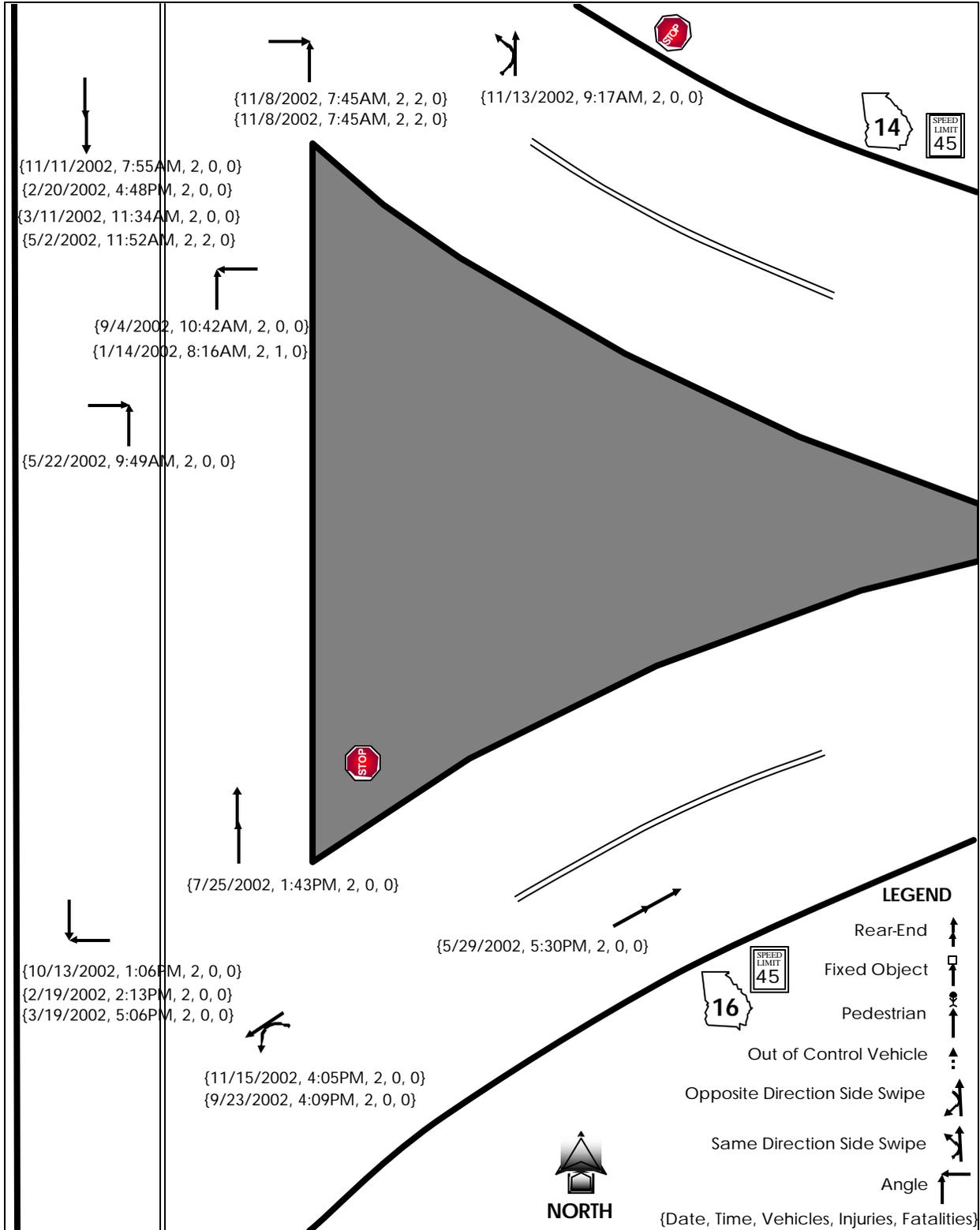


Figure 5. Crash Diagram for SR 14 at SR 16 for 2003

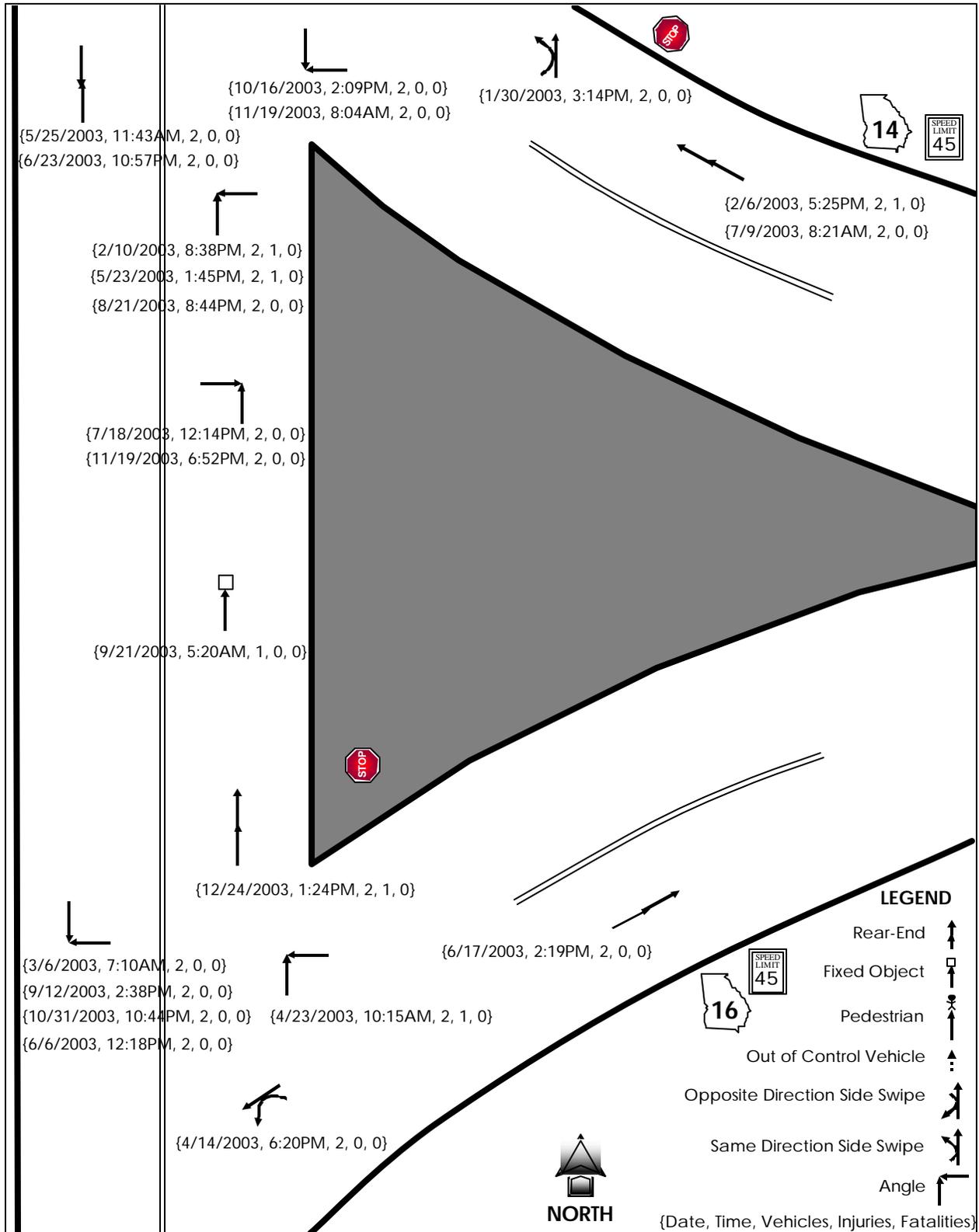
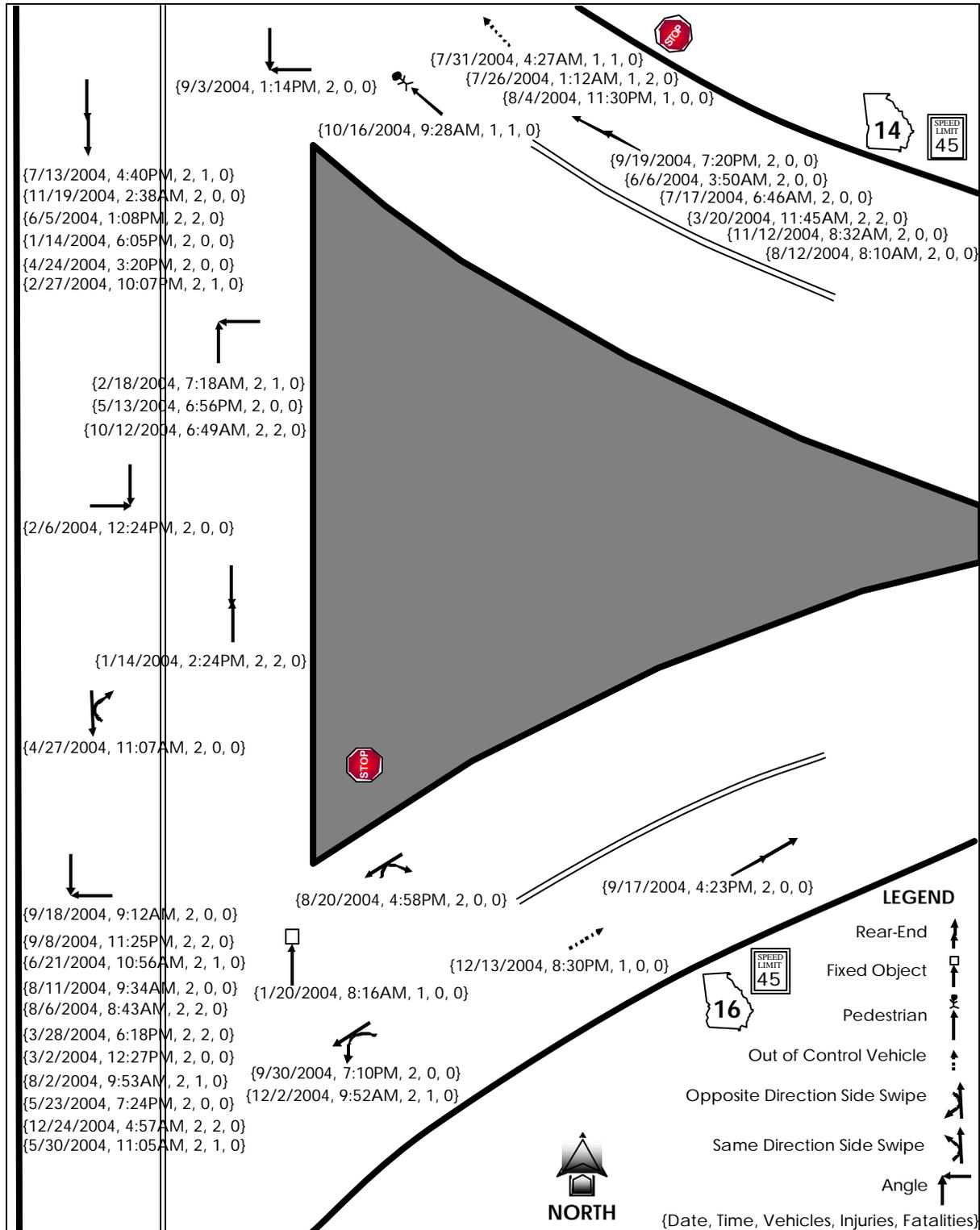


Figure 6. Crash Diagram for SR 14 at SR 16 for 2004



Turn Lane Length Analysis

Turn lane lengths for the required right-turn and left-turn lanes at the study intersections were determined using the updated 2028 intersection capacity analyses and the guidelines found in *GDOT's Regulations for Driveway and Encroachment Control* manual. The results are shown in Table 3.

Table 3. Turn Lane Length Requirements – Design Year 2028

Intersection	Speed (mph)	Lane	App. Taper (ft)	Bay Taper (ft)	Full Width Length (ft)
Newnan Bypass at Turkey Creek Road	45	NB LT Lane	270	100	235
	45	NB RT Lane	--	100	175
	45	SB LT Lane	270	100	235
	45	SB RT Lane	--	100	175
	45	EB LT Lane	270	100	235
	45	EB RT Lane	--	100	175
	45	WB LT Lane	270	100	235
	45	WB RT Lane	--	100	175
Newnan Bypass at SR 16	45	EB LT Lane	270	100	350
	45	WB RT Lane	--	100	175

The turn bay lengths shown for Newnan Bypass at SR 16 are reduced from those shown in the Original Report, from 600 feet to 350 feet for the eastbound left-turn lane, and from 300 feet to 175 feet for the westbound right-turn lane. The turn bay lengths shown for Newnan Bypass at Turkey Creek Road remain unchanged from those shown in the Original Report.

LO/AXF

A TRAFFIC OPERATIONS STUDY FOR NEWNAN BYPASS EXTENSION

In Coweta County, Georgia

Prepared for:



Prepared with:



Prepared by:



November 2004

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EXECUTIVE SUMMARY

The goal of this report is to identify the existing and future traffic operations for two intersections in Coweta County, and recommend improvements if necessary. These intersections are the following:

- Newnan Bypass at Turkey Creek Road; and
- Newnan Bypass at State Route 16 (SR 16).

The Newnan Bypass is proposed to extend from Turkey Creek Road to SR 16 by 2008. Since the existing Newnan Bypass north of Turkey Creek Road has a four-lane cross-section with a median, it can be assumed that the same cross-section will be constructed for the extension.

There are a number of other transportation improvements planned in the vicinity of the study intersections apart of this project.

Coweta County plans to extend a short stub road from SR 14 to the proposed realignment of Pine Road in 2008. As a result of the realignment of Pine Road and its connection to the stub road in 2008, Pine Road will no longer have an intersection with SR 14. Additionally, the existing divided intersection of SR 16 at SR 14 will be consolidated into one intersection.

In 2011, the stub road will become the SW Newnan Bypass, extending to the west from the intersection of SR 14 at SR 16. SR 16 will be widened to four lanes with a median. The SW Newnan Bypass will be constructed by the Georgia Department of Transportation (GDOT). The widening of SR 16 and construction of the SW Newnan Bypass is scheduled to begin in 2011.

The existing conditions, opening year traffic conditions (2008), and design year traffic conditions (2028) were evaluated for these intersections.

Presently, Newnan Bypass terminates at Turkey Creek Road; therefore the intersection of Newnan Bypass at Turkey Creek Road was the lone intersection studied under existing traffic conditions. The results of the analyses indicated that the intersection is operating with acceptable levels of service.

By 2008, the extension of the Newnan Bypass from Turkey Creek Road to SR 16 is anticipated to be complete and open-to-traffic. The assumed cross-section of the extended Newnan Bypass was assumed to match the existing Newnan Bypass cross-section. Lane configurations assumed for the intersections were the following:

Newnan Bypass at Turkey Creek Road

- The approaches on Newnan Bypass were assumed to have a left-turn lane, two thru lanes, and a right-turn lane; and
- The approaches on Turkey Creek Road were assumed to have a left-turn lane, a thru lane, and a right-turn lane, with stop control.

Newnan Bypass at SR 16

- The southbound Newnan Bypass was assumed to have a right-turn lane and a left-turn lane, with stop control;
- The eastbound approach on SR 16 was assumed to have a left-turn lane and one thru lane; and
- The westbound approach on SR 16 was assumed to have a right-turn lane and one thru lane.

From the 2008 capacity analyses for the two study intersections, it was determined that both intersections will likely operate with satisfactory levels of service.

The following table shows the turn lane length requirements based on GDOT standards. The approach taper for the two-lane roadways assumed symmetrical widening (6' shift).

Intersection	Speed (mph)	Lane	App. Taper (ft)	Bay Taper (ft)	Full Width Length (ft)
Newnan Bypass at Turkey Creek Road	45	NB LT Lane	--	100	235
	45	NB RT Lane	--	100	175
	45	SB LT Lane	--	100	235
	45	SB RT Lane	--	100	175
	45	EB LT Lane	270	100	235
	45	EB RT Lane	--	100	250
	45	WB LT Lane	270	100	235
	45	WB RT Lane	--	100	175
Newnan Bypass at SR 16	45	EB LT Lane	270	100	235
	45	WB RT Lane	--	100	175

Assuming the same lane configurations and traffic control for Newnan Bypass at Turkey Creek Road and SR 16 (with exception to the anticipated widening of SR 16 to four lanes with a median in 2011), the intersection is forecast to operate with unacceptable levels of service in 2028. A traffic signal at both intersections would raise traffic operations to acceptable levels of service.

A breakpoint analysis was done to determine when the intersections would require a traffic signal for acceptable operations. It was found that by 2016, both intersections will need a traffic signal. A signal warrant analysis was conducted for both intersections using 2008 volumes. Applicable warrants for both intersections were satisfied.

The following table shows the turn lane lengths required in order to support 2028 traffic conditions at the study intersections, based on GDOT standards and the capacity analyses (with the required traffic signals). The approach taper for the two-lane roadways assumed symmetrical widening (6' shift).

Intersection	Speed (mph)	Lane	Bay Taper (ft)	Full Width Length (ft)
Newnan Bypass at SR 16	45	EB LT Lane	100	600
	45	WB RT Lane	100	300

1. INTRODUCTION

This study presents operational analyses for two intersections in Coweta County for existing and future traffic conditions. The study intersections are the following:

- Newnan Bypass at Turkey Creek Road; and
- Newnan Bypass at State Route 16 (SR 16).

The existing conditions, opening year traffic conditions (2008), and design year traffic conditions (2028) were evaluated for these intersections.

This study included the following steps to determine the traffic conditions for existing and horizon year analyses:

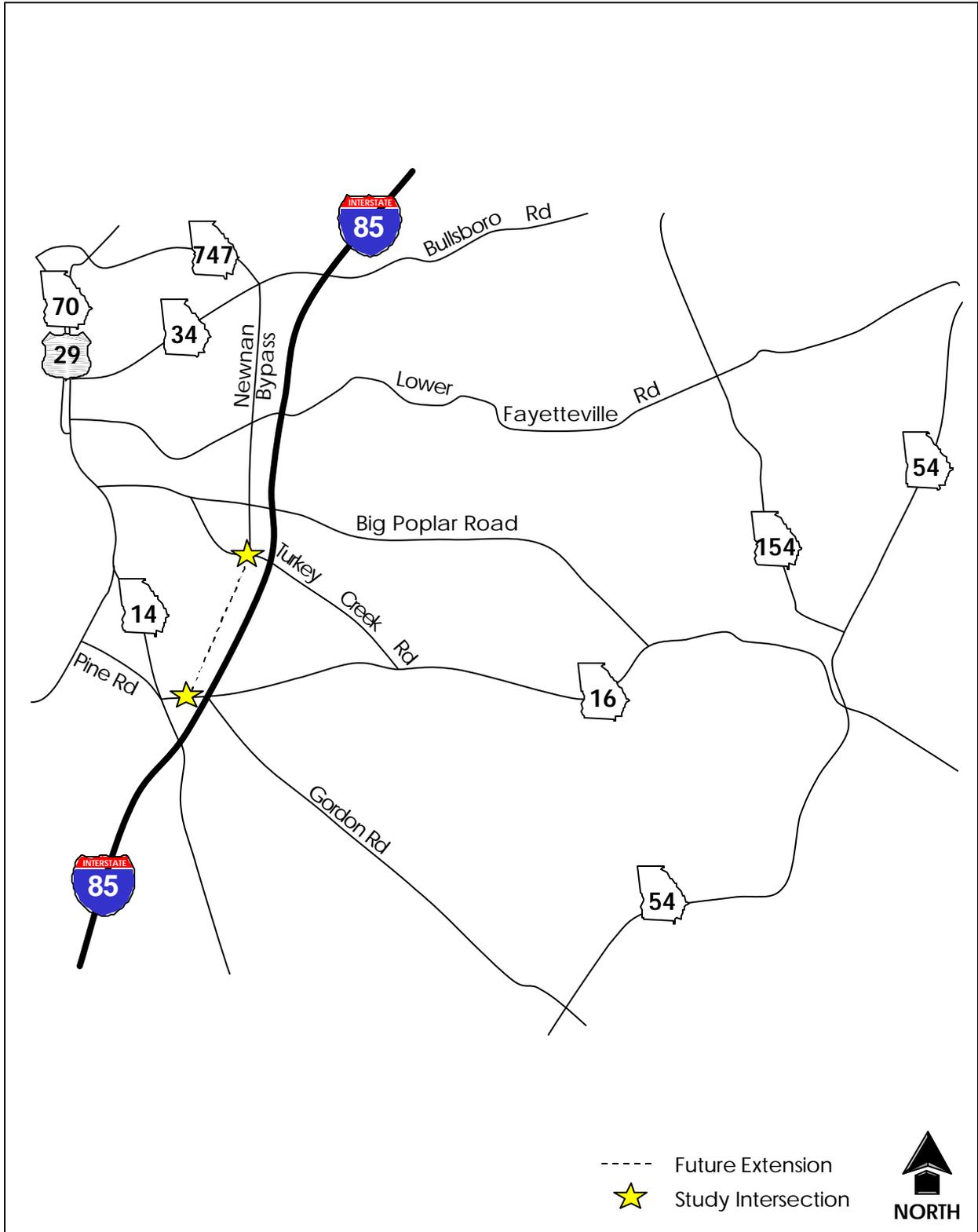
- Inventory of the existing roadway network;
- Collection of existing traffic data;
- Identification of planned transportation improvements in the vicinity of the intersections;
- Development of historically-based traffic growth rates;
- Identification and application of projected trips from 23 known future developments in the area (for future analyses);
- Development and application of additional trips in the area from expected new development based on Coweta County's 2015 Future Land Use Plan;
- Analyses of traffic conditions at the study intersections; and
- Report of results and conclusions.

Geometric road improvements and enhanced traffic control were tried at intersections where poor traffic operations were forecast for the future. If a traffic signal was determined to be effective, a signal warrant analysis was done to further validate such an improvement.

In the following sections, the existing and future traffic conditions are investigated, followed by signal warrant analyses (if necessary) and overall conclusions.

Figure 1 illustrates the locations of the study intersections.

Figure 1. Site Location



2. EXISTING TRAFFIC CONDITIONS

Roadway Inventory

To determine existing traffic conditions for the study intersections, an inventory was made of the roads involved. The following paragraphs describe the general road characteristics for these roads:

- State Route 16 (SR 16) is a two-lane roadway with a posted speed limit of 45 mph in the vicinity of SR 14. It runs primarily east-west, from SR 14 to Turin on the east, and beyond. Adjacent developments are primarily commercial, low-density residential and undeveloped land.
- Turkey Creek Road is a two-lane roadway with a 45 mph speed limit. It spans approximately two miles in length, northwest-southeast, from Poplar Road on the west to SR 16 on the east and offers a crossing over I-85. Adjacent developments are primarily low-density residential, residential subdivisions, and undeveloped land.
- Newnan Bypass is a four-lane median divided roadway with a 45 mph posted speed limit in the vicinity of its intersection with Turkey Creek Road. It functions as a perimeter roadway around the City of Newnan. At the time of this writing, the Newnan Bypass is not a complete circular loop, yet; but resembles a semicircle, beginning at SR 34 on the northwest, and ending at Turkey Creek Road on the southeast, for a span of approximately seven miles.

Existing Volumes

Twenty-four hour machine counts and weekday AM (7-9) and PM (4-6) peak period turning movement counts were collected at the following study intersections:

- Newnan Bypass at Turkey Creek Road; and
- State Route 14 (SR 14)/US 29 at State Route 16 (SR 16).

Figure 2 shows the existing AM and PM peak hour volumes at the study intersections. It should be noted that turning movement counts and 24-hour machine counts collected at SR 14 and SR 16 were used to help determine the volumes on SR 16 at the future intersection location with the extended Newnan Bypass. Figure 3 shows the existing lane configurations and traffic control for the study intersections.

Figure 2. Existing Volumes

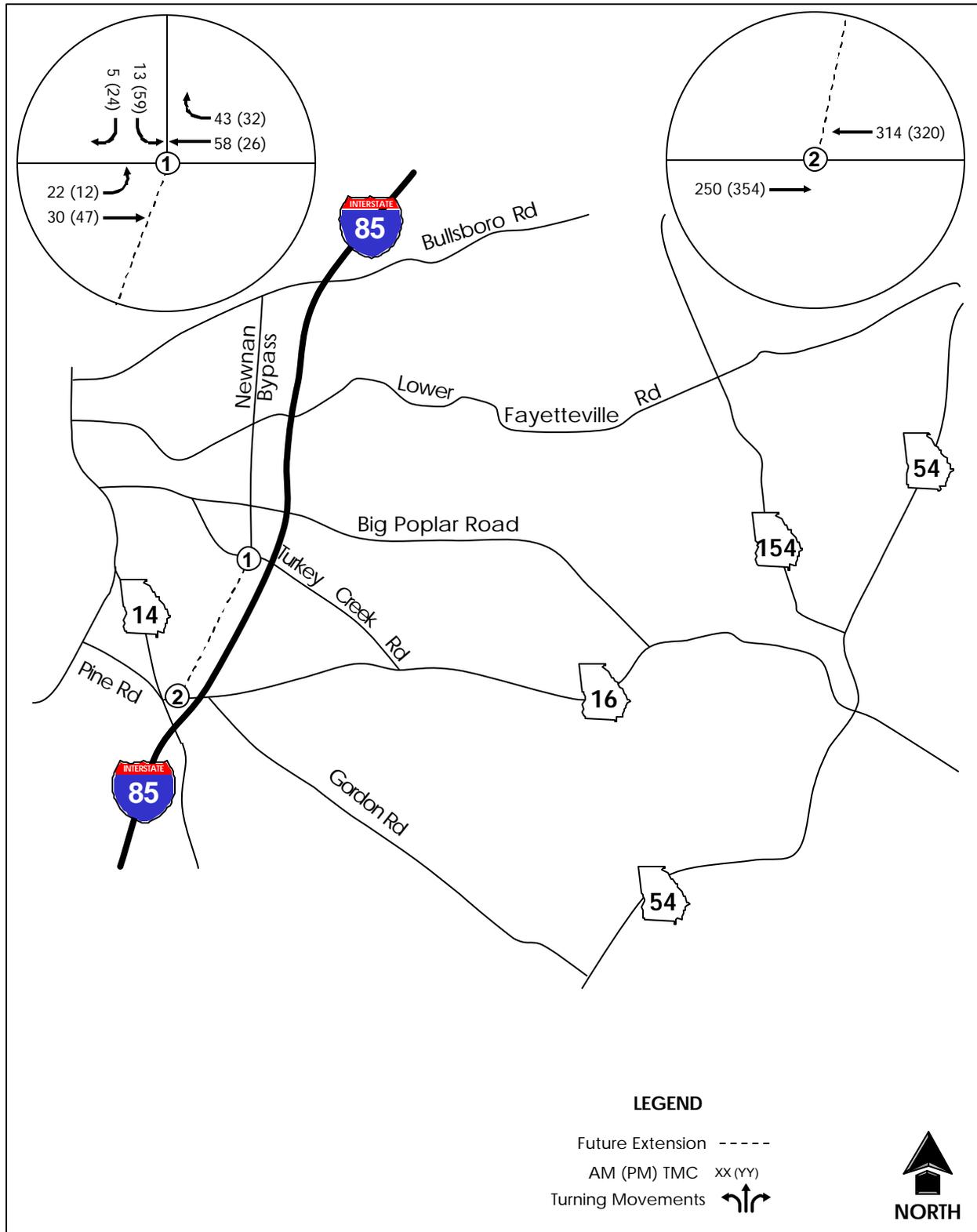
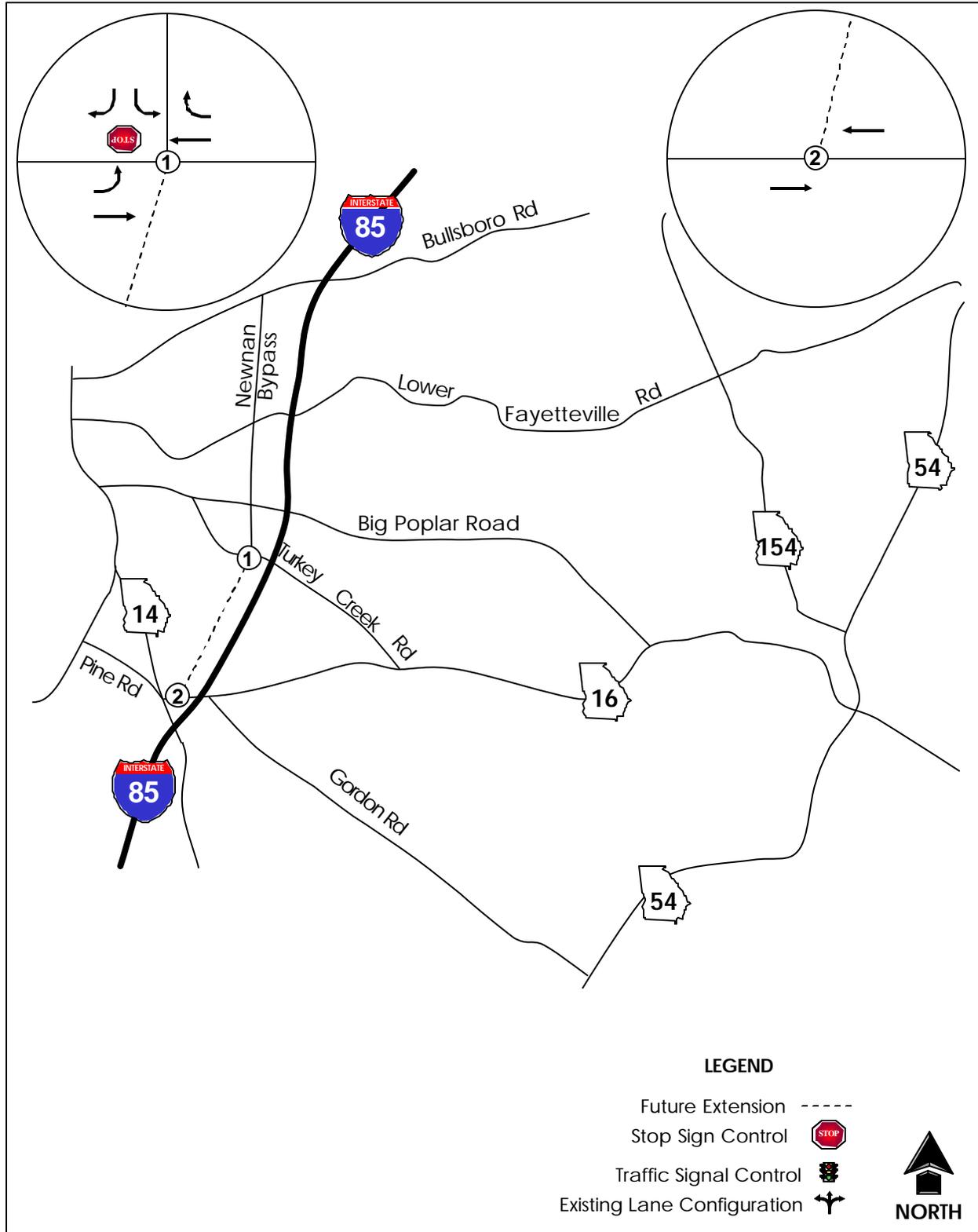


Figure 3. Existing Lane Configurations and Traffic Control



Analysis Methodology

Capacity analyses of the study intersections were completed using procedures in the *Highway Capacity Manual (HCM2000)*. This is the usual methodology for the analysis of traffic conditions. The software program *Synchro 6.0* (a standard, nationally recognized computer software package for analyzing capacities and Levels of Service) was used to perform the actual capacity analyses for the key intersections.

Operating conditions at intersections are evaluated in terms of Levels of Service (LOS). Levels of Service for signalized intersections are reported both for key intersection movements, and in composite fashion, i.e., one LOS for the entire intersection, and are presented in terms of average control delay. Individual turning movements at signalized intersections may experience poor Levels of Service, particularly where those volumes are relatively low, while the intersection as a whole has an acceptable Level of Service. This is because the major movements on the major roadway are given priority in assigning signal green time.

Traffic conditions at unsignalized intersections, with stop sign control on the minor street only, are evaluated for the minor street approach(es) and for the left turns from the major street. This is because the major street traffic is assumed to have no delay since there is no control (no stop sign). Poor Levels of Service for minor street approaches to unsignalized intersections are not uncommon, as the continuous flow traffic will always get the priority. The LOS criteria for signalized and unsignalized intersections are shown in Table 1.

For two-way stop controlled intersections, the HCM does not calculate a composite LOS for the entire intersection. For this reason the Intersection Capacity Utilization (ICU) method was used to show the intersection LOS. The ICU output is analogous to the intersection volume to capacity ratio. This is different from the methodology used for HCM LOS. The ICU LOS provides a valuable measure of the difference in LOS expected under different traffic volume and lane configuration scenarios for the "entire intersection" under un-signalized conditions.

The ICU LOS was reported as the overall intersection LOS for only two-way stop controlled intersections. The HCM LOS is reported for the individual movements for two-way stop controlled intersections. The ICU LOS criteria for the overall intersection for two-way stop controlled intersections are shown in Table 2. All other levels of service reported in this study are the HCM 2000 LOS.

Levels of Service "A" through "E" are generally considered to be acceptable peak hour operations. Level of Service "F" is generally considered an unacceptable peak hour condition.

Table 1. HCM Level of Service Delay Criteria

Level of Service	Control Delay (seconds per vehicle)	
	Signalized Intersection	Unsignalized Intersection
A	≤ 10	≤ 10
B	>10 and ≤20	>10 and ≤15
C	>20 and ≤35	>15 and ≤25
D	>35 and ≤55	>25 and ≤35
E	>55 and ≤80	>35 and ≤50
F	> 80	> 50

Source: Highway Capacity Manual, HCM2000.

Table 2. ICU Level of Service Delay Criteria

Level of Service	Intersection Capacity Utilization
A	0% to 60%
B	>60% to 70%
C	>70% to 80%
D	>80% to 90%
E	>90% to 100%
F	>100%

Source: Synchro 6.0.

Capacity Analyses - Existing

The results of the capacity analyses for existing traffic conditions are presented in Table 3. In addition to the levels of service, the approach delay is shown for all HCM levels of service. The intersection of Newnan Bypass at SR 16 does not exist at this time.

Table 3. Levels of Service - Existing

Intersection	Control	Approach	LOS			
			AM		PM	
			Approach	Overall	Approach	Overall
Newnan Bypass at Turkey Creek Road	Unsignalized	SB	A (9.3)	A*	A (9.2)	A*
		EB	A (7.5)		A (7.4)	
		WB	A (0.0)		A (0.0)	

*ICU Level of Service
(XX) = Delay in seconds

As seen in Table 3, the study intersection of Newnan Bypass at Turkey Creek Road is currently operating with acceptable levels of service.

Collision Analysis

A collision analysis was performed for the existing study intersection of Turkey Creek Road at Newnan Bypass. Crashes rates were developed using the following equation:

$$R = C \times 1,000,000 \div (T \times V \times 365)$$

Where C represents the number of collisions over a specific period of time; T represents the specific period of time in years; V represents the total average daily traffic volumes entering the intersection; and R represents the collision rate per million entering vehicles.

Collision records for the past two and a half years were provided by *Coweta County*. These records included pertinent information such as:

- Date, time, and location of the incident;
- Orientation of the collision; and
- Number of injuries, fatalities, if any.

Average daily traffic volumes were collected at each approach leg for the study intersection between 10 August and 11 August, 2004. The calculated collision rate can be seen in Table 4. The State average for a similar intersection is included for comparison purposes.

Table 4. Collision Rates

Intersection	C (# Crashes)	T (Years)	V (Total Entering ADT)	R (Rate)	2002 State Avg
Turkey Creek Road at Newnan Bypass	2	2.5	2,513	0.87	0.35

As can be seen in Table 4, the intersection of Turkey Creek Road at Newnan Bypass is above the state average. However, it should be noted that one of the collisions involved one vehicle hitting a deer.

3. FUTURE CONDITIONS

Planned Transportation Improvements

There are a few transportation improvements planned in the vicinity of the study intersections that will have an impact on intersection capacity and traffic operations. The following list of improvements was obtained from the Atlanta Regional Commission's (ARC) 2025 Regional Transportation Plan:

- Lower Fayetteville Road (CW-032) – Bridge upgrade from Grieson Trail to Fischer Road. Completion date is estimated as 2005; and
- Intersection Improvements at 12 locations (CW-033) – Intersections include locations along SR 14/US 29, SR 16, SR 154, SR 54, SR 70, Belt Road and Dixon Road. Completion date is estimated at 2010.

The Newnan Bypass is proposed to extend from Turkey Creek Road to SR 16 by 2008. Since the existing Newnan Bypass north of Turkey Creek Road has a four-lane cross-section with a median, it can be assumed that the same cross-section will be constructed for the extension.

There are a number of other transportation improvements planned in the vicinity of the study intersections apart of this project.

Coweta County plans to extend a short stub road from SR 14 to the proposed realignment of Pine Road in 2008. As a result of the realignment of Pine Road and its connection to the stub road in 2008, Pine Road will no longer have an intersection with SR 14. Additionally, the existing divided intersection of SR 16 at SR 14 will be consolidated into one intersection.

In 2011, the stub road will become the SW Newnan Bypass, extending to the west from the intersection of SR 14 at SR 16. SR 16 will be widened to four lanes with a median. The SW Newnan Bypass will be constructed by the Georgia Department of Transportation (GDOT). The widening of SR 16 and construction of the SW Newnan Bypass is scheduled to begin in 2011.

Traffic Projections - 2008

Between the time this study is performed and the horizon year 2008, the traffic volumes on the roadways are expected to increase due to other developments which will occur in the area. This growth is called background growth. The anticipated open-to-traffic year for the construction of the Newnan Bypass extension from Turkey Creek Road to SR 16 is 2008.

Historical counts near the vicinity of the study intersections were researched using Georgia Department of Transportation's (GDOT) website as the source. The annual average growth rate developed for the period between 2004 and 2008 was determined by using the *Excel Forecast Tool*. The following table displays the annual average traffic growth rates for the applicable roads.

Table 5. Annual Traffic Growth Rate - 2008

Roads	Growth Rate
Newnan Bypass, SR 16, Turkey Creek Rd	4.0%

The annual growth rate shown in Table 5 were applied to the existing peak hour turning movement volumes to develop preliminary 2008 horizon year volumes for the existing movements.

Newnan Bypass Extension

Peak hour and ADT traffic volumes were developed for the Newnan Bypass extension. To determine the 2008 horizon year volumes on the new segment of the Newnan Bypass, some traffic on SR 14 was assumed to divert to the Newnan Bypass, as well as a portion of projected trips from 23 other known developments in the area.

Approximately 25% of the existing traffic on SR 14 was assumed to divert to the extended Newnan Bypass. This was assumed because the Newnan Bypass will likely be used by traffic destined for other dense commercial/residential/industrial entities on the peripheral of downtown Newnan.

In addition, 23 future developments (retail, residential, and mixed-use) in the area were considered. The developments included were the following:

Residential

- Parkside Village;
- Fox Ridge;
- Olmsted;
- Village Walk;
- Southwind;
- Golden Gate;
- Lakeshore;
- Amesbury Park;
- The Preserve;
- Christians Corner;
- The Club;
- Villas;
- Brookhaven;
- Heritage;

- Madison Park at Newnan Lakes; and
- Stone Bridge.

Retail

- Forum;
- Stillwood Farm; and
- Newnan Mall.

Mixed-Use (Retail and Residential)

- Madison Park;
- Calmut;
- Summergrove; and
- Newnan East.

Daily trips for these developments were obtained from the *Stonebridge DRI* prepared by Street Smarts, September 2004. Development sizes and occupancy for these developments were estimated for 2008. Retail and residential trip distributions from the *Villages of Newnan Crossing Traffic Impact Study*, July 2003, and *Avery Park DRI*, December 2003 (both prepared by Street Smarts) were obtained to determine what percentage of trips was assigned for SR 14 and south. The percentages obtained from these reports were the following:

- Retail - 3.0% south on SR 14/US 29; and
- Residential - 3.1% south on SR 14/US 29.

Based on these percentages assigned to SR 14, a portion the daily trips calculated for the 23 developments that were destined to use SR 14 to go south were reassigned to the Newnan Bypass. The following table shows the daily trips projected for these developments, and their corresponding daily traffic assigned to SR 14.

Table 6. 23 Background Developments

Type	Development	Daily Volume	Assigned to SR 14
Residential	Parkside Village	1,602	50
	Fox Ridge	1,417	44
	Olmsted	1,040	32
	Village Walk	1182	37
	Southwind	669	21
	Golden Gate	1,088	34
	Lakeshore	2,273	70
	Amesbury Park	542	17
	The Preserve	642	20
	Christians Corner	19	1
	The Club	1,184	37
	Villas	2,290	71
	Brookhaven	1,399	43
	Heritage	1,370	42
	Madison Park at Newnan Lakes	2,022	63
	Stone Bridge	5,002	155
Retail	Forum	27,676	830
	Stillwood Farm	16,789	504
	Newnan Mall	30,334	910
Mixed -Use	Madison Park	5,154	155
	Calmut	7,050	212
	Summergrove	3,790	114
	Newnan East	10,414	312
Total Daily Volume projected for 2008		135,672	4,105

Based on these developments and their corresponding type, it was found that approximately 26% are residential, and 74% are retail orientated. These daily trips from the background developments assigned to SR 14 were summed with 25% of the projected 2008 SR 14 daily volumes in order to estimate daily volumes for the Newnan Bypass extension from Turkey Creek Road to SR 16. In 2008, approximately 6,658 daily trips are expected to be traveling on Newnan Bypass, between Turkey Creek Road and SR 16.

In order to convert these daily traffic volumes into peak hour volumes for intersection capacity analysis, existing average daily traffic volumes (ADT's) and peak hour turning movement volumes at the intersection of SR 14 at SR16 were investigated. It was discovered that approximately 7% of the daily volumes were equivalent to the quantity

of traffic recorded during both AM and PM peak hours. Therefore, 7% of the 2008 daily volume projected for Newnan Bypass was taken to generate AM and PM peak hour volumes.

In combination with the entering/exiting percentages for retail and residential developments during the AM and PM peak hours as documented in ITE's *Trip Generation*, 7th Edition, a traffic distribution analysis was done for the area of the Newnan Bypass extension to determine the turning movement percentages for the new approach legs at the study intersections. Population census data within a five-mile radius of the Newnan Bypass extension was analyzed to determine the spatial distribution of the retail portion of the new DRI traffic. Employment census data within a twenty-mile radius was analyzed to determine the spatial distribution of the residential portion of DRI traffic. Existing counts were used to determine the distribution of the diverted existing traffic from SR 14/US 29. Figure 4 shows the results of the traffic distribution analysis.

These distribution percentages were applied to the peak hour quantity of traffic forecast to travel on the Newnan Bypass extension. Figure 5 shows the forecast 2008 volumes for the study intersections. It should be noted that the trips diverted from SR 14 were grown over four years according to the annual growth rate shown in Table 5. Annual growth rates were not applied to the trips from the 23 developments since most of them will not be established until 2008 (plus or minus a few years).

Figure 6 shows the assumed lane configurations for the study intersections.

Figure 4. Traffic Distribution

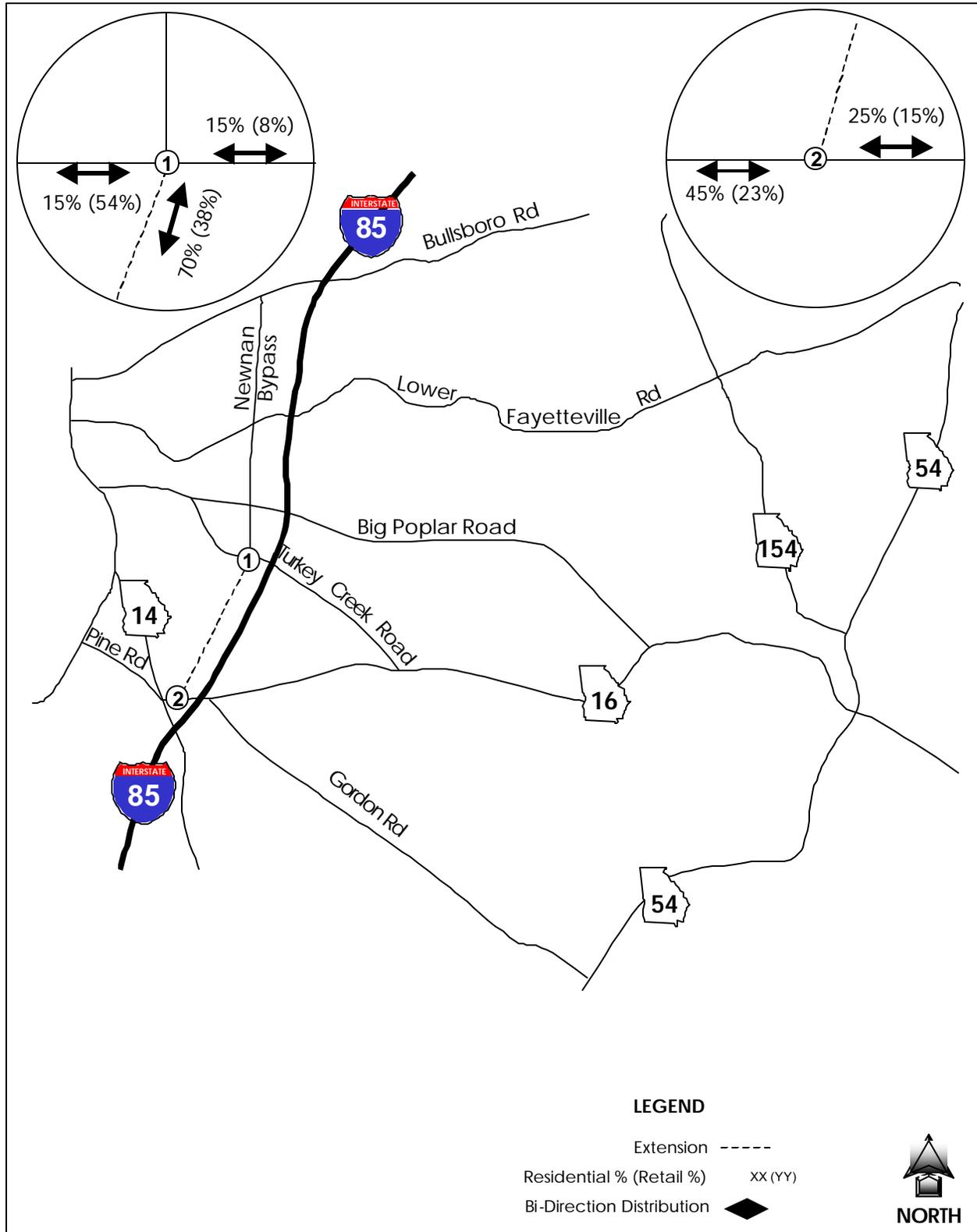


Figure 5. Traffic Volumes - 2008

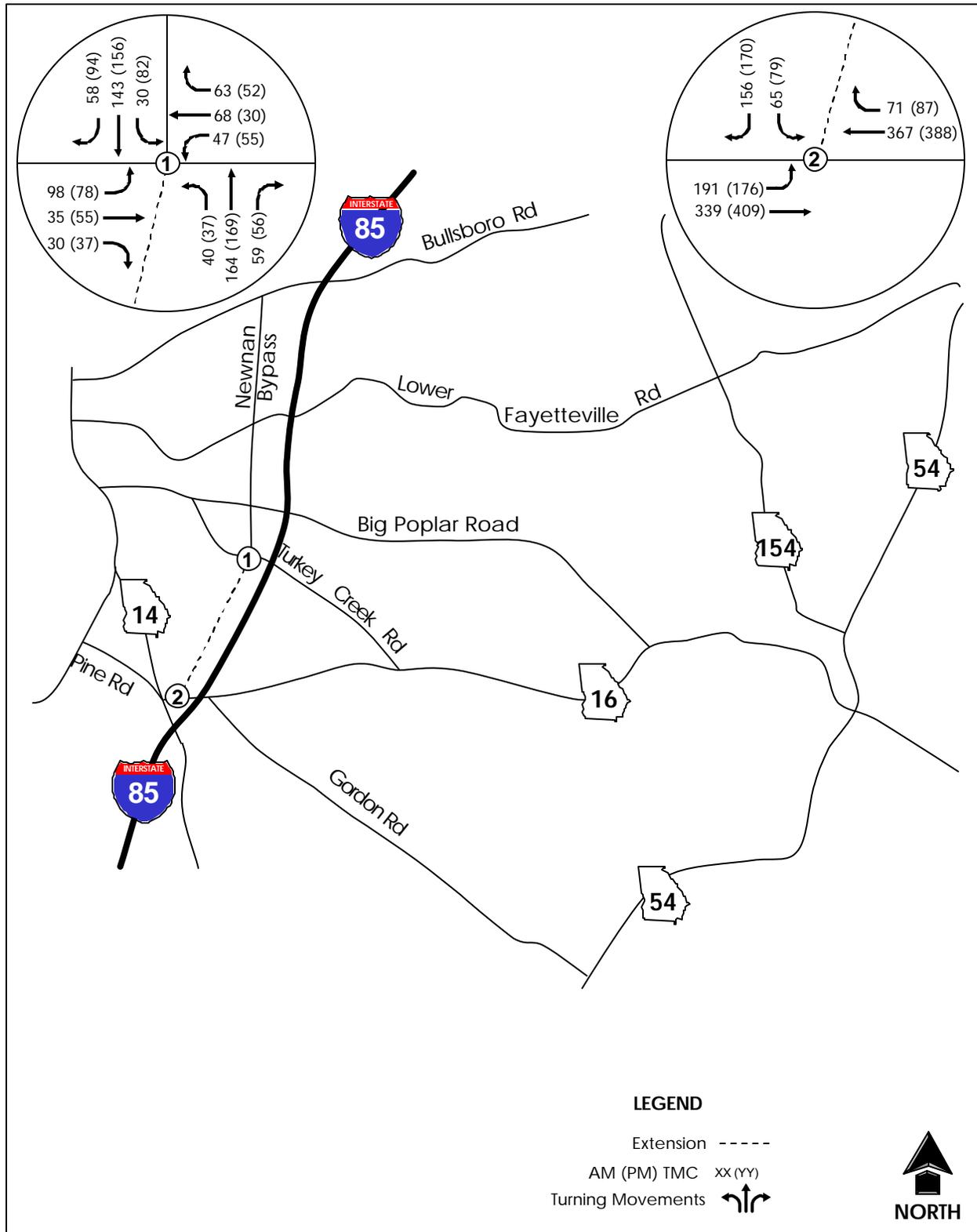
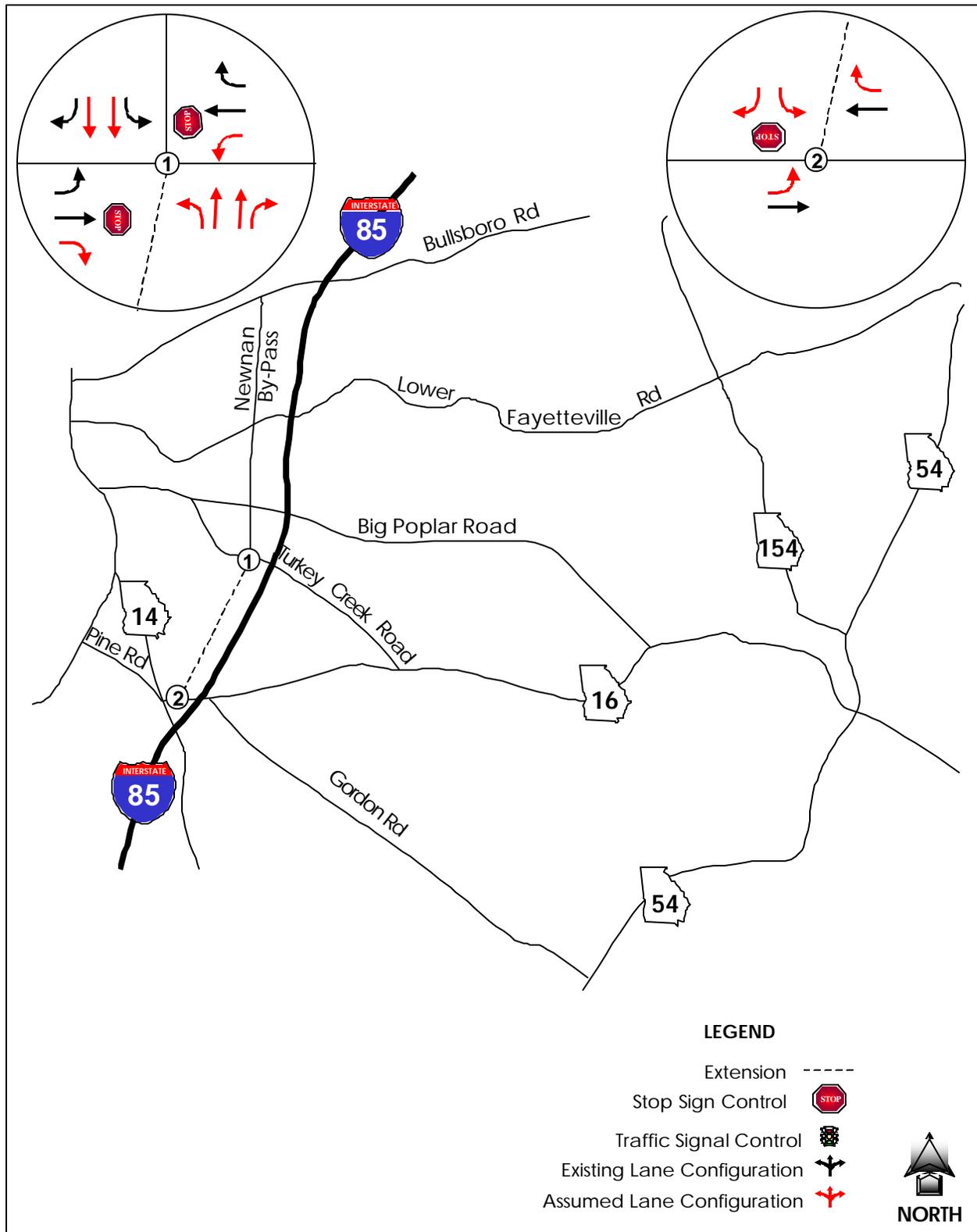


Figure 6. Assumed Lane Configurations and Traffic Control - 2008



Capacity Analyses - 2008

The results of the capacity analyses for 2008 traffic conditions are presented in Table 7. In addition to the levels of service, the approach delay is shown for all HCM levels of service.

Table 7. Levels of Service - 2008

Intersection	Control	Approach	LOS			
			AM		PM	
			Approach	Overall	Approach	Overall
Turkey Creek Road at Newnan Bypass	Unsignalized	NB	A (1.2)	A*	A (1.1)	A*
		SB	A (1.0)		A (2.0)	
		EB	C (15.9)		B (14.7)	
		WB	B (12.7)		B (13.4)	
Newnan Bypass at SR 16	Unsignalized	SB	C (21.4)	C*	D (34.9)	C*
		EB	A (4.6)		A (4.7)	
		WB	A (0.0)		B (14.1)	

*ICU Level of Service
(XX) = Delay in seconds

As seen in Table 7, both study intersections will operate acceptably under 2008 conditions.

Recommended Turn Lane Lengths - 2008

Turn lane lengths for the assumed right-turn and left-turn lanes from the 2008 capacity analyses were developed using the *GDOT Regulations for Driveway and Encroachment Control* standards.

Three guidelines for determining the turn lane taper and full width storage lengths were identified in the GDOT standards. They included the following:

Guideline A

Table 8. Minimum Right-Turn Lane Lengths

Speed (mph)	Taper (ft)	Full Width Storage (ft)
25	50	-
30	50	75
35	50	100
40	50	150
45	100	175
50	100	225
55	100	250
60	100	300
65	100	350

Guideline B

Table 9. Minimum Left-Turn Lane Lengths

Speed (mph)	Taper (ft)	Full Width Storage (ft)
30	50	135
35	50	160
40	50	210
45	100	235
50	100	260
55	100	310
60	100	360
65	100	410

Guideline C

“At signalized intersections, the amount of **storage** for right and left-turn lanes can be based on the number of vehicles arriving during 1.5 cycles.”

To determine the right-turn and left-turn lane lengths, the guideline that provided the most conservative lane length during the critical peak hour was used. An average vehicle length of 25 feet was used in the analysis.

Based on GDOT guidelines, the following turn lane lengths shown in Table 10 were developed.

Table 10. Turn Lane Lengths - 2008

Intersection	Speed (mph)	Lane	App. Taper (ft)	Bay Taper (ft)	Full Width Length (ft)
Newnan Bypass at Turkey Creek Road	45	NB LT Lane	270	100	235
	45	NB RT Lane	--	100	175
	45	SB LT Lane	270	100	235
	45	SB RT Lane	--	100	175
	45	EB LT Lane	270	100	235
	45	EB RT Lane	--	100	250
	45	WB LT Lane	270	100	235
	45	WB RT Lane	--	100	175
Newnan Bypass at SR 16	45	EB LT Lane	270	100	235
	45	WB RT Lane	--	100	175

Traffic Projections - 2028

In the period between 2008 and 2028, traffic on the roadways is expected to experience further increase because of general development and growth. Therefore, as in the 2008 analysis, historical counts near the vicinity of the study intersections were researched using Georgia Department of Transportation’s (GDOT) website as the source. The annual average growth rate developed for the period between 2008 and 2028 was determined by averaging the growth rates calculated for each year. The following table displays the annual average traffic growth rates for the applicable roads.

Table 11. Annual Traffic Growth Rate - 2028

Roads	Growth Rate
Newnan Bypass, SR 16, Turkey Creek Rd	2.9%

The annual growth rate shown in Table 12 were applied to the 2008 peak hour turning movement volumes (shown in Figure 5) over a 20-year period to develop preliminary 2028 peak hour turning movement volumes.

Additional Traffic - 2028

Since the period between 2008 and 2028 is extensive, the land surrounding the Newnan Bypass extension is expected to be developed. The future land use map from the *Coweta County Comprehensive Land Use Plan - 1995 to 2015*, was used to identify the zoning for the area surrounding the Newnan Bypass extension.

In accounting for land that cannot be developed due to probable road right-of-way and interstate right-of-way buffers, approximately 352 acres of land zoned as low density residential was identified in the vicinity of the Newnan Bypass extension. This area extends approximately 75% of the length of the Newnan Bypass extension. With a rate of one unit per acre, as stated in the future land use map, 352 single-family unit homes were assumed to be built-out by 2028.

The remaining portion of the land that will likely be developed is zoned commercial. This land is close to SR 16 and Gordon Road. Minus the land that cannot be developed due to anticipated road right-of-way and interstate right-of-way buffers, approximately 87 acres of commercial area was identified. Using a commercial floor area rate of 8,000 square feet per acre (which was the average rate from other commercial entities in the area), roughly 700,000 square feet of commercial space was calculated, and assumed built-out by 2028.

Trip Generation

The typical procedure for determining the traffic generated by new developments is to apply the rates or equations developed by the Institute of Transportation Engineers (ITE) as published in *Trip Generation, 7th Edition*. The rates and equations in this informational report are calculated from nationally collected data. For the 352 single-family unit homes, ITE Code 210 (single family detached homes) was used. For the 700,000 square foot retail development, ITE Code 820 (Shopping Center) was used.

Not all of the trips to a commercial development are new trips on the road network. Some of the trips are made by vehicles already traveling on the road, regardless of whether the development is established or not. These trips are called pass-by trips. The percentage of pass-by trips to a commercial use depends on the type and size of the commercial entity. The pass-by rates used were based on information in ITE's *Trip Generation Handbook*. Based on the type and size of commercial use, the PM peak hour pass-by rate was determined to be 22%. Therefore, a 22% reduction in commercial trips was taken for the PM peak hour. There is no pass-by rate for the AM peak hour since most retail does not open until after the AM peak hour and the trips are typically employees and deliveries which are all assumed to be new trips. Table 12 shows the trip generation results.

Table 12. Trip Generation

Land Use	Intensity	A.M. Peak Hour		P.M. Peak Hour	
		Entering	Exiting	Entering	Exiting
Single Family Homes	352 Units	64	192	210	123
Shopping Center	700,000 sq. ft.	278	177	983	1,065
Pass By Trips	22% PM Peak	-	-	-216	-234
Total Net Trips		342	369	977	954

Source: ITE Trip Generation, 7th Edition, 2003

The turning movement distributions at the study intersections were developed according to the distributions shown in Figure 7.

It should be noted that since a portion of the commercial area will likely have frontage on SR 16, it was assumed that a portion of the site access driveways to the future development would be located on SR 16. Based on that premise, 50% of the new commercial trips coming from the south were assumed to have no activity on the Newnan Bypass extension.

These traffic volumes from the anticipated developments along the Newnan Bypass extension were added to the preliminary 2028 traffic volumes for additional precision and accuracy. These final volumes are shown in Figure 8.

Figure 7. Traffic Distribution for Newnan Bypass Development

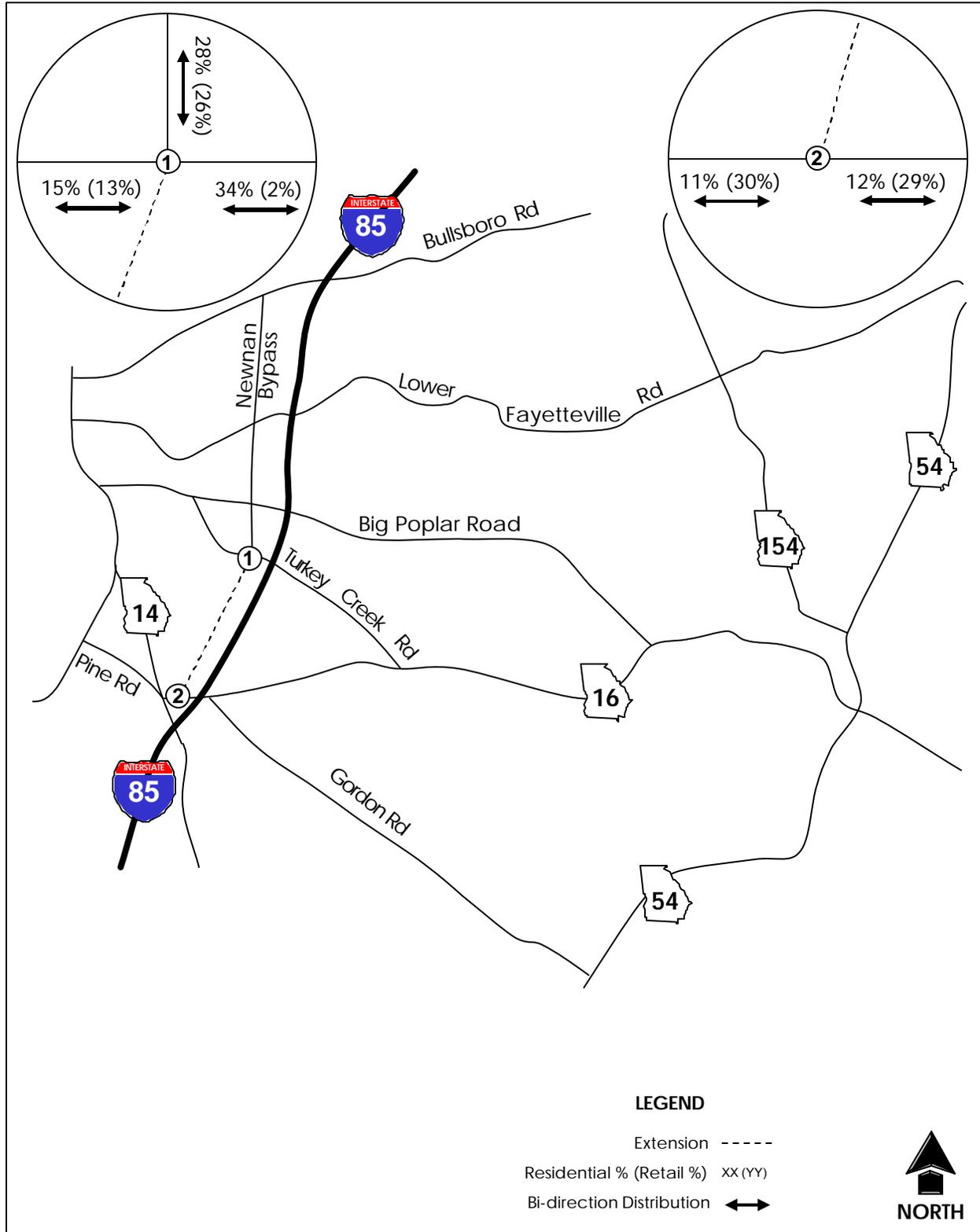
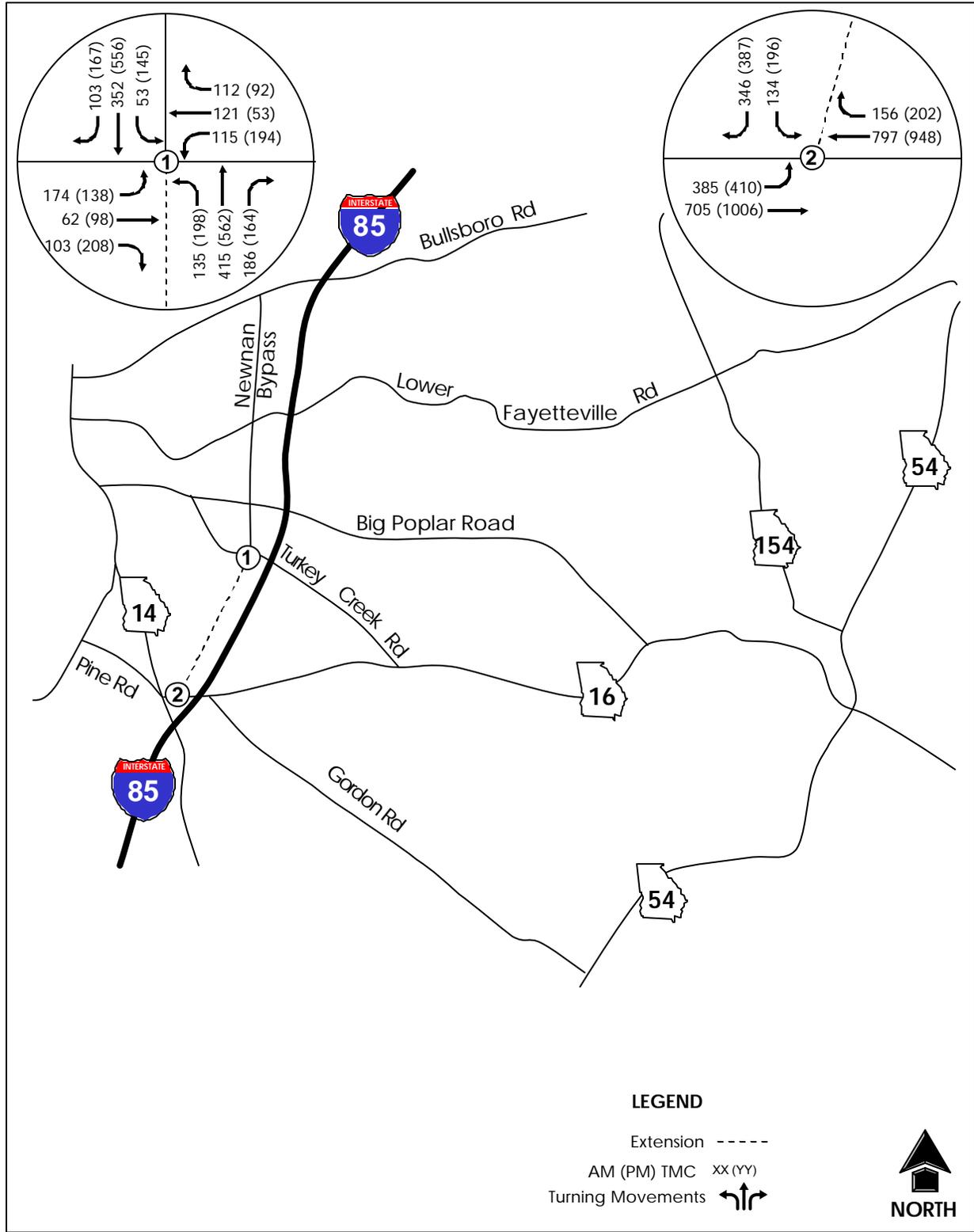


Figure 8. 2028 Traffic Volumes



Capacity Analyses - 2028

The results of the capacity analyses for 2028 traffic conditions are presented in Table 13. The lane configurations for 2008 (shown in Figure 6) are still valid for this analysis with the exception of the number of through lanes on SR 16. In this analysis, the widening of SR 16 from two-lanes to four-lanes with a median was assumed since it is scheduled to begin construction in 2011. If operations were found to be below acceptable levels, an improvement analysis was conducted to bring intersection levels of service to satisfactory levels.

Table 13. Levels of Service - 2028

Intersection	Control	Approach	LOS			
			AM		PM	
			Approach	Overall	Approach	Overall
Turkey Creek Road at Newnan Bypass	Unsignalized	NB	A (1.7)	A*	B (2.4)	A*
		SB	A (1.0)		B (1.7)	
		EB	F (5142.7)		F (Error)	
		WB	F (119.6)		F (Error)	
Newnan Bypass at SR 16	Unsignalized	SB	F (94.8)	B*	F (3390.4)	C*
		EB	B (3.8)		B (3.5)	
		WB	A (0.0)		A (0.0)	

*ICU Level of Service
(XX) = Delay in seconds

As seen in Table 13, the study intersections require improvements in order to support forecast 2028 traffic conditions. Traffic signals would mitigate the unacceptable traffic operations at both intersections. Table 14 shows the results of the improvements analysis.

Table 14. Improved Levels of Service - 2028

Intersection	Control	Approach	LOS			
			AM		PM	
			Approach	Overall	Approach	Overall
Turkey Creek Road at Newnan Bypass	Signalized	NB	A (5.9)	A	A (5.7)	A
		SB	A (5.8)		A (5.5)	
		EB	B (11.5)		B (13.5)	
		WB	B (10.8)		B (15.5)	
Newnan Bypass at SR 16	Signalized	SB	D (38.0)	B	F (134.1)	D
		EB	B (16.3)		E (55.5)	
		WB	A (3.9)		A (4.2)	

(XX) = Delay in seconds

The following lane configurations and traffic control is required to support 2028 traffic conditions.

Turkey Creek Road at Newnan Bypass

- A left-turn lane, two (2) through lanes, and a right-turn lane for the northbound and southbound approaches;
- A left-turn lane, a through lane, and a right-turn lane for the eastbound and westbound approaches; and
- A traffic signal (required improvement).

SR 16 at Newnan Bypass

- A left-turn lane and two (2) through lanes on eastbound SR 16;
- A right-turn lane and two (2) through lanes on westbound SR 16;
- A left-turn lane and a right-turn lane on Newnan Bypass; and
- A traffic signal (required improvement).

Recommended Turn Lane Lengths - 2028

Based on the methodologies previously discussed, and the 2028 peak hour capacity analyses, the following turn lane lengths shown in Table 15 were developed.

Table 15. Turn Lane Lengths - 2028

Intersection	Speed (mph)	Lane	App. Taper (ft)	Bay Taper (ft)	Full Width Length (ft)
Newnan Bypass at SR 16	45	EB LT Lane	270	100	600
	45	WB RT Lane	--	100	300

4. SIGNAL WARRANT ANALYSES

The traffic signal warrant analysis methodology as set forth in the *Manual on Uniform Traffic Control Devices, 2003 Edition (MUTCD)*, published by the Federal Highway Administration, was used. This is the usual methodology for traffic signal warrant studies.

Warrant 1 - Eight-Hour Vehicular Volume

Warrant 1, Eight-Hour Vehicular Volume, has three (3) Conditions. The Conditions are based on the combined volume of both main street approaches and the side street approach with the higher volume. Condition A, Minimum Vehicular Volume, “is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal.” Condition B, Interruption of Continuous Traffic, “is intended for application where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.” If neither Condition A nor B is met, then Warrant 1 will be considered met when 80% of both Conditions A and B are met, each for at least eight (8) hours. An additional 30% reduction in the required volumes based on a posted or measured 85th percentile speed over 40 mph is also applied. One of the two Conditions, or 80% of both Conditions, must be met for eight (8) hours to meet the warrant.

For Condition A, the main street must have a combined minimum volume of 350 vehicles and the side street with the higher volume must have a minimum volume of at least 105 vehicles.

For Condition B, the main street must have a combined minimum volume of 525 vehicles and the side street with the higher volume must have a minimum volume of at least 53 vehicles.

Warrant 2 - Four-Hour Vehicular Volume

Warrant 2, Four-Hour Vehicular Volume, is “intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal.” Warrant 2 is based on the combined volume of both main street approaches and the side street approach with the higher volume. The volumes are compared to a curve based on the number of lanes on the approaches. Warrant 2 must be met for four (4) hours to meet the warrant.

Warrant 3 - Peak Hour

Warrant 3, Peak Hour, is “intended for use at a location where traffic conditions are such that for a minimum of one hour of an average weekday, the minor street traffic suffers undue delay when entering or crossing the major street. This signal warrant shall be applied only in unusual cases. Such cases include, but are not limited to, office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.” Warrant 3 has two Conditions, at least one of which must be met to meet the Warrant.

Condition A is satisfied when the following three conditions exist for the same four consecutive 15-minute periods of an average weekday:

- The total stopped time delay experienced by traffic on the minor street approach (one direction only) controlled by a stop sign equals or exceeds four vehicle-hours for a one-lane approach or five vehicle-hours for a two lane approach;
- The volume on the same minor street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes; and
- The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.

Condition B is based on the combined volume of both main street approaches and the side street approach with the higher volume. The volumes are compared to a curve based on the number of lanes on the approaches.

Warrants 4, 5, 6, 7, and 8

Warrants 4 (Pedestrian Volume), 5 (School Crossing), 6 (Coordinated Signal System), 7 (Crash Experience), and 8 (Roadway Network) were assumed not applicable for the study intersections; and therefore were not evaluated.

Newnan Bypass at Turkey Creek Road

A signal warrant analysis was conducted for the intersection of Newnan Bypass at Turkey Creek Road for the year 2008. A breakpoint analysis indicated that a traffic signal will be needed in 2016.

Twenty-four hour volumes were developed for each approach at the intersection for 2008. Since Newnan Bypass doesn't currently exist on the south side of the intersection and the 24-hour volumes north of Turkey Creek will probably not be indicative of hourly distributions for 2008, the hourly traffic distributions on SR 14 were used. These traffic distributions on SR 14 were applied to the ADT projected for the Newnan Bypass. Table 16 shows the volumes used for the analyses.

Table 16. Hourly Volumes for Newnan Bypass at Turkey Creek Road - 2008

Time of Day	Newnan Bypass		Turkey Creek Road	
	NB	SB	EB	WB
12:00 AM	33	41	0	0
1:00 AM	0	41	0	0
2:00 AM	0	0	0	0
3:00 AM	0	0	0	0
4:00 AM	33	41	0	19
5:00 AM	67	124	46	38
6:00 AM	133	206	68	76
7:00 AM	200	289	159	171
8:00 AM	233	248	159	133
9:00 AM	166	206	91	114
10:00 AM	133	206	114	95
11:00 AM	200	206	159	114
12:00 PM	166	248	137	133
1:00 PM	200	248	114	114
2:00 PM	200	248	205	114
3:00 PM	233	289	159	114
4:00 PM	266	289	159	114
5:00 PM	266	330	205	114
6:00 PM	233	248	137	133
7:00 PM	200	206	114	114
8:00 PM	166	165	114	95
9:00 PM	100	124	68	57
10:00 PM	67	83	46	19
11:00 PM	33	41	23	19
Total	3,328	4,127	2,277	1,900

Given these hourly volumes in conjunction with the signal warrant analysis criteria stated in the previous pages, the results of the analysis is presented in Table 17.

Table 17. Results of Warrant Evaluation for Newnan Bypass at Turkey Creek Road

Warrant Number	Title of Warrant	Warrant Met? (Hours)
1A	Eight-Hour Vehicular Volume–Intersecting Traffics	Yes (8)
1B	Eight-Hour Volume–Interruption of Continuous Traffic	No (0)
2	Four-Hour Vehicular Volume	No (1)
3A	Peak Hour-Delay (Volume requirement met)	Yes (3)
3B	Peak Hour–Volume	No (0)

As seen in Table 17, applicable warrants are met for the intersection.

Newnan Bypass at SR 16

A signal warrant analysis was conducted for the intersection of SR 16 at Newnan Bypass for the year 2008. A breakpoint analysis indicated that a traffic signal will be required in 2016.

Twenty-four hour volumes were developed for each approach at the intersection. Since Newnan Bypass doesn't currently exist in the vicinity of SR 16, hourly traffic distributions on SR 14 were used. These traffic distributions on SR 14 were applied to the ADT projected for the Newnan Bypass. Table 18 shows the volumes used for the analyses.

Table 18. Hourly Volumes for Newnan Bypass at SR 16 - 2008

Time of Day	Newnan Bypass	SR 16	
	SB	EB	WB
12:00 AM	33	74	62
1:00 AM	33	74	0
2:00 AM	0	74	62
3:00 AM	0	0	0
4:00 AM	33	74	62
5:00 AM	100	148	125
6:00 AM	166	222	312
7:00 AM	233	519	437
8:00 AM	200	445	437
9:00 AM	166	371	374
10:00 AM	166	297	312
11:00 AM	166	297	312
12:00 PM	200	371	374
1:00 PM	200	445	374
2:00 PM	200	445	312
3:00 PM	233	519	312
4:00 PM	233	593	437
5:00 PM	266	667	437
6:00 PM	200	593	437
7:00 PM	166	371	374
8:00 PM	133	297	312
9:00 PM	100	222	187
10:00 PM	67	148	125
11:00 PM	33	148	62
Total	3,327	7,414	6,238

Given these hourly volumes in conjunction with the signal warrant analysis criteria stated in the previous pages, the results of the analyses is presented in Table 19.

Table 19. Results of Warrant Evaluation for Newnan Bypass at SR 16

Warrant Number	Title of Warrant	Warrant Met? (Hours)
1A	Eight-Hour Vehicular Volume-Intersecting Traffics	Yes (14)
1B	Eight-Hour Volume-Interruption of Continuous Traffic	Yes (15)
2	Four-Hour Vehicular Volume	Yes (10)
3A	Peak Hour-Delay (Volume requirement met)	Yes (14)
3B	Peak Hour-Volume	Yes (7)

As seen in Table 19, all applicable warrants are met for the intersection.

5. CONCLUSIONS

It is the intent of this report to identify the existing and future traffic operations for two intersections in Coweta County, and recommend improvements where necessary. These intersections are the following:

- Newnan Bypass at Turkey Creek Road; and
- Newnan Bypass at State Route 16 (SR 16).

The Newnan Bypass is proposed to extend from Turkey Creek Road to SR 16 by 2008. Since the existing Newnan Bypass north of Turkey Creek Road has a four-lane cross-section with a median, it can be assumed that the same cross-section will be constructed for the extension.

There are a number of other transportation improvements planned in the vicinity of the study intersections apart of this project.

Coweta County plans to extend a short stub road from SR 14 to the proposed realignment of Pine Road in 2008. As a result of the realignment of Pine Road and its connection to the stub road in 2008, Pine Road will no longer have an intersection with SR 14. Additionally, the existing divided intersection of SR 16 at SR 14 will be consolidated into one intersection.

In 2011, the stub road will become the SW Newnan Bypass, extending to the west from the intersection of SR 14 at SR 16. SR 16 will be widened to four lanes with a median. The SW Newnan Bypass will be constructed by the Georgia Department of Transportation (GDOT). The widening of SR 16 and construction of the SW Newnan Bypass is scheduled to begin in 2011.

The existing conditions, opening year traffic conditions (2008), and design year traffic conditions (2028) were evaluated for these intersections.

Currently, Newnan Bypass terminates at Turkey Creek Road; therefore the intersection of Newnan Bypass at Turkey Creek Road was the only intersection studied under existing traffic conditions. The results of the analyses indicated that the intersection is operating with acceptable levels of service.

By 2008, the extension of the Newnan Bypass from Turkey Creek Road to SR 16 is anticipated to be complete and open-to-traffic. The assumed cross-section of the extended Newnan Bypass was assumed to match the existing Newnan Bypass cross-section. Lane configurations assumed for the intersections were the following:

Newnan Bypass at Turkey Creek Road

- The approaches on Newnan Bypass were assumed to have a left-turn lane, two thru lanes, and a right-turn lane; and

- The approaches on Turkey Creek Road were assumed to have a left-turn lane, a thru lane, and a right-turn lane, with stop control.

Newnan Bypass at SR 16

- The southbound Newnan Bypass was assumed to have a right-turn lane and a left-turn lane, with stop control;
- The eastbound approach on SR 16 was assumed to have a left-turn lane and one thru lane; and
- The westbound approach on SR 16 was assumed to have a right-turn lane and one thru lane.

From the 2008 capacity analyses, it was determined that both intersections will likely operate with satisfactory levels of service.

The following table shows the turn lane length requirements based on GDOT standards. The approach taper for the two-lane roadways assumed symmetrical widening (6' shift).

Intersection	Speed (mph)	Lane	App. Taper (ft)	Bay Taper (ft)	Full Width Length (ft)
Newnan Bypass at Turkey Creek Road	45	NB LT Lane	--	100	235
	45	NB RT Lane	--	100	175
	45	SB LT Lane	--	100	235
	45	SB RT Lane	--	100	175
	45	EB LT Lane	270	100	235
	45	EB RT Lane	--	100	250
	45	WB LT Lane	270	100	235
	45	WB RT Lane	--	100	175
Newnan Bypass at SR 16	45	EB LT Lane	270	100	235
	45	WB RT Lane	--	100	175

Assuming the same lane configurations and traffic control for Newnan Bypass at Turkey Creek Road and SR 16 (with exception to the anticipated widening of SR 16 to four lanes with a median in 2011), the intersection is forecast to operate with unacceptable levels of service in 2028. A traffic signal at both intersections would raise traffic operations to acceptable levels of service.

A breakpoint analysis was done to determine when the intersections would require a traffic signal. It was found that by 2016, both intersections will need a traffic signal. A signal warrant analysis was conducted for both intersections using 2008 volumes. Applicable warrants for both intersections were satisfied.

The following table shows the turn lane lengths required in order to support 2028 traffic conditions at the study intersections, based on GDOT standards and the

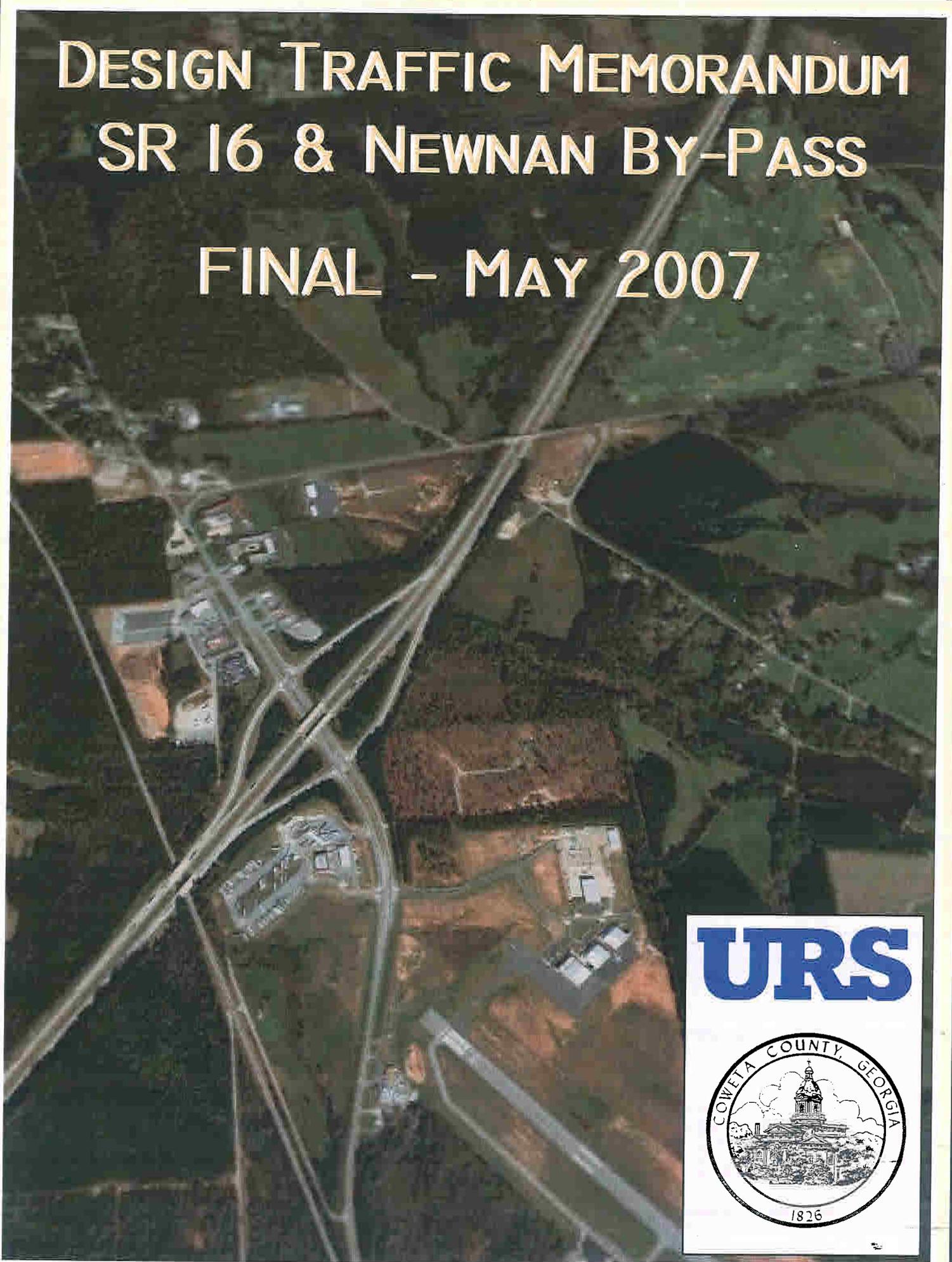
capacity analyses (with the required traffic signals). The approach taper for the two-lane roadways assumed symmetrical widening (6' shift).

Intersection	Speed (mph)	Lane	Bay Taper (ft)	Full Width Length (ft)
Newnan Bypass at SR 16	45	EB LT Lane	100	600
	45	WB RT Lane	100	300

APPENDIX

DESIGN TRAFFIC MEMORANDUM SR 16 & NEWNAN BY-PASS

FINAL - MAY 2007



URS

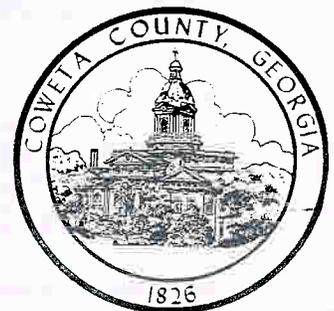


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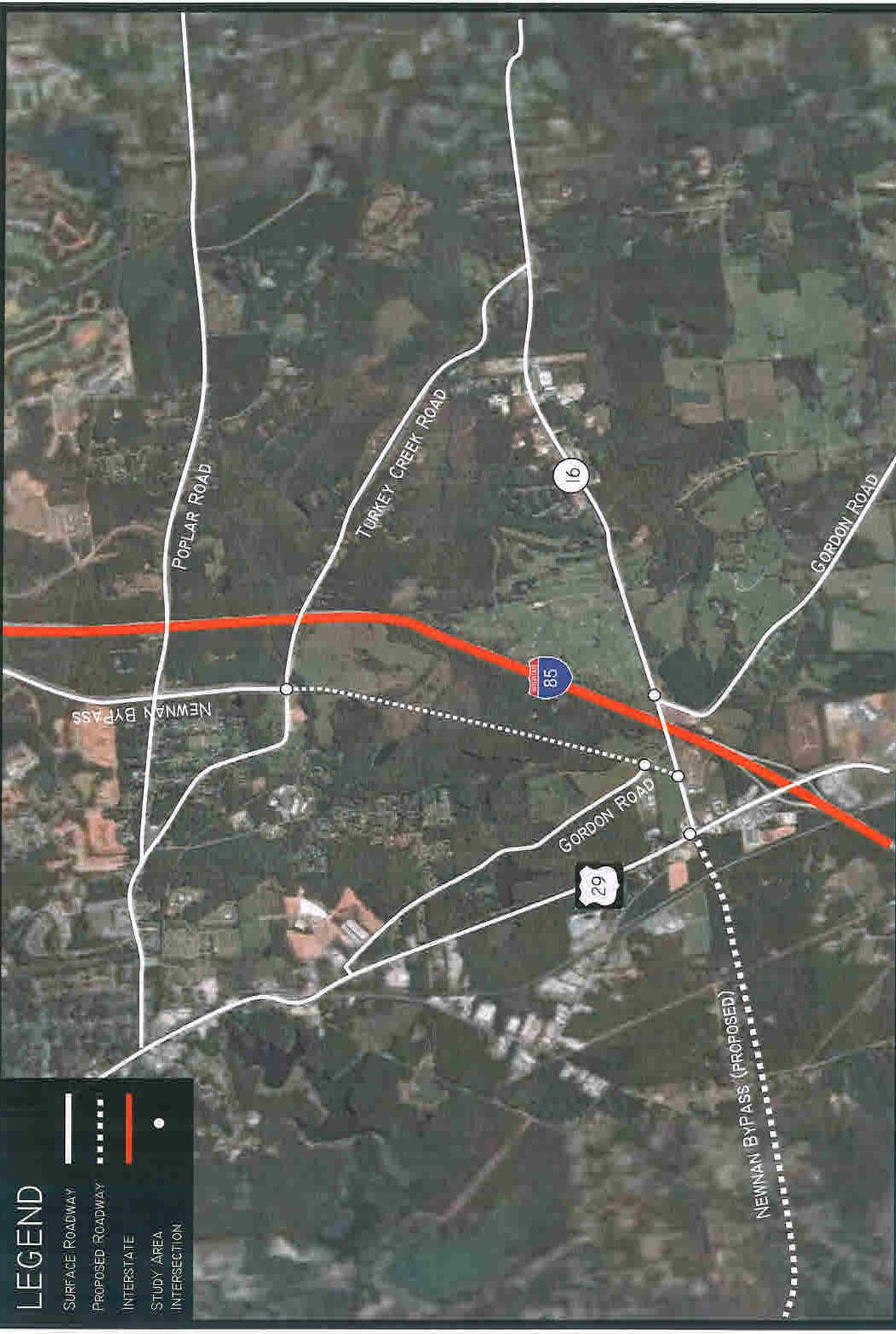
Section 1 - Introduction

URS was requested by Coweta County to assist in determining which approach of the SR 16 and Newnan ByPass intersection should conceptually be considered the 'major leg'. Due to the significant potential for growth along a future Newnan ByPass corridor (as evidenced by the growth currently occurring along the Newnan ByPass near SR 34), previous assumptions that SR 16 would be the major leg are now being reconsidered. However, forecast methodologies for new facilities are dependent on the use of travel demand models. Previous travel demand modeling forecasts for the eastern component of the Newnan ByPass, from its existing terminus at Turkey Creek Road south through SR 16, have indicated minimal traffic on the facility. The identified reasons for these minimal projections are (1) the planned facilities' proximity to I-85 which the model identifies as a more attractive parallel route for through trips and (2) a lack of local trips on the ByPass in the model due to minimal loading points from Traffic Analysis Zones (TAZ) onto the ByPass. In order to provide a more realistic traffic forecast of the intersection, URS has investigated the factors which may affect potential traffic on the Newnan ByPass.

This summary report documents the process of forecasting design traffic, otherwise known as Directional Design Hour Volumes (DDHV) for the planned Newnan ByPass from Turkey Creek Road to SR 16 and for the planned SR 16 widening from I-85 to US 29 in Coweta County, Georgia.

In part, this effort builds upon capacity adding improvements identified in the Coweta County Joint Comprehensive Transportation Plan (CTP) and Implementation Program, documented in the final report dated May 2006. As such, the forecasted traffic for this effort is based primarily on the transportation demand models used for the Coweta County Joint Comprehensive Transportation Plan (CTP).

The study area is depicted in **Figure 1**.



LEGEND

- SURFACE ROADWAY
- - - PROPOSED ROADWAY
- INTERSTATE
- STUDY AREA INTERSECTION

**FIGURE I
STUDY AREA**

Section 2 - Data Collection

Data collection for this effort not only included typical traffic data but also a review of current development and roadway projects in the vicinity of the study area in order to determine assumptions regarding future conditions.

2.1 Existing Traffic Data

Existing traffic counts were compiled from two sources: (1) Georgia Department of Transportation (GDOT) Average Daily Traffic (ADT) counts and (2) selected intersection existing peak hour turning movement count volumes.

The current GDOT traffic volumes are from the year 2005. These were also supplemented by year 2005 travel demand model volumes at locations where GDOT ADT counts were not available. In addition to the year 2005 counts, an analysis of 2003, 2004, and 2005 historical counts was conducted to determine the most appropriate representation of existing ADT conditions. For SR 16 and Gordon Road locations, the 2005 ADT indicated reasonable growth from 2003 and 2004 and was therefore used. However, on US 29 the 2005 ADT indicated a decrease in traffic from 2003 and 2004 to 2005 that cannot be explained by any new competing facilities. As a result, 2004 ADT was used as a proxy for 2005 ADT at this location.

Existing peak hour turning movement counts were conducted at the following intersections on March 22, 2007 in order to appropriately determine existing traffic volumes and distributions.

1. US 29 and SR 16
2. SR 16 and Gordon Road (north approach)
3. SR 16 and Gordon Road (south approach)
4. Newnan ByPass and Turkey Creek Road

The raw turning movement traffic data is provided in **Appendix A**.

The traffic volumes at all four intersections were tabulated to determine a study area wide AM and PM peak hour. For the AM, the hour from 7:15 to 8:15 had the highest volume of traffic, while in the PM, the hour from 5:00 to 6:00 experienced the highest volume of traffic. A traffic summary of turning movements was prepared focusing on these two peak hours. Additionally, the turning distributions observed in the AM and PM peak hours were applied to Georgia Department of Transportation Average Daily Traffic (ADT) count volumes for the year 2005 to estimate existing ADT turning movements. ADT turning movements are estimated mainly as input into the traffic forecasting process, as described in detail in this documentation under the 2010 and 2030 Average Daily Traffic Volume' section. The estimated ADT is depicted in **Figure 2** while the 2007 AM and PM peak hour count volumes are depicted in **Figure 3**.

LEGEND

-  SURFACE ROADWAY
-  INTERSTATE
-  ADT: VOLUME

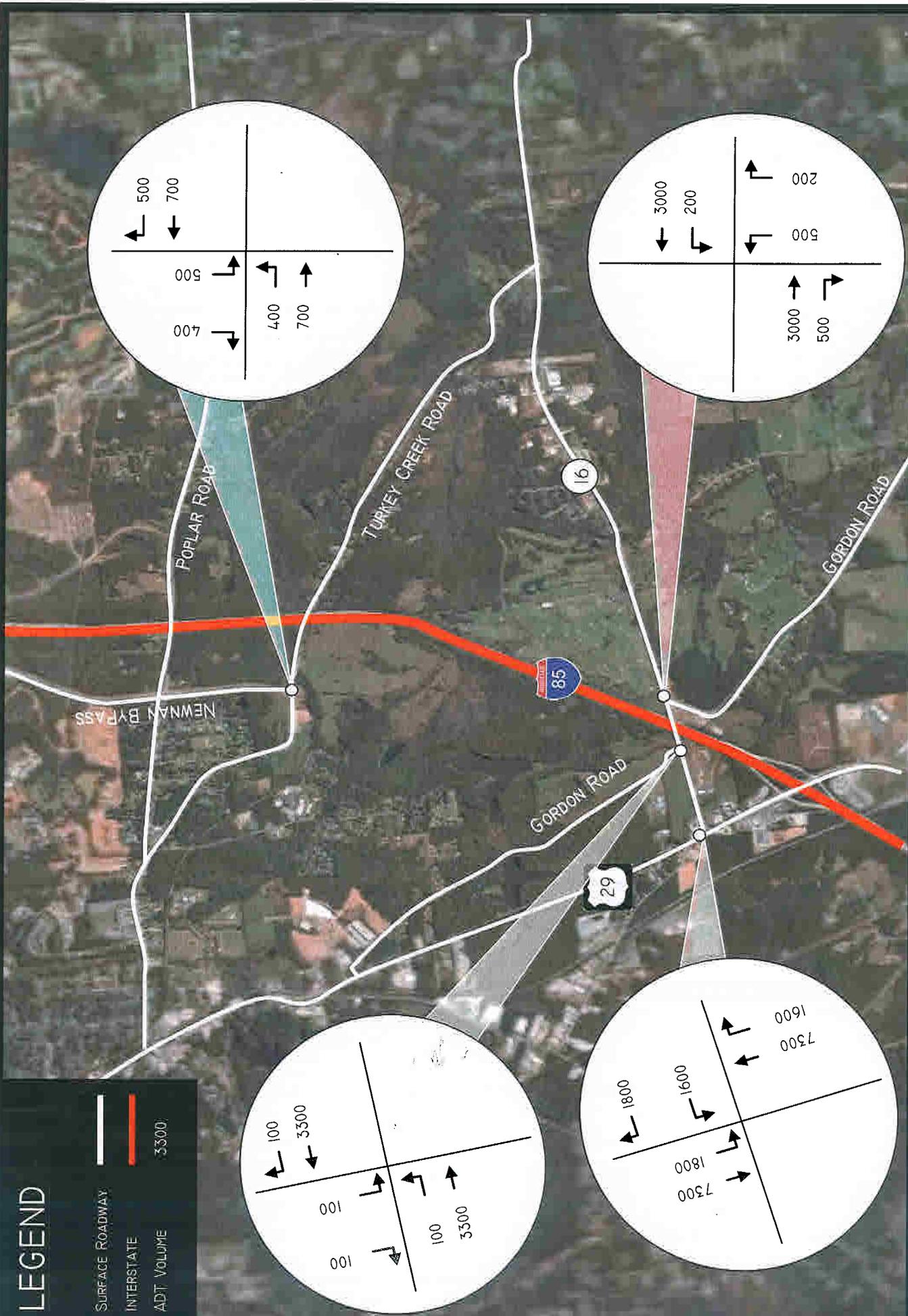


FIGURE 2
2007 AVERAGE DAILY TRAFFIC VOLUMES (ESTIMATED)

LEGEND

-  SURFACE ROADWAY
-  INTERSTATE
- AM (PM) VOLUME 428 (468)

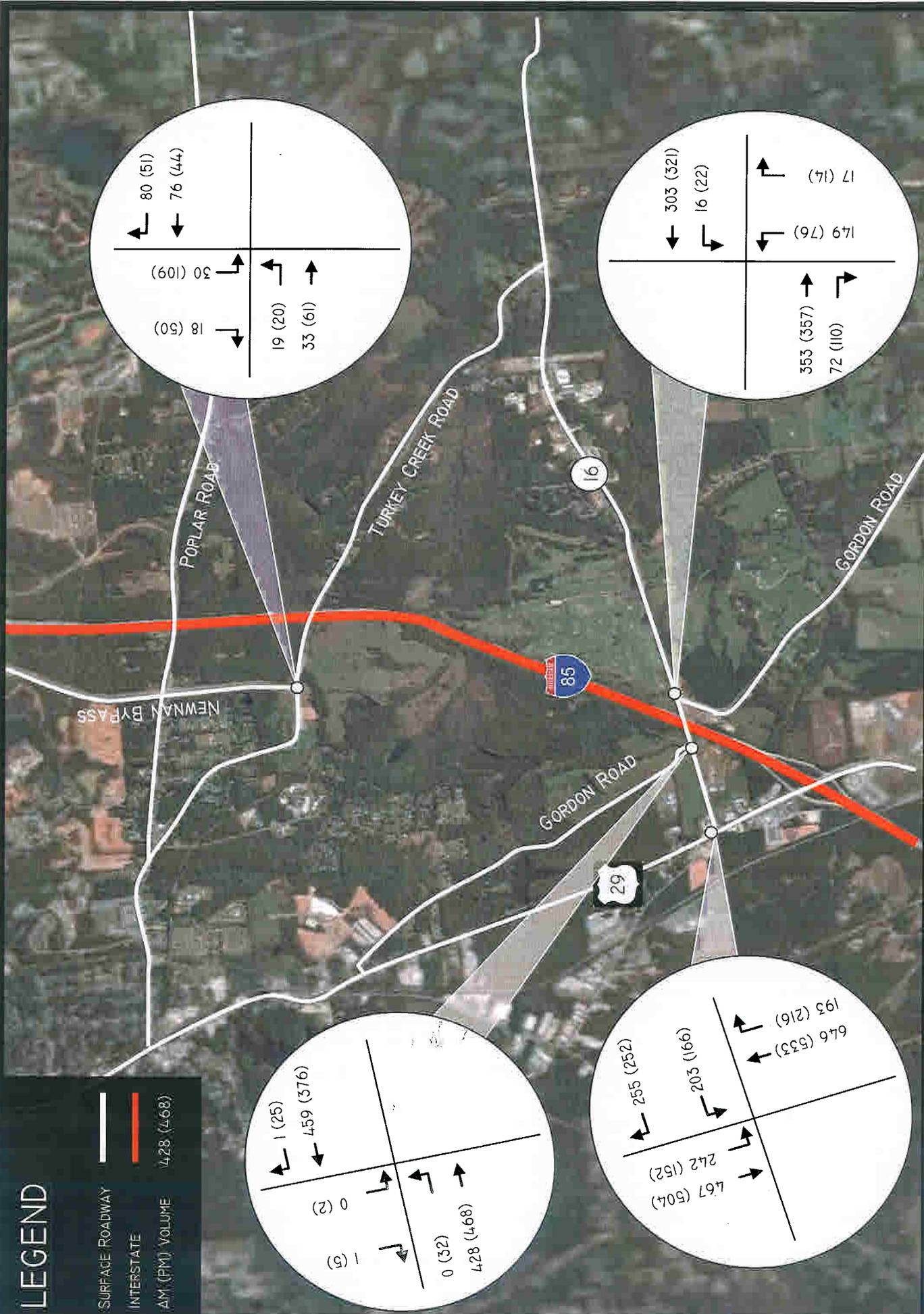


FIGURE 3
2007 AM AND PM PEAK HOUR VOLUMES

To determine the future year DDHV, it was also necessary to compile design traffic factors in the study area. These traffic factors (K and D) were collected from Georgia Department of Transportation (GDOT) data. The K₃₀ factor is an estimate of the proportion of the AADT that occurs during the 30th highest hour of the year, otherwise known as the design hour. The D₃₀ factor is an estimated proportion of traffic that is traveling in the peak direction during that same peak hour. The only location in or near the study area with a GDOT referenced K factor is on US 29, south of SR 16. To determine the appropriate D factor, Chapter 13 of the *GDOT Design Manual* was consulted. The recommended design traffic factors are provided in **Table 1**.

Table 1 – Design Traffic Factors

Facility	Location	K ₃₀ factor	D ₃₀ factor
<i>Actual Factors</i> ⁽¹⁾			
US 29	South of SR 16	9.62%	n/a
<i>Recommended Factors</i>			
SR 16, US 29, Newnan ByPass, and Gordon Road		9.62%	60.00% ⁽²⁾

(1) Source: GDOT Traffic Counts

(2) DOT Design Manual recommends using a D factor of 60% when design hour data is not available.

2.2 Poplar Road IJR

The Poplar Road Interchange Justification Report (IJR) documents traffic analysis and environmental screening for a proposed interchange at I-85 and Poplar Road, in the area immediately north of the study area. Although the IJR process is not formally completed, there is initial strong preference from the Federal Highway Administration (FHWA) for Alternative 5 in the study. This alternative includes a diamond interchange at I-85 and Poplar Road with a collector-distributor (C-D) roadway system connecting the interchange with the interchange to the south at US 29 and the interchange to the north at SR 34. This alternative was also used as an assumption for the Coweta County Joint Comprehensive Transportation Plan (CTP).

2.3 Poplar Road

Discussions have also been raised about converting Poplar Road to the SR 16 designation when and if the interchange with I-85 is constructed. In such a circumstance, the suggestion is that the current SR 16 would be turned over to local maintenance and could potentially lose some of its attractiveness as a throughway.

2.4 Coweta County Joint Comprehensive Transportation Plan (CTP)

The 2006 Coweta County Joint Comprehensive Transportation Plan (CTP) includes several capacity adding projects for the County, such as a SR 16 widening. The CTP also includes the aforementioned Alternative 5 from the Poplar Road IJR. For consistency purposes, the Atlanta Regional Commission (ARC) travel demand models that were modified for the purposes of the CTP were used as the basis of the traffic forecasting process for this project. Additionally, it should be noted that the CTP effort incorporated the Coweta County Comprehensive Plan, revised by JJG in 2006.

2.5 Southern Regional Accessibility Study

The Southern Regional Accessibility Study (SRAS) is an ongoing study being conducted by the ARC that includes goals for the improvement of the transportation system's performance and safety as well as the implementation of a series of interconnected North-South and East-West travel corridors for the south-southwest Metro Atlanta counties. Of particular importance to this effort is one of the scenarios being tested for that project that seeks to make SR 16 a major east-west travel corridor, including its implementation as a possible limited-access toll facility. Although the SRAS project team has indicated that further analysis does not indicate feasibility of such an improvement, the continued importance of SR 16 as a major East-West travel corridor was noted for the purposes of this effort.

2.6 Changes in Land Use and New Development

Analysis was conducted to determine what changes to expectations in land development had occurred since the completion of the Coweta County Comprehensive Plan. This effort involved coordination with the Coweta County Planning Department. The overall determination of this analysis was that new development is occurring consistent with the Comprehensive Plan. However, particular notice was made that the adopted Future Development Map identifies the land use surrounding the Newnan ByPass as 'Interstate Gateway'.

Section 3 - Determination of Future Conditions

To differentiate this analysis from previous forecasts for the SR 16 and Newnan ByPass intersection, it was necessary to define what assumptions would be appropriate to modify. This analysis conducted of the potential traffic volumes assumes the following:

- By 2030, an interchange at I-85 and Poplar Road will be constructed and will also include a C-D roadway system providing direct connections to SR 34 and US 29.
- Poplar Road will not be provided with the SR 16 designation. With the SRAS suggesting the continued regional importance of SR 16 and its future tie in with a

southern extension of the Newnan ByPass, even with a change in designation, a decreasing importance for the current SR 16 seems unlikely.

- As mentioned previously, the projects recommended in the Coweta County CTP were included in the analysis.
- The SRAS suggests increasing importance for SR 16 as a major east-west travel corridor.
- Discussions with the Coweta County Planning Department indicated that no significant changes in land use or development proposal have occurred that would affect the assumptions built into the Coweta County Comprehensive Plan. As the CTP incorporated changes in future population and employment expectations from the Coweta County Comprehensive Plan, and the modeling for this project is based on the CTP, no changes were made to add or re-distribute socioeconomic growth into the model for this effort. However, to better replicate how development will likely occur on a future Newnan ByPass, between SR 16 and Turkey Creek Road, all future socioeconomic growth in the travel demand model was modified. Traffic Analysis Zone (TAZ) 1585 was split into a new TAZ (TAZ 1144) with direct loading onto the Newnan ByPass. By incorporating this modification into the model, the analysis was able to incorporate the likelihood that future growth consistent with the 'Interstate Gateway' concept in the Coweta County Comprehensive Plan, would occur directly along the Newnan ByPass. The overall population and employment modifications are depicted in **Table 2**.

Table 2 – Model Socioeconomic Data Modifications

	Year 2005	Year 2010	Year 2030
<i>TAZ 1585</i>			
Population	2,025	2,025	2,025
Employment	520	520	520
Households	728	728	728
<i>TAZ 1144</i>			
Population	0	153	408
Employment	0	140	1,224
Households	0	61	249

Section 4 - Model Validation

The Atlanta Regional Commission (ARC) is responsible for maintaining an updated travel demand computer model for the Atlanta region. This model is used throughout the region for transportation planning purposes and includes socioeconomic characteristics, population projections, employment activities, and existing roadway and traffic variables.

For the Coweta County Joint CTP effort, travel demand modeling files for the years 2005, 2010, and 2030 were obtained from the ARC staff. The 2005 model was used as the base year for evaluating model performance and determining appropriate modeling modifications. All changes and modifications to the base model were incorporated into

the other future year models for consistency and comparative purposes. Additionally, as mentioned previously, a new future land use plan for Coweta County was adopted by the Board of County Commissioners in January 2006. This plan adoption occurred concurrently with the Joint CTP process and is represented in the CTP travel demand models.

As stated previously, these CTP travel demand models were the basis for the traffic forecasting on the Newnan ByPass and SR 16 widening projects. Therefore, the majority of the validation efforts are documented as part of the CTP process. This validation effort included adjustments to socioeconomic data, centroid loadings, and highway network attributes to better reflect actual and overall conditions in Coweta County. The immediate study area (concentrating roughly around the SR 16 and US 29 intersection) was checked to determine if further validation would be necessary. In this process, it was determined that model volumes on SR 16 in the immediate vicinity of the study area were low. To generate higher volumes, a new centroid connection point was added onto SR 16 from TAZ 1581 (located between Turin and Senoia) to facilitate higher volumes on the SR 16 corridor. This approach was further justified by a review of aerial photographs of the area which show direct connections to SR 16 in the area represented by TAZ 1581. Additionally, this method allowed SR 16 to be validated without making massive changes to the Coweta County CTP model networks that could negatively affect overall traffic volumes and distributions. Unfortunately, efforts to generate a stronger validation on SR 16 would have required a major shifting of TAZ locations (few TAZs load onto SR 16 directly) to the detriment to the overall model performance. However, validation methodologies assume that the ability of a model to replicate actual conditions decreases with decreases in traffic volumes. On SR 16 where daily traffic volumes are under 7,000 vehicles, the volume to count ratio and root mean square error (RMSE) are within the FHWA tolerance guidelines documented in the *Model Validation and Reasonableness Checking Manual*, dated February 1997. Additionally, the aforementioned splitting of TAZ 1585, so that all future growth would occur in TAZ 1144 with direct access to the Newnan ByPass, was incorporated into the validation analysis. The validation effort is summarized in **Table 3**.

Table 3 - Model Validation Efforts

Facility	Location	2003 ADT	2004 ADT	2005 ADT	Recommended Existing ADT	Base Model		Validated Model	
						Model Volumes	RMSE	Model Volumes	RMSE
US 29	South of SR 16	16,480	16,780	14,630	16,780	16,560	1.31	16,850	0.42
SR 16	East of I-85	6,540	6,660	6,730	6,730	4,110	38.93	4,760	29.27
Gordon Road	South of SR 16	1,450	1,480	1,510	1,510	1,080	28.48	1,200	20.53
Total					25,020	21,750	13.07	22,810	8.83

Note: For the US 29 location south of SR 16, the model was validated to the 2004 ADT due mainly to the anomaly of a lower count volume on US 29 in 2005 than 2003 or 2004.

Section 5 – Traffic Forecasting

5.1 2010 and 2030 Average Daily Traffic

Average Daily Traffic (ADT) was prepared for the years 2010 and 2030 by applying changes in model output to the existing estimated ADT. To forecast 2010 and 2030 ADT on existing facilities, actual model growth from the 2005 to 2010 models and the 2010 to 2030 models were used and added to the previous forecast year. This methodology is recommended in the *GDOT Design Manual* and is more appropriate than using raw model output as future AADT because it removes any errors present on existing facilities in the year 2005 model. As Coweta County is a fast growing area, this approach was compared to ensure that all locations were growing above an annual 1 percent growth rate. Where decreases in model volumes could not be justified or explained due to diversions to new or widened facilities, the volume was reset to assume a 1 percent annual growth rate from the previous forecast year. 2010 and 2030 ADT for future facilities and those locations without 2005 counts (i.e. Newnan ByPass, Turkey Creek Road, etc.) were extracted directly from the model output. The ADT forecasting process is depicted in **Table 4**.

Additionally, future ADT turning movements were estimated by applying the base ADT projections shown in **Table 4** to turning distributions that were determined by analyzing the existing ADT turning distributions and applying changes in distributions observed in the different analysis years of the travel demand model. The resulting corresponding turning movement volumes (i.e. an eastbound left coupled with a southbound right) were added together to determine a two-way ADT for all intersection turns. Additionally, due to the redundancy of some movements in the model and a limited amount of centroid connections, some turn distributions produced low volumes. This was corrected by rebalancing a minimal amount of trips to such movements for reasonability purposes. As a result, the final ADT turning movement volumes may not match the approach ADTs exactly, but by using the National Cooperative Highway Research Program (NCHRP) 255 balancing process, deviations were limited to 10 percent. To facilitate the design traffic process, the final ADT turning movement volumes were assumed to be half of the two-way turning ADT volumes. The entire process is documented in **Appendix B**. The 2010 and 2030 ADT turn volumes are presented in **Figures 2 and 3**.

Table 4 - ADT Forecasting Process

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Facility	Location	2003 ADT	2004 ADT	2005 ADT	Estimated or Counted ADT	2005 Model	Current ADT	2010 Model	Model Growth 2005-2010	1% Annual Growth (2005-2010)	Final 2010 ADT	2030 Model	Model Growth 2010-2030	1% Annual Growth (2010-2030)	Final 2030 ADT
		Source: GDOT			D, E, or from turns analysis	Source: ARC Model	F or G	Source: ARC Model	I-G	H @ 1% per year	H+J, I, or K	Source: ARC Model	L-I	L @ 1% per year	L+M, or O
US 29	South of SR 16	16,480	16,780	14,630	16,780	16,850	16,780	17,010	160	17,620	16,940	21,900	4,890	20,330	21,830
US 29	North of SR 16					19,060	19,050	17,330	-1,720	20,000	17,330	20,750	3,420	20,800	20,750
SR 16	East of I-85	6,540	6,660	6,730	6,730	4,760	6,730	5,270	510	7,070	7,070	15,920	10,650	8,480	17,720
Newnan ByPass	Northeast of SR 16 & US 29					n/a	n/a	2,340	n/a	n/a	2,340	8,790	6,450	2,810	8,790
Newnan ByPass	West of US 29					n/a	n/a	n/a	n/a	n/a	n/a	8,130	n/a	n/a	8,130
Newnan ByPass	South of Turkey Creek Road					n/a	n/a	960	n/a	n/a	960	620	-340	1,150	1,150
Newnan ByPass	North of Turkey Creek Road					210	2,020	990	780	2,120	2,800	490	-500	3,360	3,360
Turkey Creek Road	West of Newnan ByPass					2,150	2,150	2,640	490	2,260	2,640	2,190	-450	3,170	2,190
Turkey Creek Road	East of Newnan ByPass					2,340	2,340	2,690	350	2,460	2,690	2,060	-630	3,230	2,060
Gordon Road	South of SR 16	1,450	1,480	1,510	1,510	1,200	1,510	1,090	-110	1,590	1,590	1,550	460	1,910	2,050

Note: For the US 29 count location south of SR 16, the 2004 ADT was used due to the anomaly of a decreased 2005 count

15940

Decrease in ADT, justified due to competition with the widened of I-85 and continued construction of Newnan ByPass. Model indicates increases in volume on US 29 south of study area before interchange with I-85 and Newnan ByPass

1270

No discernable justification for minor decrease in AADT or less than 1 percent growth. Forecast assumes 1% annual growth rate.

1680

Decrease in ADT, justified due to competition with the widened Poplar Road.

Comparison of 2010 and 2030 volumes on Poplar Road show significant increases in ADT.

2020

No actual ADT count conducted, but analysis of peak hour turning movements indicates that this would be a reasonable daily volume.

5.2 2010 and 2030 Design Hour Volumes

Directional Design Hour Volumes (DHV) were calculated by applying the recommended K_{30} and D_{30} factors to the applicable 2010 and 2030 ADT turning movements. Peak hour direction was determined by analyzing the existing peak turning movement directions. At some locations, the same direction is peak in both AM and PM. In these instances, the higher peak hour volume of the two was assumed to be the peak direction. As with the ADT, reasonability modifications were necessary at some locations to ensure that future traffic volumes were higher and reasonable relative to existing traffic volumes. The DHV process and QA/QC process to ensure reasonable volumes are documented in **Appendix C**. The 2010 and 2030 DHV turning movement volumes are presented in **Figures 6 and 7**.

Section 6 - Conclusions

The revised traffic projections confirm the current assumptions that the SR 16 leg of the SR 16 and Newnan ByPass intersection should be the 'major leg' with the SR 16 approach from the east having an ADT of approximately 17,000 vehicles and the Newnan ByPass approach from the north having an ADT of approximately 9,000 vehicles.

This conclusion is mainly the function of the current expectations in future growth patterns. For example, future increases in SR 16 volumes will be the result of regional east-west movements and new development in the eastern parts of Coweta County stretching towards Sharpsburg, the McIntosh development area, and Peachtree City in Fayette County. In all likelihood, only a few development scenarios could contribute to a higher traffic volume on the Newnan ByPass approach than the SR 16 approach. Additionally, these scenarios would have to coordinate to some degree to create the conditions that would result in higher volumes on the Newnan ByPass leg:

1. A significant decrease from the expected population growth in the eastern portions of Coweta County
2. Increased expectations in population and/or employment growth in the 'Interstate Gateway' area surrounding the Newnan ByPass coupled with a significant change in population growth and density in the southern part of Coweta County in the areas currently identified as 'rural conservation'.
3. A specific regional destination (such as an enclosed shopping mall) locating on the Newnan ByPass in the immediate vicinity north of SR 16. Such a development would create a significant amount of additional traffic whose traffic distributions would be affected by access into the site.
4. The construction of a higher speed facility within the study area that would compete with SR 16 for regional east-west through trips.

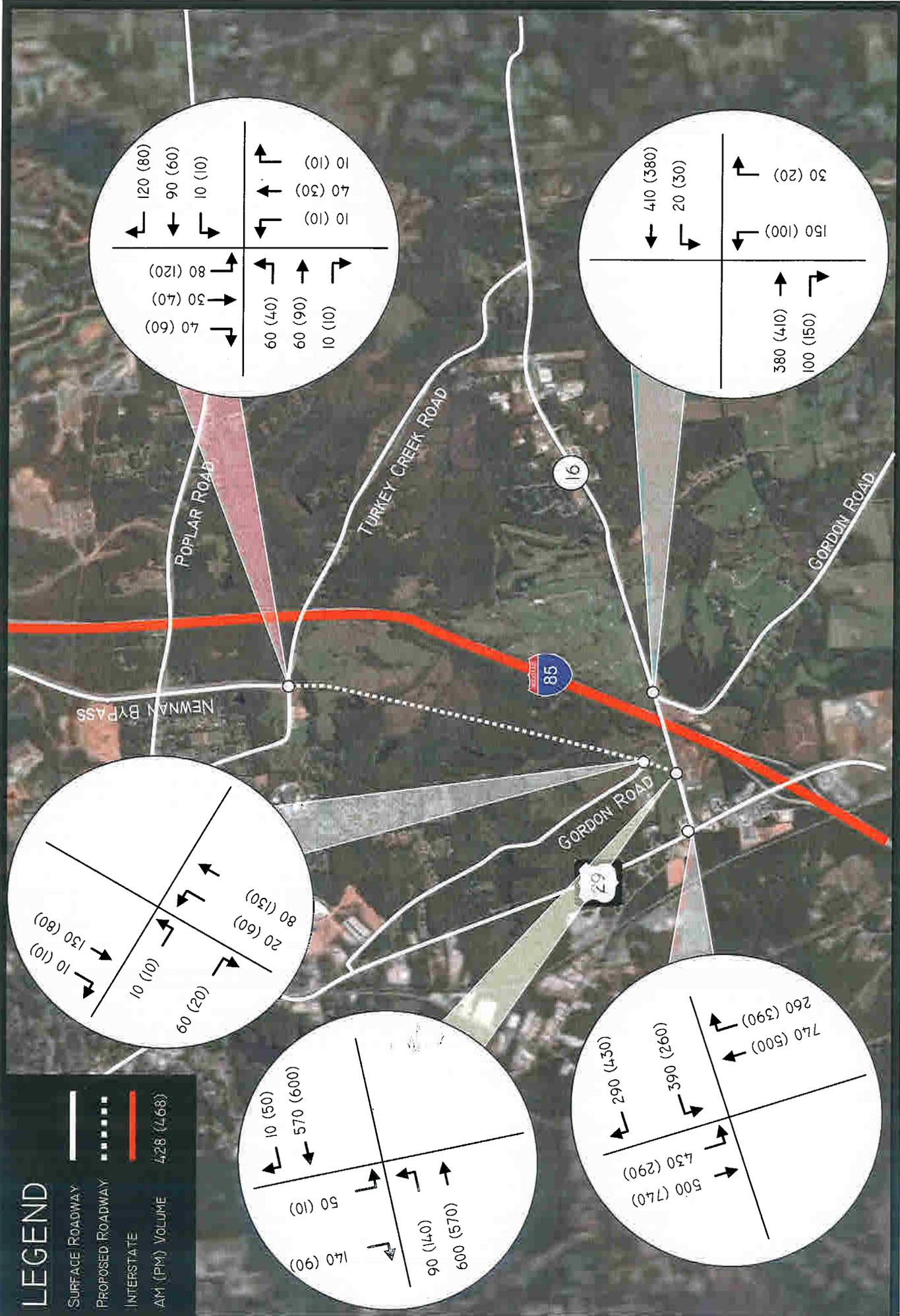


FIGURE 6
2010 DESIGN HOUR VOLUMES

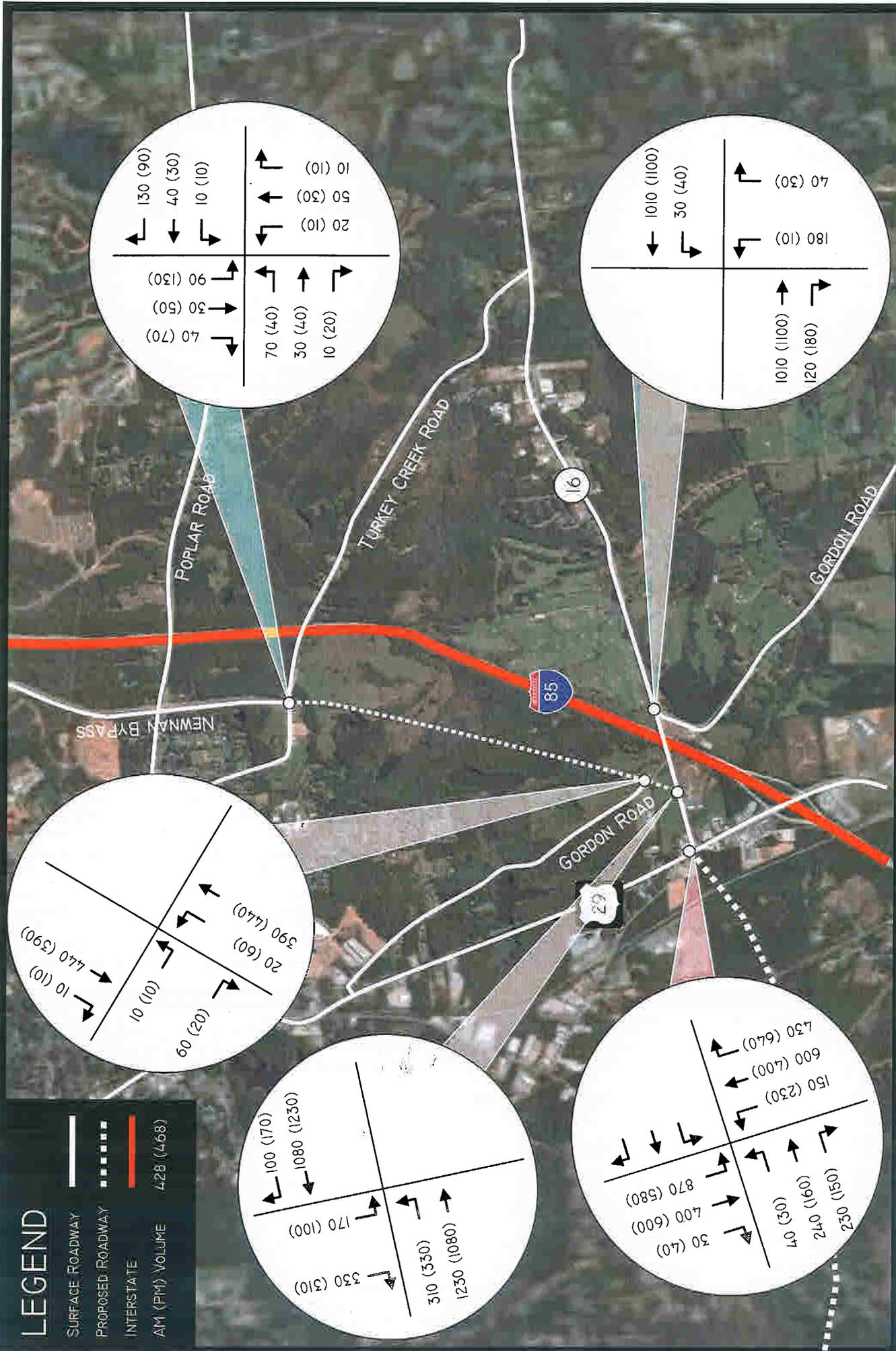


FIGURE 7
2030 DESIGN HOUR VOLUMES

Appendix A



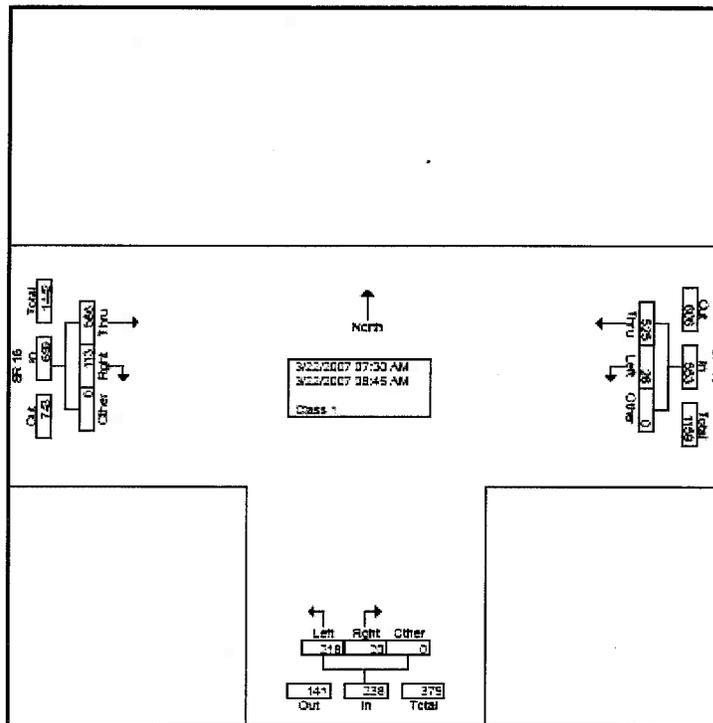
All Traffic Data Services, Inc.

1336 Farmer Road
 Conyers, Ga. 30012
 404-374-1283

File Name : GordonRdNorth@SR16AM
 Site Code : 00000000
 Start Date : 3/22/2007
 Page No : 1

Groups Printed- Class 1

Start Time	SR 16 Westbound				Northbound				SR 16 Eastbound				Int. Total
	Left	Thru	Other	App. Total	Left	Right	Other	App. Total	Thru	Right	Other	App. Total	
07:00 AM	3	48	0	49	24	1	0	25	61	13	0	74	148
07:15 AM	4	52	0	56	28	2	0	30	67	7	0	74	160
07:30 AM	5	57	0	62	30	3	0	33	84	14	0	98	193
07:45 AM	3	71	0	74	30	4	0	34	70	17	0	87	185
Total	15	226	0	241	112	10	0	122	262	51	0	333	666
08:00 AM	4	123	0	127	81	3	0	89	132	34	0	166	362
08:15 AM	4	57	0	61	10	0	0	10	54	11	0	65	136
08:30 AM	4	67	0	71	13	1	0	14	62	9	0	71	156
08:45 AM	1	52	0	53	22	1	0	23	56	8	0	64	140
Total	13	299	0	312	106	10	0	116	304	62	0	366	794
Grand Total	28	525	0	553	218	20	0	238	566	113	0	699	1490
Approch %	5.1	24.9	0	37.1	91.2	8.4	0	99.6	83.8	16.2	0	100.0	100.0
Total %	1.9	35.2	0	37.1	14.5	1.3	0	15.8	39.3	7.6	0	46.9	100.0



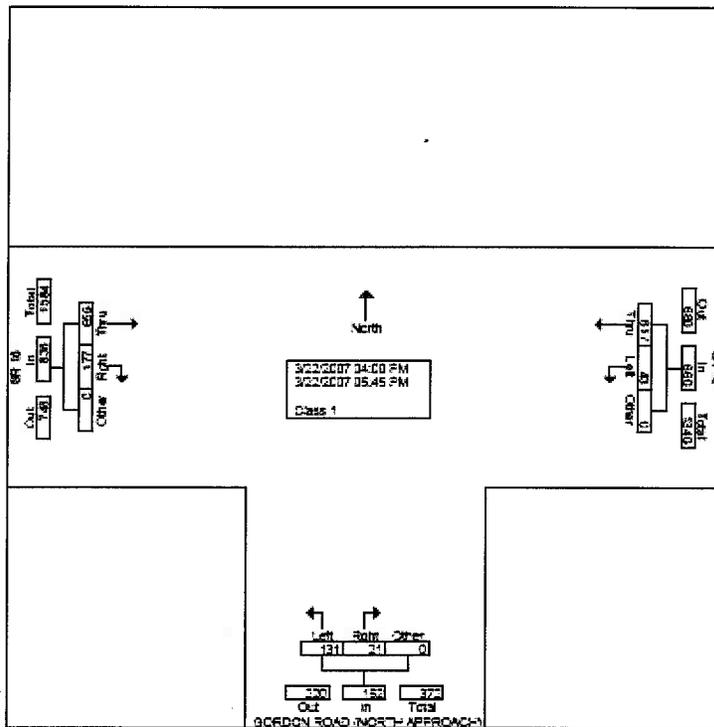


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File Name : GordonRdNorth@SR16PM
 Site Code : 00000000
 Start Date : 3/22/2007
 Page No : 1

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Start Time	SR 16 Westbound				GORDON ROAD (NORTH APPROACH) Northbound				SR 16 Eastbound				Int. Total
	Left	Thru	Other	App. Total	Left	Right	Other	App. Total	Thru	Right	Other	App. Total	
04:00 PM	7	76	0	83	12	2	0	14	73	15	0	88	165
04:15 PM	5	70	0	75	3	4	0	12	75	17	0	92	179
04:30 PM	5	72	0	77	14	0	0	14	78	20	0	98	169
04:45 PM	4	73	0	82	21	1	0	22	75	15	0	91	155
Total	21	296	0	317	55	7	0	62	302	67	0	369	748
05:00 PM	7	78	0	85	12	3	0	15	95	26	0	121	221
05:15 PM	2	66	0	68	29	3	0	32	67	27	0	124	224
05:30 PM	6	78	0	84	17	4	0	21	101	28	0	129	234
05:45 PM	7	99	0	106	18	4	0	22	74	19	0	93	221
Total	22	321	0	343	76	14	0	90	357	110	0	467	900
Grand Total	43	617	0	660	131	21	0	152	659	177	0	836	1648
Approach %	6.5	93.5	0		86.2	13.8	0		78.8	21.2	0		
Total %	2.6	37.4	0	4.0	7.9	1.3	0	9.2	40	10.7	0	50.7	





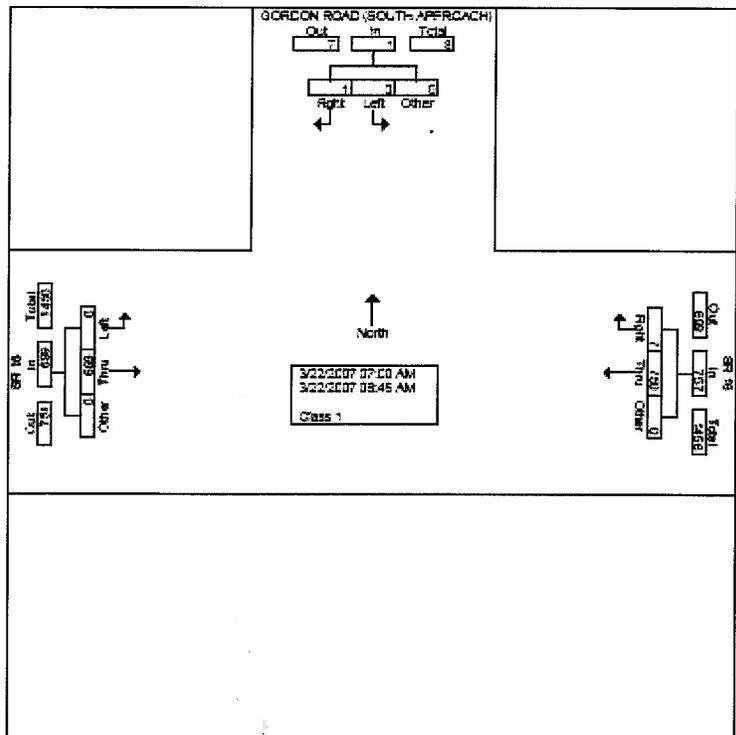
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1336 Farmer Road
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 404-374-1283

File Name : GordonRdSouth@SR16AM
 Site Code : 00000000
 Start Date : 3/22/2007
 Page No : 1

Groups Printed- Class 1

Start Time	GORDON ROAD (SOUTH APPROACH) Southbound				SR 16 Westbound				SR 16 Eastbound				Int. Total
	Left	Rght	Other	App. Total	Thru	Rght	Other	App. Total	Left	Thru	Other	App. Total	
07:00 AM	0	0	0	0	70	3	0	73	0	74	0	74	147
07:15 AM	0	1	0	1	60	0	0	60	0	75	0	75	156
07:30 AM	0	0	0	0	67	1	0	68	0	98	0	98	186
07:45 AM	0	0	0	0	104	0	0	104	0	99	0	99	193
Total	0	1	0	1	341	4	0	345	0	336	0	336	682
08:00 AM	0	0	0	0	188	0	0	188	0	166	0	166	354
08:15 AM	0	0	0	0	67	2	0	69	0	62	0	62	131
08:30 AM	0	0	0	0	60	0	0	60	0	71	0	71	151
08:45 AM	0	0	0	0	74	1	0	75	0	64	0	64	139
Total	0	0	0	0	409	3	0	412	0	363	0	363	775
Grand Total	0	1	0	1	750	7	0	757	0	699	0	699	1457
Approch %	0	100	0		99.1	0.9	0		0	100	0		
Total %	0	0.1	0	0.1	51.5	0.5	0	52	0	48	0	48	





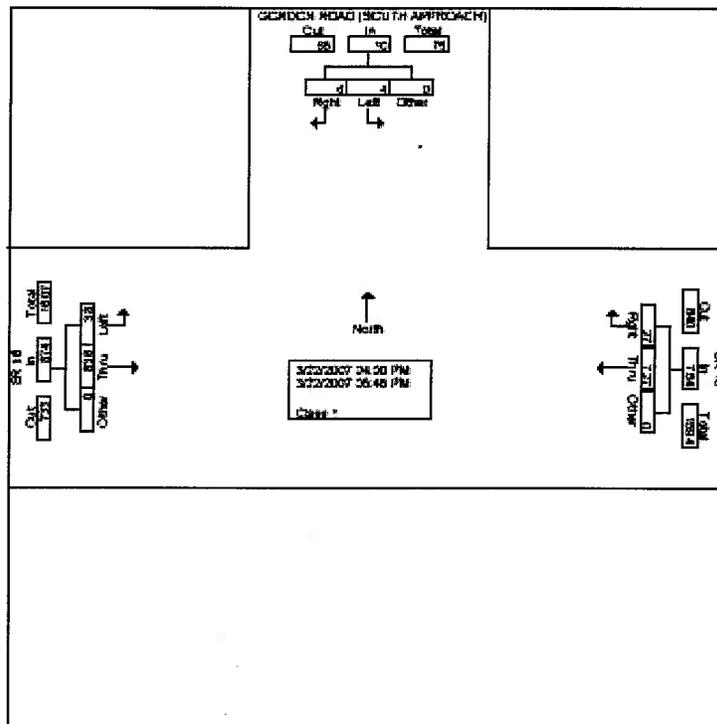
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 Conyers, Ga. 30012
 404-374-1283

File Name : GordonRdSouth@SR16PM
 Site Code : 00000000
 Start Date : 3/22/2007
 Page No : 1

Groups Printed- Class 1

Start Time	GORDON ROAD (SOUTH APPROACH) Southbound				SR 16 Westbound				SR 16 Eastbound				In Total
	Left	Right	Other	App. Total	Thru	Right	Other	App. Total	Left	Thru	Other	App. Total	
04:00 PM	1	1	0	2	88	1	0	89	3	88	0	91	182
04:15 PM	0	0	0	0	78	0	0	78	3	93	0	93	171
04:30 PM	1	0	0	1	86	1	0	87	3	97	0	97	185
04:45 PM	0	0	0	0	89	0	0	89	3	90	0	93	182
Total	2	1	0	3	351	2	0	353	5	268	0	274	730
05:00 PM	0	0	0	0	90	2	0	92	1	121	0	122	214
05:15 PM	0	0	0	0	90	6	0	96	11	124	0	135	231
05:30 PM	0	2	0	2	91	5	0	96	9	129	0	138	236
05:45 PM	2	3	0	5	135	12	0	147	11	94	0	105	252
Total	2	5	0	7	375	25	0	401	32	468	0	500	908
Grand Total	4	6	0	10	727	27	0	754	39	836	0	874	1538
Approch %	43	60	0		96.4	3.6	0		4.3	95.7	0		
Total %	0.2	0.4	0	0.6	44.4	1.6	0	46	2.3	51	0	53.4	





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1336 Farmer Road
Conyers, Ga. 30012

File Name : Newnan-ByPass&TurkeyCreekRDAM

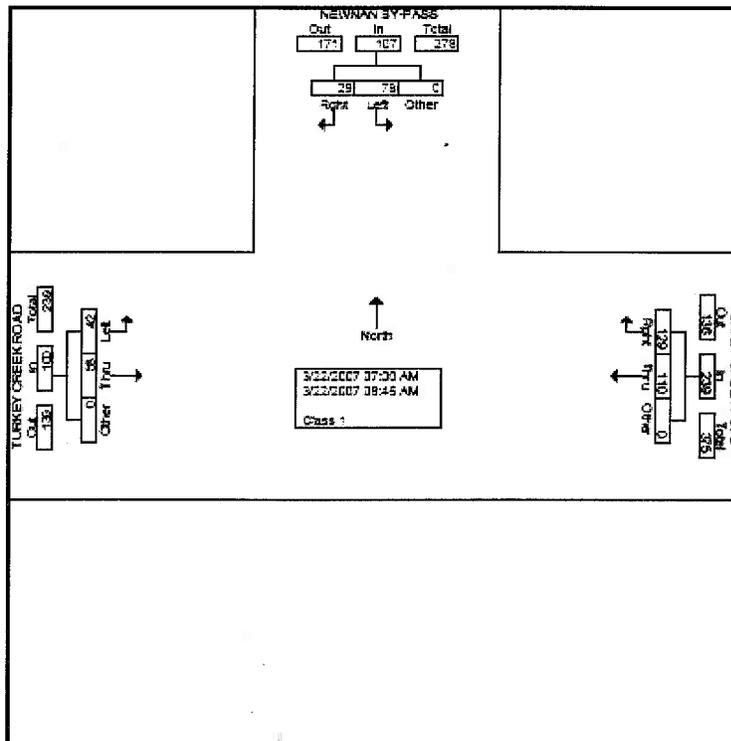
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Start Date : 3/22/2007

Page No : 1

Groups Printed- Class 1

Start Time	NEWMAN BY-PASS Southbound				TURKEY CREEK ROAD Westbound				TURKEY CREEK ROAD Eastbound				Int. Total
	Left	Right	Other	App. Total	Thru	Right	Other	App. Total	Left	Thru	Other	App. Total	
07:00 AM	4	4	0	8	10	15	0	25	3	10	0	13	46
07:15 AM	7	5	0	12	11	13	0	24	4	8	0	10	46
07:30 AM	10	4	0	14	16	24	0	40	5	9	0	14	68
07:45 AM	4	2	0	6	28	21	0	47	6	10	0	16	69
Total	25	15	0	40	63	73	0	136	18	35	0	53	229
08:00 AM	9	7	0	16	23	22	0	45	4	8	0	12	73
08:15 AM	15	4	0	19	14	14	0	28	5	2	0	7	54
08:30 AM	14	2	0	16	5	12	0	17	10	4	0	14	47
08:45 AM	15	1	0	16	5	8	0	13	5	9	0	14	43
Total	53	14	0	67	47	56	0	103	24	23	0	47	217
Grand Total	78	29	0	107	110	129	0	239	42	58	0	100	448
Approch %	72.9	27.1	0		46	54	0		42	58	0		
Total %	17.5	6.5	0	24	24.7	25.9	0	53.6	9.4	13	0	22.4	





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1336 Farmer Road
 Conyers, Ga. 30012

File Name : Newnan-Bypass&TurkeyCreekRDPM

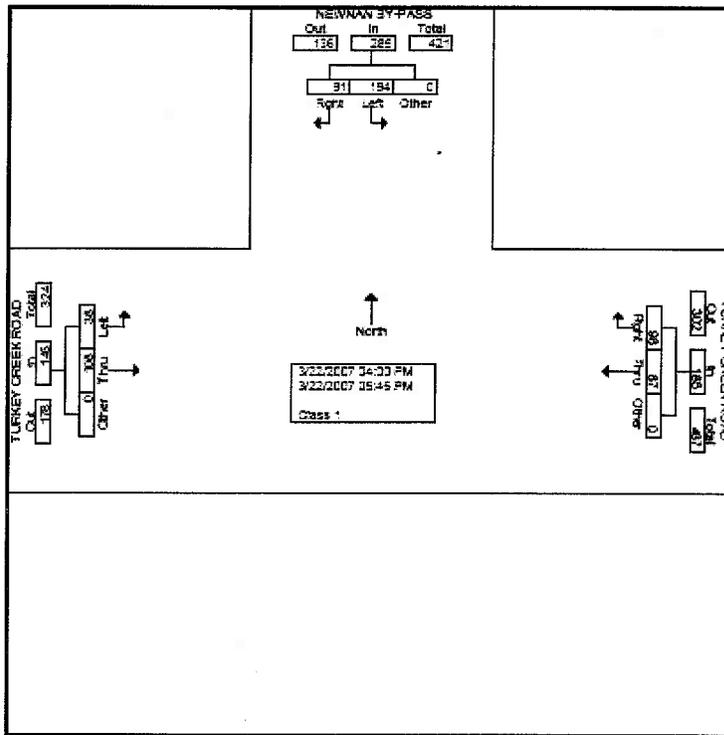
Site Code : 00000000

Start Date : 3/22/2007

Page No : 1

Groups Printed- Class 1

Start Time	NEWNAN BY-PASS Southbound				TURKEY CREEK ROAD Westbound				TURKEY CREEK ROAD Eastbound				Int. Total
	Left	Right	Other	App. Total	Thru	Right	Other	App. Total	Left	Thru	Other	App. Total	
04:00 PM	14	14	0	28	16	12	0	28	1	7	0	8	64
04:15 PM	17	5	0	22	10	11	0	21	3	8	0	11	54
04:30 PM	18	13	0	31	9	20	0	29	5	14	0	19	79
04:45 PM	38	9	0	45	8	4	0	12	9	18	0	27	84
Total	85	41	0	126	43	47	0	90	18	47	0	65	281
05:00 PM	24	11	0	35	10	12	0	22	5	18	0	23	80
05:15 PM	25	10	0	35	11	13	0	24	5	15	0	20	79
05:30 PM	32	14	0	46	10	10	0	20	4	9	0	13	79
05:45 PM	28	15	0	43	13	16	0	29	6	19	0	25	97
Total	109	50	0	159	44	51	0	95	20	61	0	81	335
Grand Total	194	91	0	285	87	98	0	185	38	108	0	146	616
Apprch %	88.1	31.9	0		47	53	0		28	74	0		
Total %	31.5	14.8	0	46.3	14.1	15.9	0	30	6.2	17.5	0	23.7	



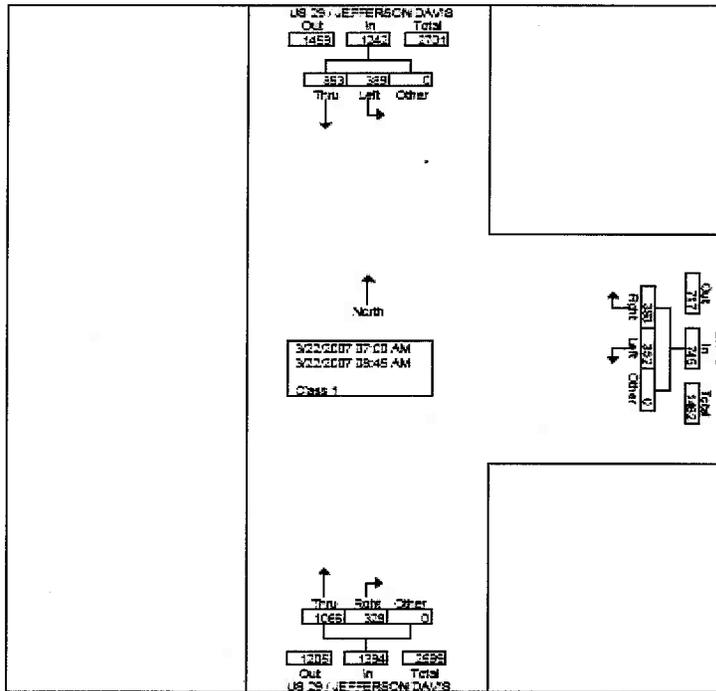


All Traffic Data Services, Inc.
 1336 Farmer Road
 Conyers, Ga. 30012
 404-374-1283

File Name : SR16&US29AM
 Site Code : 00000000
 Start Date : 3/22/2007
 Page No : 1

Groups Printed- Class 1

Start Time	US 29 / JEFFERSON DAVIS Southbound				SR 16 Westbound				US 29 / JEFFERSON DAVIS Northbound				Int. Total
	Left	Thru	Other	App. Total	Left	Right	Other	App. Total	Thru	Right	Other	App. Total	
07:00 AM	32	186	0	136	40	30	0	79	65	44	0	129	337
07:15 AM	35	139	0	174	40	39	0	79	121	42	0	163	416
07:30 AM	60	119	0	179	33	56	0	89	179	39	0	218	466
07:45 AM	48	122	0	151	42	62	0	104	205	42	0	247	502
Total	176	466	0	642	155	187	0	342	550	167	0	717	1741
08:00 AM	98	107	0	205	68	98	0	166	141	70	0	211	502
08:15 AM	30	110	0	140	32	30	0	62	103	33	0	136	338
08:30 AM	45	90	0	125	41	40	0	81	121	30	0	151	357
08:45 AM	48	90	0	130	36	38	0	74	111	28	0	139	343
Total	213	387	0	600	197	206	0	403	476	161	0	637	1640
Grand Total	369	853	0	1242	352	393	0	745	1066	328	0	1394	3381
Approch %	31.3	68.7	0		47.2	52.8	0		75.5	23.5	0		
Total %	11.5	25.2	0	36.7	12.4	11.5	0	22	31.5	9.7	0	41.2	





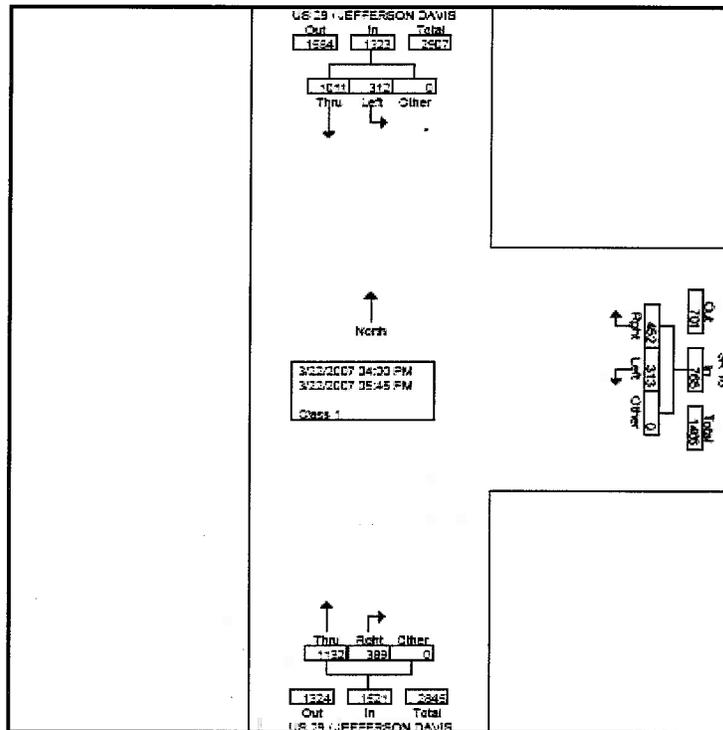
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 Conyers, Ga. 30012
 404-374-1283

File Name : SR16&US29PM
 Site Code : 00000000
 Start Date : 3/22/2007
 Page No : 1

Groups Printed- Class 1

Start Time	JS 29 / JEFFERSON DAVIS Southbound				SR 16 Westbound				US 29 / JEFFERSON DAVIS Northbound				Int. Total
	Left	Thru	Other	App. Total	Left	Right	Other	App. Total	Thru	Right	Other	App. Total	
04:00 PM	35	150	0	165	35	35	0	70	156	40	0	196	451
04:15 PM	30	119	0	149	48	40	0	88	177	45	0	222	459
04:30 PM	47	121	0	168	30	55	0	85	125	49	0	174	427
04:45 PM	48	117	0	165	34	70	0	104	121	39	0	160	429
Total	160	507	0	667	147	200	0	347	579	173	0	752	1766
05:00 PM	59	167	0	226	67	112	0	179	200	106	0	306	711
05:15 PM	34	69	0	123	24	54	0	78	80	30	0	110	311
05:30 PM	30	120	0	150	41	44	0	85	145	48	0	191	426
05:45 PM	29	128	0	157	34	42	0	76	126	34	0	162	395
Total	152	504	0	656	166	252	0	418	553	218	0	769	1843
Grand Total	312	1011	0	1323	313	452	0	765	1132	399	0	1521	3009
Approach %	23.6	76.4	0		40.9	59.1	0		74.4	25.6	0		
Total %	8.5	28	0	36.7	8.7	12.5	0	21.2	31.4	10.8	0	42.1	



Appendix B

Year 2005 Balancing of Model Turns to Actual Turn Percentages and ADT Forecast

Model Daily Turns	Estimated ADT Turns	Estimated ADT Turns
<p>Model Daily Turns</p> <p>0% 81% 19% 75% 0% 27%</p> <p>0% 54% 6%</p> <p>#DIV/0! #DIV/0! #DIV/0!</p>	<p>Estimated ADT Turns</p> <p>0% 88% 20% 53% 0% 47%</p> <p>0% 82% 18%</p> <p>#DIV/0! #DIV/0! #DIV/0!</p>	<p>Estimated ADT Turns</p> <p>9100 9100</p> <p>1800 1800</p> <p>0 7300 1600 1600</p> <p>0 7300 1600 1600</p> <p>8800 8800</p>
<p>Model Daily Turns</p> <p>0% 0% 100% 8% 91% 0%</p> <p>0% 100% 0%</p> <p>#DIV/0! #DIV/0! #DIV/0!</p>	<p>Estimated ADT Turns</p> <p>40% 0% 60% 46% 54% 0%</p> <p>36% 64% 0%</p> <p>#DIV/0! #DIV/0! #DIV/0!</p>	<p>Estimated ADT Turns</p> <p>1000 1000</p> <p>600 600</p> <p>400 0 700 0</p> <p>400 0 700 0</p> <p>1000 1000</p>
<p>Model Daily Turns</p> <p>0% 0% 100% 0% 0% 0%</p> <p>0% 0% 0%</p> <p>#DIV/0! #DIV/0! #DIV/0!</p>	<p>Estimated ADT Turns</p> <p>#DIV/0! #DIV/0! #DIV/0!</p> <p>0% 88% 14%</p>	<p>Estimated ADT Turns</p> <p>0 0</p> <p>0 0</p> <p>0 0 200 200</p> <p>0 0 200 200</p> <p>700 700</p>

Year 2010 Raw Model Turns

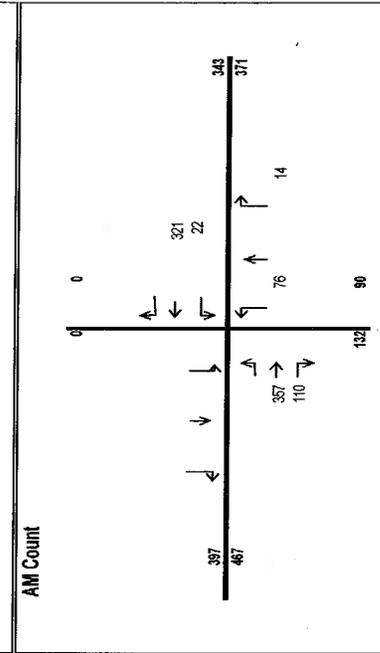
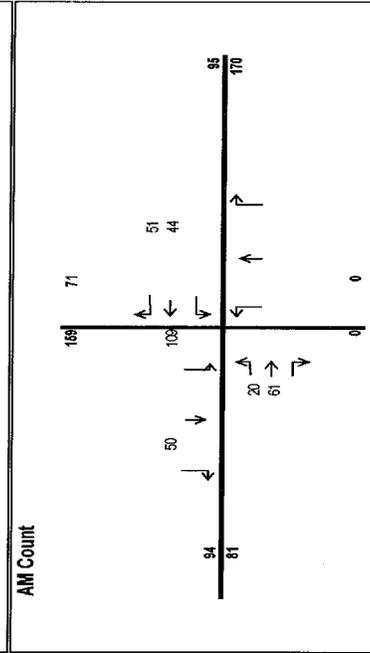
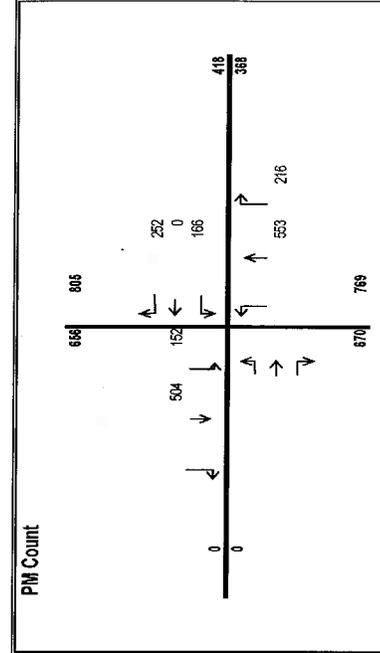
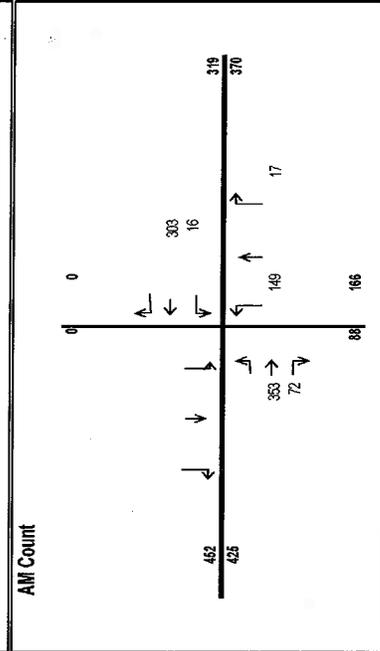
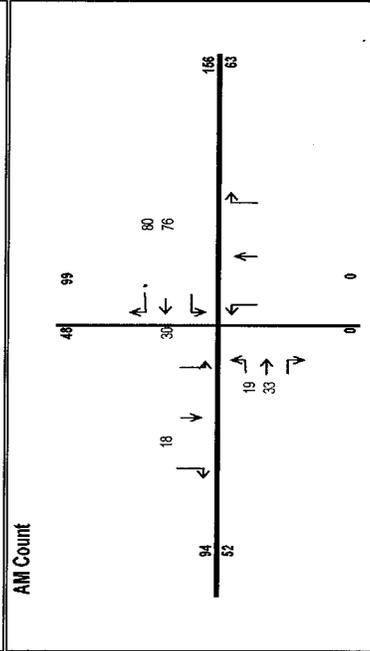
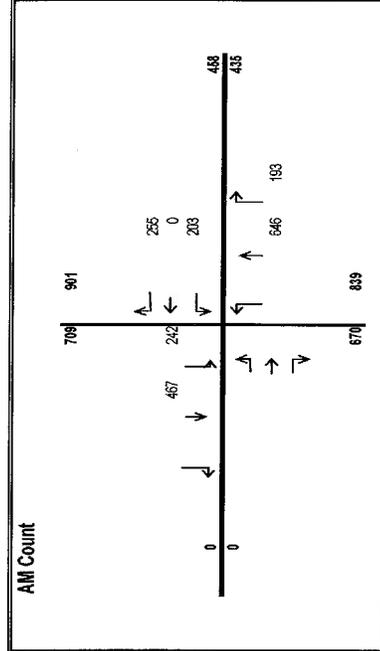
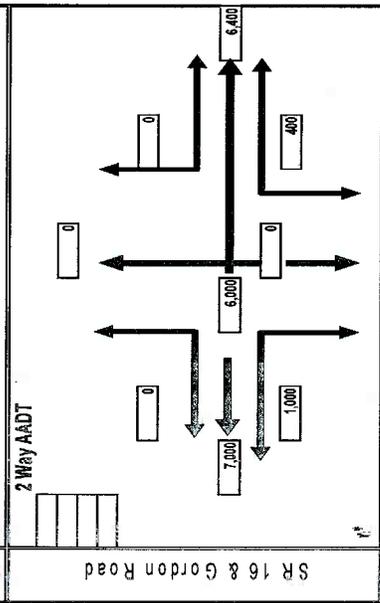
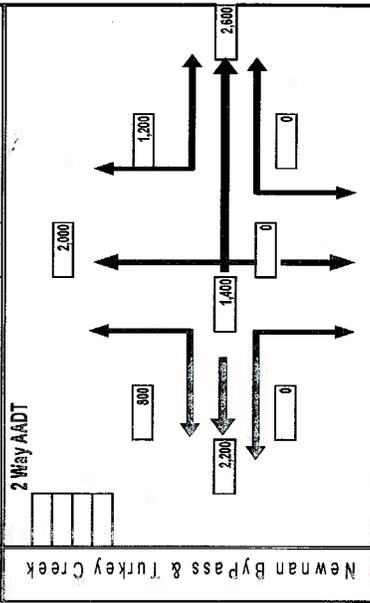
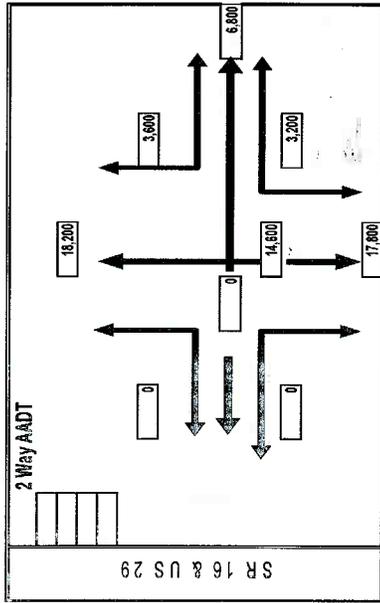
Location	Model AM Peak Period	Model Midday Period	Model PM Peak Period	Model Evening/Nighttime Period	Model Daily Turns
SR 16 & US 29 & Newman Bypass	<p>Model AM Peak Period</p>	<p>Model Midday Period</p>	<p>Model PM Peak Period</p>	<p>Model Evening/Nighttime Period</p>	<p>Model Daily Turns</p>
SR 16 & US 29 & Turkey Creek	<p>Model AM Peak Period</p>	<p>Model Midday Period</p>	<p>Model PM Peak Period</p>	<p>Model Evening/Nighttime Period</p>	<p>Model Daily Turns</p>
Newman Bypass & Gordon Road	<p>Model AM Peak Period</p>	<p>Model Midday Period</p>	<p>Model PM Peak Period</p>	<p>Model Evening/Nighttime Period</p>	<p>Model Daily Turns</p>

Year 2030 Raw Model Turns

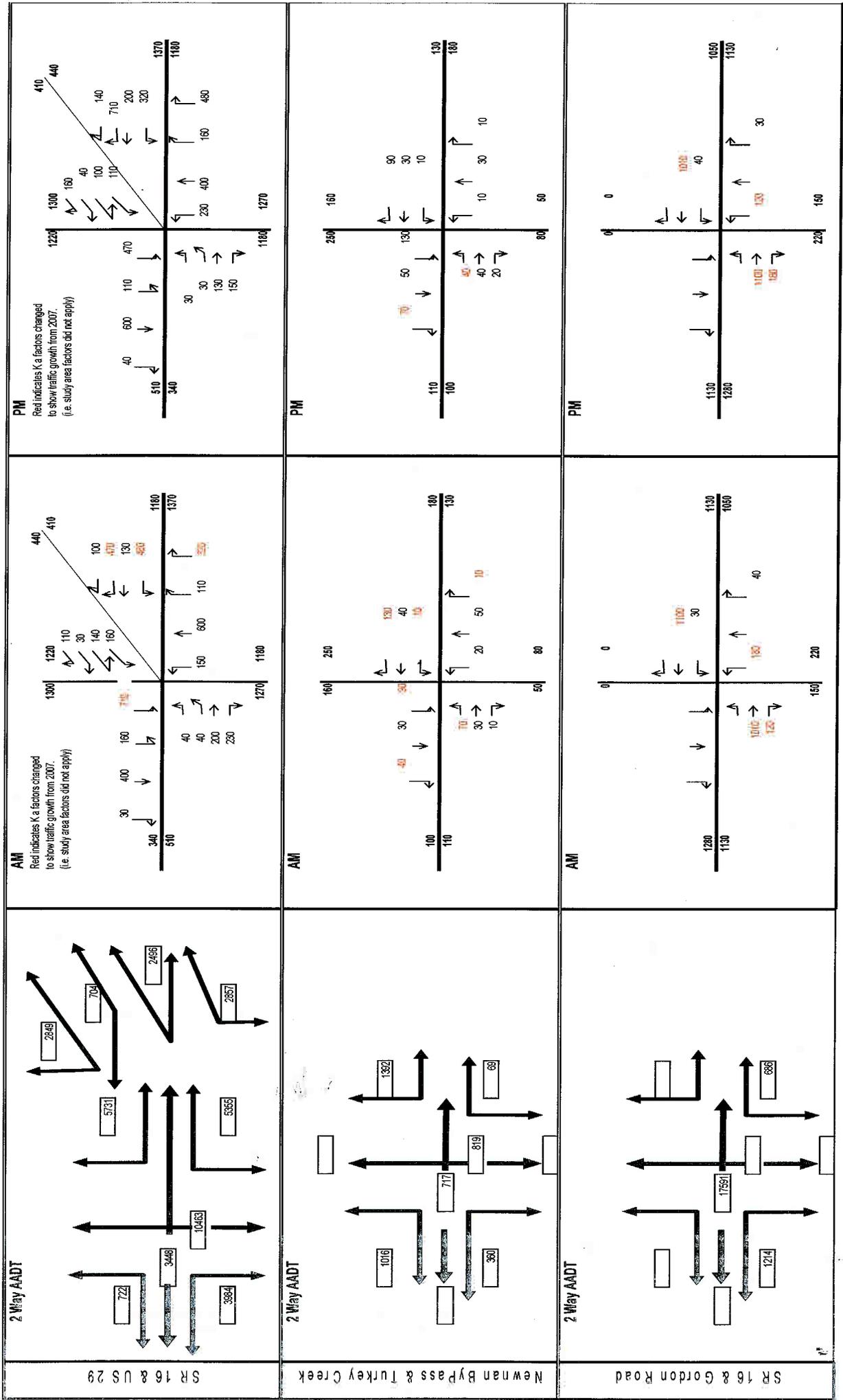
Location	Model AM Peak Period	Model Midday Period	Model PM Peak Period	Model Evening/Nighttime Period	Model Daily Turns
SR 16 & US 29 & Newman Bypass					
Newman Bypass & Turkey Creek					
Newman Bypass & Gordon Road					
SR 16 & Gordon Road					

Appendix C

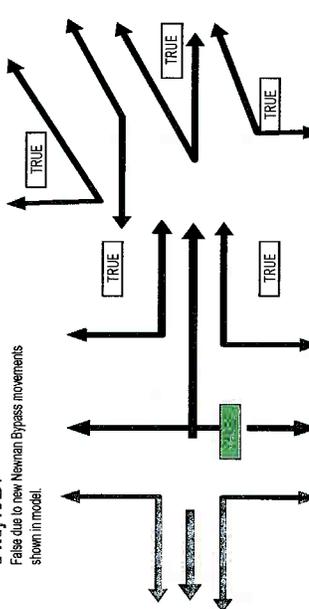
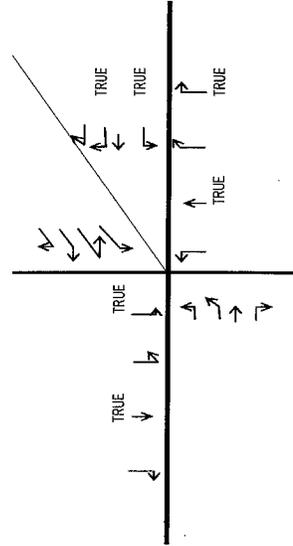
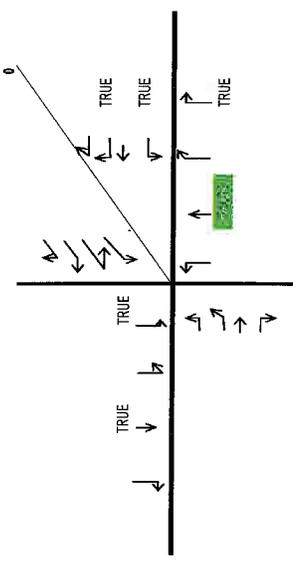
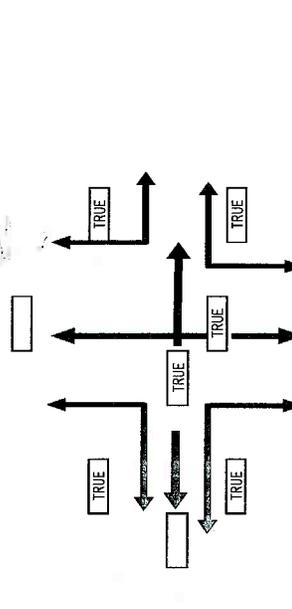
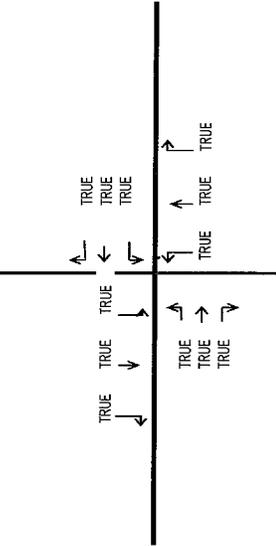
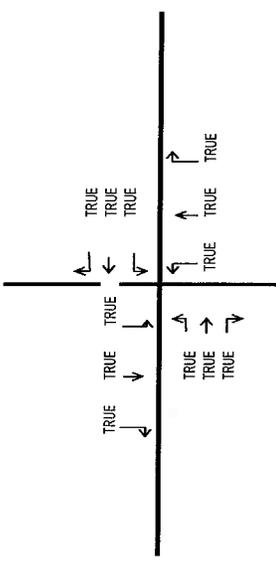
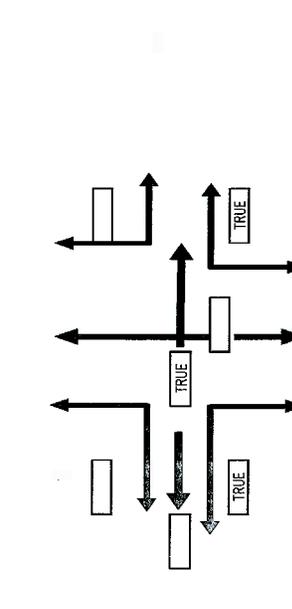
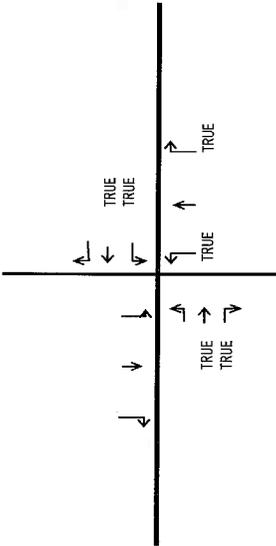
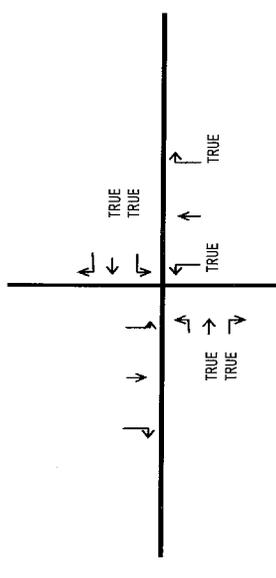
2007 Turns



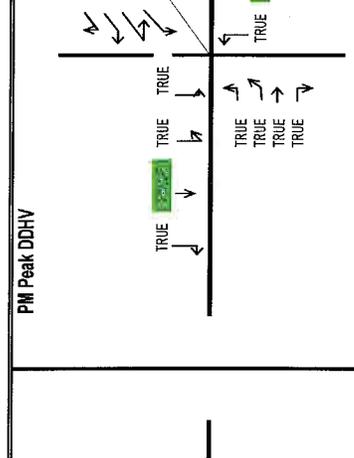
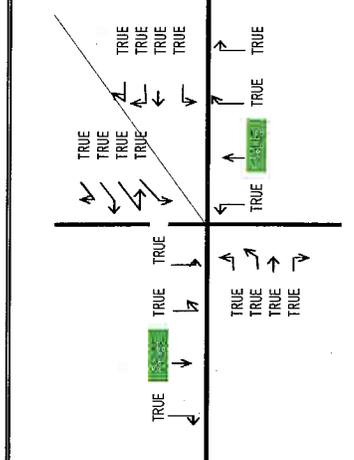
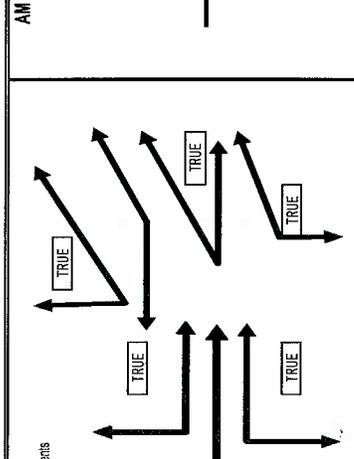
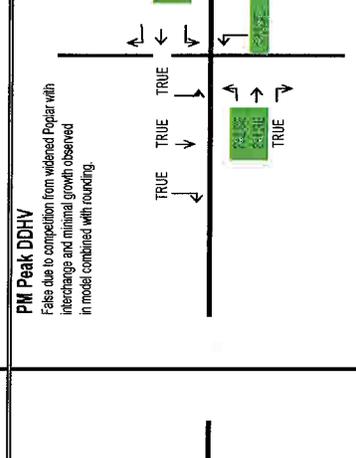
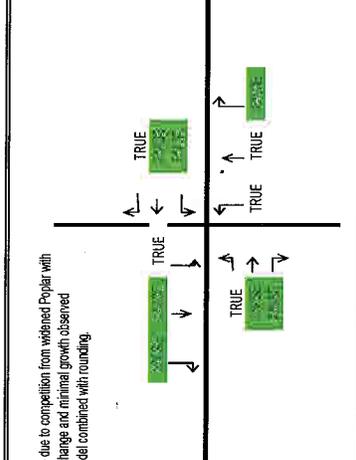
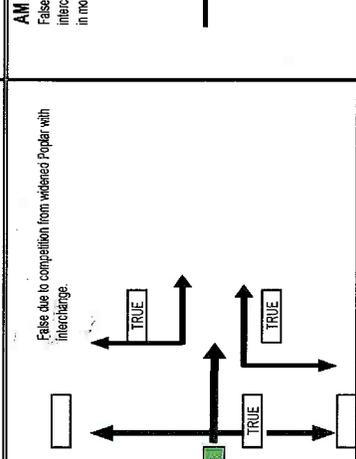
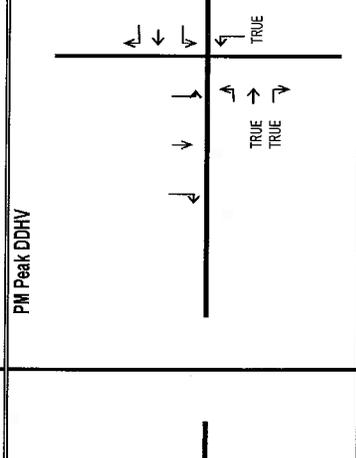
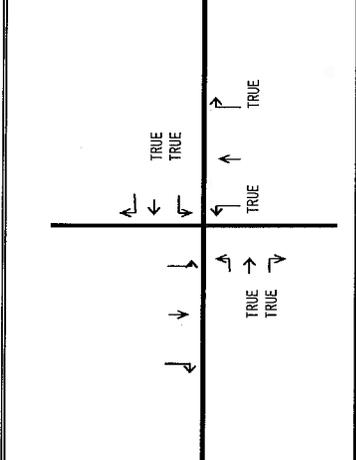
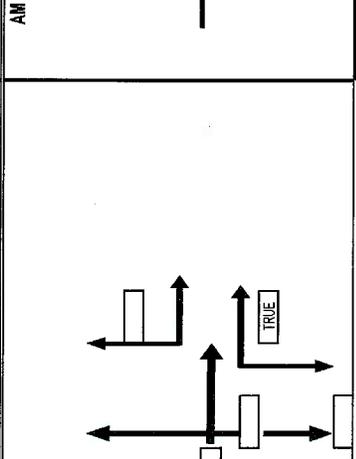
2030 DHV Turns



2010 > 2007?

<p>SR 16 & US 29</p>	<p>2 Way AADT False due to new Newman Bypass movements shown in model.</p> 	<p>AM</p> 	<p>PM Peak DDHV</p> 
<p>Newman Bypass & Turkey Creek</p>	<p>2 Way AADT</p> 	<p>AM</p> 	<p>PM Peak DDHV</p> 
<p>SR 16 & Gordon Road</p>	<p>2 Way AADT</p> 	<p>AM</p> 	<p>PM Peak DDHV</p> 

2030 > 2010?

<p>2 Way AADT False due to new Newman Bypass movements shown in model</p> 	<p>AM</p> 	<p>PM Peak DDHV</p> 
<p>2 Way AADT False due to competition from widened Poplar with interchange.</p> 	<p>AM</p> <p>False due to competition from widened Poplar with interchange and minimal growth observed in model combined with rounding.</p> 	<p>PM Peak DDHV</p> <p>False due to competition from widened Poplar with interchange and minimal growth observed in model combined with rounding.</p> 
<p>2 Way AADT</p> 	<p>AM</p> 	<p>PM Peak DDHV</p> 

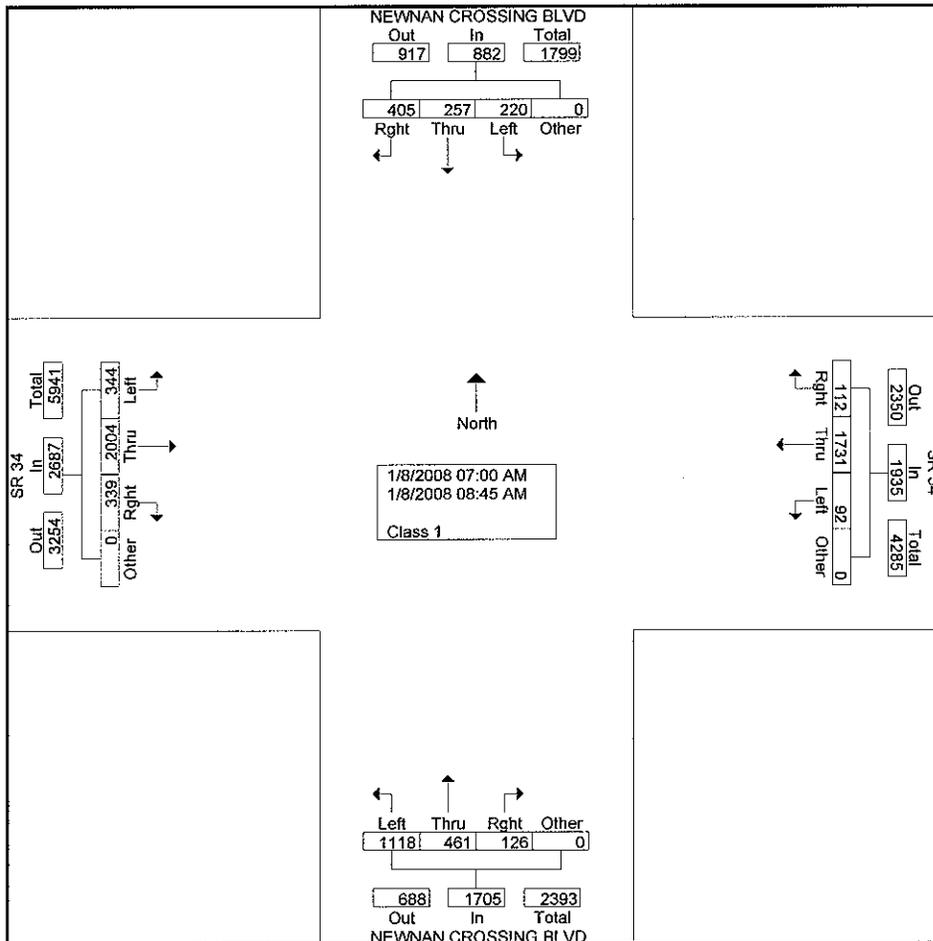
All Traffic Data Services, Inc.

1336 Farmer Road
Conyers, Ga 30012
Ph. 404-374-1283

File Name : NewnanXingBlvd@SR34AM(1)
Site Code : 00000000
Start Date : 1/8/2008
Page No : 1

Groups Printed- Class 1

Start Time	NEWNAN CROSSING BLVD Southbound					SR 34 Westbound					NEWNAN CROSSING BLVD Northbound					SR 34 Eastbound					Int. Total
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07:00 AM	12	24	46	0	82	8	155	18	0	181	89	36	13	0	138	32	154	25	0	211	612
07:15 AM	24	32	43	0	99	7	211	12	0	230	121	43	15	0	179	37	168	32	0	237	745
07:30 AM	21	33	66	0	120	6	232	15	0	253	157	55	12	0	224	33	222	43	0	298	895
07:45 AM	25	36	54	0	115	11	265	12	0	288	188	76	11	0	275	42	309	65	0	416	1094
Total	82	125	209	0	416	32	863	57	0	952	555	210	51	0	816	144	853	165	0	1162	3346
08:00 AM	26	32	54	0	112	13	233	16	0	262	156	58	16	0	230	56	276	42	0	374	978
08:15 AM	33	33	47	0	113	12	246	11	0	269	134	70	21	0	225	53	279	48	0	380	987
08:30 AM	37	37	55	0	129	16	200	12	0	228	143	66	17	0	226	51	288	44	0	383	966
08:45 AM	42	30	40	0	112	19	189	16	0	224	130	57	21	0	208	40	308	40	0	388	932
Total	138	132	196	0	466	60	868	55	0	983	563	251	75	0	889	200	1151	174	0	1525	3863
Grand Total	220	257	405	0	882	92	1731	112	0	1935	1118	461	126	0	1705	344	2004	339	0	2687	7209
Apprch %	24.9	29.1	45.9	0		4.8	89.5	5.8	0		65.6	27	7.4	0		12.8	74.6	12.6	0		
Total %	3.1	3.6	5.6	0	12.2	1.3	24	1.6	0	26.8	15.5	6.4	1.7	0	23.7	4.8	27.8	4.7	0	37.3	

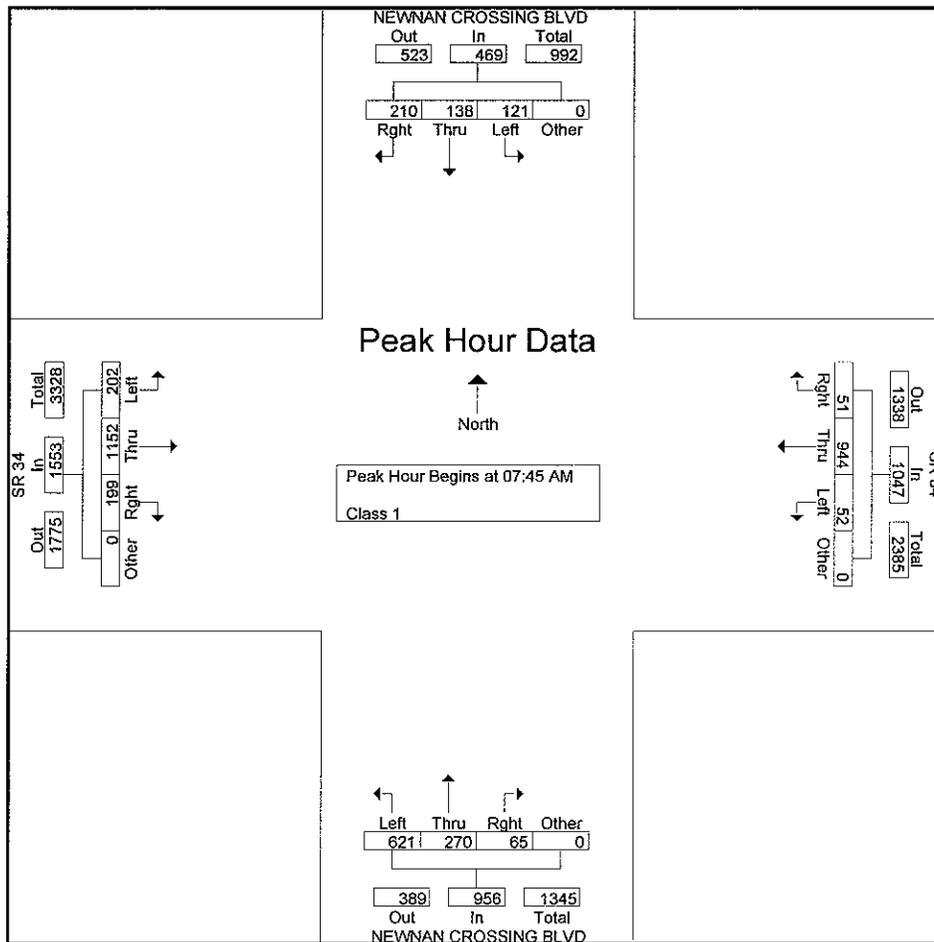


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1336 Farmer Road
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Ph. 404-374-1283

File Name : NewnanXingBlvd@SR34AM(1)
Site Code : 00000000
Start Date : 1/8/2008
Page No : 2

Start Time	NEWNAN CROSSING BLVD Southbound					SR 34 Westbound					NEWNAN CROSSING BLVD Northbound					SR 34 Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	25	36	54	0	115	11	265	12	0	288	188	76	11	0	275	42	309	65	0	416	1094
08:00 AM	26	32	54	0	112	13	233	16	0	262	156	58	16	0	230	56	276	42	0	374	978
08:15 AM	33	33	47	0	113	12	246	11	0	269	134	70	21	0	225	53	279	48	0	380	987
08:30 AM	37	37	55	0	129	16	200	12	0	228	143	66	17	0	226	51	288	44	0	383	966
Total Volume	121	138	210	0	469	52	944	51	0	1047	621	270	65	0	956	202	1152	199	0	1553	4025
% App. Total	25.8	29.4	44.8	0		5	90.2	4.9	0		65	28.2	6.8	0		13	74.2	12.8	0		
PHF	.818	.932	.955	.000	.909	.813	.891	.797	.000	.909	.826	.888	.774	.000	.869	.902	.932	.765	.000	.933	.920



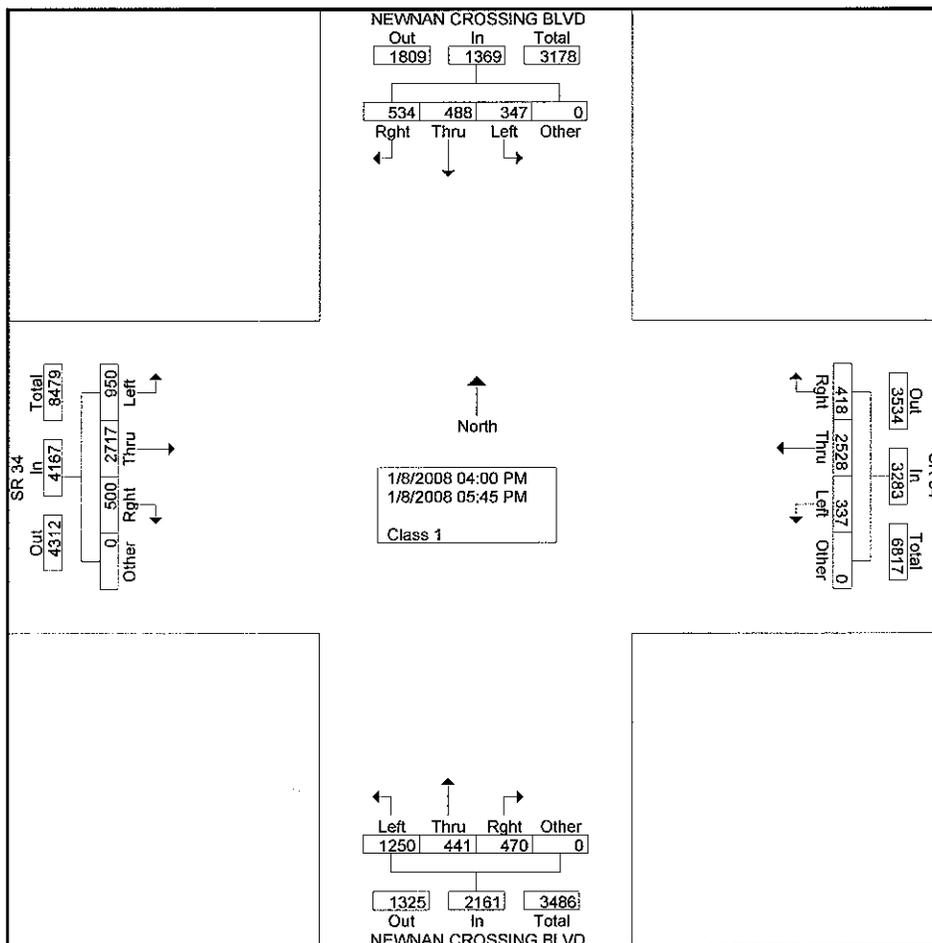
All Traffic Data Services, Inc.

1336 Farmer Road
Conyers, Ga 30012
Ph. 404-374-1283

File Name : NewnanXingBlvd@SR34PM(1)
Site Code : 00000000
Start Date : 1/8/2008
Page No : 1

Groups Printed- Class 1

Start Time	NEWMAN CROSSING BLVD Southbound					SR 34 Westbound					NEWMAN CROSSING BLVD Northbound					SR 34 Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
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04:15 PM	44	66	74	0	184	42	298	35	0	375	155	66	66	0	287	95	323	55	0	473	1319
04:30 PM	46	64	77	0	187	40	366	44	0	450	170	43	78	0	291	123	356	78	0	557	1485
04:45 PM	54	68	70	0	192	53	300	48	0	401	154	50	73	0	277	143	308	65	0	516	1386
Total	187	244	276	0	707	181	1231	167	0	1579	655	205	267	0	1127	460	1287	252	0	1999	5412
05:00 PM	41	67	73	0	181	40	342	51	0	433	138	67	55	0	260	117	387	76	0	580	1454
05:15 PM	36	62	60	0	158	38	312	50	0	400	164	54	50	0	268	130	324	56	0	510	1336
05:30 PM	44	60	71	0	175	41	344	88	0	473	138	55	53	0	246	131	377	62	0	570	1464
05:45 PM	39	55	54	0	148	37	299	62	0	398	155	60	45	0	260	112	342	54	0	508	1314
Total	160	244	258	0	662	156	1297	251	0	1704	595	236	203	0	1034	490	1430	248	0	2168	5568
Grand Total	347	488	534	0	1369	337	2528	418	0	3283	1250	441	470	0	2161	950	2717	500	0	4167	10980
Apprch %	25.3	35.6	39	0		10.3	77	12.7	0		57.8	20.4	21.7	0		22.8	65.2	12	0		
Total %	3.2	4.4	4.9	0	12.5	3.1	23	3.8	0	29.9	11.4	4	4.3	0	19.7	8.7	24.7	4.6	0	38	

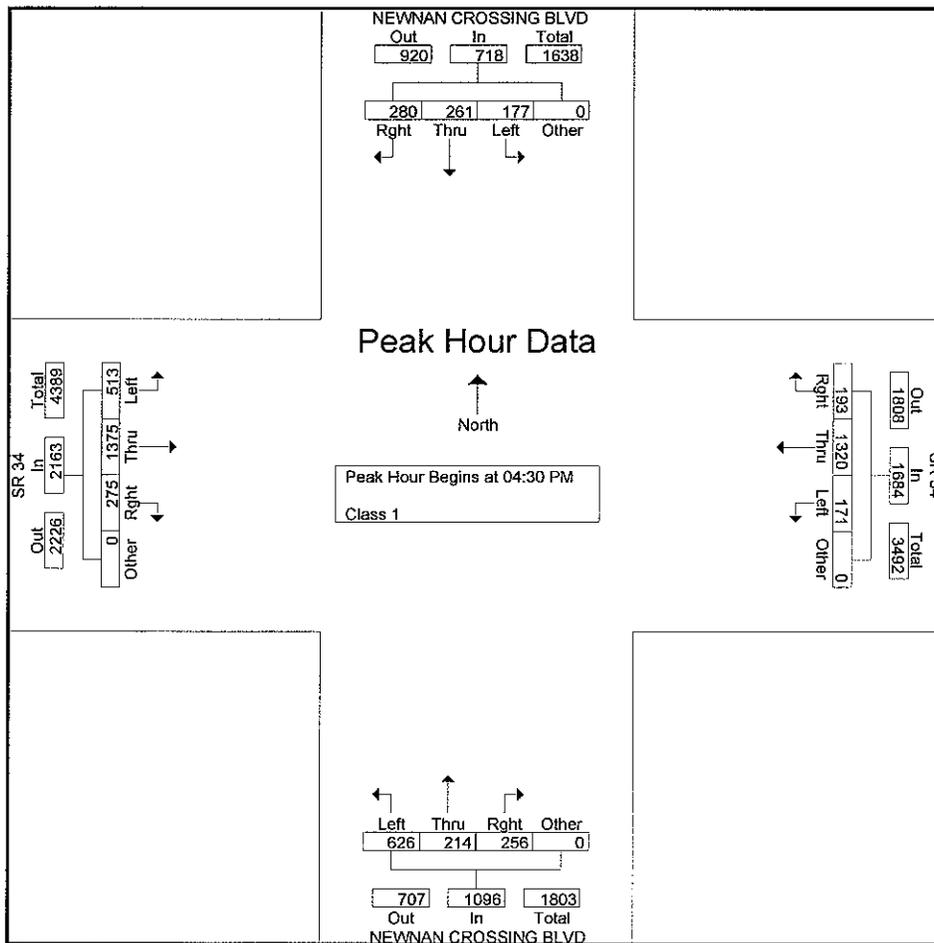


All Traffic Data Services, Inc.

1336 Farmer Road
 Conyers, Ga 30012
 Ph. 404-374-1283

File Name : NewnanXingBlvd@SR34PM(1)
 Site Code : 00000000
 Start Date : 1/8/2008
 Page No : 2

Start Time	NEWNAN CROSSING BLVD Southbound					SR 34 Westbound					NEWNAN CROSSING BLVD Northbound					SR 34 Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	46	64	77	0	187	40	366	44	0	450	170	43	78	0	291	123	356	78	0	557	1485
04:45 PM	54	68	70	0	192	53	300	48	0	401	154	50	73	0	277	143	308	65	0	516	1386
05:00 PM	41	67	73	0	181	40	342	51	0	433	138	67	55	0	260	117	387	76	0	580	1454
05:15 PM	36	62	60	0	158	38	312	50	0	400	164	54	50	0	268	130	324	56	0	510	1336
Total Volume	177	261	280	0	718	171	1320	193	0	1684	626	214	256	0	1096	513	1375	275	0	2163	5661
% App. Total	24.7	36.4	39	0		10.2	78.4	11.5	0		57.1	19.5	23.4	0		23.7	63.6	12.7	0		
PHF	.819	.960	.909	.000	.935	.807	.902	.946	.000	.936	.921	.799	.821	.000	.942	.897	.888	.881	.000	.932	.953



All Traffic Data Services, Inc.

1336 Farmer Road
Conyers, Ga 30012

Ph. 404-374-1255 File Name : PoplarRd@NewnanXingBy-PassAM

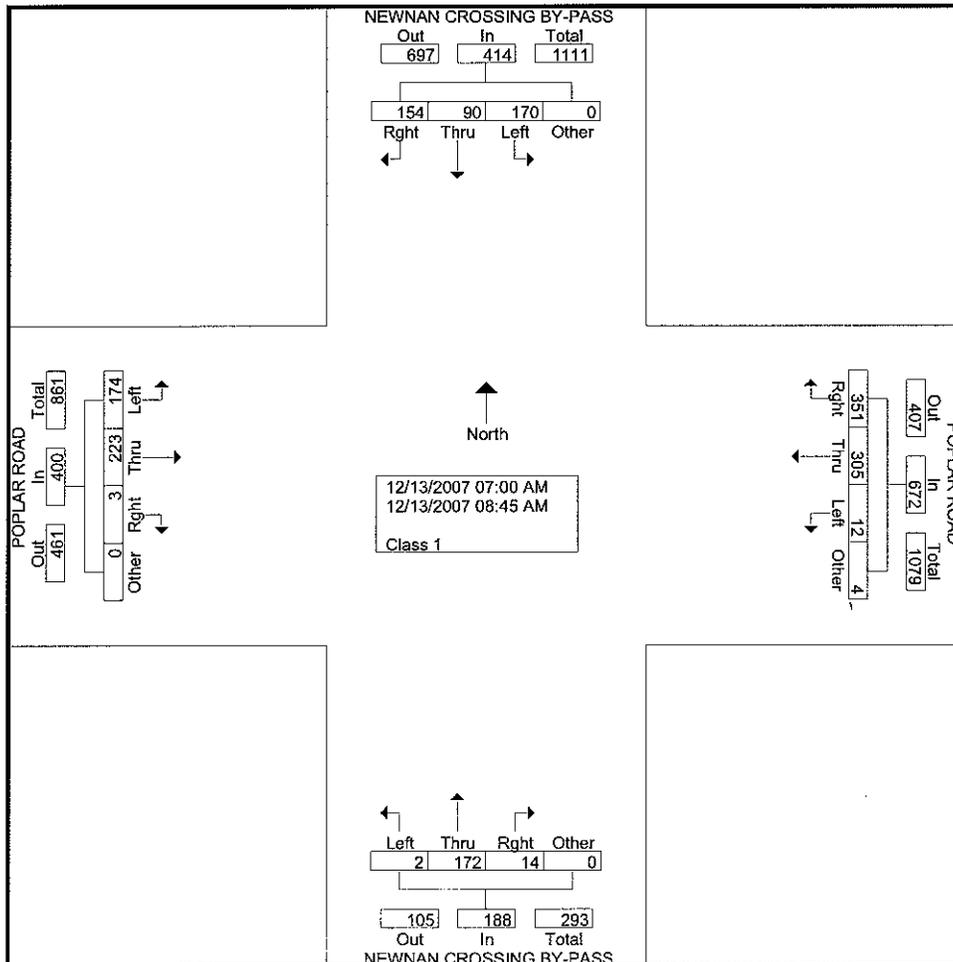
Site Code : 00000000

Start Date : 12/13/2007

Page No : 1

Groups Printed- Class 1

Start Time	NEWNAN CROSSING BY-PASS Southbound					POPLAR ROAD Westbound					NEWNAN CROSSING BY-PASS Northbound					POPLAR ROAD Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
07:00 AM	21	4	2	0	27	1	22	19	0	42	0	3	1	0	4	11	28	0	0	39	112
07:15 AM	24	7	8	0	39	0	28	28	0	56	1	9	1	0	11	9	44	0	0	53	159
07:30 AM	25	12	18	0	55	0	40	32	0	72	1	28	2	0	31	22	33	0	0	55	213
07:45 AM	32	14	29	0	75	3	41	77	3	124	0	39	4	0	43	28	32	0	0	60	302
Total	102	37	57	0	196	4	131	156	3	294	2	79	8	0	89	70	137	0	0	207	786
08:00 AM	14	14	45	0	73	3	52	58	1	114	0	31	2	0	33	23	26	1	0	50	270
08:15 AM	23	16	22	0	61	2	42	38	0	82	0	22	1	0	23	30	22	2	0	54	220
08:30 AM	17	8	16	0	41	3	41	57	0	101	0	18	1	0	19	25	18	0	0	43	204
08:45 AM	14	15	14	0	43	0	39	42	0	81	0	22	2	0	24	26	20	0	0	46	194
Total	68	53	97	0	218	8	174	195	1	378	0	93	6	0	99	104	86	3	0	193	888
Grand Total	170	90	154	0	414	12	305	351	4	672	2	172	14	0	188	174	223	3	0	400	1674
Apprch %	41.1	21.7	37.2	0		1.8	45.4	52.2	0.6		1.1	91.5	7.4	0		43.5	55.8	0.8	0		
Total %	10.2	5.4	9.2	0	24.7	0.7	18.2	21	0.2	40.1	0.1	10.3	0.8	0	11.2	10.4	13.3	0.2	0	23.9	



All Traffic Data Services, Inc.

1336 Farmer Road
Conyers, Ga 30012

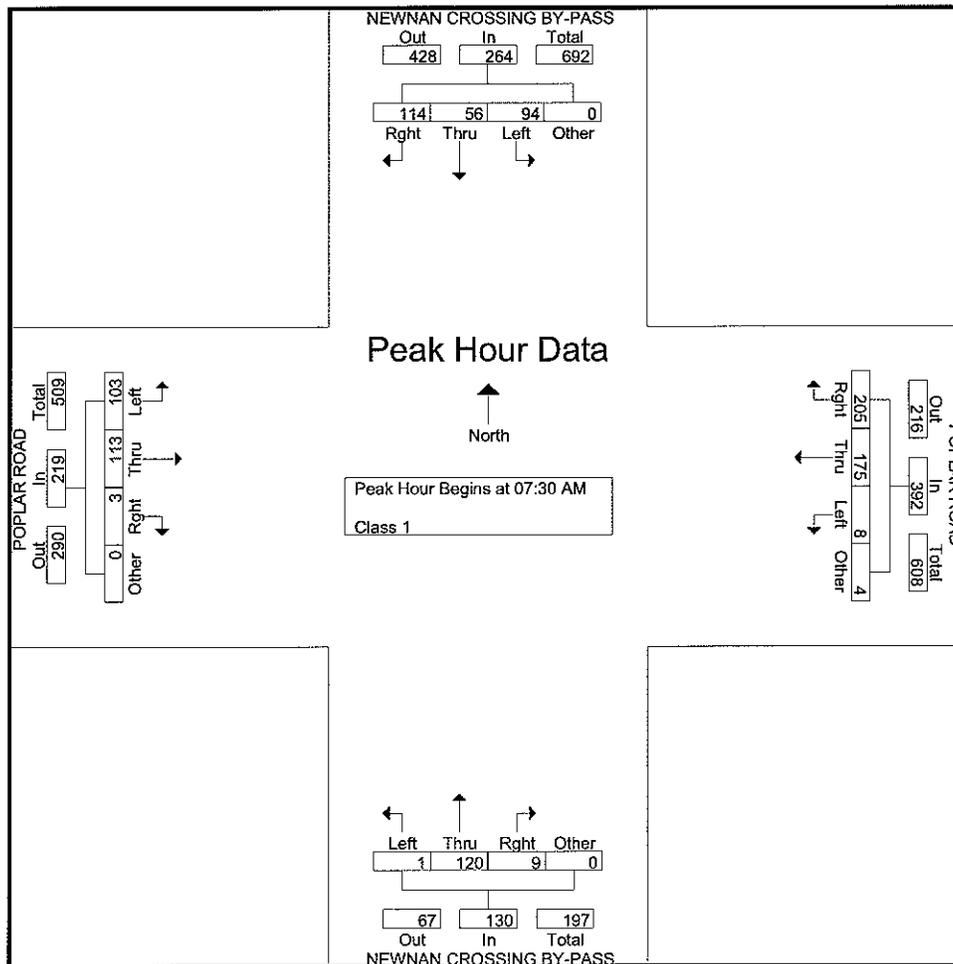
Ph. 404-374-1255 File Name : PoplarRd@NewnanXingBy-PassAM

Site Code : 00000000

Start Date : 12/13/2007

Page No : 2

Start Time	NEWMAN CROSSING BY-PASS Southbound					POPLAR ROAD Westbound					NEWMAN CROSSING BY-PASS Northbound					POPLAR ROAD Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	25	12	18	0	55	0	40	32	0	72	1	28	2	0	31	22	33	0	0	55	213
07:45 AM	32	14	29	0	75	3	41	77	3	124	0	39	4	0	43	28	32	0	0	60	302
08:00 AM	14	14	45	0	73	3	52	58	1	114	0	31	2	0	33	23	26	1	0	50	270
08:15 AM	23	16	22	0	61	2	42	38	0	82	0	22	1	0	23	30	22	2	0	54	220
Total Volume	94	56	114	0	264	8	175	205	4	392	1	120	9	0	130	103	113	3	0	219	1005
% App. Total	35.6	21.2	43.2	0		2	44.6	52.3	1		0.8	92.3	6.9	0		47	51.6	1.4	0		
PHF	.734	.875	.633	.000	.880	.667	.841	.666	.333	.790	.250	.769	.563	.000	.756	.858	.856	.375	.000	.913	.832



All Traffic Data Services, Inc.

1336 Farmer Road
Conyers, Ga 30012

Ph. 404-374-1255 File Name : PoplarRd@NewnanXingBy-PassPM

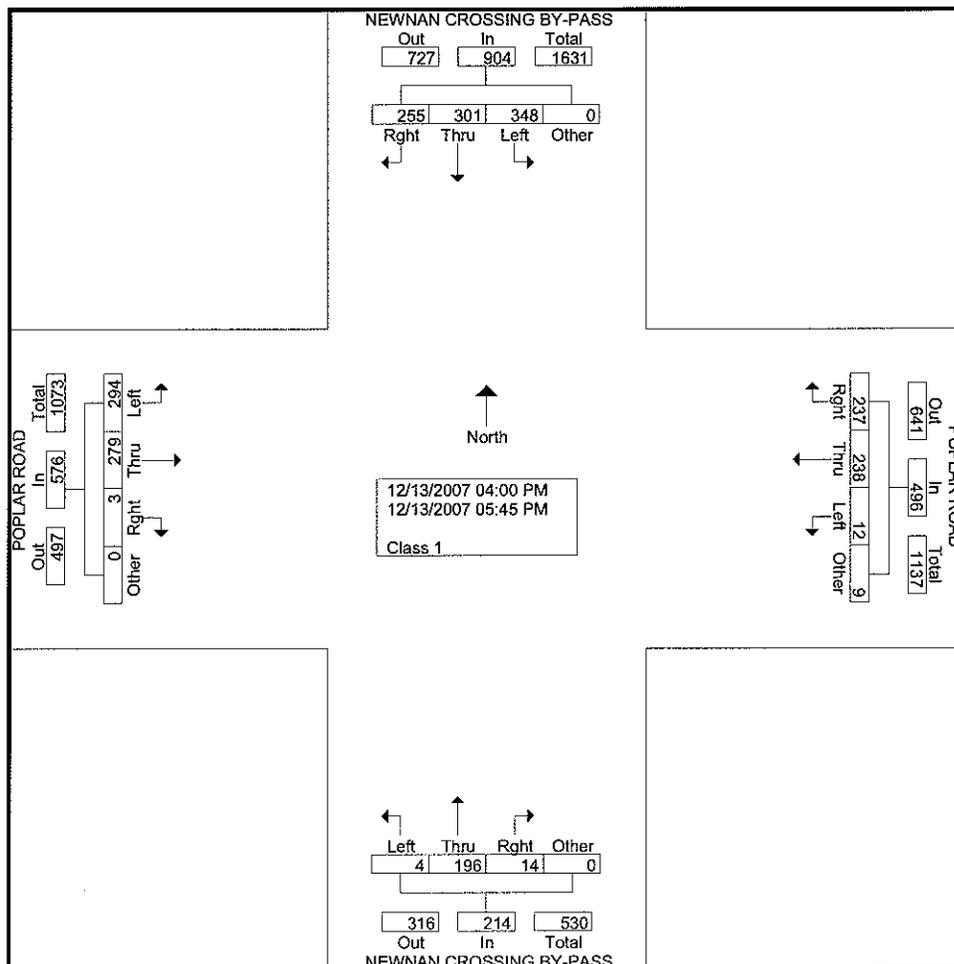
Site Code : 00000000

Start Date : 12/13/2007

Page No : 1

Groups Printed- Class 1

Start Time	NEWNAN CROSSING BY-PASS Southbound					POPLAR ROAD Westbound					NEWNAN CROSSING BY-PASS Northbound					POPLAR ROAD Eastbound					Infl. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
04:00 PM	20	32	25	0	77	3	28	32	0	63	0	31	4	0	35	44	32	0	0	76	251
04:15 PM	34	53	31	0	118	1	17	42	1	61	0	28	0	0	28	33	40	0	0	73	280
04:30 PM	27	34	47	0	108	0	26	29	7	62	0	19	7	0	26	37	30	0	0	67	263
04:45 PM	49	38	30	0	117	1	34	24	0	59	0	35	1	0	36	44	32	0	0	76	288
Total	130	157	133	0	420	5	105	127	8	245	0	113	12	0	125	158	134	0	0	292	1082
05:00 PM	51	29	27	0	107	0	28	18	0	46	0	27	0	0	27	40	30	1	0	71	251
05:15 PM	57	35	27	0	119	3	38	38	1	80	0	17	0	0	17	46	50	0	0	96	312
05:30 PM	58	44	32	0	134	2	36	29	0	67	1	18	1	0	20	25	34	0	0	59	280
05:45 PM	52	36	36	0	124	2	31	25	0	58	3	21	1	0	25	25	31	2	0	58	265
Total	218	144	122	0	484	7	133	110	1	251	4	83	2	0	89	136	145	3	0	284	1108
Grand Total	348	301	255	0	904	12	238	237	9	496	4	196	14	0	214	294	279	3	0	576	2190
Apprch %	38.5	33.3	28.2	0		2.4	48	47.8	1.8		1.9	91.6	6.5	0		51	48.4	0.5	0		
Total %	15.9	13.7	11.6	0	41.3	0.5	10.9	10.8	0.4	22.6	0.2	8.9	0.6	0	9.8	13.4	12.7	0.1	0	26.3	



All Traffic Data Services, Inc.

1336 Farmer Road
Conyers, Ga 30012

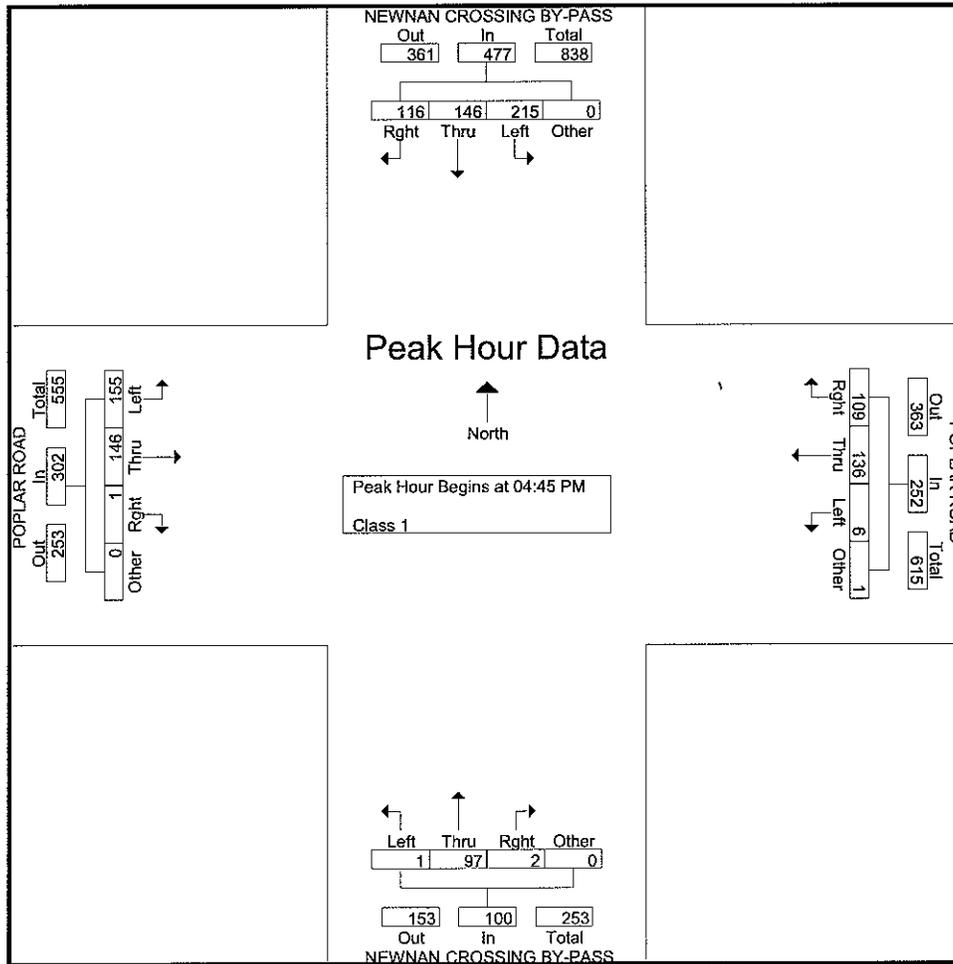
Ph. 404-374-1255 File Name : PoplarRd@NewnanXingBy-PassPM

Site Code : 00000000

Start Date : 12/13/2007

Page No : 2

Start Time	NEWNAN CROSSING BY-PASS Southbound					POPLAR ROAD Westbound					NEWNAN CROSSING BY-PASS Northbound					POPLAR ROAD Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	49	38	30	0	117	1	34	24	0	59	0	35	1	0	36	44	32	0	0	76	288
05:00 PM	51	29	27	0	107	0	28	18	0	46	0	27	0	0	27	40	30	1	0	71	251
05:15 PM	57	35	27	0	119	3	38	38	1	80	0	17	0	0	17	46	50	0	0	96	312
05:30 PM	58	44	32	0	134	2	36	29	0	67	1	18	1	0	20	25	34	0	0	59	280
Total Volume	215	146	116	0	477	6	136	109	1	252	1	97	2	0	100	155	146	1	0	302	1131
% App. Total	45.1	30.6	24.3	0		2.4	54	43.3	0.4		1	97	2	0		51.3	48.3	0.3	0		
PHF	.927	.830	.906	.000	.890	.500	.895	.717	.250	.788	.250	.693	.500	.000	.694	.842	.730	.250	.000	.786	.906



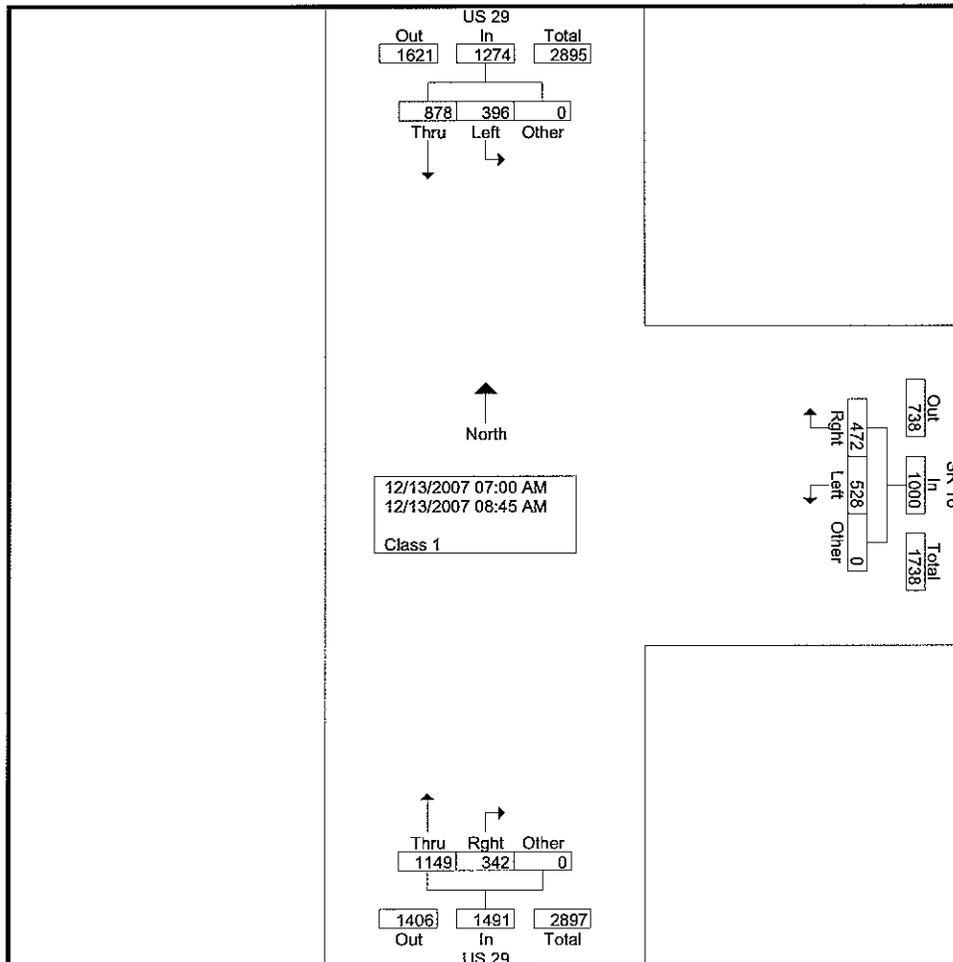
All Traffic Data Services, Inc.

1336 Farmer Road
Conyers, Ga 30012
Ph. 404-374-1283

File Name : US29@SR16AM
Site Code : 00000000
Start Date : 12/13/2007
Page No : 1

Groups Printed- Class 1

Start Time	US 29 Southbound				SR 16 Westbound				US 29 Northbound				Int. Total
	Left	Thru	Other	App. Total	Left	Right	Other	App. Total	Thru	Right	Other	App. Total	
07:00 AM	48	100	0	148	69	52	0	121	121	43	0	164	433
07:15 AM	53	126	0	179	64	49	0	113	116	38	0	154	446
07:30 AM	54	146	0	200	63	44	0	107	220	52	0	272	579
07:45 AM	61	143	0	204	80	70	0	150	230	50	0	280	634
Total	216	515	0	731	276	215	0	491	687	183	0	870	2092
08:00 AM	61	102	0	163	66	58	0	124	161	34	0	195	482
08:15 AM	45	118	0	163	49	87	0	136	104	40	0	144	443
08:30 AM	35	77	0	112	65	55	0	120	97	48	0	145	377
08:45 AM	39	66	0	105	72	57	0	129	100	37	0	137	371
Total	180	363	0	543	252	257	0	509	462	159	0	621	1673
Grand Total	396	878	0	1274	528	472	0	1000	1149	342	0	1491	3765
Apprch %	31.1	68.9	0		52.8	47.2	0		77.1	22.9	0		
Total %	10.5	23.3	0	33.8	14	12.5	0	26.6	30.5	9.1	0	39.6	

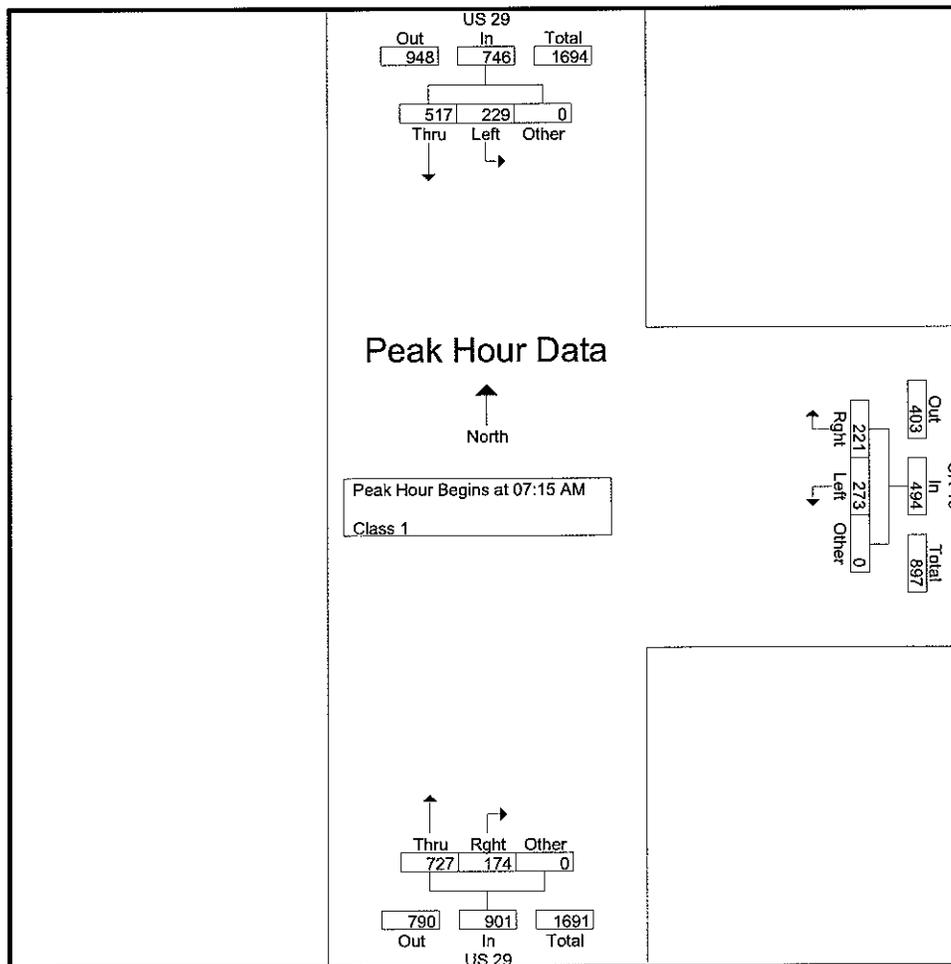


All Traffic Data Services, Inc.

1336 Farmer Road
Conyers, Ga 30012
Ph. 404-374-1283

File Name : US29@SR16AM
Site Code : 00000000
Start Date : 12/13/2007
Page No : 2

Start Time	US 29 Southbound				SR 16 Westbound				US 29 Northbound				Int. Total
	Left	Thru	Other	App. Total	Left	Right	Other	App. Total	Thru	Right	Other	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	53	126	0	179	64	49	0	113	116	38	0	154	446
07:30 AM	54	146	0	200	63	44	0	107	220	52	0	272	579
07:45 AM	61	143	0	204	80	70	0	150	230	50	0	280	634
08:00 AM	61	102	0	163	66	58	0	124	161	34	0	195	482
Total Volume	229	517	0	746	273	221	0	494	727	174	0	901	2141
% App. Total	30.7	69.3	0		55.3	44.7	0		80.7	19.3	0		
PHF	.939	.885	.000	.914	.853	.789	.000	.823	.790	.837	.000	.804	.844



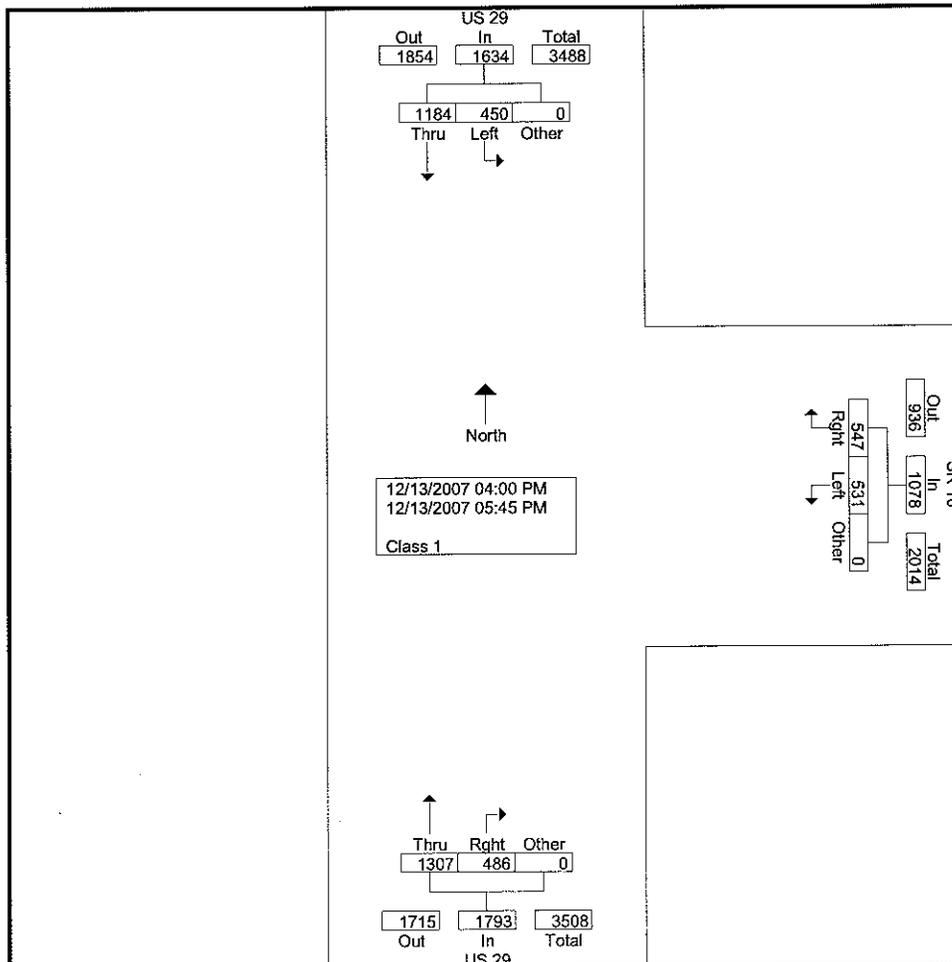
All Traffic Data Services, Inc.

1336 Farmer Road
Conyers, Ga 30012
Ph. 404-374-1283

File Name : US29@SR16PM
Site Code : 00000000
Start Date : 12/13/2007
Page No : 1

Groups Printed- Class 1

Start Time	US 29 Southbound				SR 16 Westbound				US 29 Northbound				Int. Total
	Left	Thru	Other	App. Total	Left	Right	Other	App. Total	Thru	Right	Other	App. Total	
04:00 PM	39	118	0	157	46	51	0	97	126	47	0	173	427
04:15 PM	44	102	0	146	42	67	0	109	148	57	0	205	460
04:30 PM	61	117	0	178	55	60	0	115	144	63	0	207	500
04:45 PM	52	110	0	162	49	83	0	132	143	63	0	206	500
Total	196	447	0	643	192	261	0	453	561	230	0	791	1887
05:00 PM	71	146	0	217	62	54	0	116	225	43	0	268	601
05:15 PM	68	228	0	296	109	68	0	177	201	81	0	282	755
05:30 PM	45	194	0	239	82	92	0	174	160	69	0	229	642
05:45 PM	70	169	0	239	86	72	0	158	160	63	0	223	620
Total	254	737	0	991	339	286	0	625	746	256	0	1002	2618
Grand Total	450	1184	0	1634	531	547	0	1078	1307	486	0	1793	4505
Apprch %	27.5	72.5	0		49.3	50.7	0		72.9	27.1	0		
Total %	10	26.3	0	36.3	11.8	12.1	0	23.9	29	10.8	0	39.8	

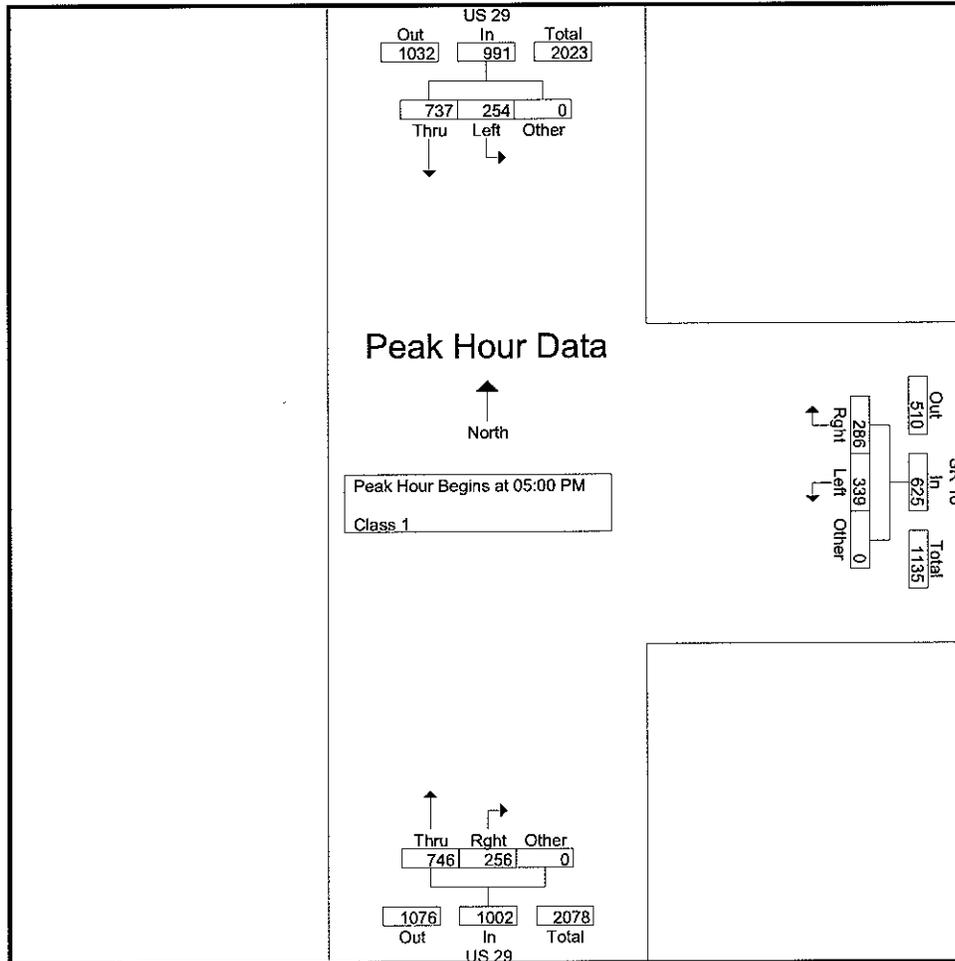


All Traffic Data Services, Inc.

1336 Farmer Road
 Conyers, Ga 30012
 Ph. 404-374-1283

File Name : US29@SR16PM
 Site Code : 00000000
 Start Date : 12/13/2007
 Page No : 2

Start Time	US 29 Southbound				SR 16 Westbound				US 29 Northbound				Int. Total
	Left	Thru	Other	App. Total	Left	Right	Other	App. Total	Thru	Right	Other	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	71	146	0	217	62	54	0	116	225	43	0	268	601
05:15 PM	68	228	0	296	109	68	0	177	201	81	0	282	755
05:30 PM	45	194	0	239	82	92	0	174	160	69	0	229	642
05:45 PM	70	169	0	239	86	72	0	158	160	63	0	223	620
Total Volume	254	737	0	991	339	286	0	625	746	256	0	1002	2618
% App. Total	25.6	74.4	0		54.2	45.8	0		74.5	25.5	0		
PHF	.894	.808	.000	.837	.778	.777	.000	.883	.829	.790	.000	.888	.867



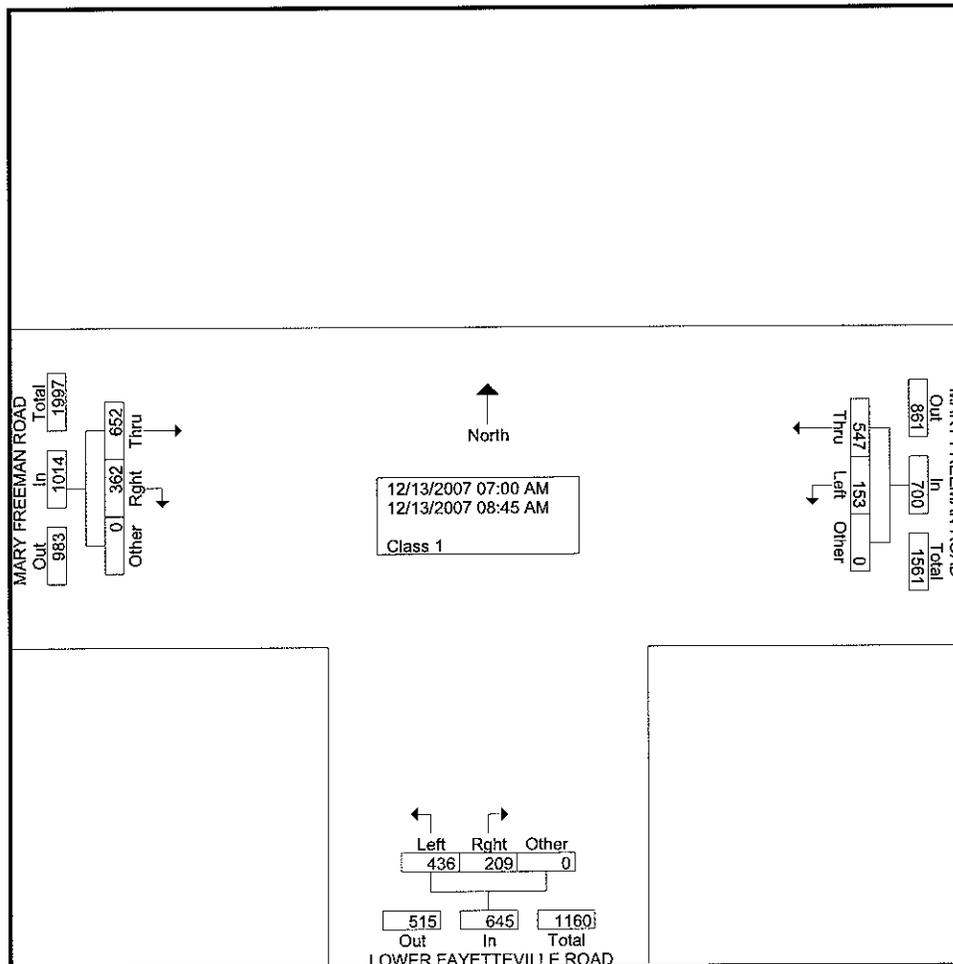
All Traffic Data Services, Inc.

1336 Farmer Road
Conyers, Ga 30012
Ph. 404-374-1283

File Name : LwrFayRd@MaryFreemanRdAM
Site Code : 00000000
Start Date : 12/13/2007
Page No : 1

Groups Printed- Class 1

Start Time	MARY FREEMAN ROAD Westbound				LOWER FAYETTEVILLE ROAD Northbound				MARY FREEMAN ROAD Eastbound				Int. Total
	Left	Thru	Other	App. Total	Left	Right	Other	App. Total	Thru	Right	Other	App. Total	
07:00 AM	15	17	0	32	25	21	0	46	57	39	0	96	174
07:15 AM	16	29	0	45	37	23	0	60	80	53	0	133	238
07:30 AM	28	69	0	97	80	39	0	119	103	71	0	174	390
07:45 AM	39	82	0	121	89	42	0	131	105	83	0	188	440
Total	98	197	0	295	231	125	0	356	345	246	0	591	1242
08:00 AM	21	90	0	111	73	49	0	122	130	45	0	175	408
08:15 AM	18	112	0	130	43	13	0	56	69	30	0	99	285
08:30 AM	10	99	0	109	56	12	0	68	54	19	0	73	250
08:45 AM	6	49	0	55	33	10	0	43	54	22	0	76	174
Total	55	350	0	405	205	84	0	289	307	116	0	423	1117
Grand Total	153	547	0	700	436	209	0	645	652	362	0	1014	2359
Apprch %	21.9	78.1	0		67.6	32.4	0		64.3	35.7	0		
Total %	6.5	23.2	0	29.7	18.5	8.9	0	27.3	27.6	15.3	0	43	

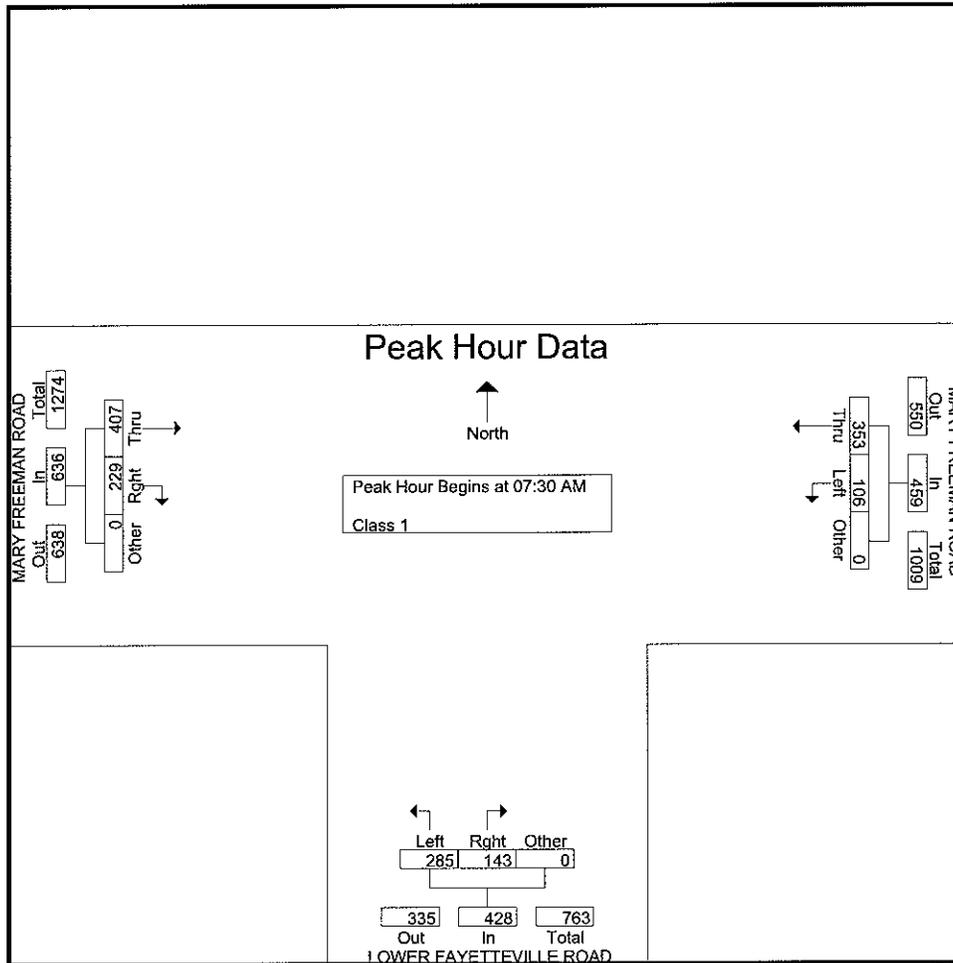


All Traffic Data Services, Inc.

1336 Farmer Road
 Conyers, Ga 30012
 Ph. 404-374-1283

File Name : LwrFayRd@MaryFreemanRdAM
 Site Code : 00000000
 Start Date : 12/13/2007
 Page No : 2

Start Time	MARY FREEMAN ROAD Westbound				LOWER FAYETTEVILLE ROAD Northbound				MARY FREEMAN ROAD Eastbound				Int. Total
	Left	Thru	Other	App. Total	Left	Right	Other	App. Total	Thru	Right	Other	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	28	69	0	97	80	39	0	119	103	71	0	174	390
07:45 AM	39	82	0	121	89	42	0	131	105	83	0	188	440
08:00 AM	21	90	0	111	73	49	0	122	130	45	0	175	408
08:15 AM	18	112	0	130	43	13	0	56	69	30	0	99	285
Total Volume	106	353	0	459	285	143	0	428	407	229	0	636	1523
% App. Total	23.1	76.9	0		66.6	33.4	0		64	36	0		
PHF	.679	.788	.000	.883	.801	.730	.000	.817	.783	.690	.000	.846	.865



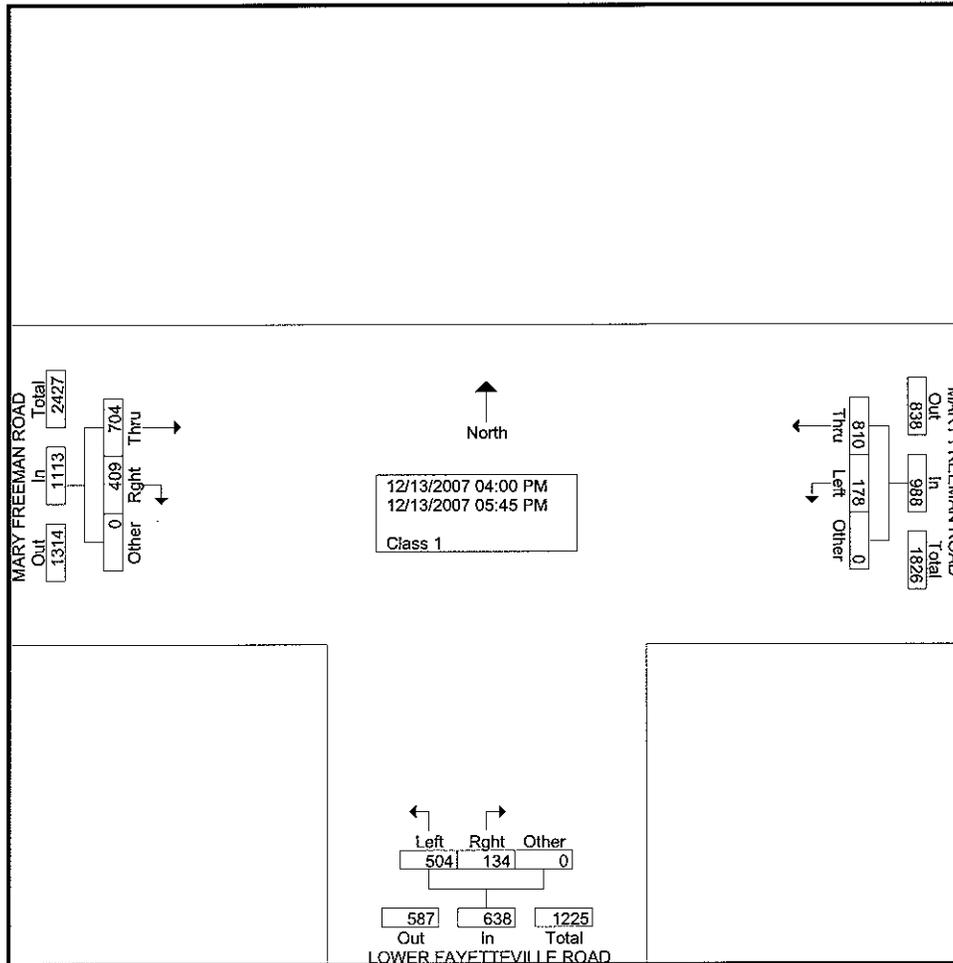
All Traffic Data Services, Inc.

1336 Farmer Road
Conyers, Ga 30012
Ph. 404-374-1283

File Name : LwrFayRd@MaryFreemanRdPM
Site Code : 00000000
Start Date : 12/13/2007
Page No : 1

Groups Printed- Class 1

Start Time	MARY FREEMAN ROAD Westbound				LOWER FAYETTEVILLE ROAD Northbound				MARY FREEMAN ROAD Eastbound				Int. Total
	Left	Thru	Other	App. Total	Left	Right	Other	App. Total	Thru	Right	Other	App. Total	
04:00 PM	23	93	0	116	59	21	0	80	70	35	0	105	301
04:15 PM	27	91	0	118	52	15	0	67	92	50	0	142	327
04:30 PM	20	95	0	115	33	13	0	46	65	49	0	114	275
04:45 PM	20	82	0	102	29	13	0	42	98	57	0	155	299
Total	90	361	0	451	173	62	0	235	325	191	0	516	1202
05:00 PM	19	109	0	128	80	19	0	99	92	50	0	142	369
05:15 PM	24	103	0	127	95	20	0	115	106	64	0	170	412
05:30 PM	24	122	0	146	75	15	0	90	88	53	0	141	377
05:45 PM	21	115	0	136	81	18	0	99	93	51	0	144	379
Total	88	449	0	537	331	72	0	403	379	218	0	597	1537
Grand Total	178	810	0	988	504	134	0	638	704	409	0	1113	2739
Apprch %	18	82	0		79	21	0		63.3	36.7	0		
Total %	6.5	29.6	0	36.1	18.4	4.9	0	23.3	25.7	14.9	0	40.6	

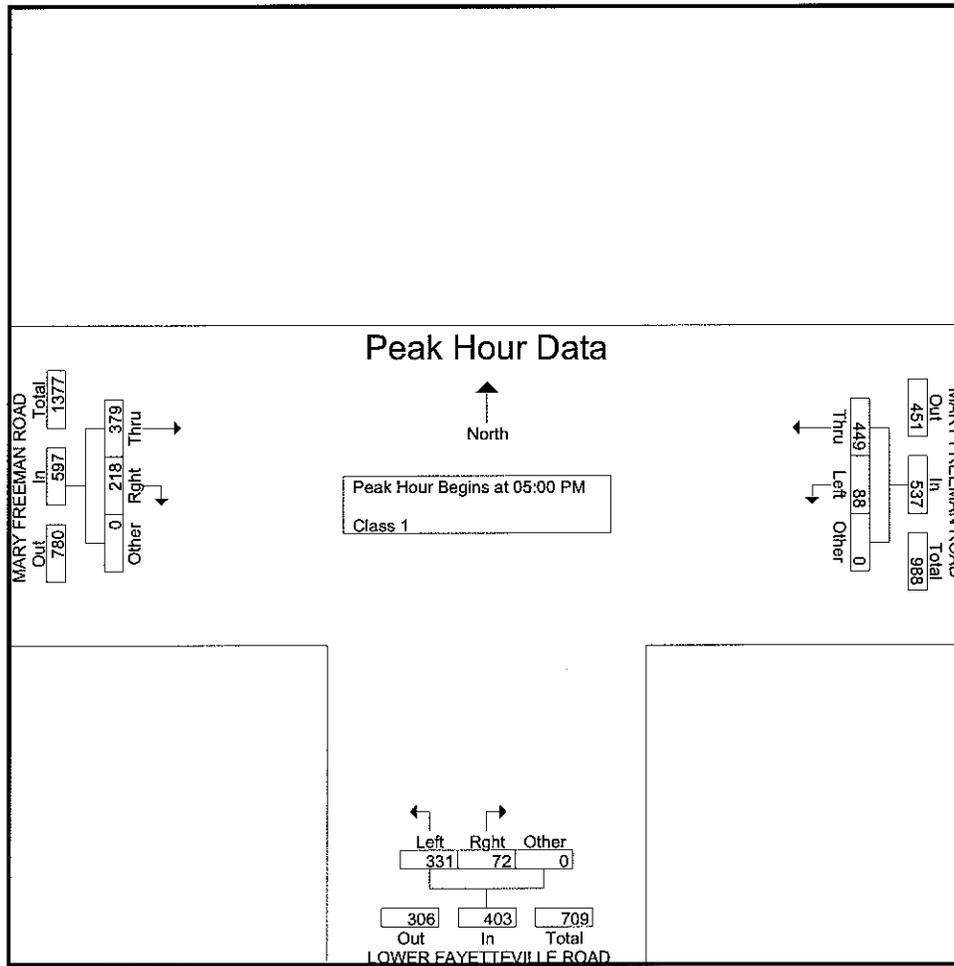


All Traffic Data Services, Inc.

1336 Farmer Road
Conyers, Ga 30012
Ph. 404-374-1283

File Name : LwrFayRd@MaryFreemanRdPM
Site Code : 00000000
Start Date : 12/13/2007
Page No : 2

Start Time	MARY FREEMAN ROAD Westbound				LOWER FAYETTEVILLE ROAD Northbound				MARY FREEMAN ROAD Eastbound				Int. Total
	Left	Thru	Other	App. Total	Left	Right	Other	App. Total	Thru	Right	Other	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	19	109	0	128	80	19	0	99	92	50	0	142	369
05:15 PM	24	103	0	127	95	20	0	115	106	64	0	170	412
05:30 PM	24	122	0	146	75	15	0	90	88	53	0	141	377
05:45 PM	21	115	0	136	81	18	0	99	93	51	0	144	379
Total Volume	88	449	0	537	331	72	0	403	379	218	0	597	1537
% App. Total	16.4	83.6	0		82.1	17.9	0		63.5	36.5	0		
PHF	.917	.920	.000	.920	.871	.900	.000	.876	.894	.852	.000	.878	.933



All Traffic Data Services, Inc.

1336 Farmer Road
Conyers, Ga 30012

Ph. 404-374-1283 File Name : LwrFayRd@NewnanXingBlvdAM

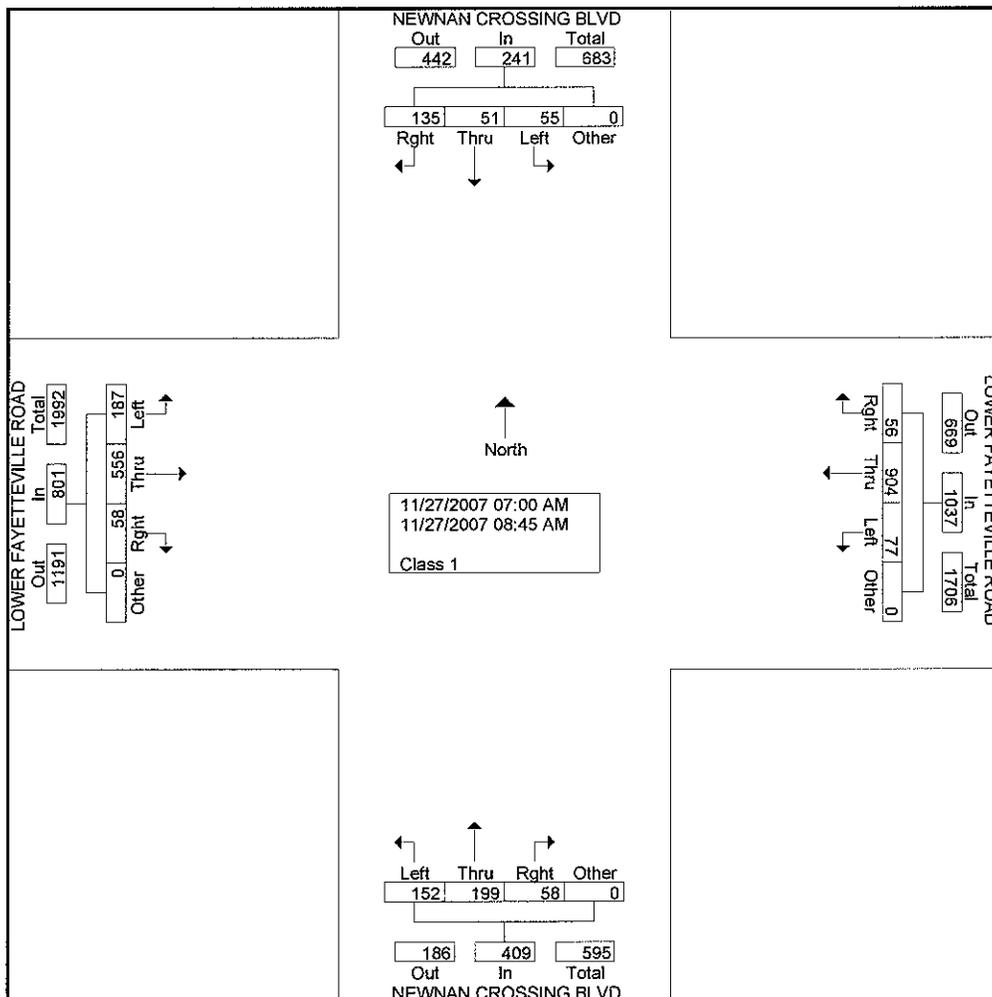
Site Code : 00000000

Start Date : 11/27/2007

Page No : 1

Groups Printed- Class 1

Start Time	NEWMAN CROSSING BLVD Southbound					LOWER FAYETTEVILLE ROAD Westbound					NEWMAN CROSSING BLVD Northbound					LOWER FAYETTEVILLE ROAD Eastbound					Int. Total
	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	
07:00 AM	5	5	9	0	19	4	54	9	0	67	9	34	4	0	47	24	46	3	0	73	206
07:15 AM	8	3	10	0	21	5	82	4	0	91	17	34	13	0	64	20	57	5	0	82	258
07:30 AM	10	4	22	0	36	7	116	4	0	127	23	31	11	0	65	19	95	9	0	123	351
07:45 AM	10	9	19	0	38	10	160	10	0	180	21	25	12	0	58	18	88	13	0	119	395
Total	33	21	60	0	114	26	412	27	0	465	70	124	40	0	234	81	286	30	0	397	1210
08:00 AM	5	6	19	0	30	21	132	12	0	165	17	27	5	0	49	24	61	6	0	91	335
08:15 AM	7	11	13	0	31	9	146	7	0	162	22	17	3	0	42	28	81	8	0	117	352
08:30 AM	5	5	21	0	31	12	111	8	0	131	20	19	4	0	43	27	68	6	0	101	306
08:45 AM	5	8	22	0	35	9	103	2	0	114	23	12	6	0	41	27	60	8	0	95	285
Total	22	30	75	0	127	51	492	29	0	572	82	75	18	0	175	106	270	28	0	404	1278
Grand Total	55	51	135	0	241	77	904	56	0	1037	152	199	58	0	409	187	556	58	0	801	2488
Apprch %	22.8	21.2	56	0		7.4	87.2	5.4	0		37.2	48.7	14.2	0		23.3	69.4	7.2	0		
Total %	2.2	2	5.4	0	9.7	3.1	36.3	2.3	0	41.7	6.1	8	2.3	0	16.4	7.5	22.3	2.3	0	32.2	



All Traffic Data Services, Inc.

1336 Farmer Road
Conyers, Ga 30012

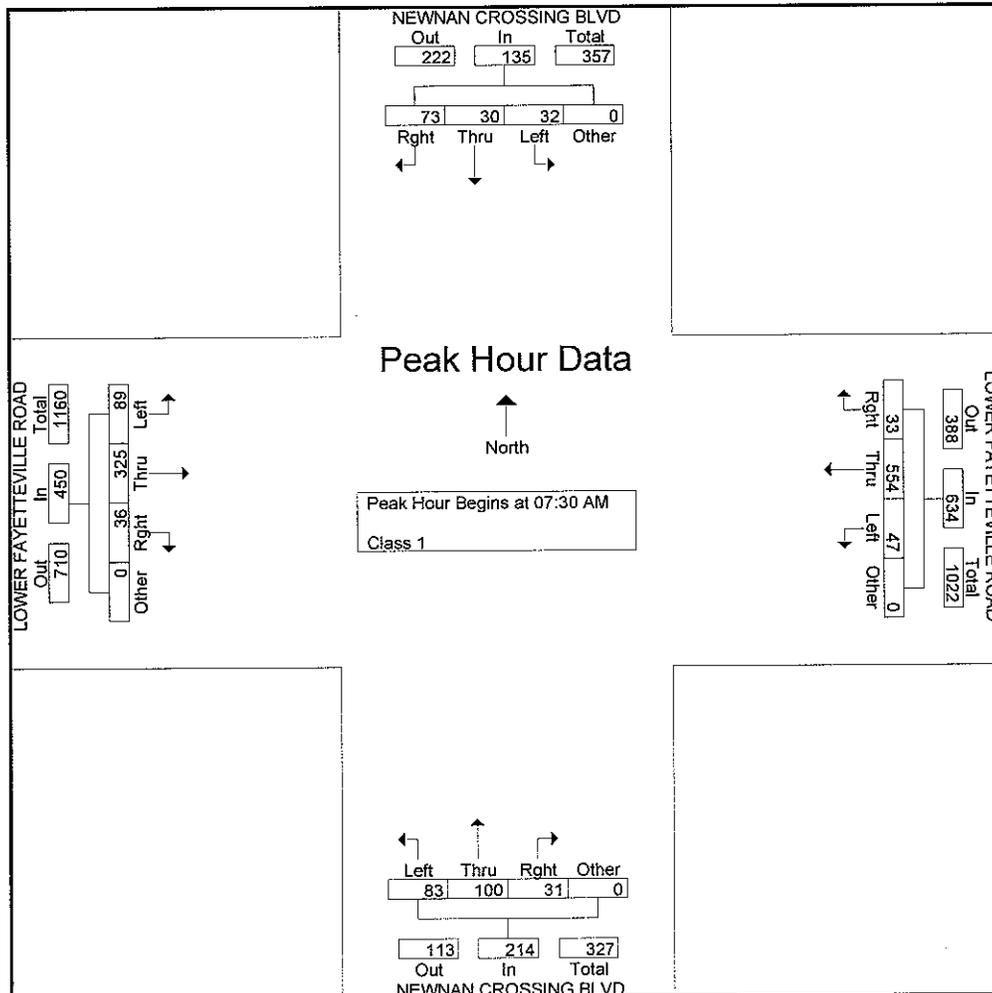
Ph. 404-374-1283 File Name : LwrFayRd@NewnanXingBlvdAM

Site Code : 00000000

Start Date : 11/27/2007

Page No : 2

Start Time	NEWMAN CROSSING BLVD Southbound					LOWER FAYETTEVILLE ROAD Westbound					NEWMAN CROSSING BLVD Northbound					LOWER FAYETTEVILLE ROAD Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	10	4	22	0	36	7	116	4	0	127	23	31	11	0	65	19	95	9	0	123	351
07:45 AM	10	9	19	0	38	10	160	10	0	180	21	25	12	0	58	18	88	13	0	119	395
08:00 AM	5	6	19	0	30	21	132	12	0	165	17	27	5	0	49	24	61	6	0	91	335
08:15 AM	7	11	13	0	31	9	146	7	0	162	22	17	3	0	42	28	81	8	0	117	352
Total Volume	32	30	73	0	135	47	554	33	0	634	83	100	31	0	214	89	325	36	0	450	1433
% App. Total	23.7	22.2	54.1	0		7.4	87.4	5.2	0		38.8	46.7	14.5	0		19.8	72.2	8	0		
PHF	.800	.682	.830	.000	.888	.560	.866	.688	.000	.881	.902	.806	.646	.000	.823	.795	.855	.692	.000	.915	.907



All Traffic Data Services, Inc.

1336 Farmer Road
Conyers, Ga 30012

Ph. 404-374-1283 File Name : LwrFayRd@NewnanXingBlvdPM

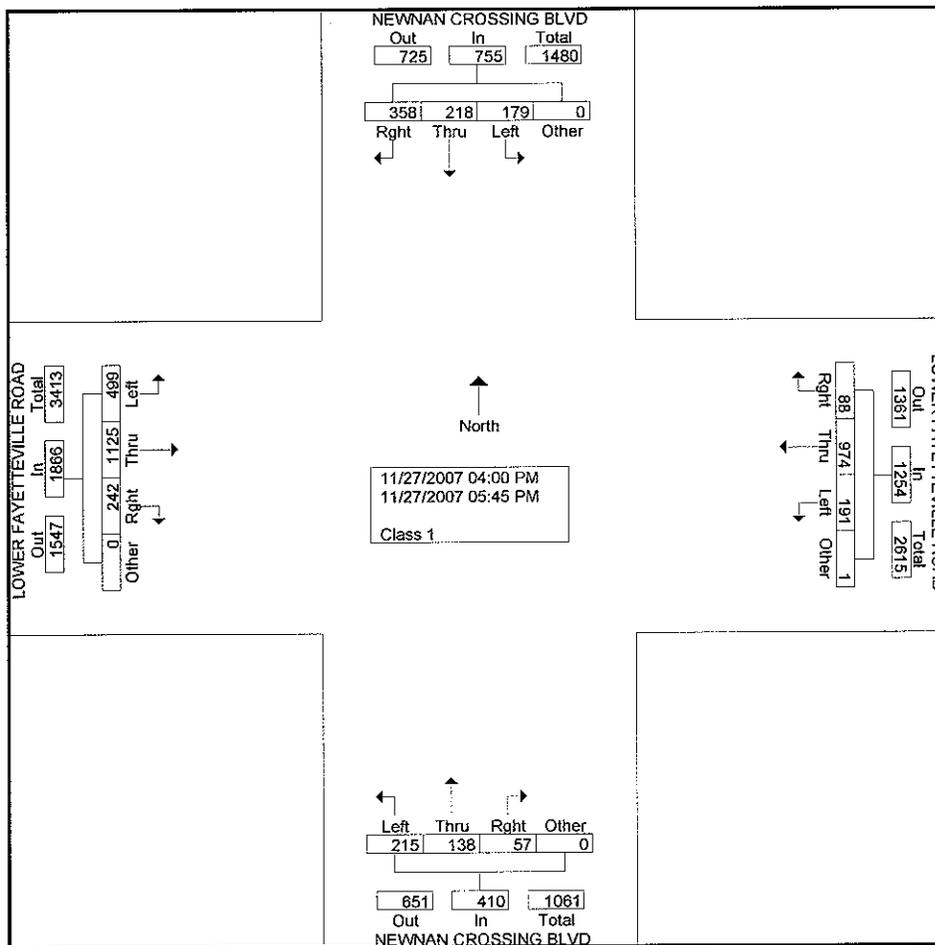
Site Code : 00000000

Start Date : 11/27/2007

Page No : 1

Groups Printed- Class 1

Start Time	NEWMAN CROSSING BLVD Southbound					LOWER FAYETTEVILLE ROAD Westbound					NEWMAN CROSSING BLVD Northbound					LOWER FAYETTEVILLE ROAD Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
04:00 PM	19	13	44	0	76	18	126	11	0	155	18	18	7	0	43	47	98	32	0	177	451
04:15 PM	14	30	39	0	83	19	101	9	0	129	23	13	10	0	46	49	121	20	0	190	448
04:30 PM	17	37	29	0	83	26	117	8	0	151	35	13	5	0	53	62	146	30	0	238	525
04:45 PM	18	31	58	0	107	25	139	2	0	166	12	17	6	0	35	68	138	34	0	240	548
Total	68	111	170	0	349	88	483	30	0	601	88	61	28	0	177	226	503	116	0	845	1972
05:00 PM	34	16	48	0	98	9	122	9	0	140	29	14	10	0	53	65	156	38	0	259	550
05:15 PM	29	24	49	0	102	40	117	23	1	181	30	15	3	0	48	70	142	43	0	255	586
05:30 PM	22	26	43	0	91	27	156	15	0	198	33	23	10	0	66	75	145	23	0	243	598
05:45 PM	26	41	48	0	115	27	96	11	0	134	35	25	6	0	66	63	179	22	0	264	579
Total	111	107	188	0	406	103	491	58	1	653	127	77	29	0	233	273	622	126	0	1021	2313
Grand Total	179	218	358	0	755	191	974	88	1	1254	215	138	57	0	410	499	1125	242	0	1866	4285
Apprch %	23.7	28.9	47.4	0		15.2	77.7	7	0.1		52.4	33.7	13.9	0		26.7	60.3	13	0		
Total %	4.2	5.1	8.4	0	17.6	4.5	22.7	2.1	0	29.3	5	3.2	1.3	0	9.6	11.6	26.3	5.6	0	43.5	



All Traffic Data Services, Inc.

1336 Farmer Road
Conyers, Ga 30012

Ph. 404-374-1283

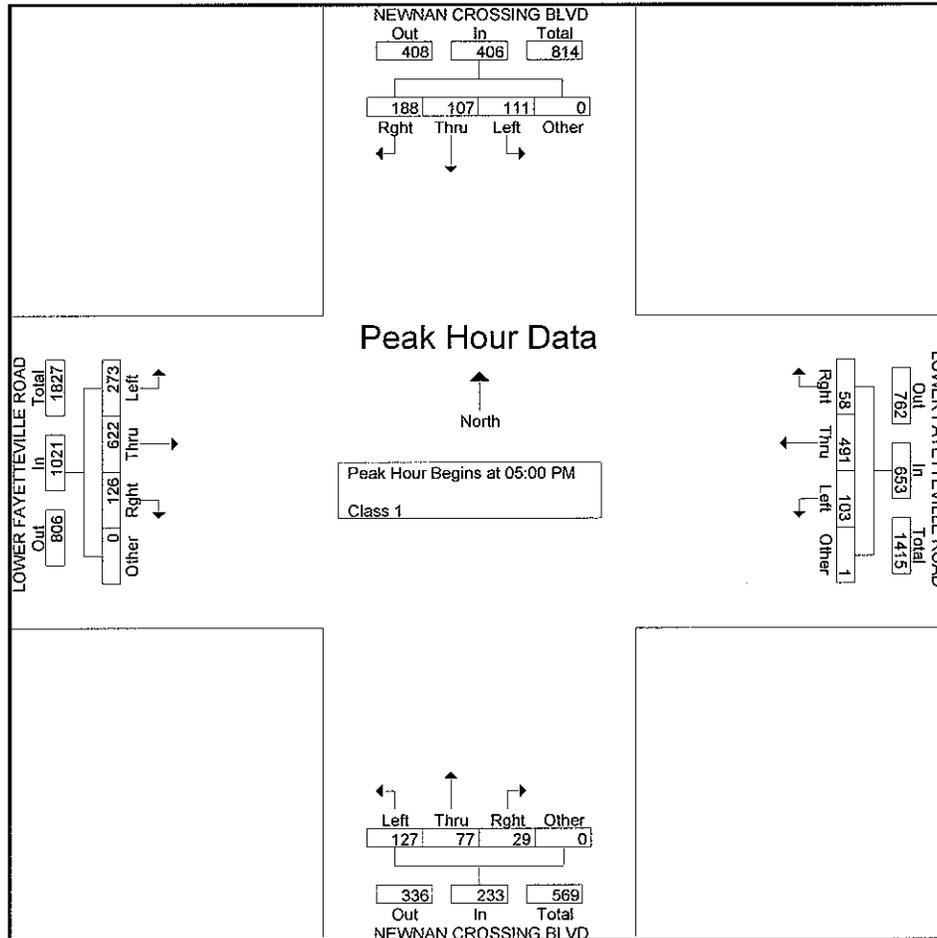
File Name : LwrFayRd@NewnanXingBlvdPM

Site Code : 00000000

Start Date : 11/27/2007

Page No : 2

Start Time	NEWNAN CROSSING BLVD Southbound					LOWER FAYETTEVILLE ROAD Westbound					NEWNAN CROSSING BLVD Northbound					LOWER FAYETTEVILLE ROAD Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	34	16	48	0	98	9	122	9	0	140	29	14	10	0	53	65	156	38	0	259	550
05:15 PM	29	24	49	0	102	40	117	23	1	181	30	15	3	0	48	70	142	43	0	255	586
05:30 PM	22	26	43	0	91	27	156	15	0	198	33	23	10	0	66	75	145	23	0	243	598
05:45 PM	26	41	48	0	115	27	96	11	0	134	35	25	6	0	66	63	179	22	0	264	579
Total Volume	111	107	188	0	406	103	491	58	1	653	127	77	29	0	233	273	622	126	0	1021	2313
% App. Total	27.3	26.4	46.3	0		15.8	75.2	8.9	0.2		54.5	33	12.4	0		26.7	60.9	12.3	0		
PHF	.816	.652	.959	.000	.883	.644	.787	.630	.250	.824	.907	.770	.725	.000	.883	.910	.869	.733	.000	.967	.967



All Traffic Data Services, Inc.

1336 Farmer Road
Conyers, Ga 30012

Ph. 404-374-1265 File Name : NewnanXingBypass@LwrFayRdAM

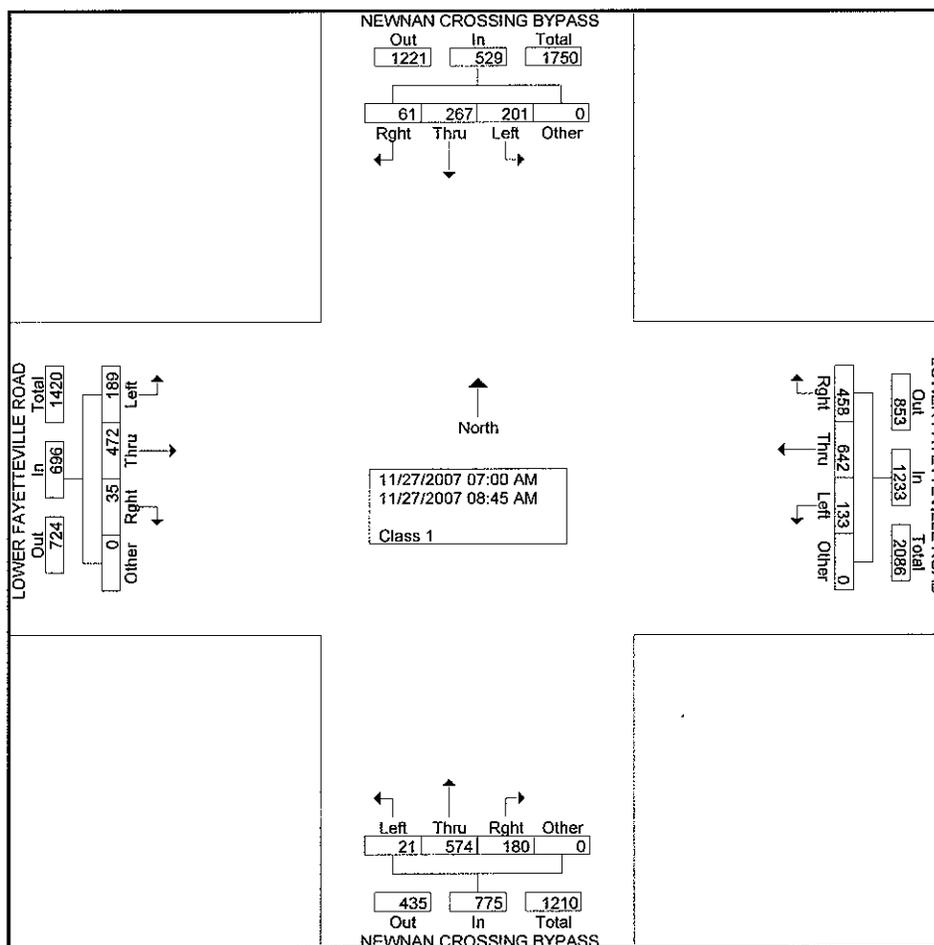
Site Code : 00000000

Start Date : 11/27/2007

Page No : 1

Groups Printed- Class 1

Start Time	NEWNAN CROSSING BYPASS Southbound					LOWER FAYETTEVILLE ROAD Westbound					NEWNAN CROSSING BYPASS Northbound					LOWER FAYETTEVILLE ROAD Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
07:00 AM	22	32	4	0	58	4	39	30	0	73	0	40	16	0	56	27	41	5	0	73	260
07:15 AM	24	40	5	0	69	8	55	46	0	109	2	67	20	0	89	36	51	0	0	87	354
07:30 AM	30	28	4	0	62	26	73	68	0	167	3	89	24	0	116	29	83	8	0	120	465
07:45 AM	18	39	3	0	60	20	94	89	0	203	4	107	36	0	147	28	57	10	0	95	505
Total	94	139	16	0	249	58	261	233	0	552	9	303	96	0	408	120	232	23	0	375	1584
08:00 AM	32	27	12	0	71	30	80	61	0	171	1	81	20	0	102	13	58	3	0	74	418
08:15 AM	29	32	13	0	74	19	93	64	0	176	4	73	24	0	101	16	59	6	0	81	432
08:30 AM	25	31	12	0	68	14	108	45	0	167	5	63	24	0	92	11	59	1	0	71	398
08:45 AM	21	38	8	0	67	12	100	55	0	167	2	54	16	0	72	29	64	2	0	95	401
Total	107	128	45	0	280	75	381	225	0	681	12	271	84	0	367	69	240	12	0	321	1649
Grand Total	201	267	61	0	529	133	642	458	0	1233	21	574	180	0	775	189	472	35	0	696	3233
Apprch %	38	50.5	11.5	0		10.8	52.1	37.1	0		2.7	74.1	23.2	0		27.2	67.8	5	0		
Total %	6.2	8.3	1.9	0	16.4	4.1	19.9	14.2	0	38.1	0.6	17.8	5.6	0	24	5.8	14.6	1.1	0	21.5	



All Traffic Data Services, Inc.

1336 Farmer Road
Conyers, Ga 30012

Ph. 404-374-1285

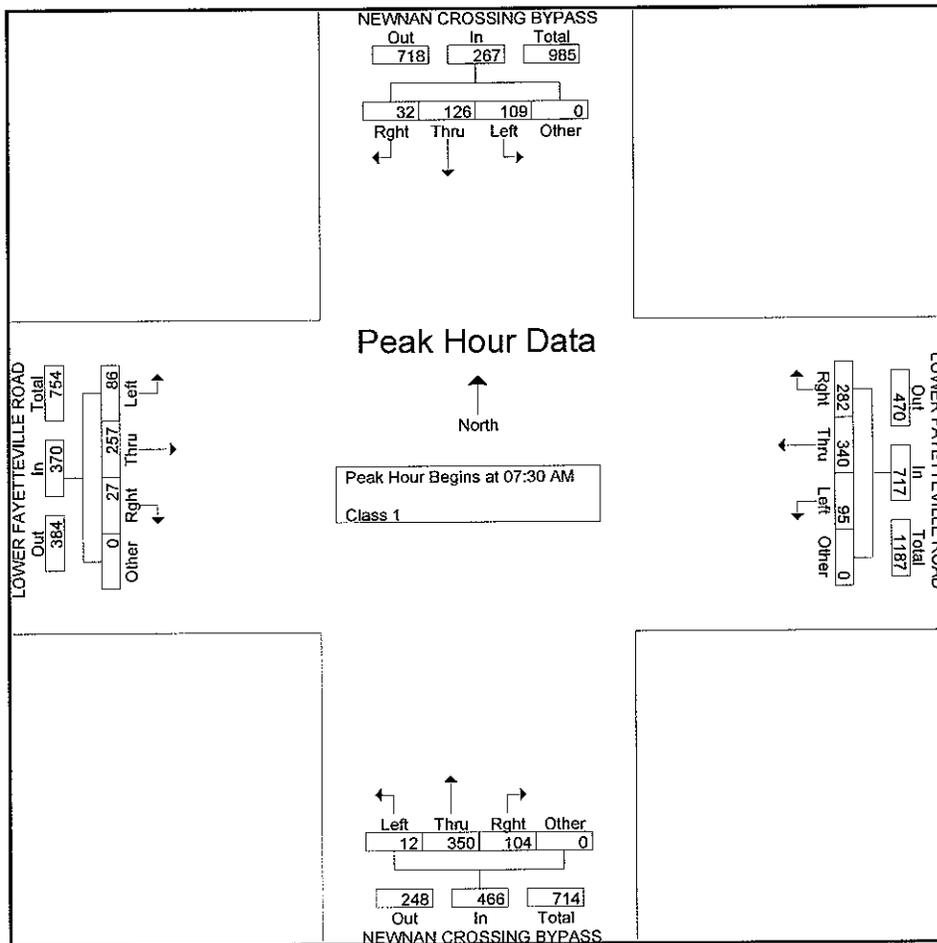
File Name : NewnanXingBypass@LwrFayRdAM

Site Code : 00000000

Start Date : 11/27/2007

Page No : 2

Start Time	NEWNAN CROSSING BYPASS Southbound					LOWER FAYETTEVILLE ROAD Westbound					NEWNAN CROSSING BYPASS Northbound					LOWER FAYETTEVILLE ROAD Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	30	28	4	0	62	26	73	68	0	167	3	89	24	0	116	29	83	8	0	120	465
07:45 AM	18	39	3	0	60	20	94	89	0	203	4	107	36	0	147	28	57	10	0	95	505
08:00 AM	32	27	12	0	71	30	80	61	0	171	1	81	20	0	102	13	58	3	0	74	418
08:15 AM	29	32	13	0	74	19	93	64	0	176	4	73	24	0	101	16	59	6	0	81	432
Total Volume	109	126	32	0	267	95	340	282	0	717	12	350	104	0	466	86	257	27	0	370	1820
% App. Total	40.8	47.2	12	0		13.2	47.4	39.3	0		2.6	75.1	22.3	0		23.2	69.5	7.3	0		
PHF	.852	.808	.615	.000	.902	.792	.904	.792	.000	.883	.750	.818	.722	.000	.793	.741	.774	.675	.000	.771	.901



All Traffic Data Services, Inc.

1336 Farmer Road
Conyers, Ga 30012

Ph. 404-374-1281

File Name : NewnanXingBypass@LwrFayRdPM

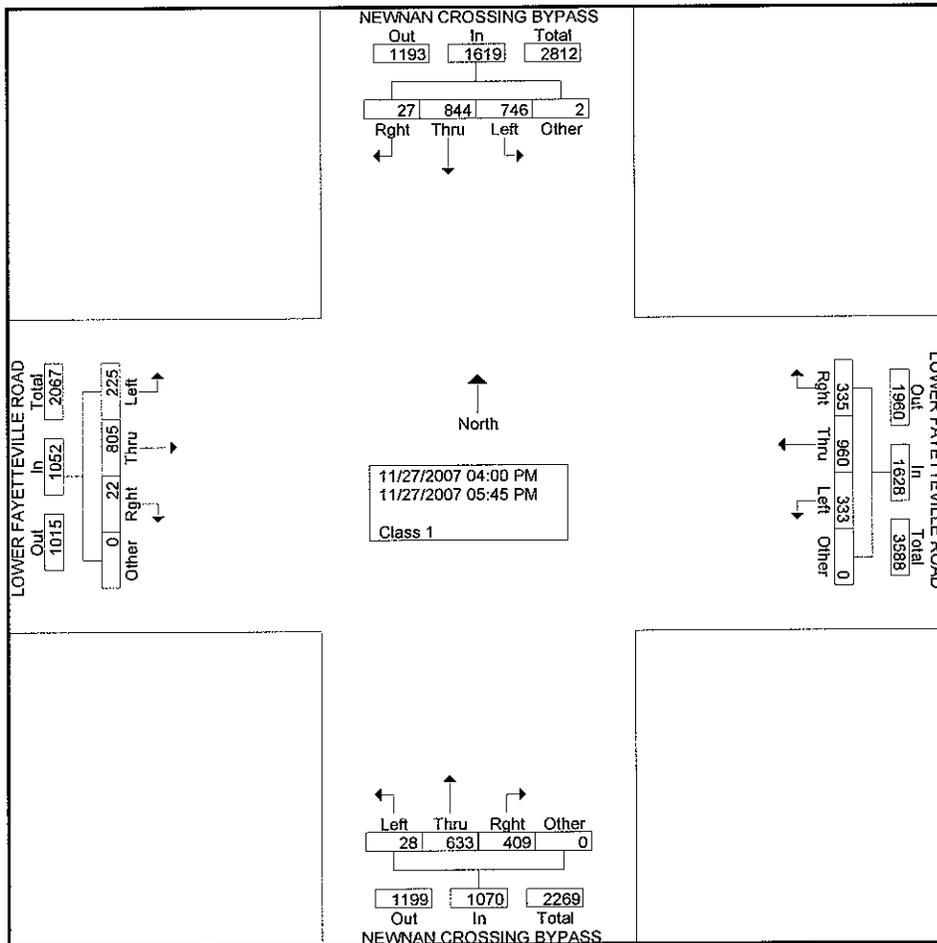
Site Code : 00000000

Start Date : 11/27/2007

Page No : 1

Groups Printed- Class 1

Start Time	NEWMAN CROSSING BYPASS Southbound					LOWER FAYETTEVILLE ROAD Westbound					NEWMAN CROSSING BYPASS Northbound					LOWER FAYETTEVILLE ROAD Eastbound					Int. Total
	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	
04:00 PM	70	91	8	2	171	36	100	49	0	185	5	77	38	0	120	23	60	5	0	88	564
04:15 PM	74	107	1	0	182	30	108	32	0	170	2	81	40	0	123	29	88	2	0	119	594
04:30 PM	93	103	3	0	199	31	110	55	0	196	1	54	65	0	120	20	78	1	0	99	614
04:45 PM	76	109	2	0	187	33	153	30	0	216	3	71	54	0	128	23	121	3	0	147	678
Total	313	410	14	2	739	130	471	166	0	767	11	283	197	0	491	95	347	11	0	453	2450
05:00 PM	100	108	3	0	211	48	134	48	0	230	5	71	52	0	128	26	116	4	0	146	715
05:15 PM	112	100	3	0	215	54	123	59	0	236	5	93	58	0	156	46	106	1	0	153	760
05:30 PM	114	115	3	0	232	46	132	28	0	206	2	102	42	0	146	34	121	2	0	157	741
05:45 PM	107	111	4	0	222	55	100	34	0	189	5	84	60	0	149	24	115	4	0	143	703
Total	433	434	13	0	880	203	489	169	0	861	17	350	212	0	579	130	458	11	0	599	2919
Grand Total	746	844	27	2	1619	333	960	335	0	1628	28	633	409	0	1070	225	805	22	0	1052	5369
Apprch %	46.1	52.1	1.7	0.1		20.5	59	20.6	0		2.6	59.2	38.2	0		21.4	76.5	2.1	0		
Total %	13.9	15.7	0.5	0	30.2	6.2	17.9	6.2	0	30.3	0.5	11.8	7.6	0	19.9	4.2	15	0.4	0	19.6	



All Traffic Data Services, Inc.

1336 Farmer Road
Conyers, Ga 30012

Ph. 404-374-1285

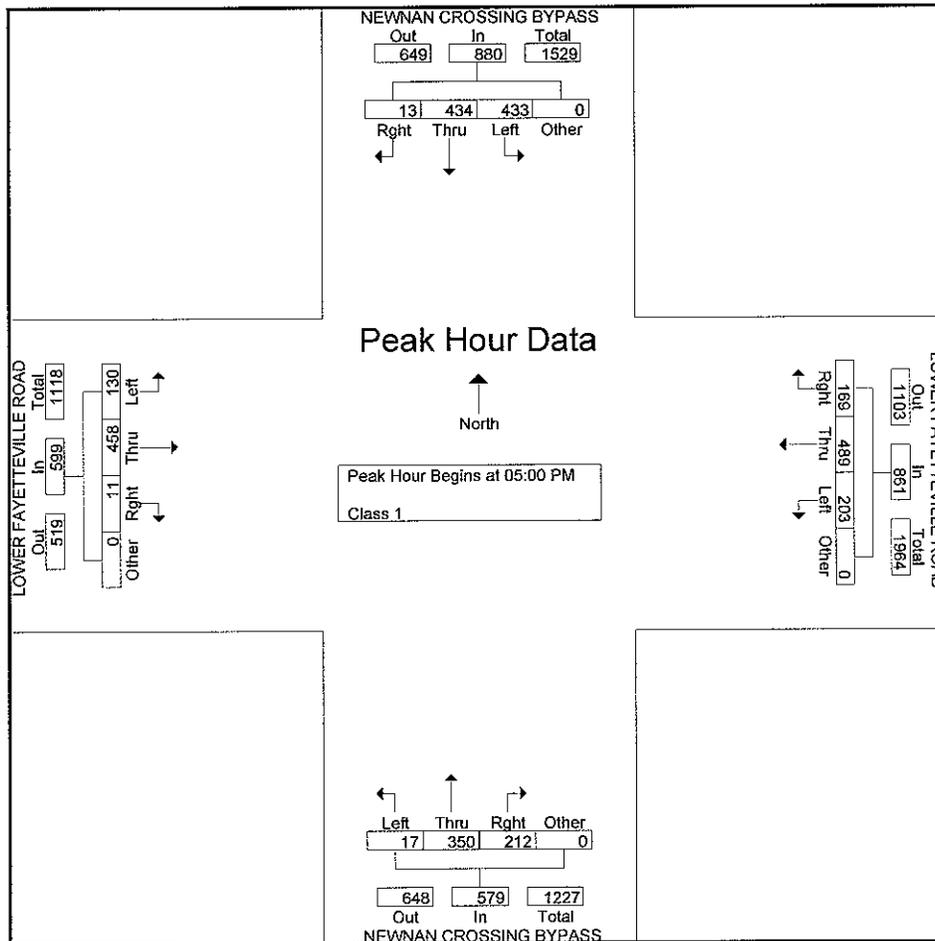
File Name : NewnanXingBypass@LwrFayRdPM

Site Code : 00000000

Start Date : 11/27/2007

Page No : 2

Start Time	NEWNAN CROSSING BYPASS Southbound					LOWER FAYETTEVILLE ROAD Westbound					NEWNAN CROSSING BYPASS Northbound					LOWER FAYETTEVILLE ROAD Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	100	108	3	0	211	48	134	48	0	230	5	71	52	0	128	26	116	4	0	146	715
05:15 PM	112	100	3	0	215	54	123	59	0	236	5	93	58	0	156	46	106	1	0	153	760
05:30 PM	114	115	3	0	232	46	132	28	0	206	2	102	42	0	146	34	121	2	0	157	741
05:45 PM	107	111	4	0	222	55	100	34	0	189	5	84	60	0	149	24	115	4	0	143	703
Total Volume	433	434	13	0	880	203	489	169	0	861	17	350	212	0	579	130	458	11	0	599	2919
% App. Total	49.2	49.3	1.5	0		23.6	56.8	19.6	0		2.9	60.4	36.6	0		21.7	76.5	1.8	0		
PHF	.950	.943	.813	.000	.948	.923	.912	.716	.000	.912	.850	.858	.883	.000	.928	.707	.946	.688	.000	.954	.960



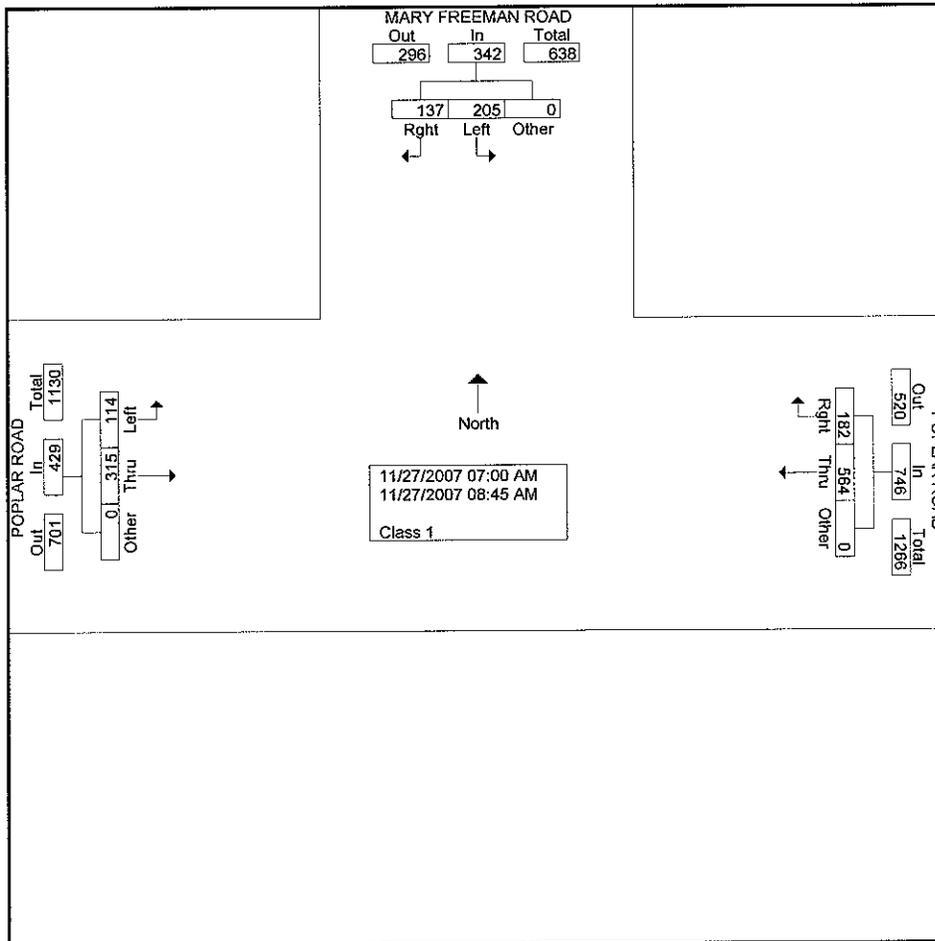
All Traffic Data Services, Inc.

1336 Farmer Road
 Conyers, Ga 30012
 Ph. 404-374-1283

File Name : MaryFreemanRd@PoplarRdAM
 Site Code : 04
 Start Date : 11/27/2007
 Page No : 1

Groups Printed- Class 1

Start Time	MARY FREEMAN ROAD Southbound				POPLAR ROAD Westbound				POPLAR ROAD Eastbound				Int. Total
	Left	Rght	Other	App. Total	Thru	Rght	Other	App. Total	Left	Thru	Other	App. Total	
07:00 AM	16	15	0	31	54	13	0	67	10	33	0	43	141
07:15 AM	27	18	0	45	68	29	0	97	15	61	0	76	218
07:30 AM	22	23	0	45	94	20	0	114	25	39	0	64	223
07:45 AM	30	30	0	60	97	36	0	133	24	52	0	76	269
Total	95	86	0	181	313	98	0	411	74	185	0	259	851
08:00 AM	52	18	0	70	72	22	0	94	13	41	0	54	218
08:15 AM	39	15	0	54	79	31	0	110	7	34	0	41	205
08:30 AM	10	8	0	18	59	21	0	80	12	30	0	42	140
08:45 AM	9	10	0	19	41	10	0	51	8	25	0	33	103
Total	110	51	0	161	251	84	0	335	40	130	0	170	666
Grand Total	205	137	0	342	564	182	0	746	114	315	0	429	1517
Apprch %	59.9	40.1	0		75.6	24.4	0		26.6	73.4	0		
Total %	13.5	9	0	22.5	37.2	12	0	49.2	7.5	20.8	0	28.3	

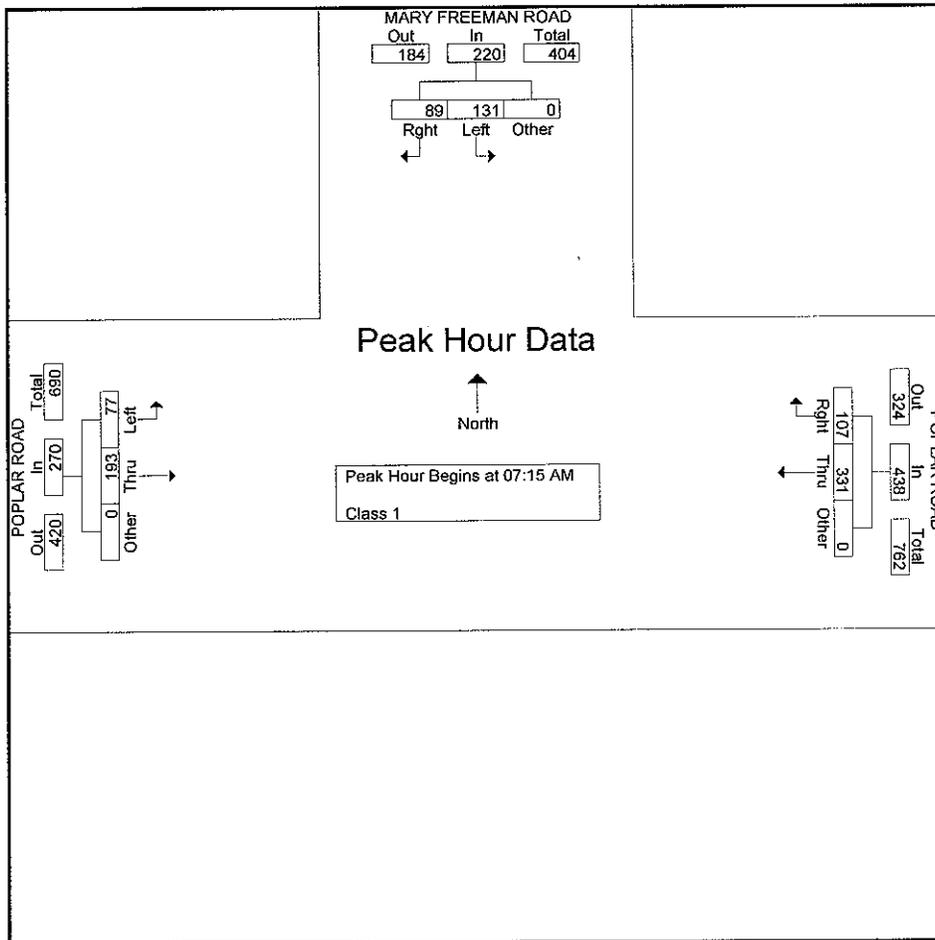


All Traffic Data Services, Inc.

1336 Farmer Road
 Conyers, Ga 30012
 Ph. 404-374-1283

File Name : MaryFreemanRd@PoplarRdAM
 Site Code : 04
 Start Date : 11/27/2007
 Page No : 2

Start Time	MARY FREEMAN ROAD Southbound				POPLAR ROAD Westbound				POPLAR ROAD Eastbound				Int. Total
	Left	Right	Other	App. Total	Thru	Right	Other	App. Total	Left	Thru	Other	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	27	18	0	45	68	29	0	97	15	61	0	76	218
07:30 AM	22	23	0	45	94	20	0	114	25	39	0	64	223
07:45 AM	30	30	0	60	97	36	0	133	24	52	0	76	269
08:00 AM	52	18	0	70	72	22	0	94	13	41	0	54	218
Total Volume	131	89	0	220	331	107	0	438	77	193	0	270	928
% App. Total	59.5	40.5	0		75.6	24.4	0		28.5	71.5	0		
PHF	.630	.742	.000	.786	.853	.743	.000	.823	.770	.791	.000	.888	.862



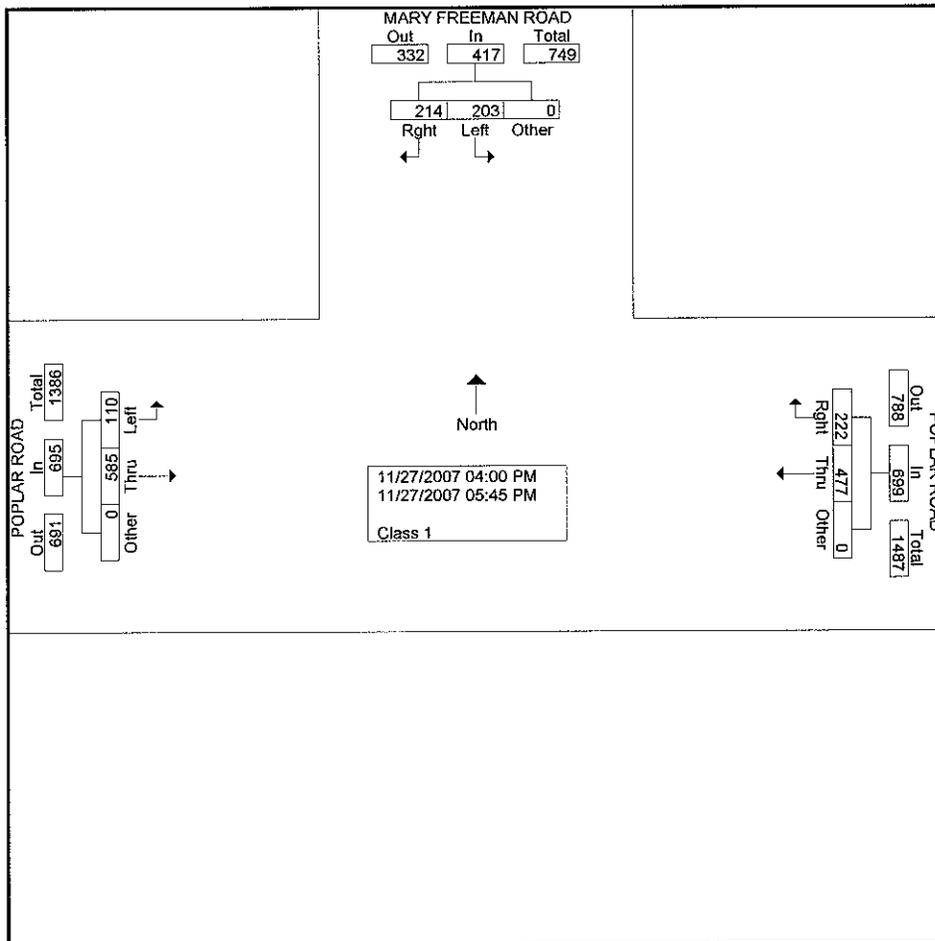
All Traffic Data Services, Inc.

1336 Farmer Road
 Conyers, Ga 30012
 Ph. 404-374-1283

File Name : MaryFreemanRd@PoplarRdPM
 Site Code : 04
 Start Date : 11/27/2007
 Page No : 1

Groups Printed- Class 1

Start Time	MARY FREEMAN ROAD Southbound				POPLAR ROAD Westbound				POPLAR ROAD Eastbound				Int. Total
	Left	Right	Other	App. Total	Thru	Right	Other	App. Total	Left	Thru	Other	App. Total	
04:00 PM	18	45	0	63	85	21	0	106	13	60	0	73	242
04:15 PM	29	27	0	56	64	23	0	87	14	67	0	81	224
04:30 PM	22	33	0	55	66	37	0	103	10	56	0	66	224
04:45 PM	26	34	0	60	42	21	0	63	10	56	0	66	189
Total	95	139	0	234	257	102	0	359	47	239	0	286	879
05:00 PM	26	20	0	46	36	18	0	54	22	85	0	107	207
05:15 PM	26	18	0	44	65	37	0	102	16	99	0	115	261
05:30 PM	29	24	0	53	56	34	0	90	10	79	0	89	232
05:45 PM	27	13	0	40	63	31	0	94	15	83	0	98	232
Total	108	75	0	183	220	120	0	340	63	346	0	409	932
Grand Total	203	214	0	417	477	222	0	699	110	585	0	695	1811
Apprch %	48.7	51.3	0		68.2	31.8	0		15.8	84.2	0		
Total %	11.2	11.8	0	23	26.3	12.3	0	38.6	6.1	32.3	0	38.4	

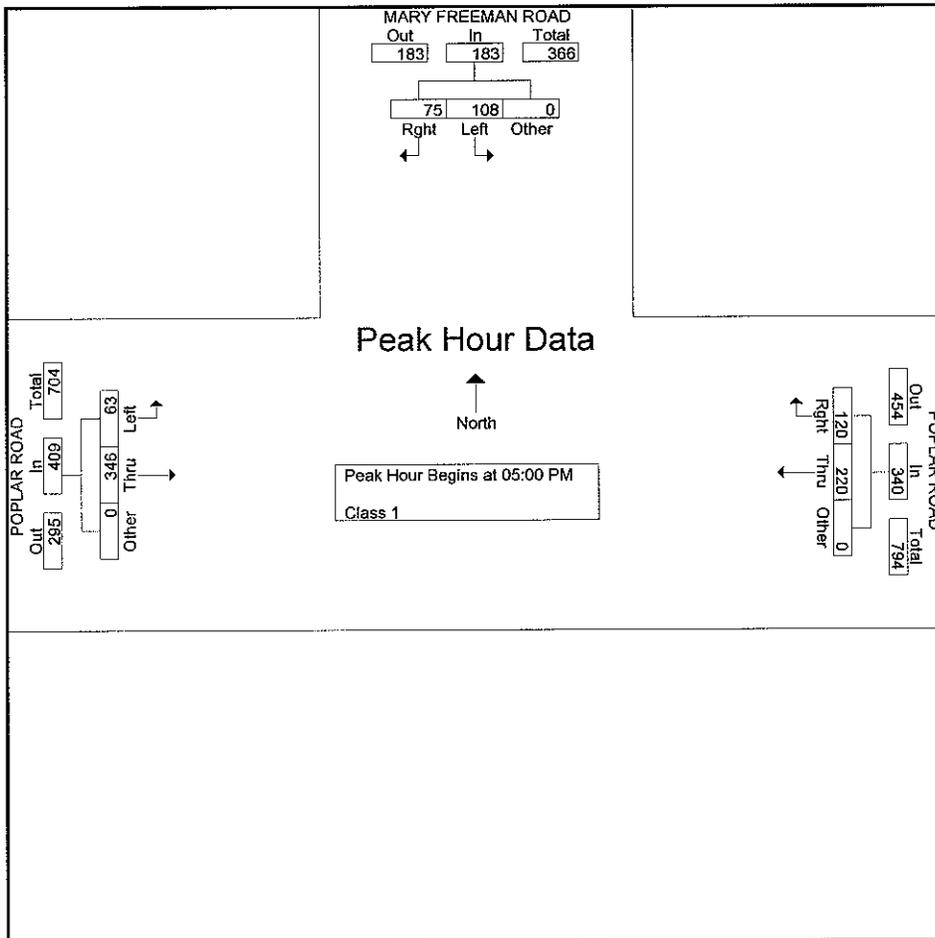


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1336 Farmer Road
 Conyers, Ga 30012
 Ph. 404-374-1283

File Name : MaryFreemanRd@PoplarRdPM
 Site Code : 04
 Start Date : 11/27/2007
 Page No : 2

Start Time	MARY FREEMAN ROAD Southbound				POPLAR ROAD Westbound				POPLAR ROAD Eastbound				Int. Total
	Left	Right	Other	App. Total	Thru	Right	Other	App. Total	Left	Thru	Other	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	26	20	0	46	36	18	0	54	22	85	0	107	207
05:15 PM	26	18	0	44	65	37	0	102	16	99	0	115	261
05:30 PM	29	24	0	53	56	34	0	90	10	79	0	89	232
05:45 PM	27	13	0	40	63	31	0	94	15	83	0	98	232
Total Volume	108	75	0	183	220	120	0	340	63	346	0	409	932
% App. Total	59	41	0		64.7	35.3	0		15.4	84.6	0		
PHF	.931	.781	.000	.863	.846	.811	.000	.833	.716	.874	.000	.889	.893



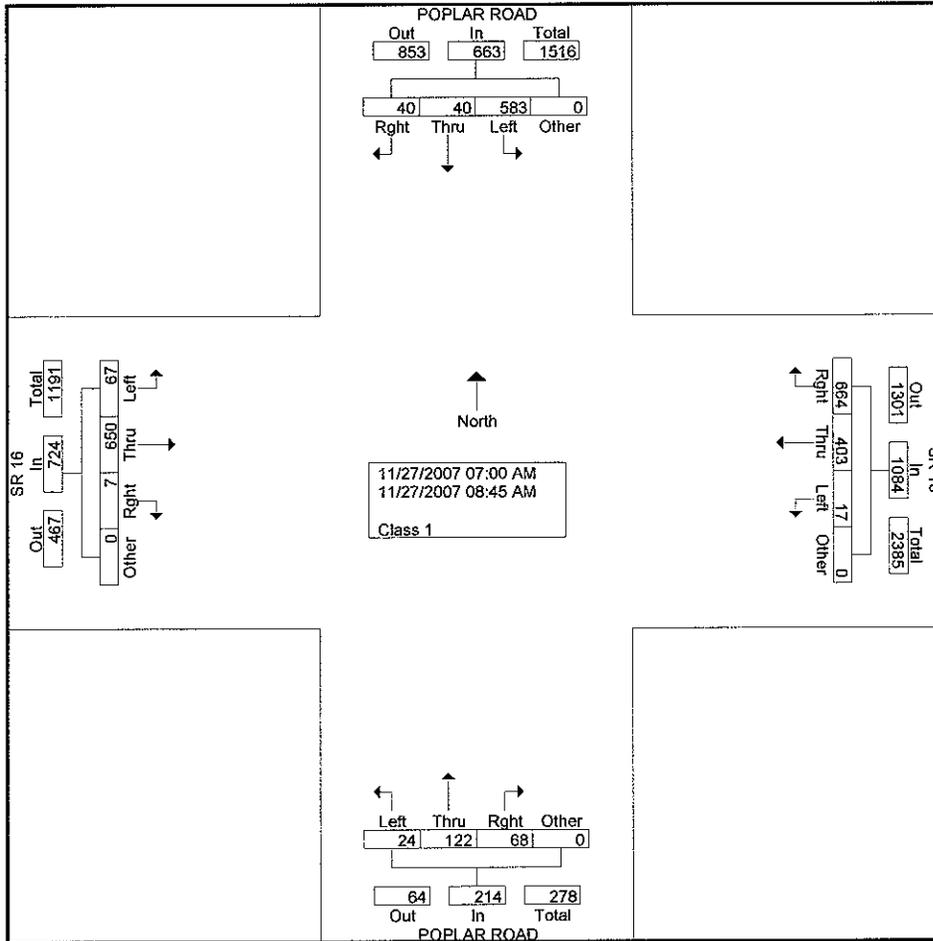
All Traffic Data Services, Inc.

1336 Farmer Road
Conyers, Ga 30012
Ph. 404-374-1283

File Name : PoplarRd@SR16AM
Site Code : 00000000
Start Date : 11/27/2007
Page No : 1

Groups Printed- Class 1

Start Time	POPLAR ROAD Southbound					SR 16 Westbound					POPLAR ROAD Northbound					SR 16 Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
07:00 AM	49	3	1	0	53	1	46	82	0	129	5	14	6	0	25	6	58	1	0	65	272
07:15 AM	60	6	4	0	70	0	57	86	0	143	4	15	3	0	22	10	80	2	0	92	327
07:30 AM	113	7	13	0	133	4	66	159	0	229	0	39	16	0	55	26	125	0	0	151	568
07:45 AM	121	9	8	0	138	1	52	112	0	165	1	18	11	0	30	8	121	2	0	131	464
Total	343	25	26	0	394	6	221	439	0	666	10	86	36	0	132	50	384	5	0	439	1631
08:00 AM	137	7	2	0	146	8	85	95	0	188	4	12	20	0	36	7	125	0	0	132	502
08:15 AM	44	1	4	0	49	2	43	52	0	97	0	10	4	0	14	0	39	0	0	39	199
08:30 AM	29	4	4	0	37	0	25	50	0	75	5	8	6	0	19	7	50	1	0	58	189
08:45 AM	30	3	4	0	37	1	29	28	0	58	5	6	2	0	13	3	52	1	0	56	164
Total	240	15	14	0	269	11	182	225	0	418	14	36	32	0	82	17	266	2	0	285	1054
Grand Total	583	40	40	0	663	17	403	664	0	1084	24	122	68	0	214	67	650	7	0	724	2685
Apprch %	87.9	6	6	0		1.6	37.2	61.3	0		11.2	57	31.8	0		9.3	89.8	1	0		
Total %	21.7	1.5	1.5	0	24.7	0.6	15	24.7	0	40.4	0.9	4.5	2.5	0	8	2.5	24.2	0.3	0	27	

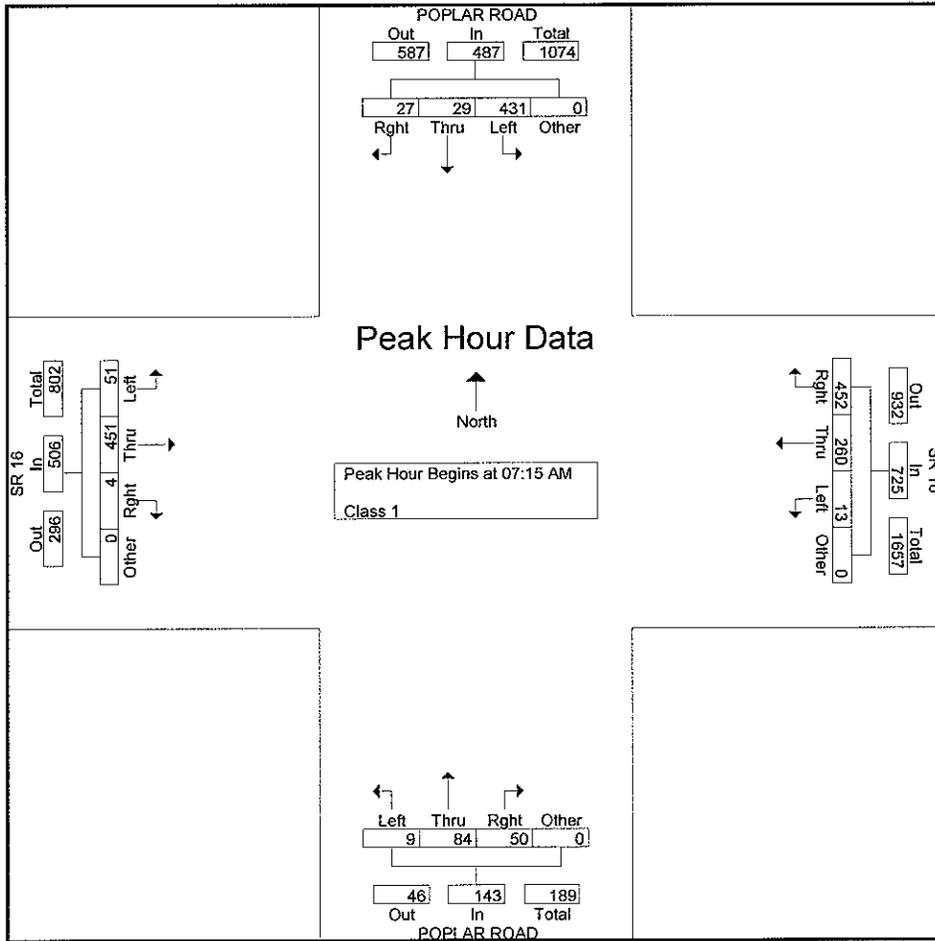


All Traffic Data Services, Inc.

1336 Farmer Road
 Conyers, Ga 30012
 Ph. 404-374-1283

File Name : PoplarRd@SR16AM
 Site Code : 00000000
 Start Date : 11/27/2007
 Page No : 2

Start Time	POPLAR ROAD Southbound					SR 16 Westbound					POPLAR ROAD Northbound					SR 16 Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	60	6	4	0	70	0	57	86	0	143	4	15	3	0	22	10	80	2	0	92	327
07:30 AM	113	7	13	0	133	4	66	159	0	229	0	39	16	0	55	26	125	0	0	151	568
07:45 AM	121	9	8	0	138	1	52	112	0	165	1	18	11	0	30	8	121	2	0	131	464
08:00 AM	137	7	2	0	146	8	85	95	0	188	4	12	20	0	36	7	125	0	0	132	502
Total Volume	431	29	27	0	487	13	260	452	0	725	9	84	50	0	143	51	451	4	0	506	1861
% App. Total	88.5	6	5.5	0		1.8	35.9	62.3	0		6.3	58.7	35	0		10.1	89.1	0.8	0		
PHF	.786	.806	.519	.000	.834	.406	.765	.711	.000	.791	.563	.538	.625	.000	.650	.490	.902	.500	.000	.838	.819



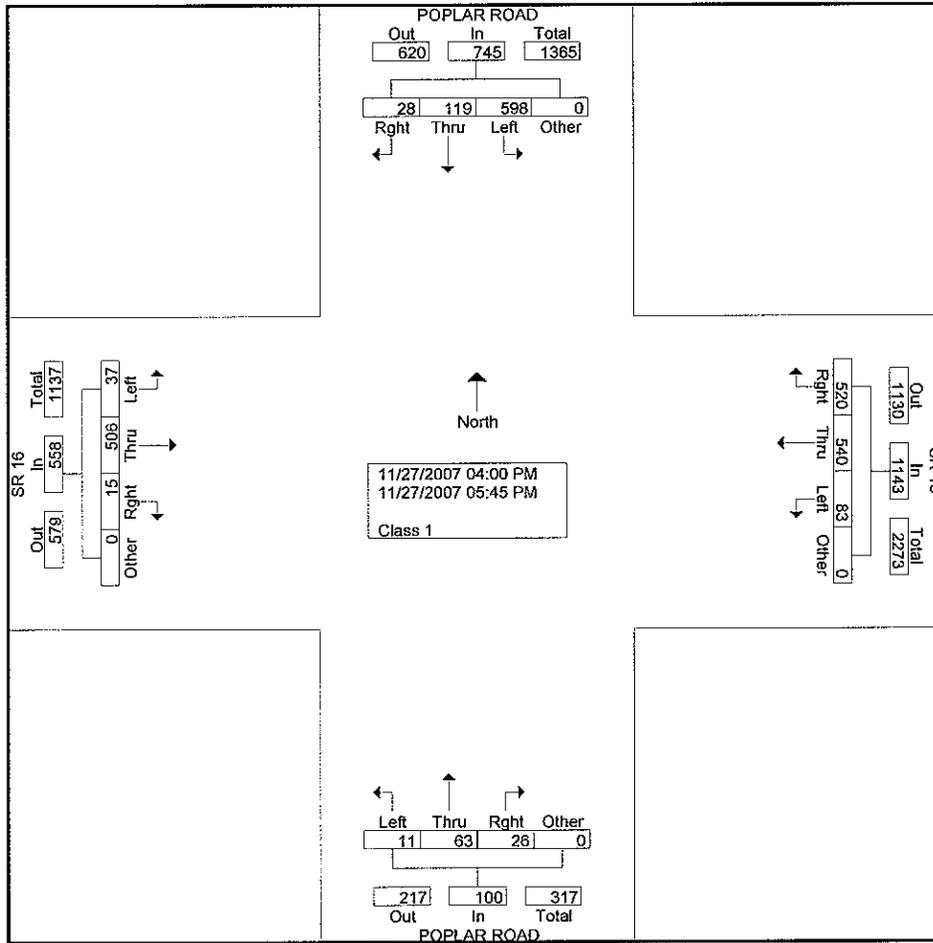
All Traffic Data Services, Inc.

1336 Farmer Road
Conyers, Ga 30012
Ph. 404-374-1283

File Name : PoplarRd@SR16PM
Site Code : 00000000
Start Date : 11/27/2007
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Groups Printed- Class 1

Start Time	POPLAR ROAD Southbound					SR 16 Westbound					POPLAR ROAD Northbound					SR 16 Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
04:00 PM	60	14	5	0	79	10	74	67	0	151	0	5	3	0	8	5	51	1	0	57	295
04:15 PM	85	6	4	0	95	9	75	63	0	147	1	8	3	0	12	4	59	1	0	64	318
04:30 PM	54	12	0	0	66	12	67	69	0	148	2	7	1	0	10	9	72	1	0	82	306
04:45 PM	63	17	3	0	83	10	69	44	0	123	0	4	6	0	10	5	68	2	0	75	291
Total	262	49	12	0	323	41	285	243	0	569	3	24	13	0	40	23	250	5	0	278	1210
05:00 PM	82	24	2	0	108	11	60	66	0	137	2	13	2	0	17	2	66	6	0	74	336
05:15 PM	80	19	2	0	101	14	71	65	0	150	3	5	6	0	14	6	65	1	0	72	337
05:30 PM	88	9	3	0	100	6	64	75	0	145	1	5	3	0	9	1	59	3	0	63	317
05:45 PM	86	18	9	0	113	11	60	71	0	142	2	16	2	0	20	5	66	0	0	71	346
Total	336	70	16	0	422	42	255	277	0	574	8	39	13	0	60	14	256	10	0	280	1336
Grand Total	598	119	28	0	745	83	540	520	0	1143	11	63	26	0	100	37	506	15	0	558	2546
Apprch %	80.3	16	3.8	0		7.3	47.2	45.5	0		11	63	26	0		6.6	90.7	2.7	0		
Total %	23.5	4.7	1.1	0	29.3	3.3	21.2	20.4	0	44.9	0.4	2.5	1	0	3.9	1.5	19.9	0.6	0	21.9	

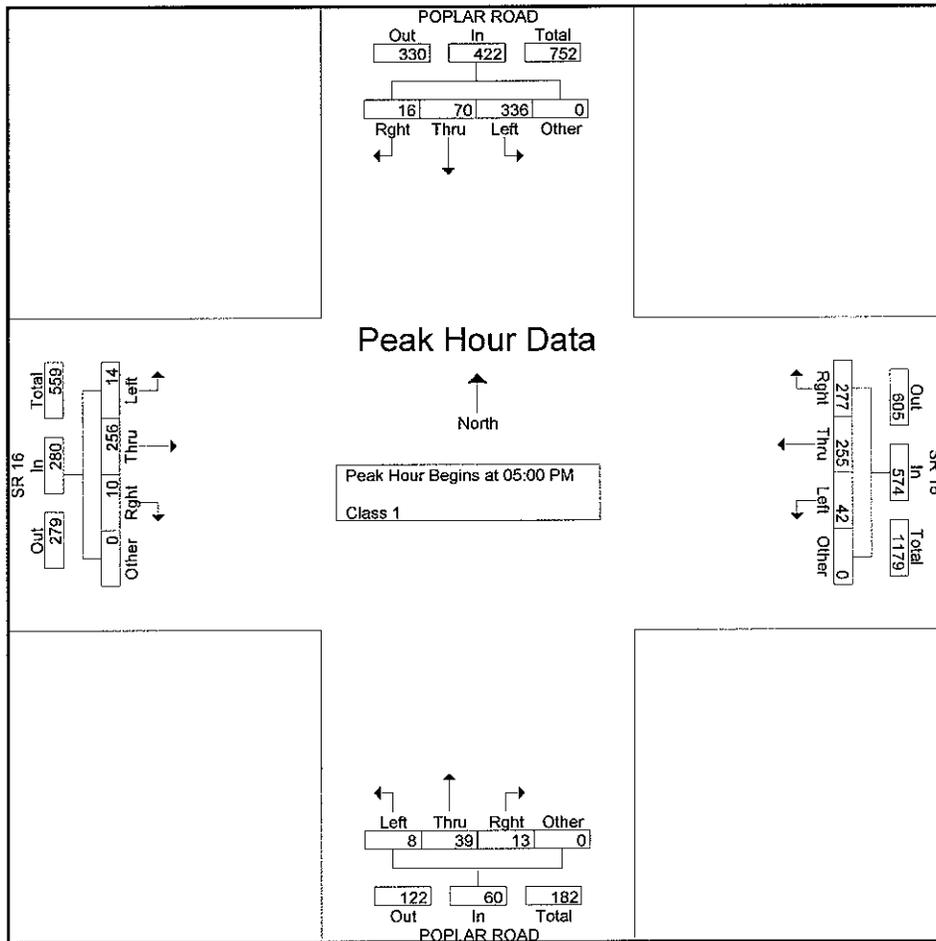


All Traffic Data Services, Inc.

1336 Farmer Road
Conyers, Ga 30012
Ph. 404-374-1283

File Name : PoplarRd@SR16PM
Site Code : 00000000
Start Date : 11/27/2007
Page No : 2

Start Time	POPLAR ROAD Southbound					SR 16 Westbound					POPLAR ROAD Northbound					SR 16 Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	82	24	2	0	108	11	60	66	0	137	2	13	2	0	17	2	66	6	0	74	336
05:15 PM	80	19	2	0	101	14	71	65	0	150	3	5	6	0	14	6	65	1	0	72	337
05:30 PM	88	9	3	0	100	6	64	75	0	145	1	5	3	0	9	1	59	3	0	63	317
05:45 PM	86	18	9	0	113	11	60	71	0	142	2	16	2	0	20	5	66	0	0	71	346
Total Volume	336	70	16	0	422	42	255	277	0	574	8	39	13	0	60	14	256	10	0	280	1336
% App. Total	79.6	16.6	3.8	0		7.3	44.4	48.3	0		13.3	65	21.7	0		5	91.4	3.6	0		
PHF	.955	.729	.444	.000	.934	.750	.898	.923	.000	.957	.667	.609	.542	.000	.750	.583	.970	.417	.000	.946	.965

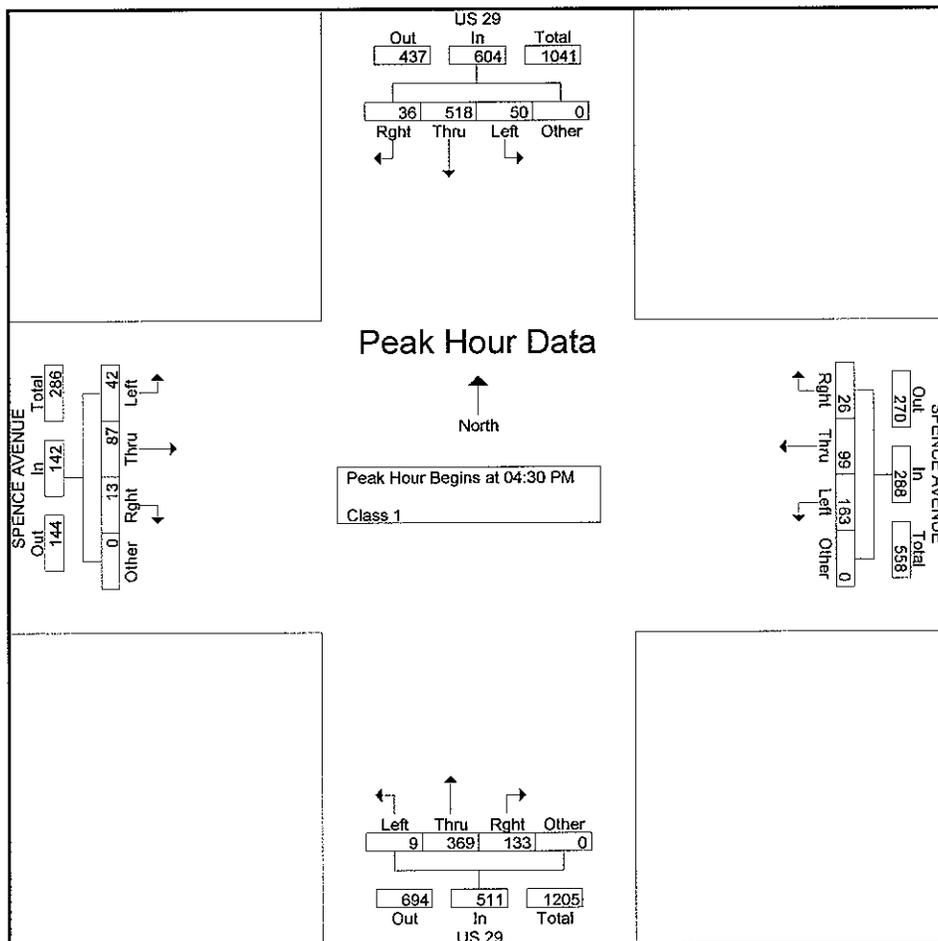


All Traffic Data Services, Inc.

1336 Farmer Road
Conyers, Ga 30012
Ph. 404-374-1283

File Name : US29@SpenceAvePM
Site Code : 00000000
Start Date : 11/27/2007
Page No : 2

Start Time	US 29 Southbound					SPENCE AVENUE Westbound					US 29 Northbound					SPENCE AVENUE Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	12	114	17	0	143	41	22	9	0	72	0	97	32	0	129	9	15	1	0	25	369
04:45 PM	14	123	6	0	143	35	27	5	0	67	1	91	39	0	131	16	20	3	0	39	380
05:00 PM	11	159	5	0	175	36	21	3	0	60	1	89	27	0	117	12	36	8	0	56	408
05:15 PM	13	122	8	0	143	51	29	9	0	89	7	92	35	0	134	5	16	1	0	22	388
Total Volume	50	518	36	0	604	163	99	26	0	288	9	369	133	0	511	42	87	13	0	142	1545
% App. Total	8.3	85.8	6	0		56.6	34.4	9	0		1.8	72.2	26	0		29.6	61.3	9.2	0		
PHF	.893	.814	.529	.000	.863	.799	.853	.722	.000	.809	.321	.951	.853	.000	.953	.656	.604	.406	.000	.634	.947



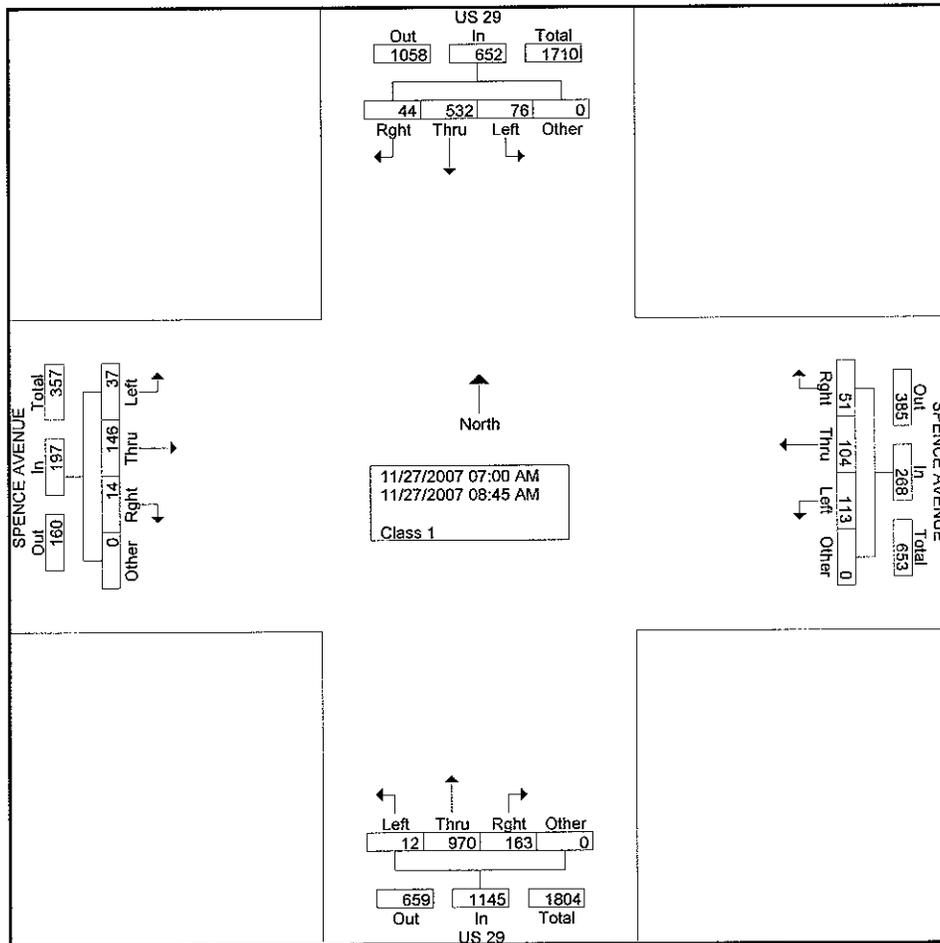
All Traffic Data Services, Inc.

1336 Farmer Road
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File Name : US29@SpenceAveAM
Site Code : 00000000
Start Date : 11/27/2007
Page No : 1

Groups Printed- Class 1

Start Time	US 29 Southbound					SPENCE AVENUE Westbound					US 29 Northbound					SPENCE AVENUE Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
07:00 AM	8	39	1	0	48	22	8	6	0	36	1	68	18	0	87	1	10	1	0	12	183
07:15 AM	12	71	4	0	87	14	13	4	0	31	0	87	29	0	116	0	15	0	0	15	249
07:30 AM	8	81	11	0	100	9	11	3	0	23	2	143	26	0	171	3	11	2	0	16	310
07:45 AM	11	83	12	0	106	22	24	9	0	55	2	193	29	0	224	6	30	1	0	37	422
Total	39	274	28	0	341	67	56	22	0	145	5	491	102	0	598	10	66	4	0	80	1164
08:00 AM	9	61	7	0	77	12	10	5	0	27	1	133	20	0	154	8	36	5	0	49	307
08:15 AM	14	86	2	0	102	17	14	8	0	39	3	125	13	0	141	11	20	4	0	35	317
08:30 AM	5	45	6	0	56	8	9	4	0	21	1	131	12	0	144	3	11	0	0	14	235
08:45 AM	9	66	1	0	76	9	15	12	0	36	2	90	16	0	108	5	13	1	0	19	239
Total	37	258	16	0	311	46	48	29	0	123	7	479	61	0	547	27	80	10	0	117	1098
Grand Total	76	532	44	0	652	113	104	51	0	268	12	970	163	0	1145	37	146	14	0	197	2262
Apprch %	11.7	81.6	6.7	0		42.2	38.8	19	0		1	84.7	14.2	0		18.8	74.1	7.1	0		
Total %	3.4	23.5	1.9	0	28.8	5	4.6	2.3	0	11.8	0.5	42.9	7.2	0	50.6	1.6	6.5	0.6	0	8.7	

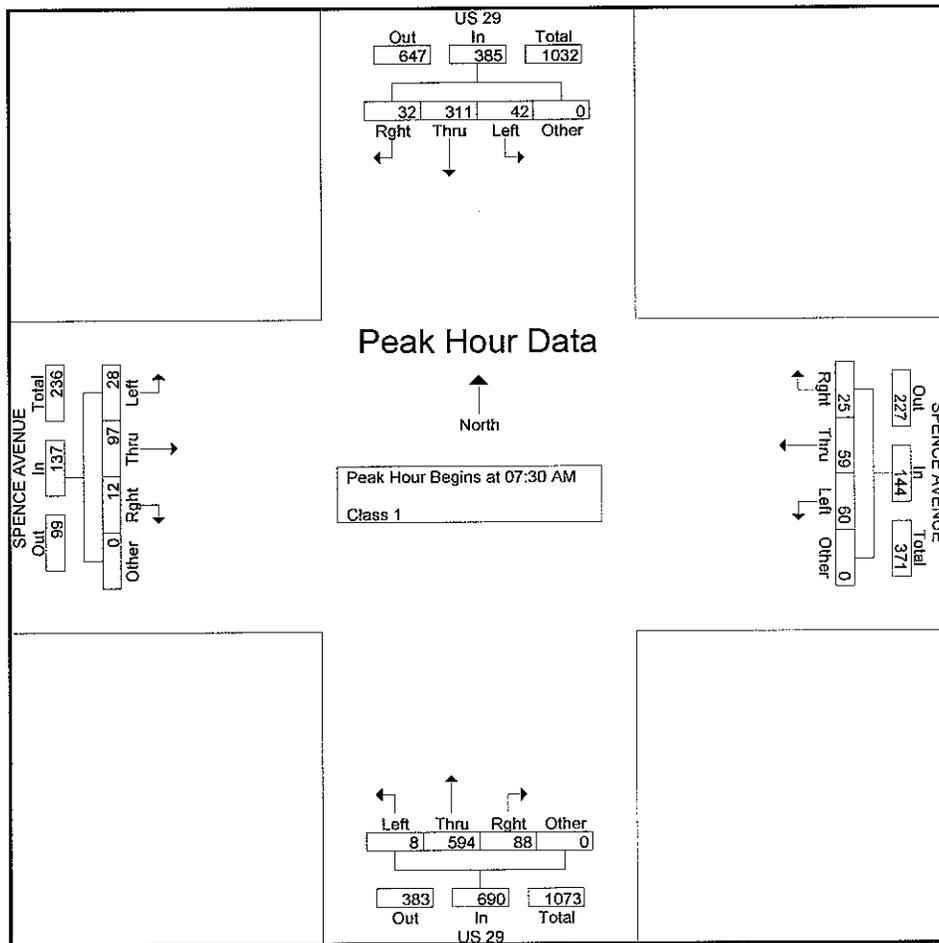


All Traffic Data Services, Inc.

1336 Farmer Road
 Conyers, Ga 30012
 Ph. 404-374-1283

File Name : US29@SpenceAveAM
 Site Code : 00000000
 Start Date : 11/27/2007
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Start Time	US 29 Southbound					SPENCE AVENUE Westbound					US 29 Northbound					SPENCE AVENUE Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	8	81	11	0	100	9	11	3	0	23	2	143	26	0	171	3	11	2	0	16	310
07:45 AM	11	83	12	0	106	22	24	9	0	55	2	193	29	0	224	6	30	1	0	37	422
08:00 AM	9	61	7	0	77	12	10	5	0	27	1	133	20	0	154	8	36	5	0	49	307
08:15 AM	14	86	2	0	102	17	14	8	0	39	3	125	13	0	141	11	20	4	0	35	317
Total Volume	42	311	32	0	385	60	59	25	0	144	8	594	88	0	690	28	97	12	0	137	1356
% App. Total	10.9	80.8	8.3	0		41.7	41	17.4	0		1.2	86.1	12.8	0		20.4	70.8	8.8	0		
PHF	.750	.904	.667	.000	.908	.682	.615	.694	.000	.655	.667	.769	.759	.000	.770	.636	.674	.600	.000	.699	.803



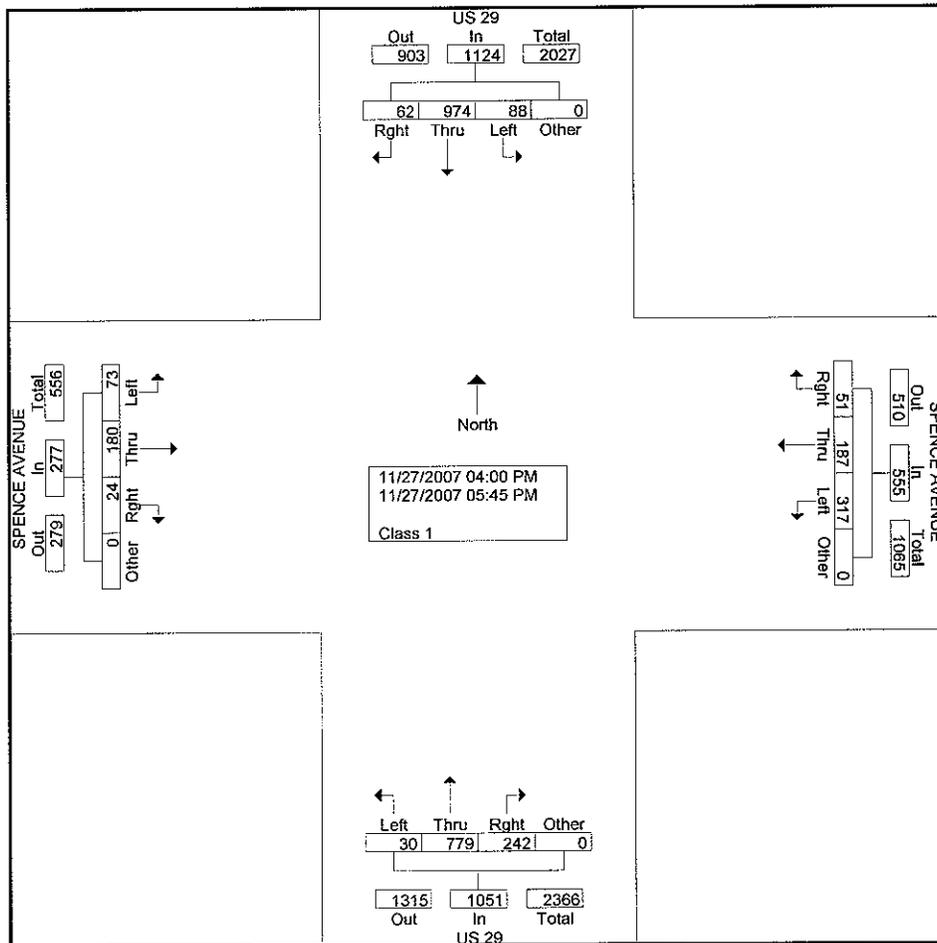
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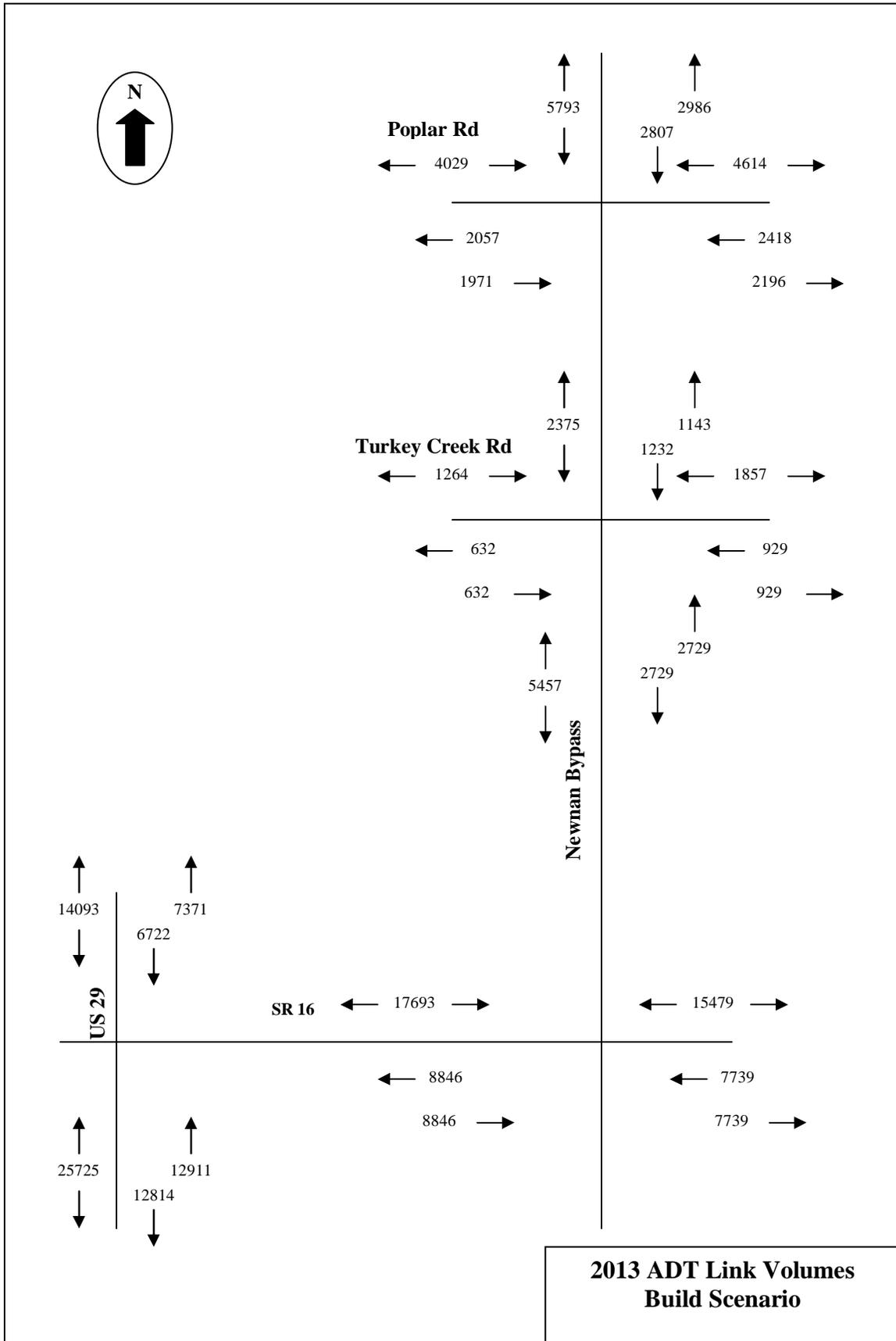
File Name : US29@SpenceAvePM
Site Code : 00000000
Start Date : 11/27/2007
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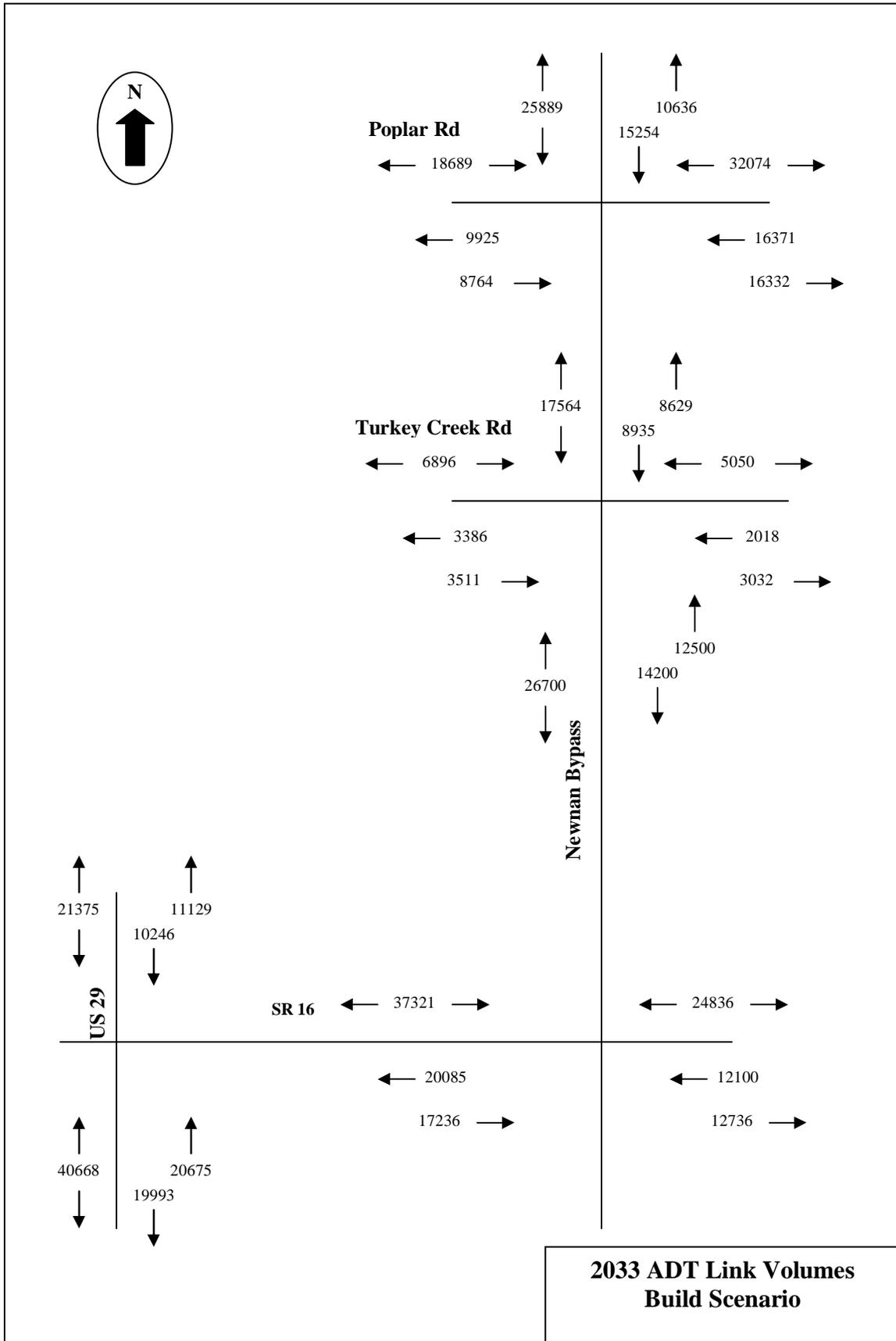
Start Time	US 29 Southbound					SPENCE AVENUE Westbound					US 29 Northbound					SPENCE AVENUE Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
04:00 PM	11	131	7	0	149	25	22	7	0	54	2	94	29	0	125	10	33	3	0	46	374
04:15 PM	7	121	12	0	140	43	24	6	0	73	2	92	21	0	115	12	25	3	0	40	368
04:30 PM	12	114	17	0	143	41	22	9	0	72	0	97	32	0	129	9	15	1	0	25	369
04:45 PM	14	123	6	0	143	35	27	5	0	67	1	91	39	0	131	16	20	3	0	39	380
Total	44	489	42	0	575	144	95	27	0	266	5	374	121	0	500	47	93	10	0	150	1491
05:00 PM	11	159	5	0	175	36	21	3	0	60	1	89	27	0	117	12	36	8	0	56	408
05:15 PM	13	122	8	0	143	51	29	9	0	89	7	92	35	0	134	5	16	1	0	22	388
05:30 PM	15	105	3	0	123	43	17	4	0	64	3	121	29	0	153	6	20	3	0	29	369
05:45 PM	5	99	4	0	108	43	25	8	0	76	14	103	30	0	147	3	15	2	0	20	351
Total	44	485	20	0	549	173	92	24	0	289	25	405	121	0	551	26	87	14	0	127	1516
Grand Total	88	974	62	0	1124	317	187	51	0	555	30	779	242	0	1051	73	180	24	0	277	3007
Apprch %	7.8	86.7	5.5	0		57.1	33.7	9.2	0		2.9	74.1	23	0		26.4	65	8.7	0		
Total %	2.9	32.4	2.1	0	37.4	10.5	6.2	1.7	0	18.5	1	25.9	8	0	35	2.4	6	0.8	0	9.2	



Traffic Sub-Study Data (2013)



Traffic Sub-Study Output (2033)



Project Number: CSSTP-0007-00(694)

P.I. Number: 0007694

County: Coweta



6001 Chatham Center Drive, Suite 150

Savannah, Georgia 31405

(912) 238-3002 FAX 238-0882

WWW.APPLIETM.COM

June 24, 2005

Ms. Shannon Dodd
Clough, Harbour & Associates LLP
1800 Peachtree Street NW
Atlanta, Georgia 30309-2518

Subject: **Review of Potential Environmental Concerns - DRAFT**
Newnan Bypass Extension- Turkey Creek Road to SR 16
P. I. Number 322800

Dear Ms. Dodd:

Applied Technology & Management, Inc. (ATM) has completed a preliminary review of available environmental data sources and field survey reports for the proposed project corridor for the Newnan Bypass Extension - Turkey Creek Road to SR 16.

The purpose of our review was to identify potential environmental concerns that could affect design features of the proposed project, as well as affect the level of environmental analysis required and project scheduling.

Environmental Concerns

ATM conducted its review in accordance with Georgia Department of Transportation (GDOT) guidelines for environmental analysis. As part of our review, we examined the following areas of potential environmental concern for the proposed project: threatened and endangered (T&E) species, wetlands and streams, water quality classification of streams, required environmental permits (e.g., Section 404, water quality, etc.), cultural resources, parkland/Section 4(F) resources, cemeteries, sole source aquifers, visual resources, Section 6(f) resources, underground storage tanks (USTs) and hazardous waste sites. Each area of environmental concern is described below along with the results of our preliminary review.

Threatened and Endangered Species

No evidence of federally listed or proposed T&E species was observed in the project area based on literature reviews and site visits by a trained ecologist in January, February and April 2005. While the floodplain forests surrounding the wetlands within the corridor provide potential habitat for the listed plant species Bay-star vine (*Schisandra glabra*), this species was not identified in the field. The easternmost unnamed tributary of Turkey Creek has marginal habitat for the Monkey-face orchid (*Platanthera integrilabia*), the Bay-star vine (*Schisandra glabra*), and the fish species the Highscale shiner (*Notropis hypsilepis*), however none of these species were spotted during the site visits. No mussels were found within any of the streams in the project corridor during site visits, although the habitat within many of the streams seemed acceptable for listed mussel species.

Environmental & Coastal Engineers, Scientists & Management Consultants

The corridor does contain a beaver pond, open wetland areas, and a lake; all of which represent potential habitat areas for the endangered Bald eagle. Bald eagles prefer the edges of large bodies of water for nesting. However, no nests were spotted during the field investigation.

Invasive species

A survey for populations of invasive species that may be spread during construction was conducted for this project. The invasive species for which the survey was conducted have been identified by GDOT's Executive Order 13112: Invasive Pest Species as having the highest priority due to environmental and economic impacts caused by those species. Invasive species found during the survey by a trained ecologist included the plant species, Common Privet (*Ligustrum sinenes*), and the aquatic plant species, Parrot's Feather (*Myriophyllum aquaticum*).

Measures should be taken during project construction to prevent or minimize the spread of these species as appropriate for the time of the year. These measures should include removal and disposal of vegetative parts in the soil that may reproduce by root raking prior to moving the soil, burning on site any such parts and aboveground parts that bear fruit, controlling or eradicating infestations prior to construction and cleaning of vehicles and other equipment prior to leaving the infested site. The measures used should be those, which are appropriate for the particular species, and the specific site conditions that exist on the project, as described in Georgia Standard Specifications Section 201, Clearing and Grubbing of Right-Of-Way.

Wetlands and Non-Wetland Waters of the U.S.

There are approximately 29 acres of wetlands located within the proposed project corridor based on field investigations by a trained wetland delineator. These wetlands are primarily located south and west of Turkey Creek between I-85 and East Newnan Lake (see attached figure). As requested by CHA, ATM has considered two alternative routes for the proposed bypass through the wetland area and estimated potential impacts associated with each route. The areas of potential permanent and temporary wetland impacts for each route are shown in the attached figure and summarized in the following table.

**Estimated Wetland Impacts for
Alternate Routes of Newnan Bypass - Phase II**

	Western Alternate Route	Eastern Alternate Route
Permanent	0.19 acres	0.11 acres
Temporary (Construction)	0.19 acres	1.05 acres

Non-wetland waters of the U.S. associated with the project corridor consist of East Newnan Lake, the discharge stream from the lake, two farm ponds, Turkey Creek and several smaller streams and creeks that are tributaries of Turkey Creek. The largest stream in the project corridor is Turkey Creek, which flows from the northwest along the eastern border of the wetlands, and then perpendicularly across the center of the proposed project corridor to the east (see attached figure). Downstream of the project corridor, Turkey Creek eventually flows south and east to White Oak Creek and then to the Flint River. There are numerous stream and creek crossings that are associated with both alternate routes for the Newnan Bypass. The number of crossings requiring culverts and approximate linear footage of stream impacts for each route are summarized in the following table.



**Estimated Stream Impacts for
Alternate Routes of Newnan Bypass - Phase II**

	Western Alternate Route	Eastern Alternate Route
Number of Crossings	3*	8*
Stream Impacts (linear feet)	200	1,690

* Preliminary route concepts show two stream crossings associated with each route will be bridged instead of culverted. If culverts are proposed as part of bridge design for these crossings, stream impacts will increase by a minimum of 200 linear feet for each culvert.

The project concept should be designed to avoid serious wetlands impacts and stream encroachments, or at least minimize impacts to the extent that only minor mitigation plans will be necessary. Impacting more than 0.1 acre of wetlands or 100 linear feet of stream will require compensatory mitigation for all impacts to wetlands and streams within the project corridor.

Mitigation

The impact thresholds for compensatory mitigation are 0.1 acre of wetlands and 100 linear feet of stream. Both alternates of the proposed project will require a mitigation plan to compensate for impacts to wetlands and streams within the project corridor.

Water Quality Classification

Turkey Creek, East Newnan Lake, and the smaller unnamed tributaries located in the vicinity of the project corridor all have the default designated use of "fishing." Turkey Creek is not listed as a Georgia trout stream or tributary of a wild and scenic river.

Environmental Permits

At this time, the only environmental permit anticipated for this project is a Clean Water Act (CWA) Section 404 Permit for unavoidable impacts to wetlands and perennial streams in the project corridor. Based on the anticipated acreage of wetland impacts and length of stream, this project can potentially be permitted under Section 404 Nationwide Permit (NWP) 14 for linear transportation projects. The cumulative loss of waters of the U.S. of all NWP 14 linear project crossings cannot exceed 10 acres of wetlands and/or 1500 linear feet of stream. Furthermore, individual project road crossings cannot result in the loss of more than 300 linear feet of perennial stream. If the project cannot be designed within these thresholds, an Individual Section 404 Permit will be required.

Cultural Resources

A trained historian with New South Associates has completed a review of existing archeological and historical resources within the project corridor. Based on their file review, four previous archeological studies have been conducted in the vicinity of the Newnan Bypass corridor. The first, completed in 1997, reviewed a 3-mile long corridor from SR16 to Lower Fayetteville Road. The survey was located west of the current corridor and found four sites. None of the four sites identified was considered eligible for the National Register of Historic Places (NRHP). The second report was completed in 2000 and reviewed a 1.5-mile corridor extending between Turkey Creek Road and SR16. This was taken in roughly the same alignment as the current eastern route alternate for the proposed bypass. Only one site was found in the corridor and it was not considered eligible for the NRHP. The remaining two studies were located in the vicinity of the corridor but neither had a direct connection to either of the proposed project routes.



Based on file review of previous historical studies, there appears to be only one previously recorded historic structure within the project area. It is a residence located on Turkey Creek Road. The corridor will also cross the historic Central of Georgia Railroad track. A review of the Newnan South USGS topographic quadrangle shows about 10 additional structures within the project area that were not surveyed during the 1993-1994 Coweta County survey and would have to be reviewed to see if any are now 50 years of age and should be recorded. New South Associates will complete this historical survey and archeological shovel tests once a final alignment is selected for the bypass.

Parkland/Section 4(F) Resources

No parklands or other Section 4(F) resources were identified in the general vicinity of the project area.

Section 6(f)

ATM has not identified any purchased or improved lands within the proposed project corridor that were purchased using funds from the Land and Water Conservation Fund Act (LWCFA). We will continue to research the potential use of LWCFA funds and finalize our assessment in the final draft of this environmental scan.

USTs and Hazardous Waste Sites

ATM has completed a review of Federal and State environmental database records for the presence of USTs and/or hazardous waste sites in the vicinity of the proposed project corridor. One UST site was found within ¼-mile of the project corridor. The closed UST site was identified at Pine Road near the intersection of Pine Road at US 29. The Colonial Baking Company UST was installed in 1978 and according to Georgia Environmental Protection Division (EPD) records was closed in-place in 1988. The UST is not listed in EPD's Leaking UST (LUST) database. Furthermore, the site is located downgradient of the project corridor and therefore is not an environmental concern.

In addition to the closed UST site, two listed LUST sites were identified within a half-mile radius of the project corridor. The Chevron gas station located at 1400 US Hwy 29 South (approximately 0.34 mile southwest of the project corridor) has had several suspected releases and one confirmed release on 2/1/1995. EPD records showed a minor release to soil near one of the fuel dispenser islands on this date. Groundwater monitoring in August 1996 did not detect any groundwater contamination at the facility. Scooter's One Stop, located to the south of the Chevron station at 1420 US Hwy 29 South (approximately 0.37 mile southwest of the project corridor) had a confirmed release on 9/29/1992. Both of these sites have been reviewed by EPD and no further regulatory action has been required for either facility. Furthermore, both sites are located southwest and downgradient of the project corridor and therefore are not considered an environmental concern for potential impacts to the project corridor.

No hazardous waste sites were identified in the project area.

Cemetery and Church Properties

No cemeteries or churches were identified within the project corridor.

Level of Environmental Analysis

Based on our review of the potential environmental concerns for this project and potential impacts to the environment, we anticipate the level of environmental analysis and



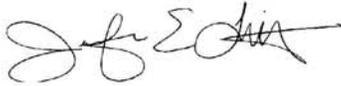
documentation required will be generally minor and can likely be addressed through a National Environmental Policy Act (NEPA) Categorical Exclusion document. If additional wetland or stream impacts require a Section 404 Individual Permit, additional environmental permitting documentation may be necessary.

Project Scheduling

Based on our review of the potential environmental concerns for this project and the anticipated permitting requirements, we anticipate the environmental process, including completion of environmental studies, review of documents and public hearings, will take approximately twelve (12) months following approval of the project concept.

ATM appreciates the opportunity to work with Clough, Harbour & Associates and Coweta County on this project. If you have any questions regarding this preliminary analysis of environmental concerns related to this project, please do not hesitate to call us at (912) 238-3002.

Very truly yours,
Applied Technology & Management, Inc.

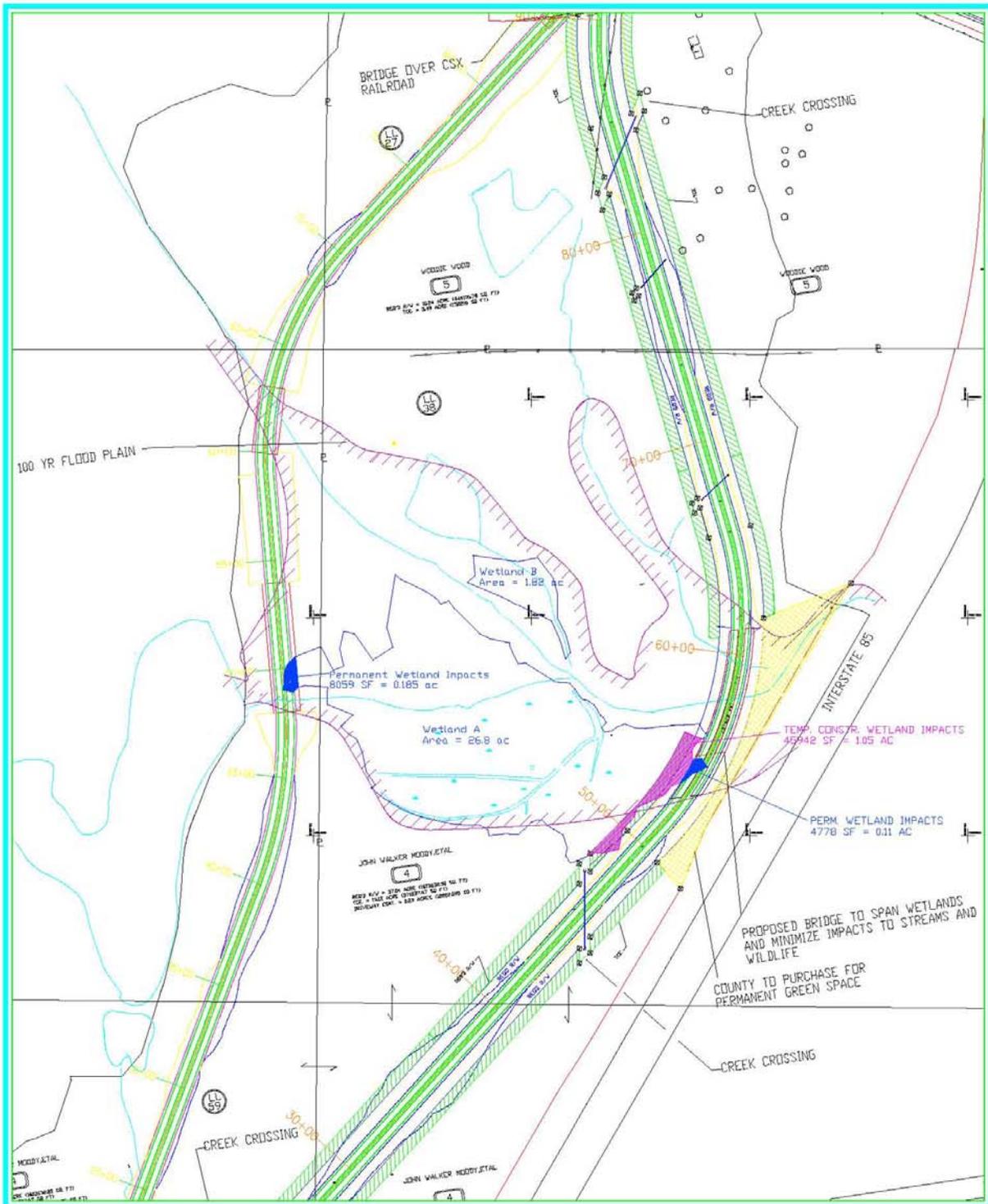


Jennifer E. Little
Environmental Scientist



Patrick N. Graham, P.E.
Senior Engineer

Attachment:
Figure 1 – Estimated Wetland Impacts, Newnan Bypass – Turkey Creek Rd to SR16



ATM
APPLIED TECHNOLOGY & MANAGEMENT, INC
ATM
8001 Chatham Ctr Dr, Ste 150
Savannah, Georgia 31405
(912) 236-3002

Estimated Wetland Impacts
Newnan Bypass-Turkey Creek Rd to SR16
Western & Eastern Alternates

For: Clough, Harbour & Associates, LLP
Coweta County Development & Engineering

REVISIONS

JOB NO: 04-911	CHECKED BY: PC
DATE: 08/24/05	DRAWN BY:
SCALE: 1"=800'	SHEET NO: 1



Department of Transportation

State of Georgia

#2 Capitol Square, S.W.

Atlanta, Georgia 30334-1002

May 15, 2007

HAROLD E. LINNENKOHL
COMMISSIONER
(404) 656-5206

DAVID E. STUDSTILL, JR., P.E.
CHIEF ENGINEER
(404) 656-5277

BUDDY GRATTON, P.E.
DEPUTY COMMISSIONER
(404) 656-5212

EARL L. MAHFUZ
TREASURER
(404) 656-5224

The Honorable Timothy Higgins, Commission Chairman
Coweta County
22 East Broad Street
Newnan, Georgia 30263

Dear Chairman Higgins:

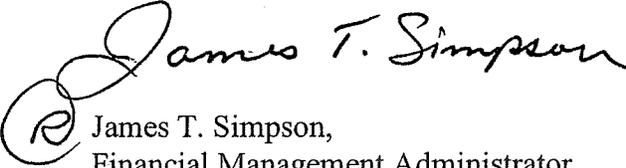
I am returning for your files an executed agreement between the Georgia Department of Transportation and Coweta County for the following project:

PROJECT#:CSSTP-0007-00(694) Coweta County, P.I.#0007694

PROJECT#:CSSTP-0006-00(877) Coweta County, P.I.#0006877

We look forward to working with you on the successful completion of the joint project.
Should you have any questions, please contact the Project Manager Bill Roundtree at (404)646-6604.

Sincerely,


James T. Simpson,
Financial Management Administrator

JTS:as

Enclosure

c: Bob Rogers
Thomas Howell - District 3
Jeff Baker - Utilities

No. 10/2007

**AGREEMENT
BETWEEN
DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
AND
COWETA COUNTY
FOR
TRANSPORTATION FACILITY IMPROVEMENTS**

This Framework Agreement is made and entered into this 4th day of May, 2007, by and between the DEPARTMENT OF TRANSPORTATION, an agency of the State of Georgia, hereinafter called the "DEPARTMENT", and Coweta County, acting by and through its Board of Commissioners, hereinafter called the "LOCAL GOVERNMENT".

WHEREAS, the LOCAL GOVERNMENT has represented to the DEPARTMENT a desire to improve the transportation facility described in Attachment A, attached and incorporated herein by reference and hereinafter referred to as the "PROJECT"; and

WHEREAS, the LOCAL GOVERNMENT has represented to the DEPARTMENT a desire to participate in certain activities including the funding of certain portions of the PROJECT and the DEPARTMENT has relied upon such representations; and

WHEREAS, the DEPARTMENT has expressed a willingness to participate in certain activities of the PROJECT as set forth in this Agreement; and

WHEREAS, the Constitution authorizes intergovernmental agreements whereby state and local entities may contract with one another “for joint services, for the provision of services, or for the joint or separate use of facilities or equipment; but such contracts must deal with activities, services or facilities which the parties are authorized by law to undertake or provide.” Ga. Constitution Article IX, §III, ¶1(a).

NOW THEREFORE, in consideration of the mutual promises made and of the benefits to flow from one to the other, the DEPARTMENT and the LOCAL GOVERNMENT hereby agree each with the other as follows:

1. The LOCAL GOVERNMENT shall contribute to the PROJECT by funding all or certain portions of the PROJECT costs for the preconstruction engineering (design), all reimburseable utility relocation costs, right of way acquisitions and construction, as specified in Attachment A, attached hereto and incorporated herein by reference. Expenditures incurred by the LOCAL GOVERNMENT and eligible for reimbursement by the DEPARTMENT shall not be considered reimbursible to the LOCAL GOVERNMENT until the LOCAL GOVERNMENT receives a written notice to proceed for each phase of the PROJECT.

2. The DEPARTMENT shall contribute to the PROJECT by funding all or certain portions of the PROJECT costs for the preconstruction engineering (design) activities, right of way acquisitions or construction as specified in Attachment A.

3. It is understood and agreed by the DEPARTMENT and the LOCAL GOVERNMENT that the funding portion as identified in Attachment "A" of this Agreement only applies to the Preconstruction Engineering Activities. Right of Way and Construction funding estimate levels are provided herein for planning purposes.

The DEPARTMENT will prepare LOCAL GOVERNMENT Specific Activity Agreements for applicable Right of Way and Construction.

4. The LOCAL GOVERNMENT shall be responsible for all costs for the continual maintenance and the continual operations of any and all sidewalks and the grass strip between the curb and gutter and the sidewalk within the PROJECT limits.

5. Both the LOCAL GOVERNMENT and the DEPARTMENT hereby acknowledge that Time is of the Essence. It is agreed that both parties shall adhere to the schedule of activities currently established in the approved Transportation Improvement Program/State Transportation Improvement Program (TIP/STIP). Furthermore, all parties shall adhere to the detailed project schedule as approved by the DEPARTMENT, attached as Attachment B and incorporated herein by reference. In the completion of respective commitments contained herein, if a change in the schedule is needed, the LOCAL GOVERNMENT shall notify the

DEPARTMENT in writing of the proposed schedule change and the DEPARTMENT shall acknowledge the change through written response letter; provided that the DEPARTMENT shall have final authority for approving any change.

If, for any reason, the LOCAL GOVERNMENT does not produce acceptable deliverables in accordance with the approved schedule, the DEPARTMENT reserves the right to delay the project's implementation until funds can be re-identified for construction or right of way, as applicable.

6. The LOCAL GOVERNMENT shall certify that they have read and understands the regulations for "CERTIFICATION OF COMPLIANCES WITH FEDERAL PROCUREMENT REQUIREMENTS, STATE AUDIT REQUIREMENTS, AND FEDERAL AUDIT REQUIREMENTS" and will comply in full with said provisions.

7. The LOCAL GOVERNMENT shall accomplish all of the design activities for the PROJECT. The design activities shall be accomplished in accordance with the DEPARTMENT's Plan Development Process, the applicable guidelines of the American Association of State Highway and Transportation Officials, hereinafter referred to as "AASHTO", the DEPARTMENT's Standard Specifications Construction of Transportation Systems, the DEPARTMENT's Plan Presentation Guide, PROJECT schedules, and applicable guidelines of the DEPARTMENT. The LOCAL GOVERNMENT responsibility for design shall include, but is not limited to the following items:

a. Prepare the PROJECT concept report in accordance with the format used by the DEPARTMENT. The concept for the PROJECT shall be developed to accommodate the future traffic volumes as generated by the LOCAL GOVERNMENT as provided for in paragraph 7b and approved by the DEPARTMENT. The concept report shall be approved by the DEPARTMENT prior to the LOCAL GOVERNMENT beginning further development of the PROJECT plans. It is recognized by the parties that the approved concept may be modified by the LOCAL GOVERNMENT as required by the DEPARTMENT and re-approved by the DEPARTMENT during the course of design due to public input, environmental requirements, or right of way considerations.

b. Develop the PROJECT base year (year facility is expected to be open to traffic) and design year (base year plus 20 years) traffic volumes. This shall include average daily traffic (ADT) and morning (am) and evening (pm) peak hour volumes. The traffic shall show all through and turning movement volumes at intersections for the ADT and peak hour volumes and shall indicate the percentage of trucks expected on the facility.

c. Validate (check and update) the approved PROJECT concept and prepare a PROJECT Design Book for approval by the DEPARTMENT prior to the beginning of preliminary plans.

d. Prepare environmental studies, documentation, and reports for the PROJECT that show the PROJECT is in compliance with the provisions of the National Environmental Protection Act and Georgia Environmental Protection Act, as appropriate to the PROJECT funding. This shall include

any and all archaeological, historical, ecological, air, noise, underground storage tanks (UST), and hazardous waste site studies required as well as any environmental reevaluations required. The LOCAL GOVERNMENT shall submit to the DEPARTMENT all environmental documents and reports for review and approval by the DEPARTMENT and the FHWA.

e. Prepare all public hearing and public information displays and conduct all required public hearings and public information meetings in accordance with DEPARTMENT practice.

f. Perform all surveys, mapping, soil investigation studies and pavement evaluations needed for design of the PROJECT.

g. Perform all work required to obtain project permits, including, but not limited to, US Army Corps of Engineers 404 and Federal Emergency Management Agency (FEMA) approvals. These efforts shall be coordinated with the DEPARTMENT.

h. Prepare the PROJECT drainage design including erosion control plans and the development of the hydraulic studies for the Federal Emergency Management Agency Floodways and acquisition of all necessary permits associated with the drainage design.

i. Prepare traffic studies, preliminary construction plans including a cost estimate for the Preliminary Field Plan Review, preliminary and final utility plans, preliminary and final right of way plans, staking of the required right of way, and final construction plans including a cost estimate for the Final Field Plan Review, erosion control plans, lighting plans, traffic handling

plans, and construction sequence plans and specifications including special provisions for the PROJECT.

j. Provide certification, by a Georgia Registered Professional Engineer, that the construction plans have been prepared under the guidance of the professional engineer and are in accordance with AASHTO and DEPARTMENT guidelines.

k. Failure of the LOCAL GOVERNMENT to follow the DEPARTMENT's Plan Development Process will jeopardize the use of Federal funds in some or all of the categories outlined in this Agreement, and it shall be the responsibility of the LOCAL GOVERNMENT to make up the loss of that funding.

8. All Primary Consultant firms hired by the LOCAL GOVERNMENT to provide services on the PROJECT shall be prequalified with the DEPARTMENT in the appropriate area-classes. The DEPARTMENT shall, on request, furnish the LOCAL GOVERNMENT with a list of prequalified consultant firms in the appropriate area-classes.

9. The PROJECT construction and right of way plans shall be prepared in English units.

10. All drafting and design work performed on the project shall be done utilizing Microstation and CAiCE software respectively, and shall be organized as per the Department's guidelines on electronic file management.

11. The DEPARTMENT shall review and has approval authority for all aspects of the PROJECT provided however this review and approval does not relieve the LOCAL GOVERNMENT of its responsibilities under the terms of this agreement. The DEPARTMENT will work with the FHWA to obtain all needed approvals as deemed necessary with information furnished by the LOCAL GOVERNMENT.

12. The LOCAL GOVERNMENT shall be responsible for the design of all bridge(s) and preparation of any required hydraulic and hydrological studies within the limits of this PROJECT in accordance with the DEPARTMENT's policies and guidelines. The LOCAL GOVERNMENT shall perform all necessary survey efforts in order to complete the design of the bridge(s) and prepare any required hydraulic and hydrological studies. The final bridge plans shall be incorporated into this PROJECT as a part of this Agreement.

13. The LOCAL GOVERNMENT shall follow the DEPARTMENT's procedures for identification of existing and proposed utility facilities on the PROJECT. These procedures, in part, require all requests for existing, proposed, or relocated facilities to flow through the DEPARTMENT's Project Liaison and the District Utilities Engineer.

14. The LOCAL GOVERNMENT shall address all railroad concerns, comments, and requirements to the satisfaction of the DEPARTMENT.

15. If the right of way phase is 100% local funding with no Federal or State reimbursement, upon the DEPARTMENT's approval of the project right of way plans, verification that the approved environmental document is current, which shall mean that the approval of the environmental document occurred within six (6) months of the approval notice by the DEPARTMENT's for project right of way plans, and delivery of a written notice to proceed, the LOCAL GOVERNMENT may proceed with the acquisition of the necessary right of way for the PROJECT. If the right of way phase involves federal and/or state funding reimbursement, upon the Department's approval of the project right of way plans, the Local Government may proceed with all pre-acquisition right of way activities, however, property negotiation and acquisition cannot commence until right of way funding authorization is approved. Right of way acquisition shall be in accordance with the law and the rules and regulations of the FHWA including, but not limited to, Title 23, United States Code; 23 CFR 710, et. Seq., and 49 CFR Part 24 and the rules and regulations of the DEPARTMENT and in accordance with the "Contract for the Acquisition of Right of Way" to be prepared by the Office of Right of Way and executed between the LOCAL GOVERNMENT and the DEPARTMENT prior to the commencement of any right of way activities. Failure of the LOCAL GOVERNMENT to adhere to the provisions and requirements specified in the acquisition contract may result in the loss of Federal funding for the PROJECT and it will be the responsibility of the LOCAL GOVERNMENT to make up the loss of that funding. In the event the LOCAL GOVERNMENT is to receive reimbursement of all or part of the acquisition funding, reimbursable right of way costs are to include land and improvement costs, property

damage values, relocation assistance expenses and contracted property management costs. Non reimbursable costs include administrative expenses such as appraisal, consultant, attorney fees and any in-house property management or staff expenses. All required right of way shall be obtained and cleared of obstructions, including underground storage tanks, prior to advertising the PROJECT for bids. The LOCAL GOVERNMENT shall further be responsible for making all revisions to the approved right of way plans, as deemed necessary by the DEPARTMENT, for whatever reason, as needed to purchase the required right of way.

16. Upon completion and approval of the PROJECT plans, certification that all needed rights of way have been obtained and cleared of obstructions, and certification that all needed permits for the PROJECT have been obtained by the LOCAL GOVERNMENT the PROJECT shall be let for construction. The DEPARTMENT, unless shown otherwise on Attachment A, shall be solely responsible for securing and awarding the construction contract for the PROJECT.

17. The LOCAL GOVERNMENT shall review and make recommendations concerning all shop drawings prior to submission to the DEPARTMENT. The DEPARTMENT shall have final authority concerning all shop drawings.

18. The LOCAL GOVERNMENT agrees that all reports, plans, drawings, studies, specifications, estimates, maps, computations, computer diskettes and printouts, and any other data prepared under the terms of this Agreement shall

become the property of the DEPARTMENT if required. This data shall be organized, indexed, bound, and delivered to the DEPARTMENT no later than the advertisement of the PROJECT for letting. The DEPARTMENT shall have the right to use this material without restriction or limitation and without compensation to the LOCAL GOVERNMENT.

19. The LOCAL GOVERNMENT shall be responsible for the professional quality, technical accuracy, and the coordination of all designs, drawings, specifications, and other services furnished by or on behalf of the LOCAL GOVERNMENT pursuant to this Agreement. The LOCAL GOVERNMENT shall correct or revise, or cause to be corrected or revised, any errors or deficiencies in the designs, drawings, specifications, and other services furnished for this PROJECT. Failure by the LOCAL GOVERNMENT to address the errors or deficiencies within 30 days shall cause the LOCAL GOVERNMENT to assume all responsibility for construction delays caused by the errors and deficiencies. All revisions shall be coordinated with the DEPARTMENT prior to issuance. The LOCAL GOVERNMENT shall also be responsible for any claim, damage, loss or expense, to the extent allowed by law that is attributable to errors, omissions, or negligent acts related to the designs, drawings, specifications, and other services furnished by or on behalf of the LOCAL GOVERNMENT pursuant to this Agreement.

This Agreement is made and entered into in FULTON COUNTY, GEORGIA, and shall be governed and construed under the laws of the State of Georgia.

The covenants herein contained shall, except as otherwise provided, accrue to the benefit of and be binding upon the successors and assigns of the parties hereto.

IN WITNESS WHEREOF, the DEPARTMENT and the LOCAL GOVERNMENT have caused these presents to be executed under seal by their duly authorized representatives.

RECOMMENDED:

COWETA COUNTY

[Signature]
District Engineer - Thomaston

BY: [Signature]
Name
Title Chairman

[Signature]
Deputy Commissioner

Signed, sealed and delivered this 20th day of March, 2007, in the presence of:

[Signature]
Chief Engineer

DEPARTMENT OF TRANSPORTATION

[Signature]
Witness

BY: [Signature]
Deputy Commissioner

[Signature]
Notary Public
Notary Public, Heard County, Georgia
My Commission Expires Sept. 21, 2008

ATTEST:

This Agreement approved on the 20th day of March, 2007.

[Signature]
Treasurer

[Signature]
City/County Clerk (as appropriate)

REVIEWED AS TO LEGAL FORM:

[Signature] 4-13-07
Office of Legal Services

FEIN: 58-6000809

ATTACHMENT "A"

Project Numbers: CSSTP-0007-00 (694) & CSSTP-0006-00 (877), Coweta County

Project (PI#, Project #, Description)	Work Type	Preliminary Engineering		Right of Way		Construction		Utilities
		Funding	Design	Funding	Acquisition	Funding	Letting	
CSSTP-0007-00 (694), PI 0007694 SR 34 SE bypass	New Construction	Coweta County/\$2,125,000 100% Coweta County	Coweta County	Coweta Co. \$2,500,000	Coweta County	\$26,465,894 /GDOT \$6,616,474 Coweta Co.	GDOT	Coweta County
CSSTP-0006-00 (877), PI 0006877 SR 16 from I-85 to US 29	Reconstruction/ Rehabilitation	Coweta County/\$200,000 100% Coweta County	Coweta County	GDOT \$812,500	GDOT	\$1,811,066/ GDOT \$452,767 Coweta Co.	GDOT	Coweta County

Note: 1. Maximum allowable GDOT reimbursible amount may be shown above in lieu of percentages when applicable. Local Government will only be reimbursed the percentage of the accrued invoiced amounts up to but not to exceed the maximum amount indicated. 2. Cash participation limits may be shown above in lieu of percentages when applicable.

ATTACHMENT "B"
CSSTP-0007-00 (694), & CSSTP-0006-00 (877), Coweta County

Proposed Project Schedule



Annual Reporting Requirements

The Local Government shall provide a written status report to the Department's Project Manager with the actual phase completion date(s) and the percent complete/proposed completion date of incomplete phases. The written status report shall be received by the Department no later than the first day of February of every calendar year until all phases have been completed.

Training Certification Requirement

The Local Government shall provide a written certification that all appropriate staff (employees and consultants) involved in the Project have attended or are scheduled to attend the Department's Plan Development Process Training Course. The written certification shall be received by the Department no later than the first day of February of every calendar year until all phases have been completed.

01/25/06

MEETING MINUTES
FOR
STP-0007-00(694), P.I. #0007694

Newnan Bypass (Turkey Creek Road to SR 16)
Initial Concept Meeting

Date: January 23, 2006; 10:30 am
Location: Coweta County Development & Engineering Conference Room
Attendees:

Wayne Kennedy (WK)	Coweta County	770-254-3775
Bill Rountree (BR)	Georgia DOT District #3	706-646-6604
Shannon Dodd (SD)	Clough, Harbour & Associates LLP	404-352-9200
Tom Karis (TK)	Clough, Harbour & Associates LLP	404-352-9200

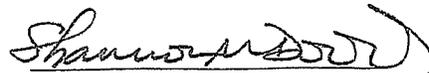
Project Kick-Off

- BR confirmed that he is the GDOT Project Manager for both the Newnan Bypass and SR 16 widening project, and provided his contact information.
- SD provided conceptual layouts of the Newnan Bypass and there was discussion about the existing features which would affect the alignment. These features include wetlands, floodplains, lakes, dams, streams, and an existing railroad. BR suggested minimizing the number of horizontal curves wherever feasible.
- There was discussion regarding whether the Newnan Bypass would be limited access restricted or access controlled by permit. WK stated he did not believe the Newnan Bypass is designated as a State Route, and that the previous section is controlled by permit. WK said that retaining that level of access would be helpful in trying to obtain right of way donations. BR stated he would confirm whether or not the Newnan Bypass would be designated a State Route number, as that might dictate it being limited access. BR told WK that even if the Newnan Bypass were designated as limited access, the County could speak to the GDOT Commissioner about areas where access needs to be provided.
- There was discussion about the logical termini, and those appear to be clear. The alignment will begin at the Turkey Creek Road, where the Newnan Bypass currently ends. The alignment will end at SR 16, west of the bridge over Interstate 85.
- There are 3 other projects in the vicinity of our project which need to be listed in the Concept Report: the SR 16 Widening project, the GRTA Intersection project for Pine & SR 16 @ US 29, and the next phase of the Newnan Bypass. In addition, there is an Interchange Justification Report (IJR) for Poplar Road that will need to be noted. TK requested a copy of the IJR from the County.
- BR will provide the Project Management Agreement (PMA) to Coweta County. The PMA was previously called the Local Government Project Agreement (LGPA). The PMA will indicate whether the project is to be done in Microstation J or V8, InRoads or Caice, and whether the new EDG standards are to be used. TK indicated a desire to provide the project in the recently approved GDOT standard of Microstation V8 and InRoads.

01/25/06

- BR stated he will clarify the responsibilities of GDOT and Coweta in the PMA, but that right now it appears that the County is responsible for PE and R/W, and that the project will be GDOT Let. It also appears the project has ARC dollars, so it is a Federal Aid project and the NEPA process and R/W guidelines will need to be followed.
- WK said that the County will ask for additional funding in the next TIP update, as the Newnan Bypass will be considerably more expensive to construct than originally anticipated.
- BR requested that WK review the project schedule provided by SD. Once Coweta County has approved a project schedule, it should be sent to BR to be included in the PMA.
- R/W parcels were reviewed and it was determined that the count should be listed as 7 for the Concept Report.
- The environmental document level was discussed. TK suggested that a CE with documentation may be acceptable. BR offered his thoughts on an EA.
- The level of existing mapping and the schedule for acquiring new mapping was discussed, with WK telling TK if the aerial photography and/or photogrammetry needed to be acquired now in order to advance the schedule, to please provide a proposal to get that work done.
- The typical section of the project was determined to need to transition from a rural section at Turkey Creek to an urban section at SR 16. The consensus was that the urban section should begin prior to the bridged section over the waterways. The urban section would have curb and gutter on the inside with a raised grass median, and rural shoulders on the outside to help with water quality and management. It was unknown whether the Newnan Bypass was on the bike route system, but GDOT shows no bike facilities are to be designed.
- WK stated that Coweta County was required to meet both water quality and stormwater management requirements on this project.
- BR will provide the name of the GDOT planner for this project, although one has not been currently assigned. The Need and Purpose statement can either be submitted to the GDOT planner directly, or to BR and he will forward. The environmental scan already performed by ATM should be submitted directly to Harvey Keepler at GDOT OEL with a cover letter stating that this is a new project and asking them to assign an environmental coordinator.
- BR was not sure if this project would qualify for a PAR, but that it would be determined by the environmental process. If we do need to go through PAR, there are east and west alignments, so it should be alright.
- WK noted that the project has to have an Access Management Plan and asked what that included. TK stated it was something that would be determined during design; that opportunities for access management will be near SR 16.
- BR and WK discussed potential mitigation costs of the west alignment, and based on the current level of mapping, seemed to believe the east alignment would be the better choice.
- WK stated that the curved tie-in of the Newnan Bypass at SR 16 should be careful not to encroach upon the existing church property. In addition, WK requested that impacts to the Kunse property be limited as much as possible.
- BR, SD and TK performed a site visit to look at the project termini, and determine if there were any previously unforeseen problems. The only item of interest we noted was that there was an above ground power line running through the site.

Please report any additions or corrections in writing within seven (7) calendar days to the undersigned at Clough Harbour & Associates LLP.



Shannon M. Dodd, P.E.
Project Manager

DRAFT CONCEPT TEAM MEETING MINUTES

MEETING DATE: April 14, 2006, 9:00 a.m.

MEETING LOCATION: Coweta County Development & Engineering Conference Room in Newnan, GA

PROJECT: Newnan Bypass, STP-0007-00 (694), P.I. #0007694

ATTENDEES:

Wayne Kennedy (WK), Coweta County	770-254-3775
Debra Fowler (DF), GDOT District 3 Environment	706-646-6597
Bill Rountree (BR), GDOT District 3 Design	706-646-6604
Tavores Edwards (TE), Coweta County	770-254-2635
Reggie James (RJ), GDOT R/W	678-423-0603
Richard A. Bolin (RB), City Manager – Newnan	770-253-2682
Mike Cope (MC), Engineering –Bellsouth	770-254-2406
Michael Adams (MA), GDOT Planning	404-657-5499
Kim Brown (KB), GDOT District 3 Utilities	706-646-6548
Tony Maglione (TM), Applied Technology & Mgmt	843-884-8750
Tom Karis (TK), Clough, Harbour & Associates	404-352-9200
Eniel Gonzalez (EG), Clough, Harbour & Associates	404-352-9200

I. WELCOME

WK welcomed everyone to the meeting.

BR provided TK with a marked up copy of the Draft Concept Report which identified minor text comments and comments to the estimate pricing.

II. INTRODUCTION OF ATTENDEES

Each attendee introduced themselves and the organization they represented.

III. PROJECT IDENTIFICATION

Project Number: STP-0007-0(694)

P.I. Number: 0007694

County: Coweta

City: Newnan

IV. FUNCTIONAL CLASSIFICATION

Turkey Creek Road – Urban Local Street/Rural Local Road

Newnan Bypass – Urban Principal Arterial (Free Access)

SR 16 – Urban Minor Arterial

V. NEED AND PURPOSE STATEMENT

TK stated that the full Need and Purpose Statement was included in the Draft Concept Report, but a brief description was provided during the presentation of the concept layout. The concept layout included the original alignment, known as the East Alternate, shown at the Initial Concept Meeting and a new alternate, known as the West Alternate. TK stated that the goal of the meeting was a consensus in proceeding to Preliminary Design with the West Alternate alignment based upon investigations conducted after the Initial Concept Meeting. TK stated that the project will provide connectivity and improve access between the existing segments of the Newnan Bypass (Bypass). BR mentioned that the Need and Purpose Statement will be approved by MA. The Need and Purpose Statement must be approved prior to Final Concept Report Approval. Revisions to the Need and Purpose Statement must include traffic and accident data, fatality data, and projected volumes on adjoining roads.

VI. ACCIDENT HISTORY

No accident data was available. DF stated that the accident data, injury, etc will need to be included in the Final Concept Report.

VII. TRAFFIC COUNTS

WK stated the Intersection Justification Report (IJR) for a proposed interchange at Poplar Road and Interstate 85 has been prepared. It was determined that the ARC model used to generate the original traffic count for the Bypass did not consider the interchange at Poplar Road. MA stated that with an interchange at Poplar Road, it may increase the amount of traffic projected for the Bypass and reduce the projected traffic on SR 16. TE stated that he will provide TK with information on the ARC model. In preparation of the Final Concept Report, the revised traffic information will be important in the determination of the southern project terminus.

Proposed Tie-in at SR 16

BR mentioned reviewing a concept layout with an alternate tie-in at SR 16 which replaced the direct T-intersection at SR 16 with a curved alignment. TK stated that at the Initial Concept Meeting, WK and TK originally proposed redirecting the Bypass onto SR 16 by merging with SR 16 and having the eastern portion of SR 16 intersect the curved alignment at a T. Due to lower traffic volumes

generated by the ARC model on the Newnan Bypass, it was decided that the Bypass was going to intersect at a T at SR 16. There was a general consensus among the group that a new traffic count should be generated with the Poplar Road interchange information. The new traffic will help justify redirecting the Bypass onto SR 16 and having the eastern portion of SR 16 intersect at a T.

VIII. TYPICAL SECTIONS

There was a general consensus that the project shall transition from a rural typical cross-section to an urban typical cross-section in the segment between the railroad crossing (2 independent bridges) and the first watercourse bridge crossing (1 common bridge). The segment of project between the intersection at Turkey Creek Road and the railroad crossing is recommended to follow a rural typical section – as the previously constructed Bypass segment (Lower Fayetteville Road to Turkey Creek Road). RJ recommended using an urban typical section where possible to reduce the amount Right of Way (R/W). The urban typical cross-section will allow for a narrower median to also reduce construction costs. WK added that the urban section consists of a 20 foot median that will accommodate future left turn lanes for access.

IX. PROPOSED PROJECT DESCRIPTION

The project is located near the center of Coweta County (County), to the southeast of the City of Newnan, and slightly northwest of the Interstate 85 Interchange 41 for SR 14/US 29. The project is an extension of the existing Newnan Bypass which currently terminates at Turkey Creek Road. This segment of the overall Newnan Bypass will extend approximately 1.6 miles on new alignment between Turkey Creek Road and SR 16, and will include traffic signal controlled intersections at its termini with both Turkey Creek Road and SR 16.

X. DESIGN CRITERIA

The project has a proposed design speed of 45 MPH, with a maximum degree of curvature of 4 degrees, and maximum grade of 6%.

XI. MAJOR STRUCTURES

A maximum of three bridges will be required. BR stated to make sure all streams are accounted for so as not to require design changes late in the design development process which may affect the environmental process and/or the project schedule and costs. BR stated that he has been involved in a project which is requiring the addition of a bridge crossing which was not anticipated in the design development process. TK stated that some of the stream crossings may require culverts. BR stated that a Bridge Foundation Investigation (BFI) will need to be conducted prior to Preliminary Field Plan Review (PFPR). The BFI will be approved by the Office of Materials and Research (OMR).

XII. DESIGN VARIANCES

None were mentioned.

XIII. RIGHT OF WAY DISPLACEMENT

It was concluded that no R/W displacements will be involved.

XIV. UTILITIES

MC stated that there are no major utilities in between the project but may have some at the intersections of Turkey Creek Road and SR 16. BR stated to revise the Utility Cost estimate in the Draft Concept Report to \$300,000.

XV. ALTERNATES CONSIDERED AND REASONS FOR REJECTION

TK stated that originally the East Alternate alignment was chosen because of the limited information at the time. TK stated that after the Initial Concept Meeting, more detailed topographic survey was acquired and environmental boundaries/constraints were determined in the surrounding area. As a result of the additional information, CHA developed the West Alternate in an effort to reduce environmental consequences. TM stated that the West Alternate alignment had the least environmental impacts in regards to streams and wetlands. Below is a summary of the estimated impacts for each alternate:

**Estimated Wetland Impacts for
Alternate Routes of Newnan Bypass - Phase II**

	Western Alternate Route	Eastern Alternate Route
Permanent	0.19 acres	0.11 acres
Temporary (Construction)	0.19 acres	1.05 acres

**Estimated Stream Impacts for
Alternate Routes of Newnan Bypass - Phase II**

	Western Alternate Route	Eastern Alternate Route
Number of Crossings	3*	8*
Stream Impacts (linear feet)	200	1,690

* Preliminary route concepts show two stream crossings associated with each route will be bridged instead of culverted. If culverts are proposed as part of bridge design for these crossings, stream impacts will increase by a minimum of 200 linear feet for each culvert

TM mentioned that the close proximity of the East Alternate alignment to Interstate 85 would have required buffer protection. TK indicated that the East Alternate alignment would have resulted in a non-economic remainder parcel.

XVI. TRAFFIC HANDLING DURING CONSTRUCTION

TK stated that the staging of the project should not be a problem due to the majority of the project being on new location. BR stated that it is essential to coordinate early with the Rail Road (RR) company. BR mentioned that Richard Crowley of GDOT will handle the coordination and develop the RR agreement. WK stated that the RR tracks are used minimally.

XVII. EROSION CONTROL / DRAINAGE

TM stated that BMPs (Best Management Practices), sediment traps, etc. shall be placed in accordance with the NPDES permit, etc. TM stated that stream buffers will be identified and addressed. There are no known trout streams in the vicinity of the project. BR stated that the project will require a NOI (Notice of Intent).

XVIII. LEVEL OF ENVIRONMENTAL ANALYSIS

TM stated that typically the project would be identified for Environmental Assessment (EA) because of the length (1.6 miles) and being on new location. TM mentioned his collaboration with Jonathan Cox of GDOT OEL and they agreed that this project should be considered for a Categorical Exclusion (CE) because of the minimal environmental impacts. Katy Allen of FHWA will be involved in the project. The project is located in a 100 year floodplain. The dam at East Newnan Lake will be analyzed by United Consulting for a dam breach. A floodplain and a dam breach analysis will be conducted prior to PFPR. There is a man-made pond that will probably be filled.

- a. **Historic Areas - None**
- b. **Hazardous Wastes -- None**
- c. **Underground Storage Tanks - None**

XIX. ENVIRONMENTAL CONCERNS

TM stated that there will be minimal environmental stream and wetland impacts.

XX. PROJECT DEVELOPMENT SCHEDULE

BR asked for the County Project schedule to update the Preconstruction Status Report. The project is scheduled for construction in 2009.

There was general consensus that the factors which will drive the schedule are the Environmental, RR, and the R/W process.

XXI. PUBLIC HEARING

TK stated that there are a few property owners that will be affected and that based upon input to date, the property owners support the project. WK stated that the owners want access to the Bypass.

BR recommended conducting a Public Information Open House (PIOH) even though there are a few owners that will be affected. Everyone at the meeting agreed that the project will require public outreach which should be satisfied through PIOH. Given the limited number of affected properties, TK was of the opinion that an opportunity for a Public Hearing could be offered to satisfy the right of way process.

XXII. PERMITS REQUIRED

TM stated that the anticipated permits are NPDES, Section 404 Nationwide, water quality, etc.

XXIII. OTHER PROJECTS IN THE AREA

WK stated that there is support for an interchange at Poplar Road and Interstate 85. BR stated that the Need and Purpose for the IJR will need to be sent to MA for advancing the IJR process.

There was a lengthy discussion on combining the SR 16 widening project (P.I. No. 0006877) with the Newnan Bypass based on factors such as the proposed interchange at Poplar Road and Interstate 85. WK said he would look into coordinating with the ARC to combine the two projects. The scheduled let dates for both projects are in the same fiscal year. It was determined that with some collaboration, both projects could possibly be constructed together without modifying the ARC project schedule. The funding of the SR 16 widening project will be checked. There was some discussion on combining the environmental documents of both projects but have two separate concept reports. See discussion in **TRAFFIC COUNTS**.

The discussion included the topics if logical termini and potential for segmentation concerns. The consensus reached by the attendees was that the P.I. No. 0006877 should be advanced with its own Concept Approval Process and then both projects combined into one common environmental approval document.

The Final Concept Report needs to include an area map to present the proximity of this project within the transportation network.

XXIV. COMMENTS FROM ATTENDEES

BR asked what type of access control is the project. WK stated that he would like the access control to be by permit. WK mentioned that the previously constructed Bypass segment (Lower Fayetteville Road to Turkey Creek Road) was controlled access. WK mentioned that there would possibly be R/W donation involved. There was much discussion on what type of access control would be appropriate as to whether GDOT or the County will make the decision. It was concluded that since the project will probably not be in the State Highway System, that the County should make the ultimate decision but with written notice to the GDOT Commissioner.

XXV. COMMENTS, CONCERNS, OPEN DISCUSSION

TK summed up the meeting by asking for a consensus on the alternate alignment to move forward through Preliminary Design. Everyone agreed that the West Alternate alignment is the least environmentally damaging practicable alternative and therefore could be advanced as the Preferred Alternative.

BR requested that the Draft Concept Report comments be addressed and an updated copy sent to him.

BR stated that since the total estimated cost of the project is over \$ 25,000,000; a Value Engineering (VE) study will probably be conducted. BR said to contact Ron Wishon of GDOT Engineering Services to arrange the VE study.

XXVI. CONCEPT REPORT SCHEDULED TO BE SENT TO ENGINEERING SERVICES

CHA will begin revisions to the Draft Concept Report with the goal of submitting a Revised Draft within 1 month.

XXVII. CONCEPT REPORT SCHEDULED TO BE APPROVED

BR provided TK with a marked up copy of the Draft Concept Report that included two original signatures on the cover sheet to expedite the process.

XXVIII. ADJOURN MEETING

The meeting adjourned at 11:00 a.m.

NOTES

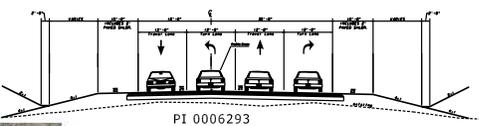
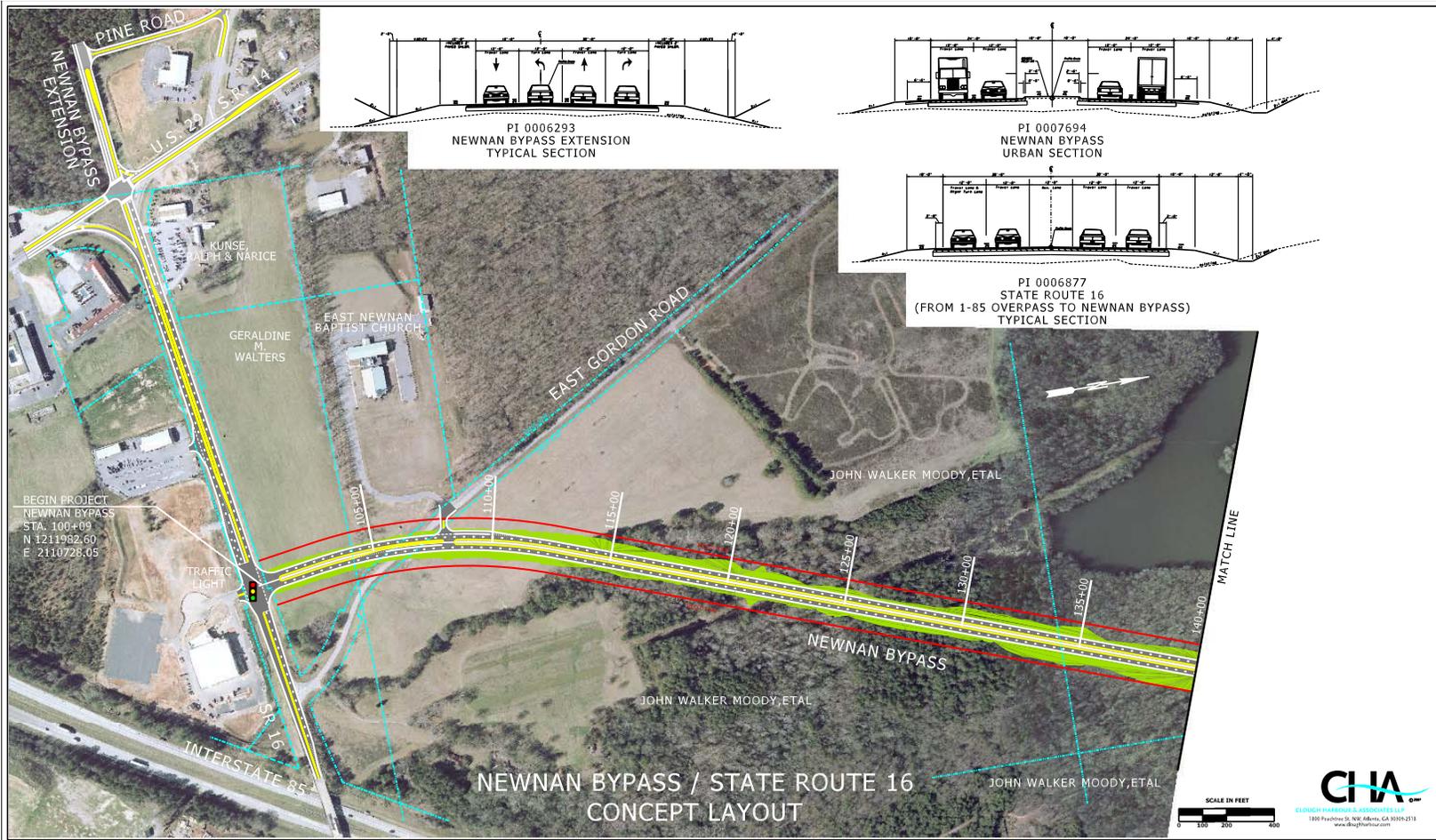
Please report any additions or corrections in writing within seven (7) calendar days to the undersigned at Clough Harbour & Associates LLP. If you have any questions, please feel free to contact me at (404) 352-9200.

Sincerely,

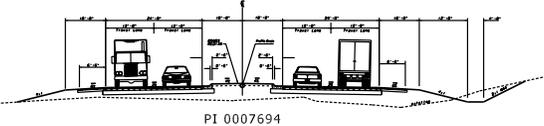
Thomas P. Karis, P.E.

Project Manager

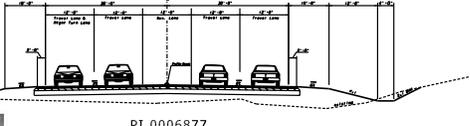
cc: Attendees



PI 0006293
NEWNAN BYPASS EXTENSION
TYPICAL SECTION



PI 0007694
NEWNAN BYPASS
URBAN SECTION



PI 0006877
STATE ROUTE 16
(FROM I-85 OVERPASS TO NEWNAN BYPASS)
TYPICAL SECTION

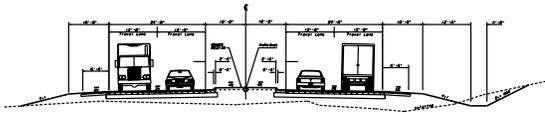
BEGIN PROJECT
NEWNAN BYPASS
STA. 100+09
N 1211962.60
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TRAFFIC LIGHT

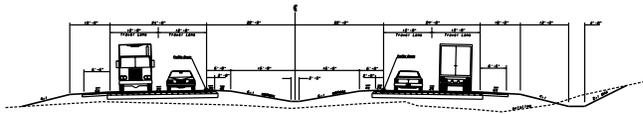
NEWNAN BYPASS / STATE ROUTE 16
CONCEPT LAYOUT

JOHN WALKER MOODY, ETAL

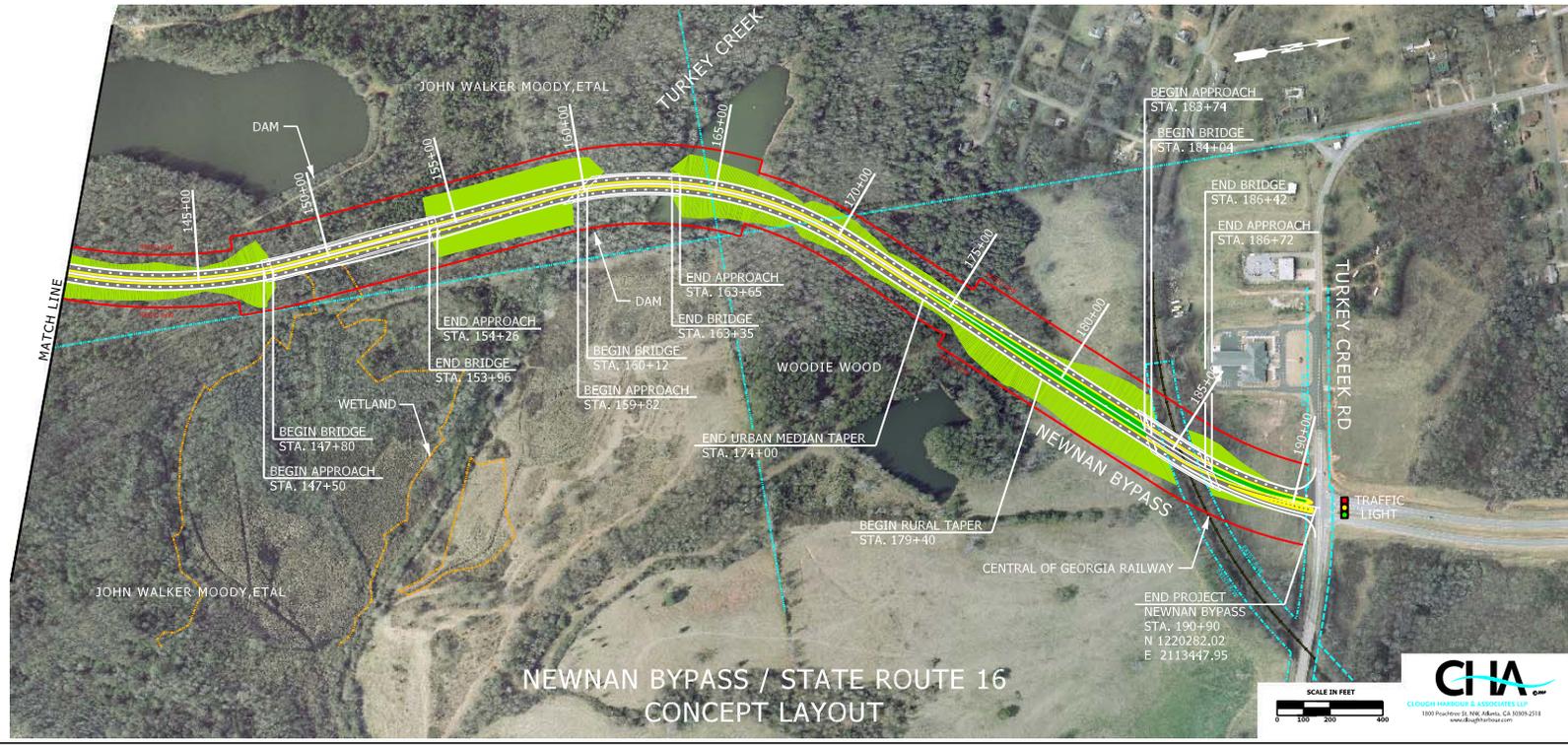


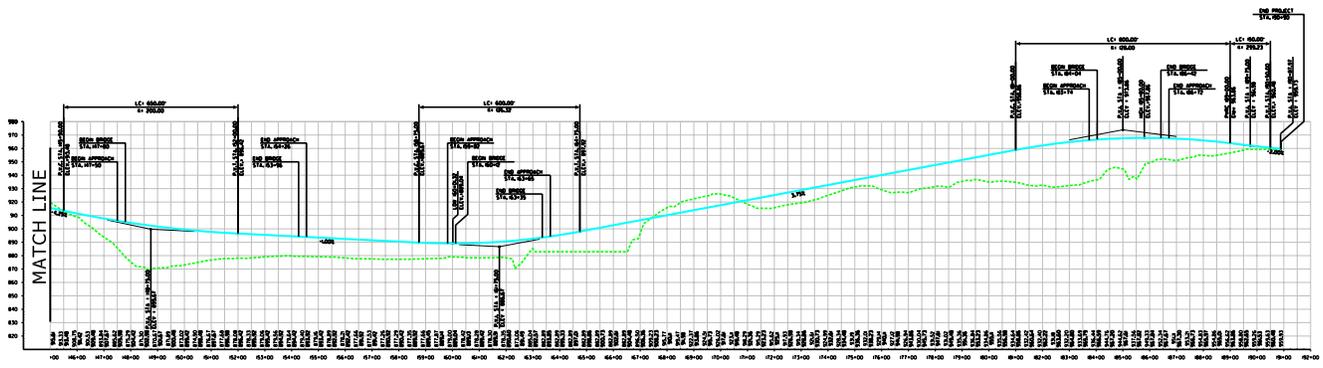
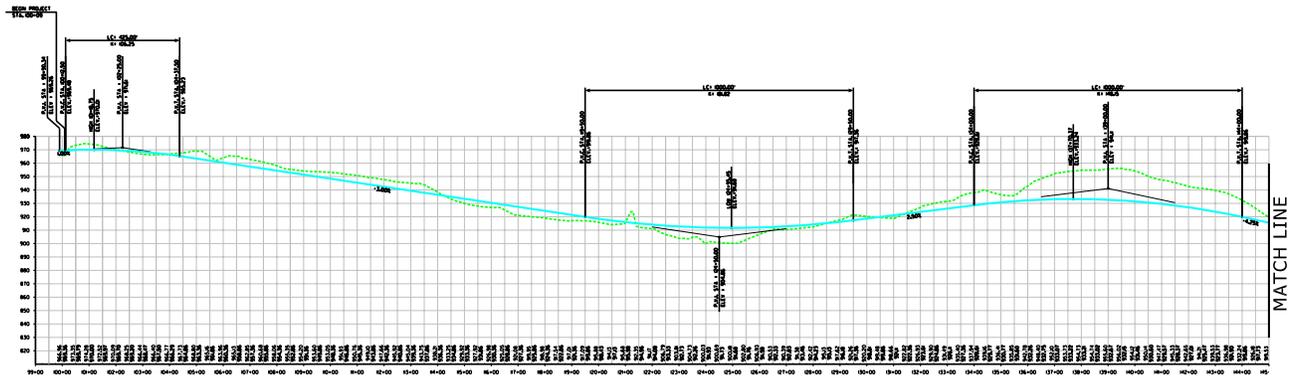


PI 0007694
NEWNAN BYPASS
URBAN SECTION



PI 0007694
NEWNAN BYPASS
RURAL SECTION





NEWMAN BYPASS / STATE ROUTE 16
CONCEPT PROFILE



CONCEPT TEAM MEETING MINUTES

MEETING DATE: August 28, 2007, 10:00 AM

MEETING LOCATION: GDOT District 3 Auditorium
Thomaston, GA

PROJECTS: **SR 16 from I-85 to US 29/27 Alt.**
Project Number: CSSTP-0006-00(877)
PI Number: 0006877
County: Coweta

Newnan Bypass from Turkey Creek Road to SR 16
Project Number: CSSTP-0007-00(694)
PI Number: 0007694
County: Coweta

On August 28, 2007 a Concept Team Meeting was held for the subject two projects. As noted below in comment 9 of the meeting minutes, it was determined from the meeting that the Newnan Bypass project would require a PAR (Practical Alternative Report). The need for a PAR was based upon the amount of anticipated wetland impacts resulting from the proposed concept alignment. It was concluded at the Concept Team Meeting that the Final Concept Report could not be submitted for approval until the PAR was completed and approved.

To begin the PAR preparation, more comprehensive survey and investigations of the wetlands were done to better define the extent of the impacts from the proposed concept alignment. The preliminary database and constraints map were created using aerial photography and mapping supplemented with LIDAR mapping. Wetland delineations were identified from field investigations using GPS. From the investigations and the database, it has been determined that a feasible alignment can be developed to reduce the wetland impacts to a point where a PAR will no longer be required. This new alignment is now the preferred alignment and is described in detail as the *West Alternate Alignment* under the "Other Alternates Considered" portion of the concept report.

Because the PAR is no longer required and no further concept meetings are necessary, the meeting of August 28, 2007 will be considered as the official Concept Team Meeting. The following meeting minutes will be submitted as the recorded minutes for the Concept Team Meeting for projects CSSTP-0006-00(877) & CSSTP-0007-00(694).

ATTENDEES:

Wayne Kennedy (WK), Coweta County	770-254-3775
Thomas Howell (TH), GDOT District 3 Engineer	706-646-6900
Bill Rountree (BR), GDOT District 3 Design	706-646-6604
David Millen (DM), GDOT District 3 Preconstruction	706-646-6594
Jason Mobley (JM), GDOT District 3 Squad Leader	706-646-6600
Mike England (ME), GDOT District 3 Traffic	706-646-6554
Lamar Pruitt (LP), GDOT District 3 Construction	706-646-6911
Kim Brown (KB), GDOT District 3 Utilities	706-646-6548
Audrey Gooch (AG), GDOT District 3 R/W	706-646-6602
Havard Seldon (HS), GDOT-LaGrange Area Engineer	706-845-4115
Kimberly Larson (KL), GDOT District 3 Communications	706-646-6938
Debra Pruitt (DP), GDOT District 3 Environmental	706-646-6984
Tom Queen (TQ), GDOT District 3 Planning and Programming	706-646-6982
Ron Jenkins (RJ), AT&T	770-251-6471
Steve Manley (SM),	770-278-0013
Tom Karis (TK), Clough, Harbour & Associates LLP (CHA)	404-352-9200
Chris Edmondson (CE), Clough, Harbour & Associates LLP (CHA)	404-352-9200
Kevin Kahle (KK), Clough, Harbour & Associates LLP (CHA)	404-352-9200
Helga Torres (HT), Clough, Harbour & Associates LLP (CHA)	404-352-9200

1. Project Introduction

TK introduced the project and provided background information related to the geometrics and tie-in configurations considered for the intersection of the Newnan Bypass and SR 16. In his introduction TK presented the recent chronology on the project development from the Initial Concept Team Meeting on April 14, 2006 which lead to the coordination and association of the SR 16 improvements and the GRTA intersection improvements at SR 14 / US 29. Given the proximity and programming of those projects it was determined at the Initial Concept Team Meeting of 2006 that the Bypass and SR 16 projects needed to be developed through the Concept Phase concurrently. This decision was necessary to ensure the proper terminus configuration of the Bypass and SR 16. During that concept development phase, in the effort to determine the intersection configuration and primary traffic movements, URS Corp. was contracted through Coweta County to assess the project through the Regional Travel Demand Model. The results of the Travel Demand Modeling effort by URS concluded that SR16 would be the primary traffic operational leg and the Bypass would form a T intersection with SR 16. It was also as an outcome of the Initial Concept Team Meeting that a more comprehensive environmental evaluation was to be conducted to provide better definition of environmental constraints within the corridor. TK concluded that the proposed project consists of utilizing the westerly alignment of the Newnan Bypass for this section, with signalized T intersections on both ends, Turkey Creek Road and SR 16.

CE presented the concept layout and described the project as outlined in the concept report. The concept layout included the project limits, proposed horizontal and vertical alignments, parcel data, proposed bridges, typical sections and proposed signalized intersections. Construction limits and wetland locations are also shown on the layout.

2. Need and Purpose Statement

CE presented the need and purpose as defined in the concept report.

3. Functional Classification

Turkey Creek Road – Urban Local Street (within the Newnan Urban Area Boundary)/Rural Local Road (outside of the Newnan Urban Area Boundary)

Newnan Bypass – Urban Principal Arterial - the proposed Turkey Creek to SR 16 segment is partial controlled access

SR 16 – Urban Minor Arterial – partial controlled access

4. Typical Sections & Roadway Items

CE described the proposed typical sections consisting of a four lane rural section with a 44 foot depressed median at the intersection with Turkey Creek Road, and then transitioning to a four lane urban section with a 20 foot raised grass median after crossing the Central of Georgia Railway.

5. Major Structures

CE stated that a minimum of three crossings will be required. One crossing will be over the existing Central of Georgia Railway and the other(s) will be over the wetlands, water courses and floodplains associated with East Newnan Lake and Turkey Creek. The bridge types, a single bridge (to include a median) per crossing location versus two parallel and independent bridges per crossing location will be determined based upon completion of a maintenance and economic analyses in preliminary design.

6. Design Variances

No design variances are anticipated.

7. Alternates Considered

No Build:

The No Build Alternative has been considered, but not selected due to its inability to satisfy the Need and Purpose.

Build Alternative 1 (East Alternate Alignment):

The East Alternate Alignment has been dismissed from further consideration because it is not the least environmentally damaging, practicable alternative which satisfies the goals and objectives of the project.

Build Alternative 2 (West Alternate Alignment):

The West Alternate Alignment has less environmental consequences than the East Alternate Alignment and therefore is considered the preferred alternate for this project.

8. Other Projects in the Area

TK identified the GRTA intersection improvements at Pine Road and SR 16, at SR 14 / US 29 currently been designed by CHA. The GRTA intersection improvements will be constructed in advance of the SR 16 and Newnan Bypass projects. The proposed project will be coordinated accordingly with these intersection improvements.

9. Planning and Programming

TQ advised that a Practical Alternatives Report (PAR) may be required. This was confirmed by BR that a PAR will be required as apart of the Concept Development Process.

10. Environmental Analysis and Concerns

It was suggested that a public informational meeting needs to be scheduled in the near future. The general consensus was that the alignments were well-defined and a public informational meeting in the preliminary design phase would be consistent with the objectives of advancing the project.

11. Utilities

No comments were made regarding utilities.

12. Right of Way

Seven parcels will be affected. It was recommended to negotiate with the property owner at SR 16 at the same time for both projects, the Pine Road and SR 16 @ SR 14 / US 29 intersection improvements and the Newnan Bypass.

Also it was recommended to consider ROW acquisitions along SR 16 to the bridge over I-85, since there was discussion as to extending the project and / or future projects for widening this bridge as well. DM suggested to consider ROW acquisitions for four lanes from the Pine Road and SR 16 @ SR 14 / US 29 intersection to the I-85 bridge. LP suggested considering building four lanes to the bridge over I-85 and stripe only two lanes for use until the bridge is widened.

It was noted that for the Pine Road and SR 16 @ SR 14 / US 29 intersection improvements DOT is to purchase the ROW, and for the Newnan Bypass Coweta County is to purchase the ROW. Coordination is needed to ensure that there is no duplication of effort as a result of the project impacts.

SM inquired what type of access control was proposed for the Newnan Bypass and WK responded that it was proposed to have controlled access.

13. Traffic Operations

No comments were provided.

14. Preconstruction

DM noted that environmental impacts are unavoidable in the project corridor. He suggested considering to straighten the proposed alignment near East Newnan Lake to reduce impacts within the water body. TK suggested that early authorization from the County to advance the database preparation would allow CHA to define the environmental constraints more definitively within the corridor. That in turn would allow the alignment to be refined.

JM inquired about an at-grade crossing at the intersection with the Central of Georgia Railway. TK responded that high traffic volumes are expected and an at-grade crossing will not be feasible. CE also discussed that an at-grade crossing will require unacceptable grades.

15. Coweta County

WK requested to conduct further analysis to reconfigure the intersection with Turkey Creek Road, in order to require a single structure bridge over the Central of Georgia Railway.

WK inquired about staged construction of the Newnan Bypass, initially constructing two lanes and later widening to a four lane highway. TK explained that a four lane highway was modeled for 20 years. TH discouraged staged construction for this project.

16. Additional Comments

TK inquired into the responsibilities to conduct a Value Engineering (VE) Study which will be required for this project because of its cost. DM and BR indicated that the VE Team will be assembled by the Office of Engineering Services at GDOT and CHA will present the design to the VE Team. The VE Study will need to be requested by the County through GDOT.

TK stated that the survey database needs to be completed before the proposed alignment can be refined further.

DM stated that there is consensus as to the T intersection with SR 16 and recommended that the County proceeds with the database survey.

BR emphasized that there is need for a public meeting to be scheduled as soon as possible, even before the database survey is started.

17. Meeting was adjourned at 2:30 PM.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

**PRACTICABLE ALTERNATIVE REPORT
SR 34 NEWNAN BYPASS-SOUTHEAST SEGMENT
CSSTP-0007-00(694) & CSSTP-0006-00(877),
P.I. Nos.: 0007694 & 0006877
COWETA COUNTY**

Grip Corridor N/A **Date of Report:** **August 18, 2008**
US Route No. N/A
State Route No. 34 Bypass

RECOMMENDATION FOR APPROVAL	
Date	Georgia Department of Transportation
Date	Federal Highway Administration
Date	U.S. Army Corps of Engineers
Date	U.S. Fish and Wildlife Service
Date	U.S. Environmental Protection Agency
Date	Georgia Department of Natural Resources, Environmental Protection Division

GENERAL PROJECT LOCATION/DESCRIPTION

The project (GDOT PI Nos. 0007694 & 0006877) involves the construction of a new 1.6 mile segment of roadway on new location. The project is located near the center of Coweta County, proximate to the southeast quadrant of the City of Newnan, and slightly northwest of the Interstate 85 (I-85) Interchange 41 for SR 14/US 29/27 Alt. The project is an extension of the existing SR 34 Newnan Bypass, which currently terminates at Turkey Creek Road from the north. Please see Figure 1, Project Location Map.

The project begins at SR 16 with an at grade signalized T-type intersection. The typical section of the proposed Bypass consists of four 12 foot lanes, a 20 foot wide raised grass median, and 10 foot rural shoulders (4'-0" to be paved). The proposed project alignment heads north to a point where the alignment crosses Gordon Road. From there the alignment turns towards the north-northeast to pass just east of East Newnan Lake. The alignment turns back towards the north where it then crosses Turkey Creek. After crossing over Turkey Creek the alignment turns back towards the north-northeast passing to the west of an unnamed pond. At this point the typical section transitions to a rural section with a 44 foot depressed median and 10 foot shoulders (4'-0" paved). This typical section matches the existing Newnan Bypass section to provide cross sectional continuity at the project terminus at Turkey Creek Road (See Attachment 1, Typical Sections). The alignment then crosses over the Norfolk Southern Railroad and turns back to the north to terminate at an at grade intersection of Turkey Creek Road and the existing Newnan Bypass. This intersection would also be signalized.

This project is being developed in conjunction with the SR 16 widening (PI 0006877) that begins just west of the I-85 overpass and extends 0.5 mile to its intersection with SR 14/US 29/27 Alt. The intersection of SR 16 at SR 14/US 29/27 is being improved as a separate project – PI No 0006293.

The Newnan Bypass (SR 34 Bypass) was originally contemplated as a 7 mile long circumferential road to function as an alternate route around the City of Newnan in Coweta County. The construction of the Bypass has been advanced in segments which have been phased over time and opened to traffic as segments are completed. Approximately one-half of the overall Bypass is currently constructed and open to traffic.

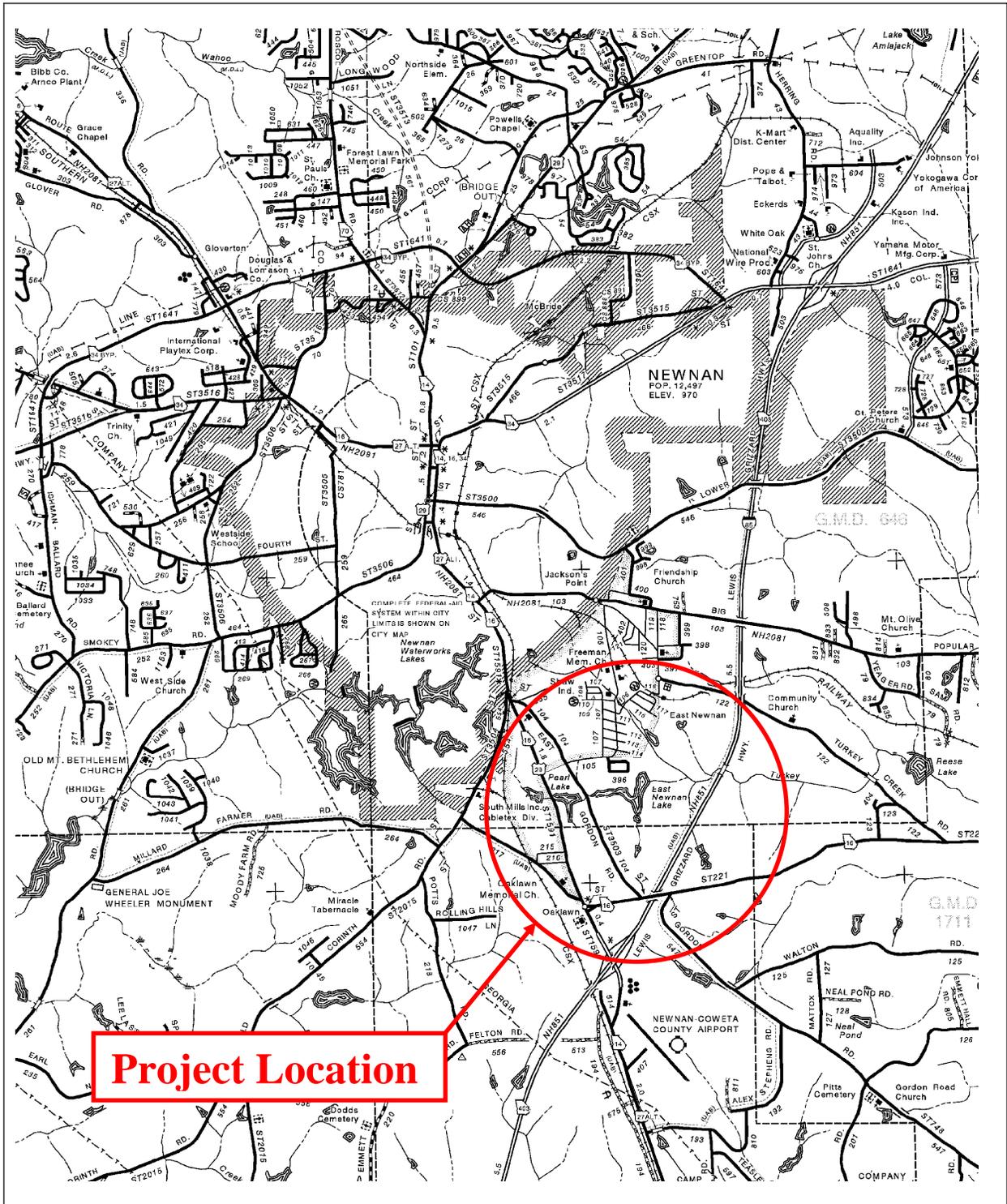


Figure 1 Project Location Map

NEED AND PURPOSE

The segment of the Bypass proposed under projects CSSTP-0007-00(694) & CSSTP-0006-00(877), is an approximately 1.6 mile new location link between SR 16 and Turkey Creek Road. This segment has independent utility and function which would provide connectivity and access between one of the previously constructed segments of the Bypass and the existing state highway system at SR 16 proximate to the southeastern quadrant of the City of Newnan. The previously constructed adjoining segment of the Bypass extends from Bullsboro Road (SR 34) through Lower Fayetteville Road to Turkey Creek Road. Terminating at Turkey Creek Road, the existing Bypass is a four-lane median divided arterial roadway that provides access between the central commercial district on SR 34 and Turkey Creek Road. Completion of this proposed segment of the Bypass would improve accessibility to I-85 at Interchange 41 via SR 16 and SR 14/US 29/27 Alt. and provide a parallel facility to I-85 between Interchange 40 at SR 34 and Interchange 41 at SR 14/US 29/27 Alt.

The termini of the project have been established to provide connectivity, continuity and consistency with the local and regional transportation initiatives that are currently underway or programmed through GDOT and the ARC. Providing an extension of the Bypass to SR 16 would facilitate this objective. Within the County, SR 16 provides primary surface transportation access between the populated centers of Newnan, Sharpsburg and Senoia. SR 16 crosses over I-85 slightly to the east of this proposed segment of the Bypass, but does not provide access to I-85 at the crossing. The nearest access to I-85 is provided at Interchange 41, a distance of approximately 0.4 mile from the intersection of SR 16 with SR 14/US 29/27 Alt.

The Newnan Bypass has been, and still remains a priority transportation initiative for Coweta County to improve access around the City of Newnan and be a catalyst to promote and support economic development. Completion of this segment of the Bypass would support and promote economic development in this quadrant of Coweta County by providing 1) an additional and alternate route for access between I-85 at Interchange 41 and commercial and industrial land uses in Newnan, 2) access to previously undeveloped land in close proximity to I-85, 3) additional capacity to supplement US 29/27 Alt., and 4) advancing the completion of the full circumferential route around Newnan.

EXISTING ROADWAY

EXISTING ROADWAY			
PROJECT	POSTED SPEED	TYPICAL SECTION	R/W WIDTH
N/A	N/A	N/A	N/A

EXISTING MAJOR STRUCTURES					
STRUCTURE ID	FEATURES INTERSECTED/TYPE	LENGTH (ft)	WIDTH (ft)	SUFFICIENCY RATING	WETLAND AREA
N/A	N/A	N/A	N/A	N/A	N/A

PROPOSED ROADWAY			
LOCATION	DESIGN SPEED	MAXIMUM DEGREE OF CURVE	MAXIMUM GRADE
Newnan Bypass at SR 16 to Turkey Creek Road and existing Newnan Bypass	45 mph	4°46'	5%

PROPOSED MAJOR STRUCTURES				
FEATURES INTERSECTED/TYPE	DESCRIPTION OF PROPOSED ACTIVITY	LENGTH OF PROPOSED STRUCTURES	WIDTH	WETLAND AREA (ACRES)
Proposed Newnan Bypass south of East Newnan Lake – Wetland 3	New construction-Culvert	N/A	N/A	0.35
Proposed Newnan Bypass at unnamed tributary of Turkey Creek – Stream 4	New construction-Culvert	220 ft	6 ft	N/A
Proposed Newnan Bypass at Turkey Creek	New construction	261 ft	6 ft	N/A
Proposed Newnan Bypass east of Open Water 8 – Wetland 7	New construction	N/A	N/A	0.85
Proposed Newnan Bypass west of Open Water 10 – Wetland 9	New construction	N/A	N/A	0.15
Proposed Newnan Bypass bridge over Norfolk Southern Right of Way	New construction	288 ft	104 ft	N/A

Currently Proposed/ “Best Fit” Alternative
<p>The alignment of the Best Fit Alternative was developed to minimize wetland and stream impacts while still meeting the need and purpose of the proposed project and avoiding impacts to Section 4(f) resources (please see Figure 2). Several alternative alignments were assessed to minimize impacts to waters of the US, historic properties, residences and businesses. A discussion of the alternative alignments is included in the section entitled Other Alternatives Considered. Note that impacts reflect only horizontal alignments, with impacts taken across the full width of a 200 ft. right of way. The Best Fit Alternative for the proposed project would impact approximately 1.35 acres of jurisdictional wetlands, and approximately 481 linear feet of streams.</p>

Descriptions of jurisdictional waters are identified in the Phase I Ecology Report in Attachment 2, and the estimated impacts to these jurisdictional areas is listed below. Refer to Figures 2a through 2c for locations of anticipated impacts associated with the Best Fit Alternative.

Ephemeral Channel 1A (ES-1A)

ES-1A is a drainage channel that begins at the intersection of Gordon Road and SR 16. No water was observed in ES-1A during any of the field surveys conducted for the project. ES 1A flows in to Stream 1 (S-1). The Best Fit Alternative was shifted to the west to avoid impacts to this stream.

Stream 1 (S-1)

S-1 is an intermittent stream located south of Stream 2 (S-2) and Wetland 3 (W/L-3). It flows north and connects to S-2 prior to discharging to W/L-3. The Best Fit Alternative was shifted to the west to avoid impacts to this stream.

Stream 2 (S-2)

This is a somewhat impaired perennial stream located east of W/L-3. It flows east to west and connects to W/L-3. The Best Fit Alternative was shifted to the west to avoid impacts to this stream.

Wetland 3 (W/L-3)

W/L-3 is connected to and located just south of Open Water 5 (OW-5) and is also connected to S-2. The Best Fit Alternative would cross W/L-3 with a proposed culvert and impact approximately 0.35 acre of this wetland.

Stream 4 (S-4)

S-4 is an unnamed perennial tributary of Turkey Creek. S-4 flows east out of the OW-5. The Best Fit Alternative would cross S-4 with a proposed culvert and impact approximately 220 linear feet of this stream.

Ephemeral Channel 4A (ES-4A)

ES-4A is a drainage channel that begins on the north side of East Newnan Lake. Based upon field observation the ES-4A drainage channel is fed from an emergency spillway from the lake. Based upon field observation, more than half of the channel was dug by shovel or back hoe in order to provide a positive outfall to Stream 4. The Best Fit Alternative would not impact this ephemeral stream.

Open Water 5 (OW-5)

OW-5 is known as East Newnan Lake. This is a small lake impounded by an earthen dam. OW-5 is located approximately 1,500 ft. south of Open Water 8 (OW-8). OW-5 is a lacustrine, open water system with a saturated hydrologic regime (LOW). OW-5 would not be impacted by the Best Fit Alternative because the alignment was shifted to the east to avoid the area.

Stream 6 (S-6)

S-6, aka Turkey Creek, is a lower perennial stream. Approximately 261 feet of S-6 would be impacted by the Best Fit Alternative.

Ephemeral Channel 6A (ES-6A)

ES-6A is a drainage channel that begins on the north side of OW-8. Based on field observation ES-6A is fed from an emergency spillway from the lake. The Best Fit Alternative would not impact this ephemeral stream.

Wetland 7 (W/L-7)

W/L-7 is a low quality emergent wetland system that has developed within the floodplain of Stream 6. During site investigations it was noted that attempts to use the area as pasture land have been made. Indications of prior use include the construction of ditches to the east to drain the area and the fact that the area has been planted with grass. Approximately 0.85 acre of W/L-7 would be impacted by the Best Fit Alternative.

Open Water 8 (OW-8)

OW-8 is a small pond, impounded by an earthen dam. OW-8 is located approximately 1,000 feet southwest of OW-10. OW-8 would not be impacted by the Best Fit Alternative because the alignment was shifted to the east to avoid the area.

Wetland 9 (W/L-9)

W/L-9 is a small, medium quality wetland system located immediately west of OW-10. Approximately 0.15 acre of W/L-9 would be filled by the Best Fit Alternative.

Open Water 10 (OW-10)

This is a small pond impounded by an earthen dam located approximately 1,300 feet south of Turkey Creek Road. Open Water 10 would not be impacted by the Best Fit Alternative because the alignment was shifted to the west to avoid the area.

Stream 11 (S-11)

This is a somewhat impaired intermittent tributary of Turkey Creek. S-11 flows southeast from OW-10, merging with S-6 proximate to I-85. The Best Fit Alternative was shifted to the west to avoid impacts to this stream.

Construction of the Best Fit Alternative would impact two streams and three wetlands. The impacts to jurisdictional areas cannot be avoided; however, they have been minimized where possible. Impacts to six streams, three open waters and one wetland would be avoided due to alignment shifts.

Minimization Considerations

Impact numbers reflected above include the total acreage/linear footage of all jurisdictional systems located within the corridor for the Best Fit Alternative. Further measures to avoid and minimize impacts would be determined as final design is completed for the Best Fit Alternative.

Through the concept development, efforts have been made to avoid and minimize jurisdictional impacts. Due to the linear nature of the project, it is not practicable to completely avoid

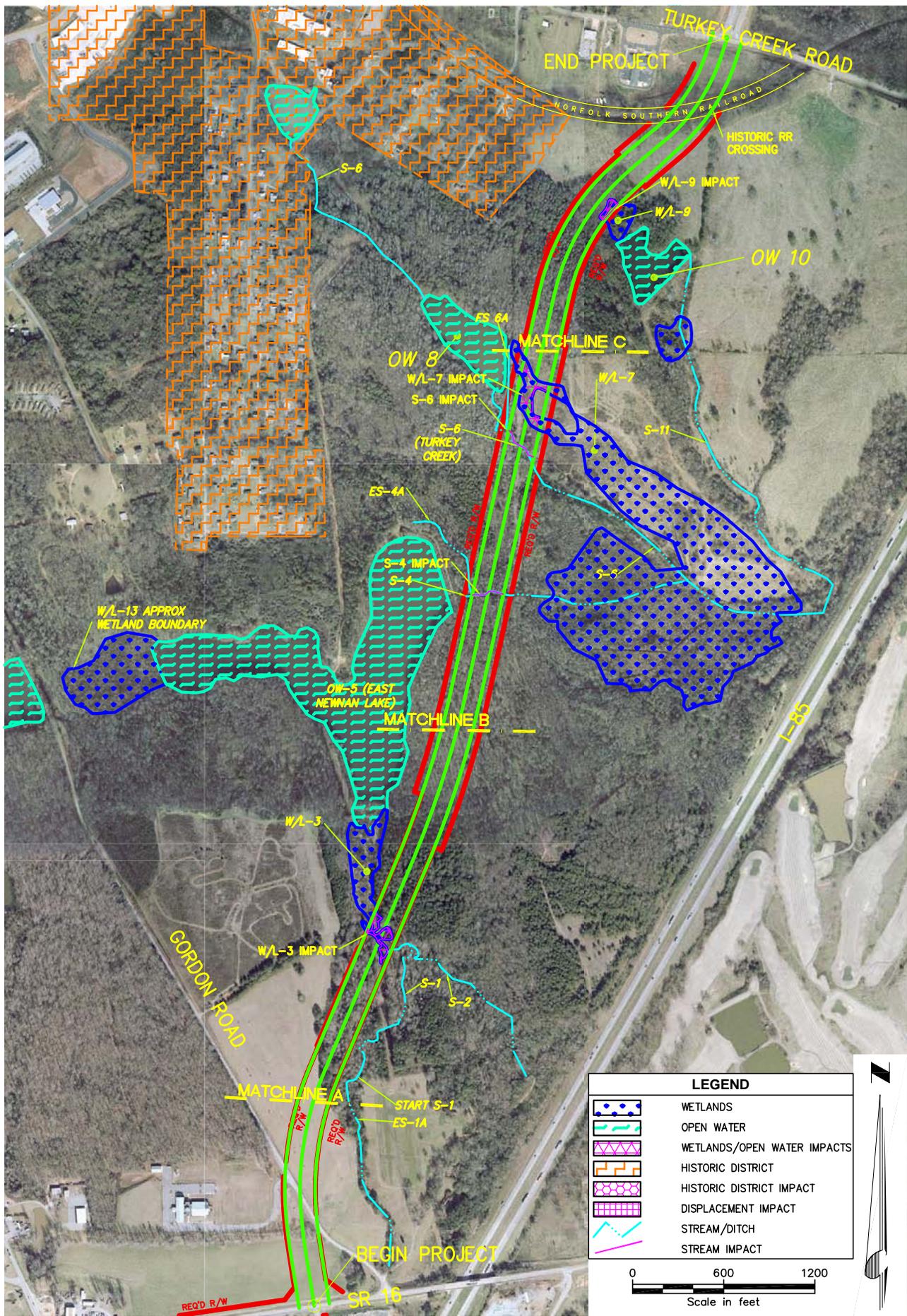
Practical Alternative Report Page: 8

Project Numbers: CSSTP-0007-00(694) & CSSTP-0006-00(877)

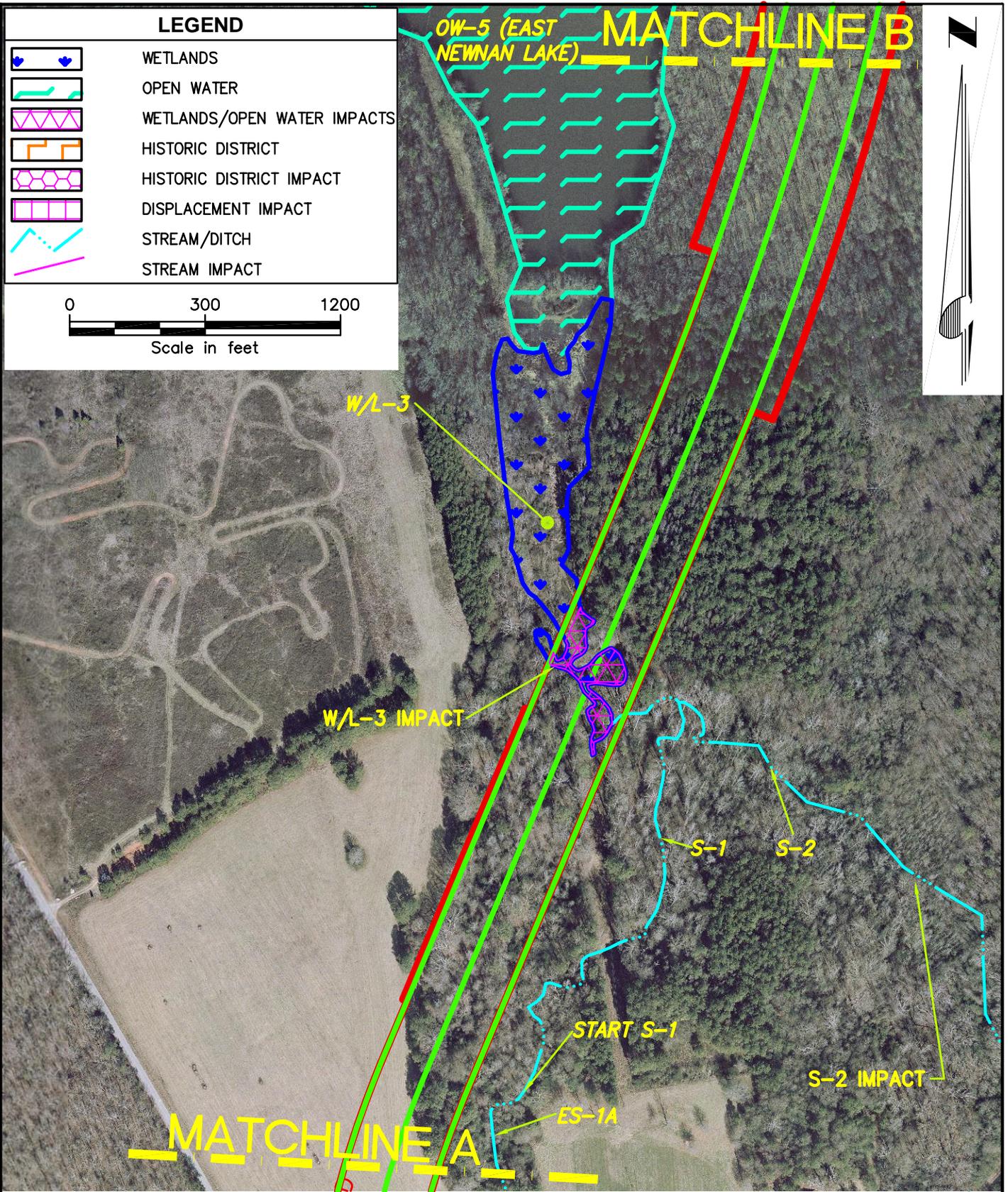
P.I. Numbers: 0007694 & 0006877

County: Coweta

jurisdictional impacts. Unavoidable impacts along the Best Fit Alternative would be permitted through the Section 404 process and compensatory mitigation would be provided. As part of the initial concept plan bridge structures were proposed at S-4, S-6 and W/L-7. However, as a result of a Value Engineering study it was recommended that these bridges be replaced with culvert structures for a project cost savings of more than \$5 million.



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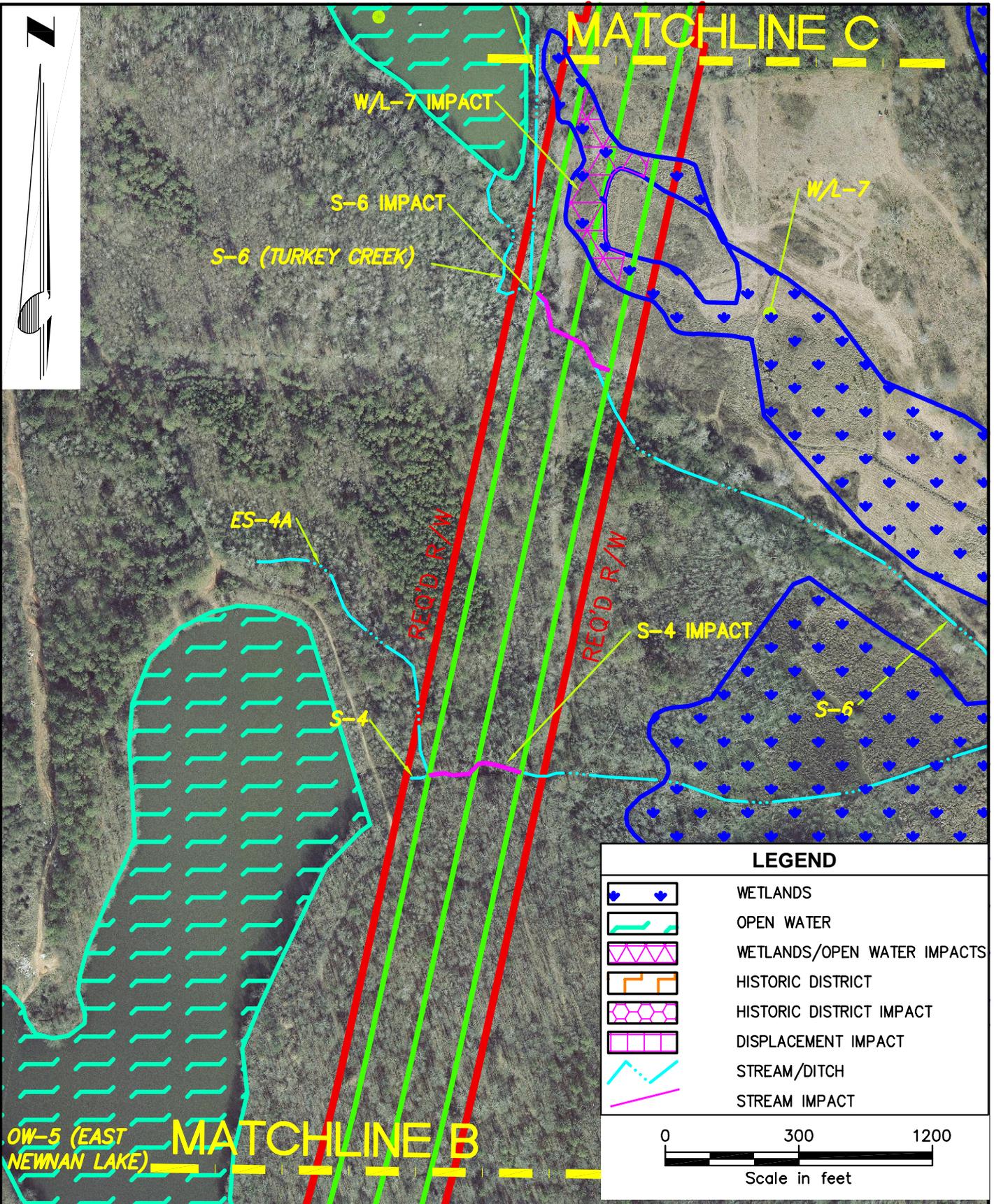


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BEST FIT ALTERNATIVE IMPACT MAP
 OW 5, W/L-3 & STREAM 1, 2 & ES-1A DETAIL
 NEWNAN BYPASS
 PRACTICABLE ALTERNATIVE REPORT
 COWETA COUNTY, GEORGIA

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FIGURE 2a

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LEGEND	
	WETLANDS
	OPEN WATER
	WETLANDS/OPEN WATER IMPACTS
	HISTORIC DISTRICT
	HISTORIC DISTRICT IMPACT
	DISPLACEMENT IMPACT
	STREAM/DITCH
	STREAM IMPACT

0 300 1200
Scale in feet

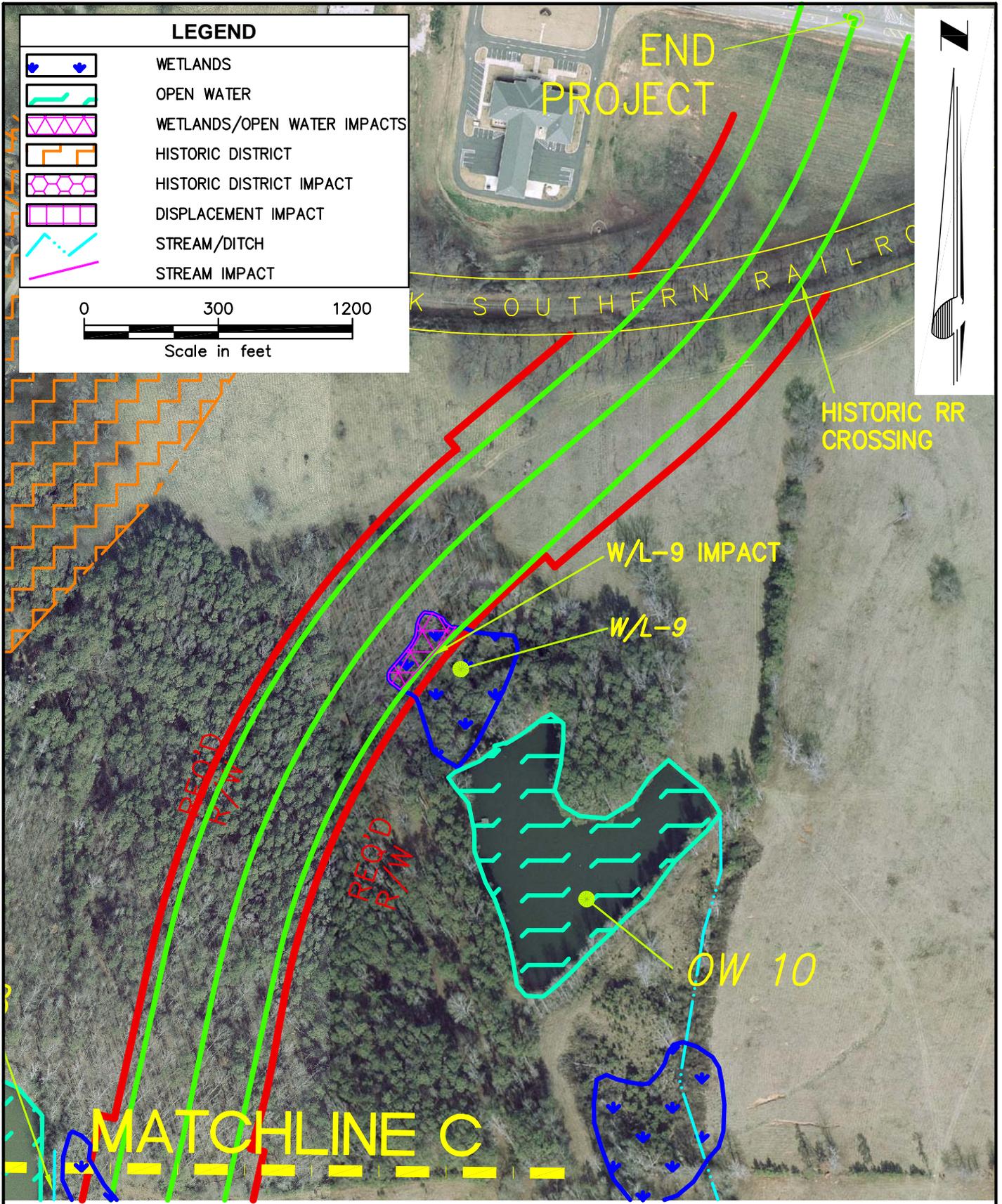
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BEST FIT ALTERNATIVE IMPACT MAP
STREAMS 4 & 6/WETLAND 7 DETAIL
NEWNAN BYPASS
PRACTICABLE ALTERNATIVE REPORT
COWETA COUNTY, GEORGIA

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FIGURE 2b

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**BEST FIT ALTERNATIVE IMPACT MAP
STREAMS 4 & 6/WETLAND 7 DETAIL**
NEWMAN BYPASS
PRACTICABLE ALTERNATIVE REPORT
COWETA COUNTY, GEORGIA

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0007694

DATE: 8/1/08

FIGURE 2c

Other Alternatives Considered

In addition to the Best Fit Alternative, other alternatives including a wetland and stream minimization alternative have been considered. See Figure 3 for the locations of all alternatives considered. Impacts from all alternatives are estimated based on impact across full right of way widths, and do not account for stream sinuosity.

Eastern Shift Alternative – Alt-A

The Eastern Shift Alternative is identified as Alternative A (Alt-A). Alt-A has the same termini as the Best Fit Alternative, however, the alignment is shifted a maximum distance of 1,350 ft. to the east from the Best Fit Alternative. Alt-A, begins at SR-16, west of I-85, at the same location as all of the alternatives considered. The alignment follows a northeast route, with an impact of approximately 234 ft across ES-1A, then would cross S-2 with an impact of approximately 204 ft. Alt-A continues toward the northeast, paralleling I-85 for approximately 3,000 ft., and impacting approximately 209 ft. of S-6 and approximately 5.35 acres of wetland. Alt-A then changes course to the north, crossing S-11 and impacting approximately 205 ft. of this intermittent stream. Alt-A then turns to the north-northwest, passing to the east of OW-10 and the wetland located downgradient of OW-10. From there Alt-A then passes over the existing railroad, and continues to the terminus at the existing intersection of the Newnan Bypass and Turkey Creek Road, common to all alternatives considered. Refer to Figures 4a-4c, Alt A Detail.

This alternative would impact approximately 5.35 acres of wetland and approximately 852 linear feet of streams. This alternative would not have any open water impacts, or cause any residential or commercial displacements. The existing railroad near the northern terminus of the proposed bypass has been identified as eligible for listing on the National Register of Historic Places (NRHP). As with all of the alternatives considered, a span crossing would be installed over the railroad.

Although this alternative meets the project need and purpose, impacts to wetlands and streams exceed the impacts identified for the Best Fit Alternative. In addition, the estimated cost of Alt-A is approximately \$3.6 million more than the Best Fit Alternative, mostly due to the increased length of the alignment. Therefore, this alternative was not selected as the preferred alternative.

Western Shift Alternative – Alt-B

The Western Shift Alternative is identified as Alternative B (Alt-B). Like Alt-A, Alt-B has the same termini as the Best Fit Alternative, however Alt-B shifts a maximum distance of 1,050 feet to the west from the Best Fit Alternative. From the southern terminus, Alt-B travels to the north-northwest for approximately 2,800 ft. with no identified impacts. Alt-B then changes course to the north-northeast, and crosses an approximately 461 ft. (1.9 ac.) expanse of OW-5. Continuing to the north-northeast, Alt-B avoids impacting a section of the Historic Mill District. From there, Alt-B passes to the west of, and avoids OW-8, however approximately 202 feet of S6, the primary tributary to OW-8, would be impacted by Alt-B. Alt-B then takes a south-southwesterly heading, before impacting a 0.43-acre portion of the Historic Mill District. From there Alt-B continues toward the common northern terminus, crossing the existing railroad right of way. Refer to Figures 5a-5c, Alt-B Detail.

Alt-B would impact approximately 202 feet of stream, and approximately 1.9 ac. of open water. This alternative would also displace one residence and require approximately 0.43 acres of property from a National Register (NR) eligible historic district.

This alternative meets the project need and purpose, and impacts to wetlands and streams are less than those for the Best Fit Alternative. However, the crossing of OW-5 would necessitate the construction of a bridge, increasing the projected cost by approximately \$7.4 million in comparison to the Best Fit Alternative. In addition, this alternative would cause unavoidable adverse impacts to a NR eligible historic district, which is a Section 4(f) resource. Therefore, this alternative was not selected as the preferred alternative.

Wetlands and Stream Minimization Alternative – Alt-C

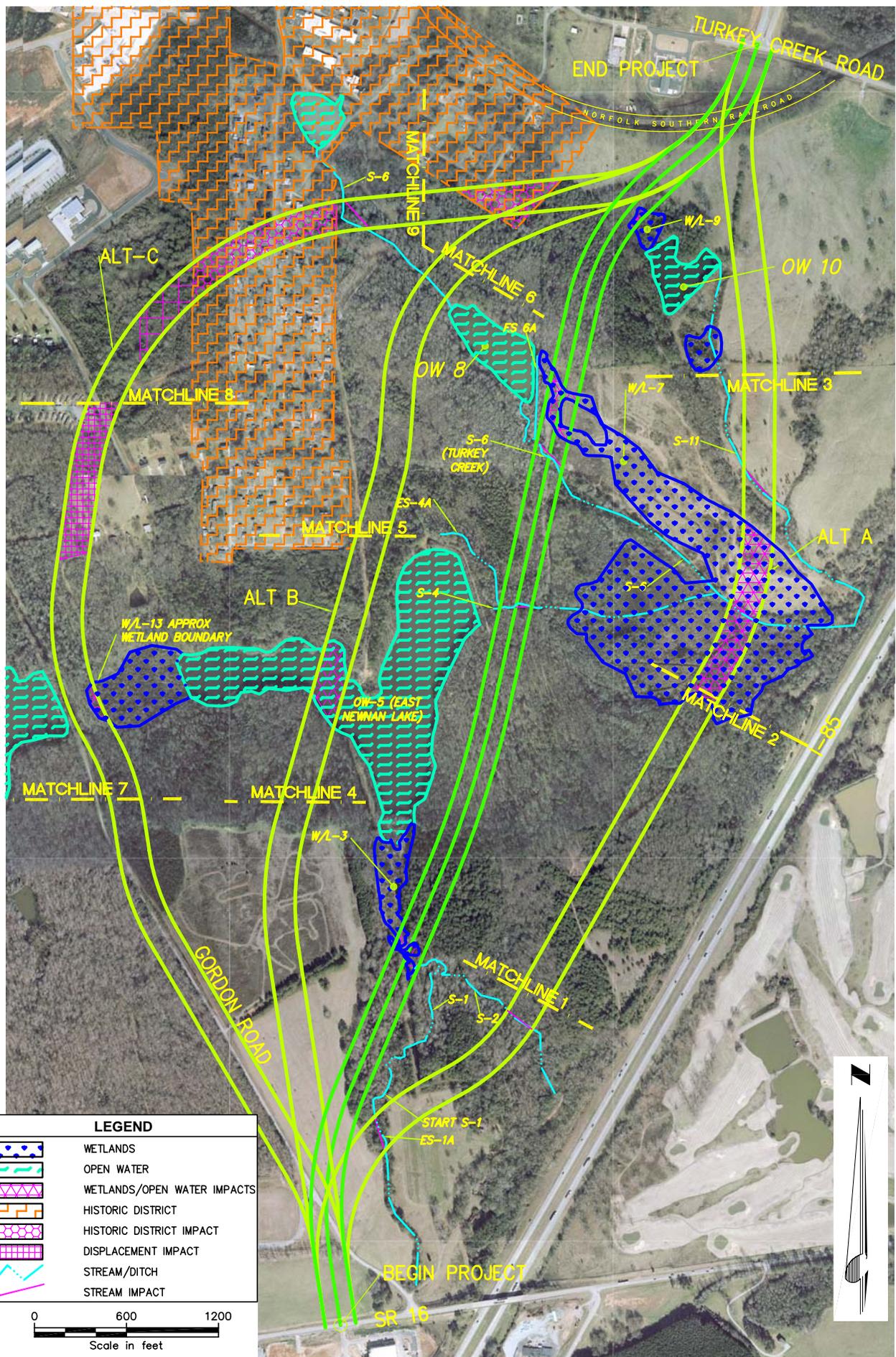
The wetlands and stream minimization alternative is identified as Alternative C (Alt-C). Like Alt-A & B, Alt-C has the same termini as the Best Fit Alternative; however Alt-C would shift a maximum distance of approximately 2,900 feet to the west from the Best Fit Alternative. From the southern terminus at SR-16, Alt-C advances approximately 4,100 ft. to the northwest without any identified impacts, and then crosses the existing Gordon Rd. dam. Approximately 0.30 ac. of wetland would be impacted by Alt-C proximate to the dam. Alt-C then changes heading toward the northeast and crosses through an existing residential neighborhood, and historic district. This intersection would cause an impact to approximately 4.8 ac. of historic district, and cause an estimated 21 residential displacements from both historic and non-historic areas. The alignment then crosses S-6, impacting approximately 247 ft. of perennial stream. After crossing S-6, the alignment continues to the east-northeast, and again crosses through the historic district. This crossing would impact approximately 2.1 ac., and displace approximately three residences. Alt-C then continues toward the common northern terminus, crossing the existing railroad right of way.

Alt-C would impact approximately 247 feet of stream, and approximately 0.30 ac. of wetland. This alternative would also cause approximately 24 residential displacements and impact approximately 6.9 ac. of a historic district.

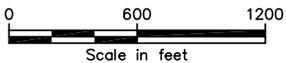
This alternative meets the project need and purpose, and impacts to wetlands and streams are less than those for the Best Fit Alternative. However, the extended length of Alt-C, including construction and right-of-way acquisition, would increase the projected cost by approximately \$7.2 million in comparison to the Best Fit Alternative. In addition, this alternative would cause unavoidable adverse impacts to the historic mill district including displacement of approximately 20 historic structures and use of approximately 6.9 acres of property from the historic district, which is a Section 4(f) resource. Therefore, this alternative was not selected as the preferred alternative.

NO-BUILD ALTERNATIVE

This alternative would result in no action by the Georgia Department of Transportation (GDOT) to construct any project, which would not provide connectivity and access between one of the previously constructed segments of the Bypass and the existing state highway system at SR 16 in the southeasterly quadrant of the City. The No-Build alternative would also not address the need to support and promote economic development in this quadrant of Coweta County by providing 1) an additional and alternate route for access between I-85 at Interchange 41 and commercial and industrial land uses in Newnan, 2) access to previously undeveloped land in close proximity to I-85, 3) additional capacity to supplement US 29/27 Alt., and 4) advancing the completion of the full circumferential route around Newnan.



LEGEND	
	WETLANDS
	OPEN WATER
	WETLANDS/OPEN WATER IMPACTS
	HISTORIC DISTRICT
	HISTORIC DISTRICT IMPACT
	DISPLACEMENT IMPACT
	STREAM/DITCH
	STREAM IMPACT



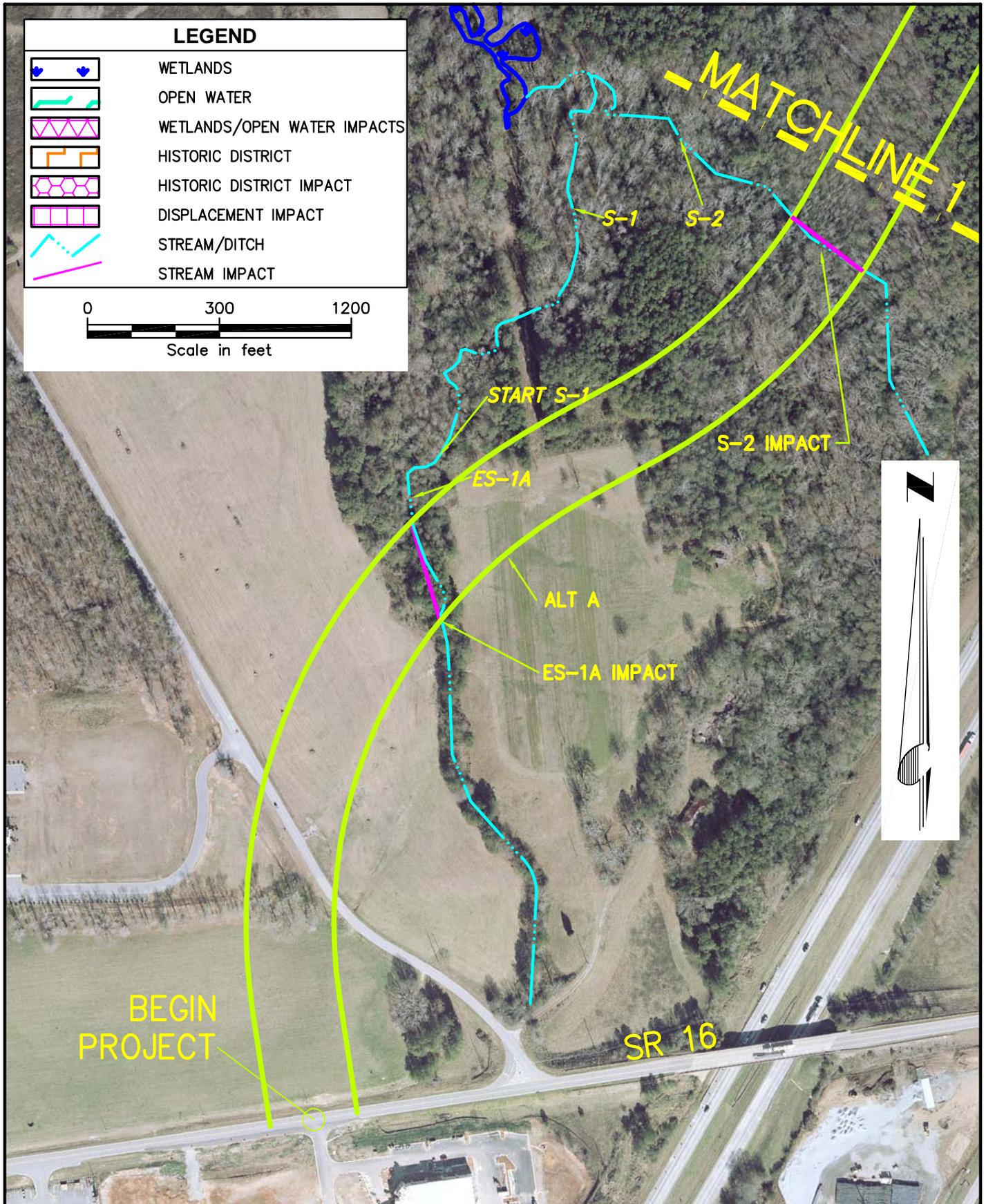
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OVERALL ALTERNATIVE IMPACT MAP
 NEWNAN BYPASS
 PRACTICABLE ALTERNATIVE REPORT
 COWETA COUNTY, GEORGIA

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FIGURE 3

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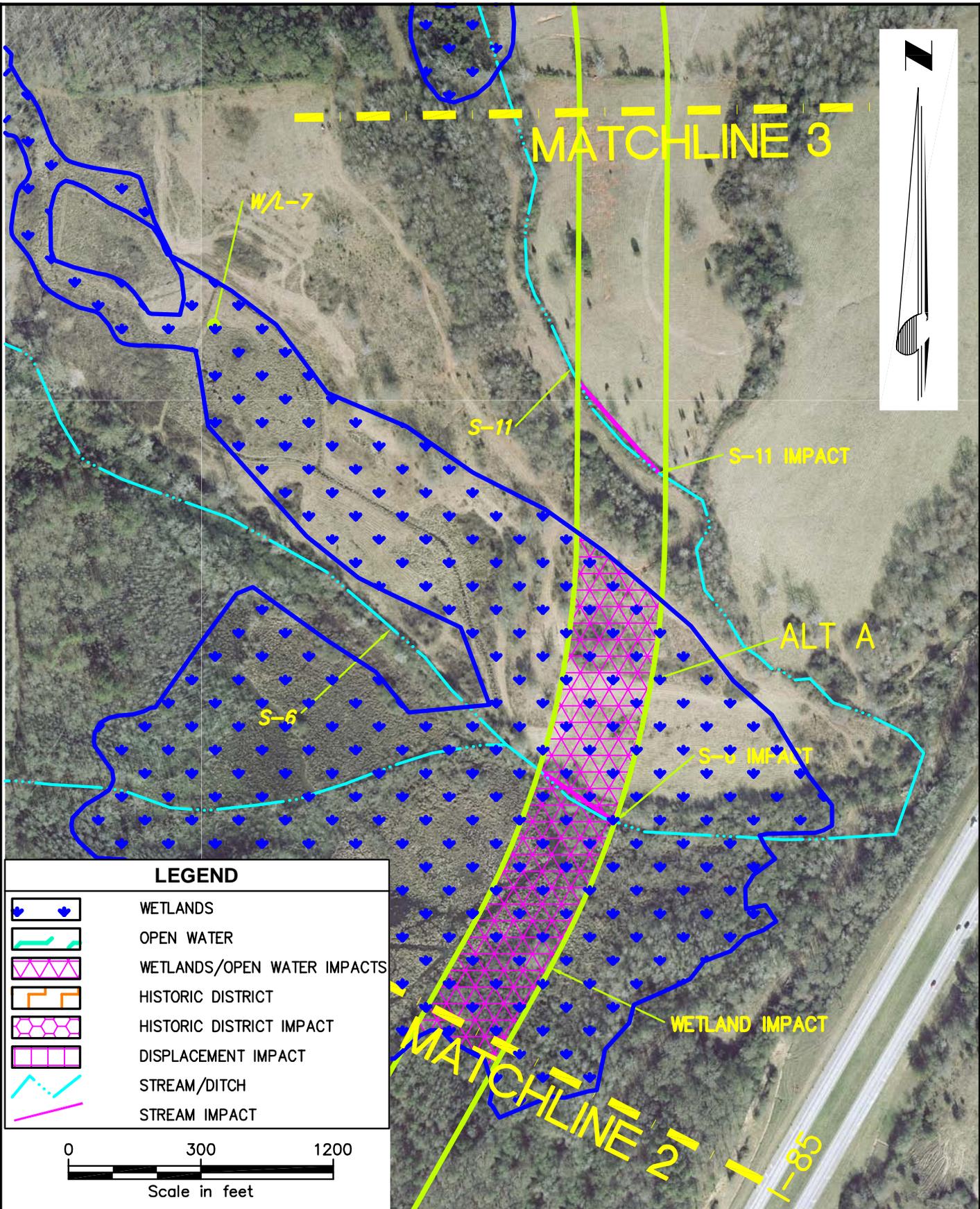
ALTERNATIVES ANALYSIS IMPACT MAP
ALT A DETAIL
NEWNAN BYPASS
PRACTICABLE ALTERNATIVE REPORT
COWETA COUNTY, GEORGIA

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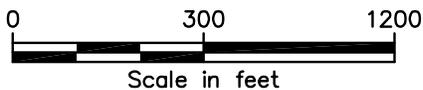
FIGURE 4a

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LEGEND

-  WETLANDS
-  OPEN WATER
-  WETLANDS/OPEN WATER IMPACTS
-  HISTORIC DISTRICT
-  HISTORIC DISTRICT IMPACT
-  DISPLACEMENT IMPACT
-  STREAM/DITCH
-  STREAM IMPACT



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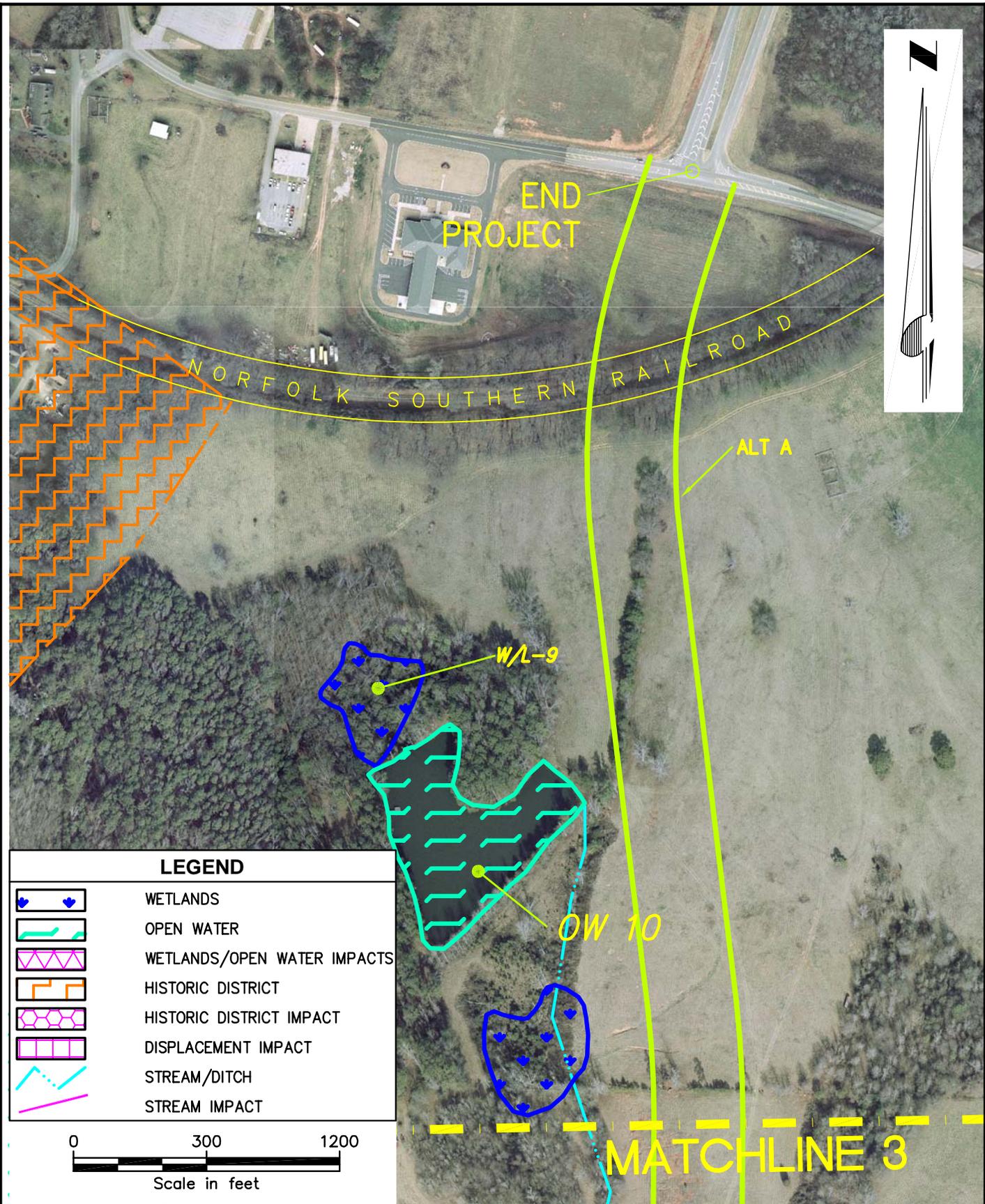
ALTERNATIVES ANALYSIS IMPACT MAP
ALT A DETAIL
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 PRACTICABLE ALTERNATIVE REPORT
 COWETA COUNTY, GEORGIA

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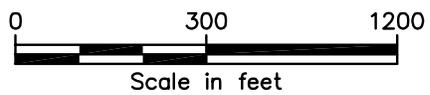
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FIGURE 4b

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LEGEND	
	WETLANDS
	OPEN WATER
	WETLANDS/OPEN WATER IMPACTS
	HISTORIC DISTRICT
	HISTORIC DISTRICT IMPACT
	DISPLACEMENT IMPACT
	STREAM/DITCH
	STREAM IMPACT



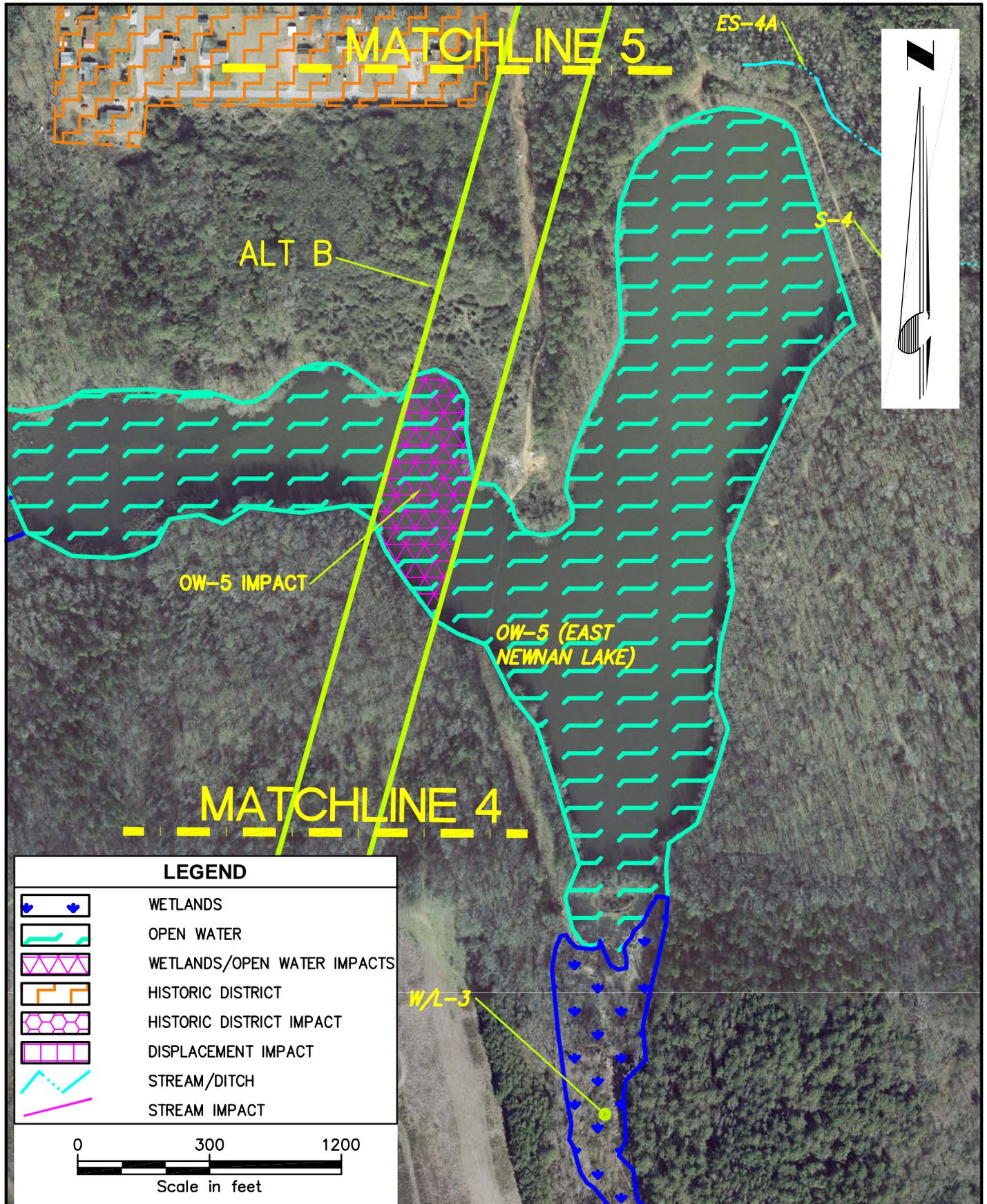
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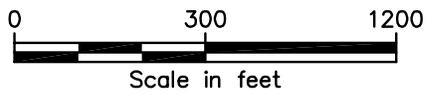
ALTERNATIVES ANALYSIS IMPACT MAP
ALT A DETAIL
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PRACTICABLE ALTERNATIVE REPORT
COWETA COUNTY, GEORGIA

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FIGURE 4c

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LEGEND	
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	OPEN WATER
	WETLANDS/OPEN WATER IMPACTS
	HISTORIC DISTRICT
	HISTORIC DISTRICT IMPACT
	DISPLACEMENT IMPACT
	STREAM/DITCH
	STREAM IMPACT

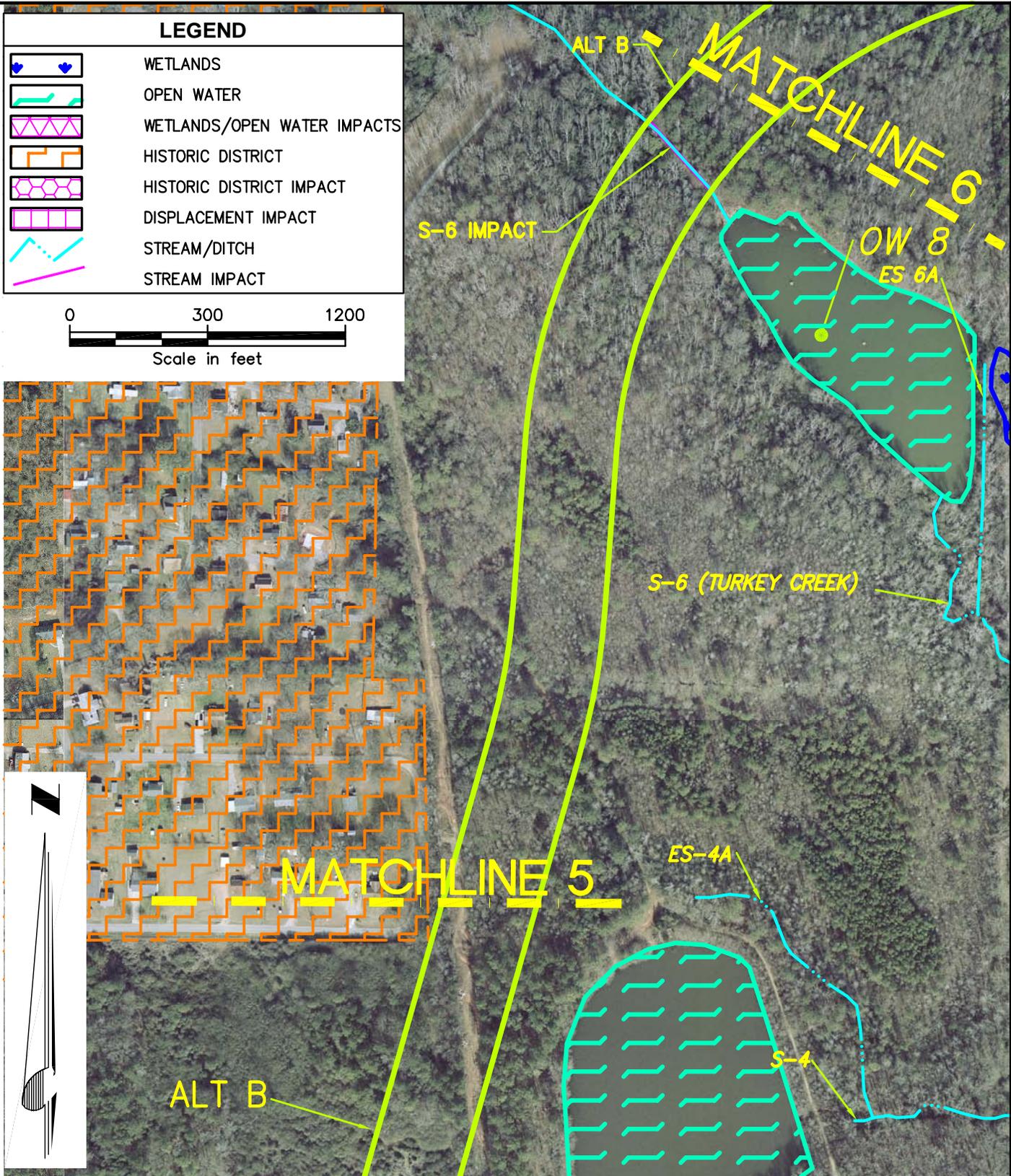


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ALTERNATIVES ANALYSIS IMPACT MAP
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 COWETA COUNTY, GEORGIA

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 0007694
 DATE: 8/1/08
 FIGURE 5a

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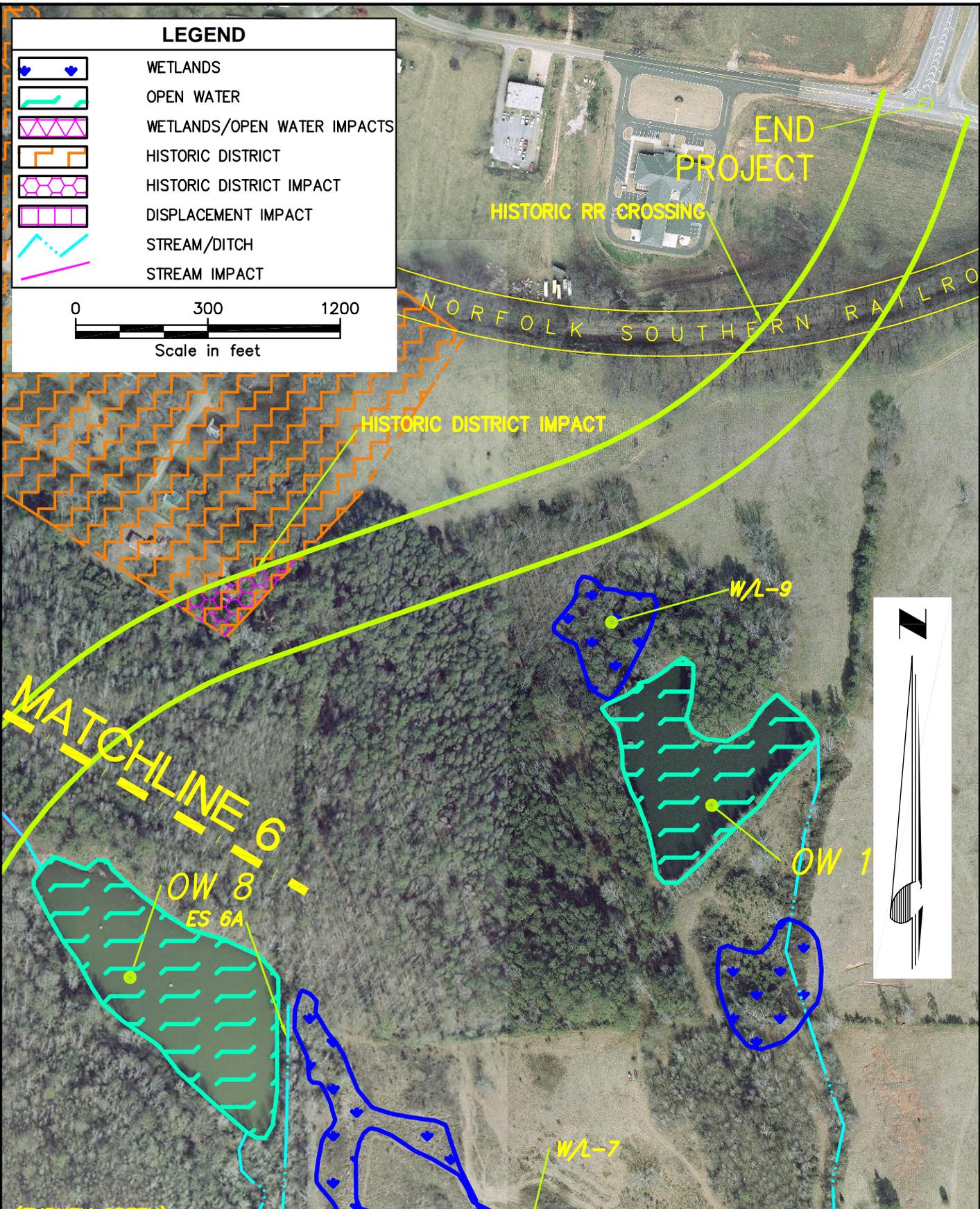
ALTERNATIVES ANALYSIS IMPACT MAP
 ALT B DETAIL
 NEWNAN BYPASS
 PRACTICABLE ALTERNATIVE REPORT
 COWETA COUNTY, GEORGIA

P.I. No.
0007694

DATE: 8/1/08

FIGURE 5b

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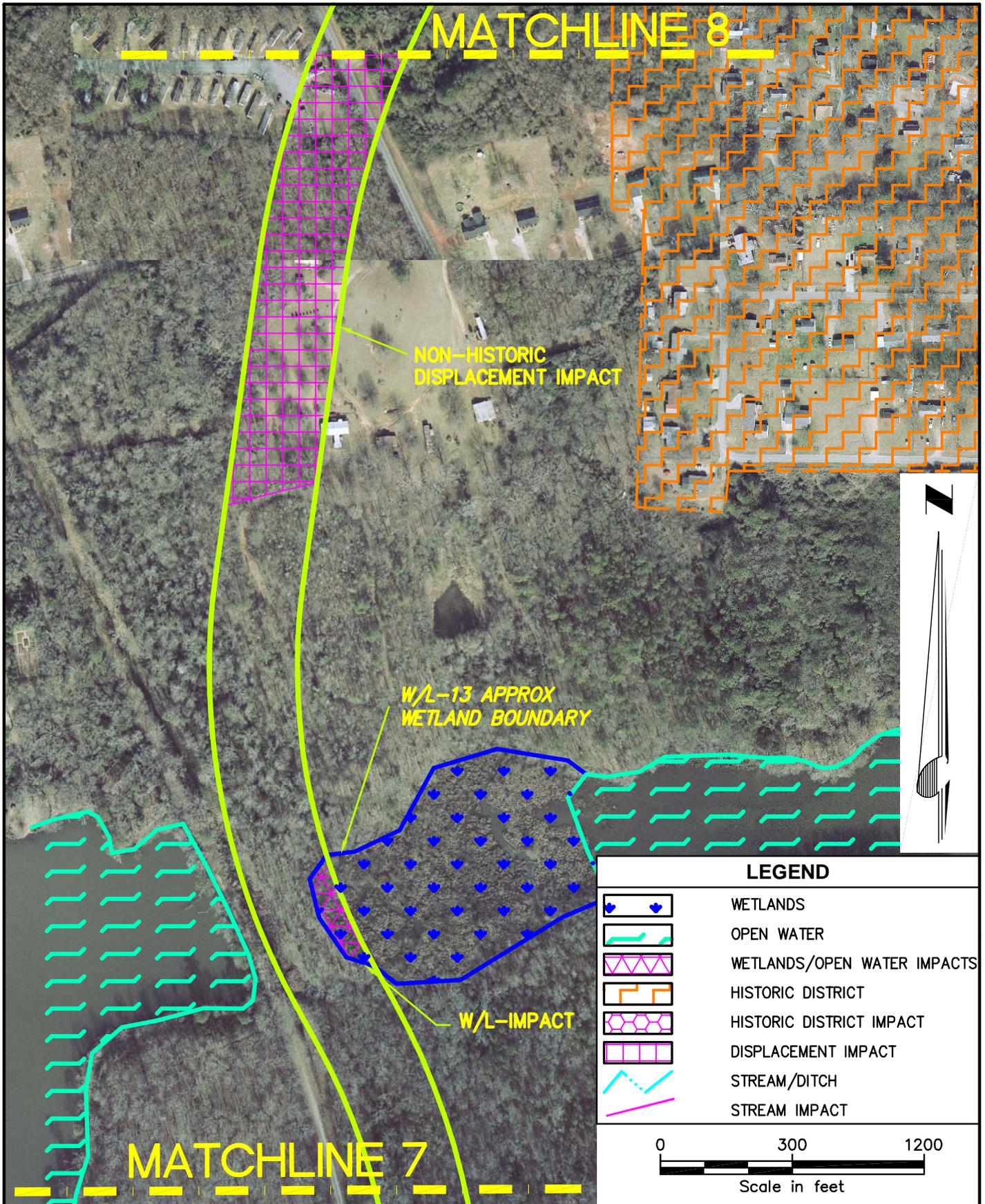
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 COWETA COUNTY, GEORGIA

P.I. No.
 0007694
 DATE: 8/1/08
 FIGURE 5c

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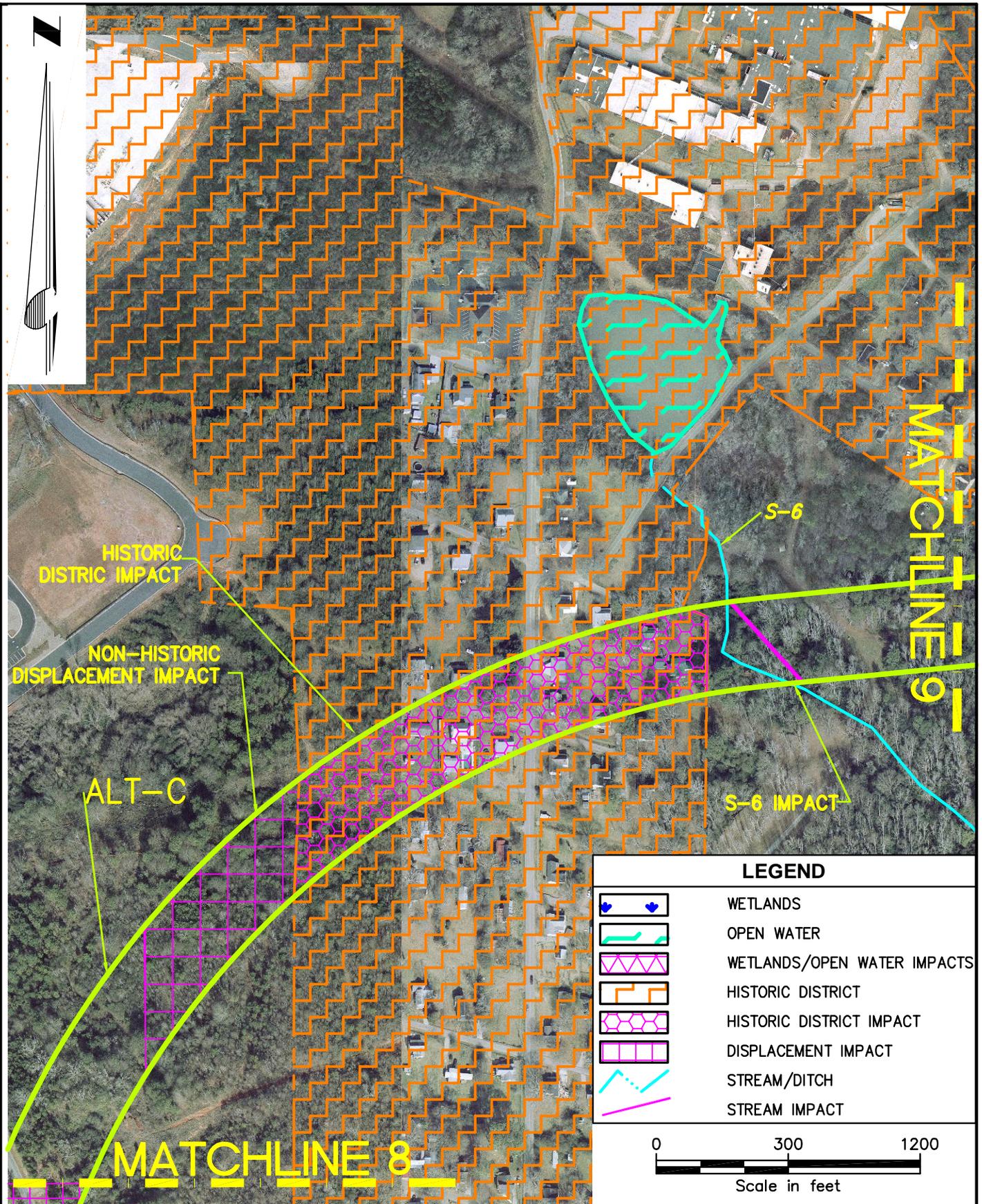
ALTERNATIVES ANALYSIS IMPACT MAP
ALT C DETAIL
 NEWNAN BYPASS
 PRACTICABLE ALTERNATIVE REPORT
 COWETA COUNTY, GEORGIA

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0007694

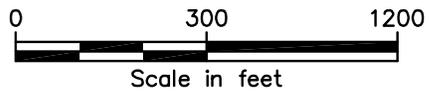
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FIGURE 6a

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LEGEND	
	WETLANDS
	OPEN WATER
	WETLANDS/OPEN WATER IMPACTS
	HISTORIC DISTRICT
	HISTORIC DISTRICT IMPACT
	DISPLACEMENT IMPACT
	STREAM/DITCH
	STREAM IMPACT



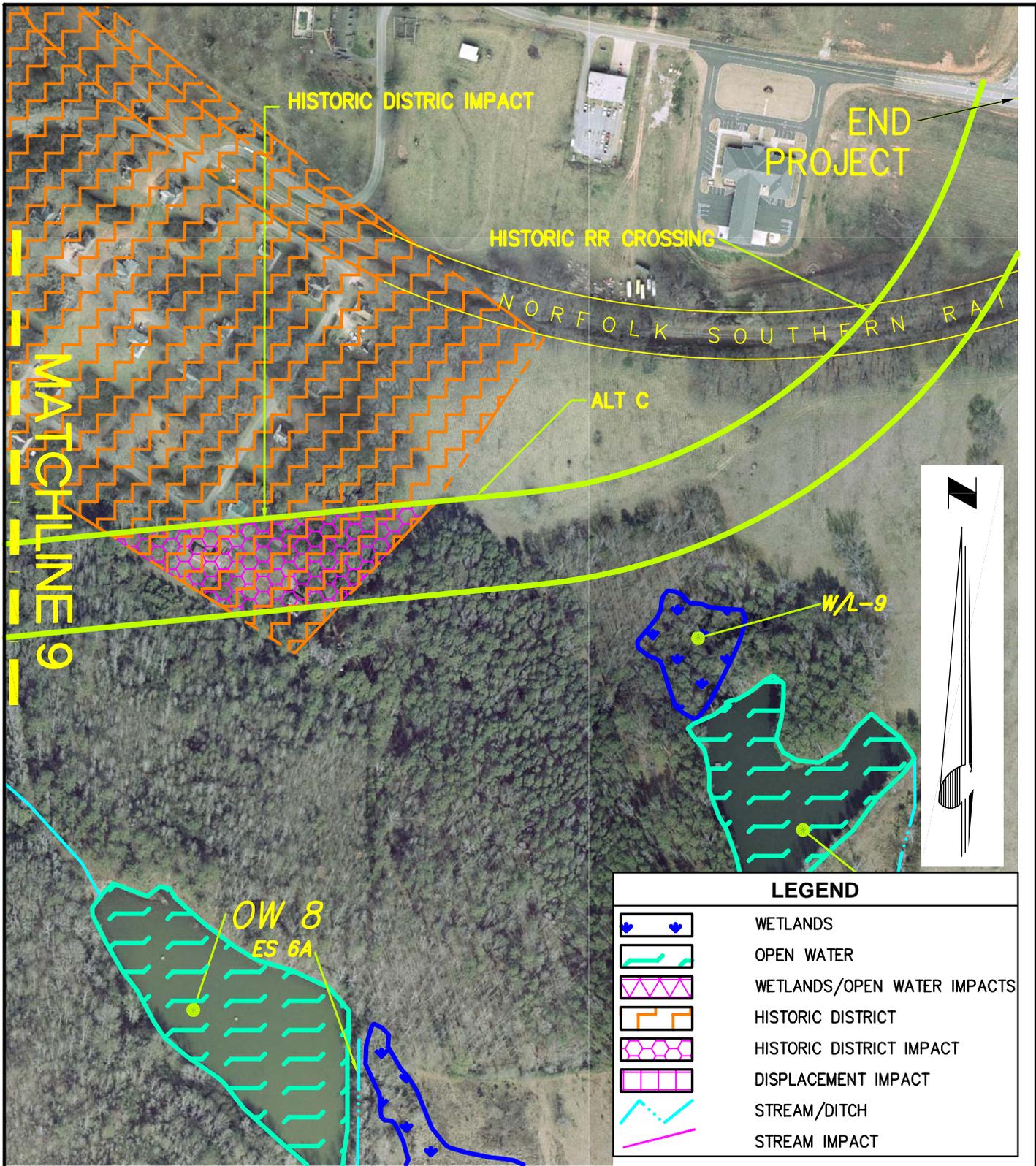
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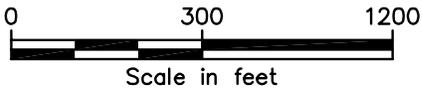
ALTERNATIVES ANALYSIS IMPACT MAP
ALT C DETAIL
NEWNAN BYPASS
PRACTICABLE ALTERNATIVE REPORT
COWETA COUNTY, GEORGIA

P.I. No.
0007694
DATE: 8/1/08
FIGURE 6b

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LEGEND	
	WETLANDS
	OPEN WATER
	WETLANDS/OPEN WATER IMPACTS
	HISTORIC DISTRICT
	HISTORIC DISTRICT IMPACT
	DISPLACEMENT IMPACT
	STREAM/DITCH
	STREAM IMPACT



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ALTERNATIVES ANALYSIS IMPACT MAP
 ALT C DETAIL
 NEWNAN BYPASS
 PRACTICABLE ALTERNATIVE REPORT
 COWETA COUNTY, GEORGIA

P.I. No.
0007694

DATE: 8/1/08

FIGURE 6c

ALTERNATIVE ANALYSIS CHART

Factor	Best Fit (See detailed Description)	Alternative A	Alternative B	Alternative C	Information Source
Length	1.7 miles	1.8 miles	1.8 miles	2.2 miles	
Typical Section	Four 12-foot lanes with a 44 to 68-foot depressed median on minimum of 200 feet of right of way. 200 ft. R/W used for Alternatives Analysis				
Displacements	0	0	1	Approx. 24	EcA/HSR/Aerial photography
Cultural Resource Impacts	N/A	N/A	0.43 ac. HD	2 impacts - 6.9ac. HD)	HSR/Aerial photography
Wetlands	1.35 acres	5.35 acres	0.00 acres	0.30 ac.	EcA/Aerial photography/Field Delineation
Open Water	0.0 acres	0.0 acres	1.9acres	0.0 acres	EcA/Aerial photography/Field Delineation
Streams	443 linear feet	689 linear feet	202 linear feet	247 linear feet	EcA/Aerial photography/Field Delineation
Ephemeral Channel		234			
Cost Estimates					
Construction	\$22 million	\$25 million	\$28.5 million	\$28 million	Location estimate
Right-of-Way	\$4.4 million	\$5.0 million	\$5.3 million	\$5.6 million	Location estimate
Total Cost	\$ 26.4 million	\$ 30.0 million	\$ 33.8 million	\$33.6 million	Location estimate

- **NOTE: Clough Harbour Associates, in its representations of preliminary concepts, strives to show as nearly as possible the route and right-of-way requirements of projects. Because of the preliminary nature of these location studies, certain information cannot be finalized until completion of the design stage of the GADOT's project development process. In areas where existing facilities are to be improved and are in need of vertical and/or horizontal realignment, CHA tries to present a "worst case" of impacts, in anticipation of a reduction of these impacts and right-of-way requirements at the detailed design stage.**
- **HD-Historic District**
- **EcA-Phase I Ecological Assessment**
- **R/W-Right of Way**
- **HSR-Historic Survey Report**

WETLAND & WATERS OF THE U.S. IMPACTS BY CROSSING			
SITE DESIGNATION	Alternative A		
	Open Water Area	Wetland Acres	Streams Linear Feet
Stream 11	0	0	205
Stream 6	0	0	209
Wetland 12	0	5.35	0
Stream 2	0	0	204
Ephemeral Stream 1A	0	0	234
TOTAL	0	5.35acres	852 feet

WETLAND & WATERS OF THE U.S. IMPACTS BY CROSSING			
SITE DESIGNATION	Alternative B		
	Open Water Area	Wetland Acres	Streams Linear Feet
Stream 6	0	0	202
Open Water 5	1.9	0	0
TOTAL	1.9 acres	0 acres	209 feet

WETLAND & WATERS OF THE U.S. IMPACTS BY CROSSING			
SITE DESIGNATION	Alternative C		
	Open Water Area	Wetland Acres	Streams Linear Feet
Stream 6	0	0	247
Wetland 13	0	0.3 (approx.)	0
TOTAL	0 acres	0.3 acres	247 feet

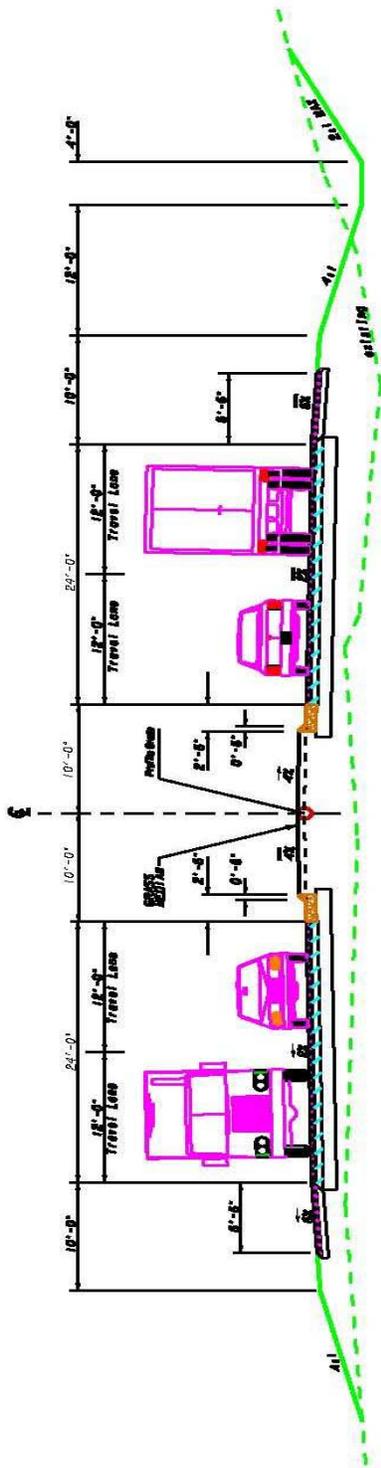
WETLAND & WATERS OF THE U.S. IMPACTS BY CROSSING			
SITE DESIGNATION	Best Fit Alternative		
	Open Water Area	Wetland Acres	Streams Linear Feet
Wetland 9	0	0.15	0
Wetland 7	0	0.85	0
Stream 6	0	0	261
Stream 4	0	0	220
Wetland 3	0	0.35	0
TOTAL	0	1.35 acres	481 feet

*

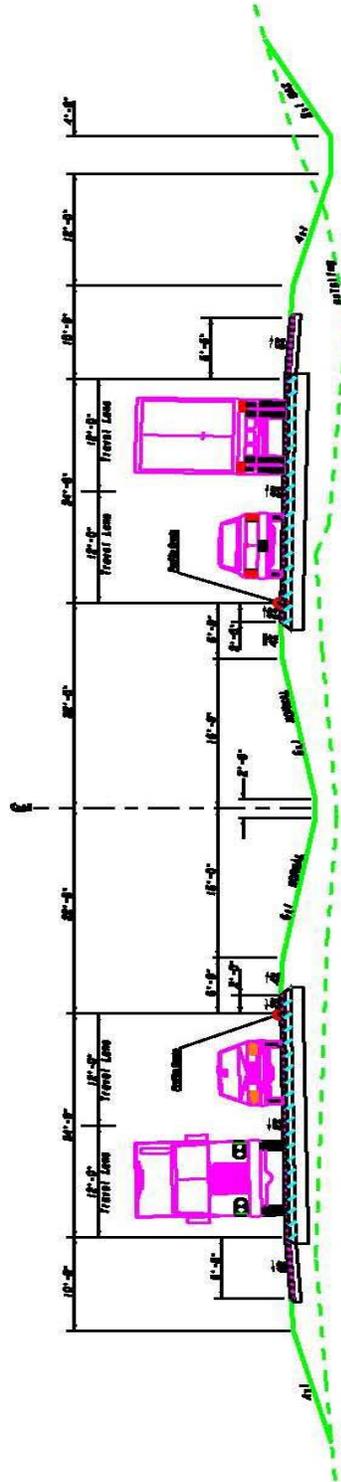
RECOMMENDATIONS: The Currently Proposed “Best Fit” Alternative is recommended because it provides for a safe, efficient roadway while avoiding impacts to historic, archeological, and cemetery sites while minimizing impacts to residences, businesses, and the environment.

ATTACHMENTS: 1) Typical Sections
 2) Ecology Report

PREPARED BY:



URBAN SECTION



RURAL SECTION

**Attachment 2
Ecology Report**

**PHASE I ECOLOGY ASSESSMENT/DESCRIPTION
OF JURISDICTIONAL WETLANDS, NON-
WETLAND WATERS OF THE U.S. AND
PROTECTED SPECIES SURVEY**

**CSSTP-0007-00(694) and CSSTP-0006-00(877),
Coweta County
Newnan Bypass Southeast Segment
PI#'s 0007694 and 0006877**

**Prepared by:
GT Hill Planners Corporation**

**For:
Georgia Department of Transportation
and
Coweta County, Georgia**

September 6, 2008

Prepared by: 
G. Todd Hill, P.P., AICP

Approved by: _____
GDOT Ecologist

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REFERENCES

Appendix 1 – Figures

1. Project Location
2. Project Waters Map
3. Project Habitats Map

Appendix 2 – Routine Wetland Determination Forms

Appendix 3 – Tables

1. Protected Species for Coweta County, GA
2. GDOT 2008 List of 29 Invasive Pest Species

Appendix 4 – Agency Correspondence

Appendix 5 – Aquatic Survey

I. EXECUTIVE SUMMARY

GDOT Project CSSTP-0007-00(694) and CSSTP-0006-00(877), PI #'s 0007694 and 0006877 proposes to construct a new location segment of the Newnan Bypass from SR 16 to Turkey Creek Road with a project length of approximately 1.6 miles. This project will be coordinated with the SR 16 widening (PI 0006877) that begins just before the I-85 overpass to its intersection with US 29/27 Alt. (which is being improved as part of a separate project). The project is located near the center of Coweta County, to the southeast of the City of Newnan, and slightly northwest of Interstate 85 Interchange 41 for SR 14/US 29. The bypass would typically be a rural cross-section containing four 12-foot lanes, 10 foot shoulders (6'-6" paved), and a 44-foot depressed median where it begins at Turkey Creek Road. The bypass would transition to an urban cross-section containing four 12-foot lanes, a 20-foot wide raised grass median, and 10-foot rural shoulders (6'-6" paved) on the outside after crossing the Central of Georgia Railway. The intersections with both Turkey Creek Road and SR 16 would be signalized. At these intersections the cross-section would have curb and gutter to reduce right-of-way impacts and sidewalks to facilitate pedestrian travel. All necessary turn lanes would be provided at the intersections. See Appendix 1, Figure 1 for Project Location Map.

The approximate project midpoint is at 33° 20' 35" N, 84° 46' 17" W. The proposed project is within the Upper Flint River Basin system (Hydrologic Unit Code 03130005). This watershed is listed as a U.S. EPA Priority Watershed. The project is located on the Newnan, GA USGS 7.5-minute topographic quadrangle (USGS 1973).

Following preliminary research, field surveys were conducted on August 4, 2007, November 16, 2007, and February 9, 2008 to identify the extent and characteristics of natural community types located within the survey area of the proposed project. The habitat/land use types along the proposed corridor are primarily agricultural, undeveloped tracts of mixed pine/hardwood forests, with some development located along SR 16 and Turkey Creek Road. Approximately 10% of the proposed project area consists of Jurisdictional Waters of the U.S. Five (5) streams, three (3) ephemeral channels, three (3) wetlands and three (3) open water sites occur in the vicinity of the project corridor.

Coweta County is in the Piedmont Forest ecosystem and provides habitat suitable for a variety of listed species. GDNR's Natural Heritage Program's database lists known locations of eight federally or State-listed threatened or endangered species in Coweta County. Pursuant to the Endangered Species Act of 1973, field surveys were conducted on August 4, 2007, November 16, 2007, and February 9, 2008 to identify protected individuals and/or potential habitat for protected individuals within the project corridor. None of the protected species or suitable habitat was identified.

II. JURISDICTIONAL WATERS OF THE U.S.

A. Definitions of Terms and Criteria

Jurisdictional Waters of the U.S. are defined by 33 CFR Part 328.3(b) and are protected by Section 404 of the Clean Water Act (33 USC 1344), which is administered and enforced by the U.S. Army Corps of Engineers (ACOE). Prior to field investigations, the Coweta County USDA Soil Survey (USDA 1982) was reviewed for the presence of hydric soils. Also, the Sharpsburg and Newnan South, GA USGS 7.5-minute topographic quadrangles (USGS 1973), and the associated National Wetlands Inventory (NWI) maps (USGS 1973) were reviewed to identify any Jurisdictional Waters of the

U.S. that occur within the vicinity of the proposed project. Potential wetlands and streams, including ephemeral channels, were marked on reference maps and the information was updated in the field.

Wetland locations were determined following the procedures specified in the Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987). This multi-parameter approach requires positive evidence of three (3) criteria:

- Dominance of hydrophytic vegetation
- Presence of hydric soils
- Wetland hydrology

Areas were considered wetlands if they exhibited evidence of all three (3) of the above wetland criteria. Areas were considered Jurisdictional streams if they had a defined channel and had evidence of water flow at times other than major storm events. Areas were considered ephemeral channels if they exhibited evidence of directed water flow during storm events and showed a significant nexus with a relatively permanent water (RPW) that is directly or indirectly connected to a traditionally navigable water (TNW).

A low-medium-high rating system was used to evaluate the wetland sites in terms of their ability to perform their associated functions. Factors considered included type of habitat (i.e. forested, emergent, etc.), vegetation diversity, hydrology, size, surrounding landscape, wildlife habitat, wildlife corridors, and size/type of stream.

B. Description of Jurisdictional Waters

Field surveys of the project area were conducted on August 4, 2007, November 16, 2007, and February 9, 2008 to identify any potential Jurisdictional Waters of the U.S. Five (5) streams, two (2) ephemeral channels, three (3) wetland and three (3) open water sites were identified within or adjacent to the proposed project corridor (Appendix 1, Figure 2. Project Waters Map).

Ephemeral Channel 1A (ES 1A)

Ephemeral Channel 1A is a drainage channel that begins at the intersection of Gordon Road and SR 16. It varies from 3-10 feet deep (averaging approximately 8 feet) and 5-6 feet wide. The channel lacks sinuosity and is deeply entrenched. The side slopes are somewhat stable, and the banks are similarly stable. No water was observed in E1A during any of the field surveys. The soil substrate in the channel, a red clay loam, is similar to soil in the surrounding upland area. Vegetation along this ephemeral channel includes loblolly pine, Chinese privet, Christmas fern, and blackberry. Ephemeral Channel 1A flows in to Stream 1.

Stream 1 (S1)

This is an intermittent stream located south of Stream 2 and Wetland 3. It flows north and connects to Stream 2 prior to discharging to Wetland 3. The land surrounding this stream is an undeveloped wooded area. S1 has an average width of approximately 1-2 feet and depth of 0-3" of water during the field survey. Its bankfull width is approximately 12 feet and bankfull depth is 8 feet. The streambed is flat, with deep entrenchment, and the channel is somewhat sinuous. The substrate consists of gravel, silt, and sand. The water appeared relatively clear during the survey. The riparian corridor on either bank is greater than 50 feet wide, and consists of mixed pine and hardwood species, green

catbrier, yellow poplar, and Christmas fern. This tributary is not on the GA EPD's 2006 303(d) draft list of impaired waters.

Stream 2 (S2)

This is a somewhat impaired perennial stream located east of Wetland 3. It flows west and connects to Wetland 3. The land surrounding this stream is an undeveloped wooded area. S2 has an average width of approximately 2-5 feet and depth of 3-8" of water during the field survey. Its bankfull width is approximately 8 feet and bankfull depth is 7 feet. The streambed is flat, with little entrenchment, and the channel is somewhat sinuous. The substrate consists of gravel, silt, and sand. The water appeared relatively clear during the survey. The riparian corridor on either bank is greater than 50 feet wide, and consists of mixed pine and hardwood species, green catbrier, yellow poplar, and Christmas fern. This tributary is not on the GA EPD's 2006 303(d) draft list of impaired waters.

Wetland 3 (W/L 3)

W/L 3 is a low value wetland located adjacent to OW 5. It is classified as a palustrine, emergent, and a palustrine, forested, broad-leaf deciduous system with a saturated hydrologic regime (PEM1B/ PFO1B). Within the wetland data point, dominant vegetation included soft rush (*Juncus effusus*, facultative wetland+) and bladder sedge (*Carex intumescens*, facultative wetland), brook-side alder (*Alnus serrulata*, facultative wetland+), black willow (*Salix nigra*, obligate wetland), and red maple (*Acer rubrum*, facultative). The vegetation criterion was satisfied with 100 percent of the dominant species being facultative wetland. Indicators of wetland hydrology included soil saturation in the upper 12 inches and inundation in the wetland. These are primary indicators of wetland hydrology and satisfy the hydrology criterion. Soils from a depth of 0 to 12 inches had a matrix color of 10YR 4/2 and 2.5 4/1. Hydric soil indicators included low-chroma colors and reducing conditions, both of which satisfy the criterion for wetland soils. Appendix 2 contains the Routine Wetland Data Forms completed for this project.

Stream 4 (S4)

This perennial stream, an unnamed tributary of Turkey Creek, flows east out of the East Newnan Lake (OW 5). This stream's width varies from approximately 5-7 feet, with a bankfull width of 12-15 feet and depth of approximately 5 feet. The water depth during the February 9, 2008 survey was from 3-6 inches. The streambanks are somewhat entrenched. The substrate consists of rubble, silt, sand, and gravel. Within the proposed corridor, the stream is characterized as somewhat impaired. Riparian species along S4 include loblolly pines, yellow poplar, sweetgum, Christmas fern, blackberry and green catbrier. This stream is not on the GA EPD's 2008 303(d) draft list of impaired waters.

Ephemeral Channel 4A (ES 4A)

Ephemeral Channel 4A is a drainage channel that begins on the north side of East Newnan Lake and is fed from what appears to be an emergency spillway from the lake. It varies from 0.5-2 feet deep and 1-4 feet wide. It is clear that more than half of the channel was dug by shovel or back hoe in order to provide a positive outfall to Stream 4. The channel lacks sinuosity, and has unstable banks. Ponded water was observed in ES 4A during the February field survey. The soil substrate in the channel, a red clay loam, is similar to soil in the surrounding upland area. Vegetation along this ephemeral channel includes loblolly pine, Chinese privet, Christmas fern, and blackberry.

Open Water 5 (OW 5)

Open water 5 is known as East Newnan Lake. This is a medium, approximately 17-acre earthen dam lake located approximately 1,500 feet south of OW 8. Open Water 5 is a lacustrine, open water system with a saturated hydrologic regime (LOW). Open Water 5 is a man-made pond constructed on an unnamed tributary of Turkey Creek. Indicators of wetland hydrology included inundation and soil saturation in the upper 12 inches. These are primary indicators of wetland hydrology and satisfy the hydrology criterion. It was not possible to obtain a soil sample due to the saturation level of the soil.

Stream 6 (S6)

Stream 6 is Turkey Creek. Within the proposed corridor, the stream is characterized as somewhat impaired. It has highly eroded banks and heavy siltation in the channel. It is classified as a lower perennial stream with a cobble-gravel, sand, and mud substrate (R2UB123). The depth at ordinary high water is approximately 0.5 to 1 foot, the width at ordinary high water is approximately 5 to 6 feet, and the width at top of bank is approximately 8 to 10 feet. The width of the riparian buffer on the right bank is greater than 50 feet, and the width of the riparian buffer on the left bank is less than 5 feet having been cleared as part of the adjacent pasture. This stream is not on the GA EPD's 2008 303(d) draft list of impaired waters.

Ephemeral Channel 6A (ES 6A)

Ephemeral Channel 6A is a drainage channel that begins on the north side of OW 8 and is fed from what appears to be an emergency spillway from the lake. It varies from 1-2 feet deep and 2-4 feet wide. The channel was man-made to provide a positive outfall to Stream 6. The channel lacks sinuosity, and has unstable banks. Pondered water was observed in ES 6A during the February field survey. Vegetation along this ephemeral channel includes giant cane, Chinese privet, christmas fern, and blackberry.

Wetland 7 (W/L 7)

W/L 7 is a low quality emergent wetland system that has developed within the floodplain of Stream 6 and Stream 4. During site investigations it was identified that attempts to use the area as pasture land have been made. This includes the construction of ditches to the east to drain the area and the fact that the area has been planted with grass. The lower areas of the floodplain contain emergent vegetation; and therefore the site is classified as a palustrine, emergent, persistent system with a saturated hydrologic regime (PEM1B). Within the wetland data point, dominant vegetation included soft rush (*Juncus effusus*, facultative wetland+), broad-leaf cattail (*Typha latifolia*, obligate wetland), and black willow (*Salix nigra*, obligate wetland). The vegetation criterion was satisfied with 100 percent of the dominant species being obligate wetland or facultative wetland. Indicators of wetland hydrology included inundation and soil saturation in the upper 12 inches. These are primary indicators of wetland hydrology and satisfy the hydrology criterion. Soil samples from 0 to 12 inches had a matrix color of 10 YR 3/1 with mottles of 10 YR 4/4.

Open Water 8 (OW8)

This is a small, approximately 2.7-acre earthen dam pond located approximately 1,000 feet southwest of OW10. Open Water 8 is a lacustrine, open water system with a saturated hydrologic regime (LOW). Open Water 8 is a man-made pond constructed on Turkey Creek. It is likely that an emergent wetland system exists near the edge of the pond under normal circumstances; however, the pond had recently been drained to repair the dam and the pond was still in the process of filling. Indicators of wetland

hydrology included inundation and soil saturation in the upper 12 inches. These are primary indicators of wetland hydrology and satisfy the hydrology criterion. It was not possible to obtain a soil sample due to the saturation level of the soil.

Wetland 9 (W/L 9)

W/L 9 is a small (less than 1-acre), medium quality system located immediately west of OW10. It is bordered to the north by a grass pasture and is sparsely wooded with pine and oak to the south. The wetland is classified as a palustrine, forested, broad-leaf deciduous system with a saturated hydrologic regime (PFO1B) and palustrine, scrub-shrub, broad-leaf deciduous system with a saturated hydrologic regime (PSS1B). Within the wetland data point, dominant vegetation included brook-side alder (*Alnus serrulata*, facultative wetland+), black willow (*Salix nigra*, obligate wetland), and red maple (*Acer rubrum*, facultative). The vegetation criterion was satisfied with 100 percent of the dominant species being obligate wetland, facultative, or facultative wetland. Indicators of wetland hydrology included soil saturation in the upper 12 inches, water marks, drainage patterns in the wetland, oxidized root channels, and water-stained leaves. These are primary and secondary indicators of wetland hydrology and satisfy the hydrology criterion. Soils were sampled from a depth of 0 to 12 inches. Soils from a depth of 0 to 6 inches had a matrix color of 10 YR 3/1. Soils from a depth of 6 to 12 inches had a matrix color of 2.5 YR 4/2. Hydric soil indicators included low-chroma colors and reducing conditions, both of which satisfy the criterion for wetland soils.

Open Water 10 (OW10)

This is a small; approximately 2.5-acre earthen dam pond located approximately 1,300 feet south of Turkey Creek Road. Open Water 10 is a lacustrine, open water system with a saturated hydrologic regime (LOW). Open Water 10 is a man-made pond constructed on an unnamed tributary of Turkey Creek. An emergent wetland system exists near the edge of the pond. Within the wetland data point, dominant vegetation included soft rush (*Juncus effusus*, facultative wetland+) and few-flower rush (*Juncus gymocarpus*, obligate wetland). The vegetation criterion was satisfied with 100 percent of the dominant species being obligate or facultative wetland. Indicators of wetland hydrology included inundation and soil saturation in the upper 12 inches. These are primary indicators of wetland hydrology and satisfy the hydrology criterion. It was not possible to obtain a soil sample due to the saturation level of the soil.

Stream 11 (S11)

This is a somewhat impaired intermittent stream located east of OW 10. This stream, an unnamed tributary of Turkey Creek, flows east out of OW 10. The land surrounding this stream consists of undeveloped wooded areas to the south and pasture to the north. S11 has an average width of approximately 1-3 feet and depth of 1-3" of water during the field survey. Its bankfull width is approximately 5 feet and bankfull depth is 3-4 feet. The streambed is flat, with little entrenchment, and the channel has little sinuosity. The substrate consists of gravel, silt, and clay. The water appeared relatively clear during the survey. The riparian corridor on the southern bank is greater than 50 feet wide, and consists of mixed pine and hardwood species, green catbrier, yellow poplar, and Christmas fern. The riparian corridor on the northern bank is from 5-50 feet wide, and consists of mixed pine and hardwood species, green catbrier, yellow poplar, and fescue. This tributary is not on the GA EPD's 2006 303(d) draft list of impaired waters.

III. PROTECTED SPECIES

A. General Habitat Description

Following preliminary research, field surveys were conducted on August 4, 2007, November 16, 2007, and February 9, 2008 to identify the extent and characteristics of natural community types located within the survey area of the proposed project. The habitat/land use types along the proposed corridor are primarily agricultural, undeveloped tracts of mixed pine/hardwood forests, and some development is located along SR 16 and Turkey Creek Road. Approximately 10% of the proposed project area consists of Jurisdictional Waters of the U.S. Five (5) streams, two (2) ephemeral channels, three (3) wetlands and three (3) open water sites occur in the vicinity of the project corridor. Refer to Section II. B. Description of Jurisdictional Waters of the U.S. for a detailed discussion of these resources.

Commercial/Residential

This land-use type consists of approximately 15% of the project corridor. The commercial areas are characterized by asphalt and gravel parking areas, buildings, manicured grass, and ornamental shrubs and flowers. These areas may have value for wildlife species such as birds and small mammals but are limited in resources.

Agricultural

This land-use type consists of approximately 25% of the project corridor. The agricultural areas are characterized by hay fields and some areas that appear to be pasture, although no livestock was evident during field investigations.

Mixed Pine/Hardwood Forests

Mid-successional stands of mixed pine/hardwood forests, which are fragmented by agricultural areas, and three open water areas (ponds), were interspersed throughout the project area. This habitat type comprises approximately 50% of the project area. The dominant species present are loblolly pine (*Pinus taeda*), yellow poplar (*Liriodendron tulipifera*), sweetgum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), Sycamore, and several oak species, including white oak, southern red oak, and scarlet oak (*Quercus alba*, *Q. falcata*, *Q. coccinea*, respectively). Subcanopy species include silky dogwood (*Cornus amomum*), loblolly pine, and Chinese and European privet (*Ligustrum sinense* and *L. vulgare*, respectively). The herbaceous layer consists of broadly interspersed Japanese honeysuckle (*Lonicera japonica*), catbrier (*Smilax* spp.), blackberry (*Rubus* spp.), Christmas fern (*Polystichum acrostichoides*), and muscadine (*Vitis* spp.).

B. Threatened and Endangered Species Information

The U. S. Fish and Wildlife Service (USFWS) County Listing of Threatened and Endangered Species for Coweta County, Georgia, the Georgia Department of Natural Resources (GDNR) County Listing of Locations of Special Concern Animals, Plants and Natural Communities for Coweta County, Georgia, and the GDNR Listing of Locations of Special Concern Animals, Plants and Natural Communities were reviewed to determine the proposed project's potential impact to protected species in Coweta County, Georgia (Appendix 3, Table 1, Threatened and Endangered Species for Coweta County, GA). Prior to field surveys, early coordination with the GA DNR's Wildlife Resource Division, Nongame Conservation Section, was initiated to identify federally and/or state threatened and endangered species, as well as Georgia conservation areas and

“species of concern” known to be located within a three-mile radius of the proposed project corridor (See Appendix 4, Agency Correspondence).

Coweta County is in the Piedmont Forest ecosystem and provides habitat suitable for a variety of listed species. GDNR’s Natural Heritage Program’s database lists known locations of eight federally or State-listed threatened or endangered species in Coweta County as shown in Table 2. Pursuant to the Endangered Species Act of 1973, field surveys were conducted on August 4, 2007, November 16, 2007, and February 9, 2008 to identify protected individuals and/or potential habitat for protected individuals within the project corridor.

Bay Starvine

The Bay Starvine includes leaves on a vine reaching up to 6 in long and 2.5 in wide, they have sparsely toothed margins, and are sweet smelling when crushed. Both male and female flowers occur on the same plant (monoecious), and droop on long, delicate flower stalks arising from the leaf axils of mature vines. These vines are found twining on subcanopy and understory trees/shrubs in rich alluvial woods and on lower slopes near streams. The Bay Starvine was not identified during field surveys by a trained ecologist. While suitable habitat for the species could exist at the project site, the proposed project is anticipated to have no significant adverse affect on Bay Starvine due to minimal stream encroachment.

White Fringeless Orchid

The White Fringeless Orchid (Monkeyface Orchid) is an orchid with a two-foot-tall herb that grows in wetlands. The leaves are alternate with entire margins and are narrowly elliptic to lanceolate in shape. The white flowers are borne in a loose cluster at the end of the stem. They bloom from July through September. These orchids are found in Red maple-blackgum swamps; also sandy damp stream margins; on seepy, rocky, thinly vegetated slopes. This plant species does prefer undisturbed habitat. A trained ecologist did not identify these orchids during field surveys for the project. No effect on this species is anticipated as neither the species nor suitable habitat was found to be present.

Shiny-rayed pocketbook mussel

The Shiny-rayed pocketbook mussel is a medium-sized freshwater mussel that usually reaches 3.3 inches. Elliptical in shape, the smooth, light yellowish-brown outer surface is shiny and decorated with bright emerald green rays. They are found in medium creeks to the mainstems of rivers with slow to moderate currents over sandy substrates and associated with rock or clay. The aquatic survey did not identify any shiny-rayed pocketbook mussel and determined that none of the streams in the study area had suitable habitat for this species. Therefore, construction of the project shall have no effect on this species. For additional information, please refer to the Aquatic Survey Report in Appendix 5.

Gulf moccasinshell mussel

The Gulf moccasinshell mussel is a small freshwater mussel that has a fairly elongate and inflated shell that measures less than 2.2 inches (55 mm) in length. They have yellowish to greenish-brown periostracum with fine, interrupted green rays. These mussels are found in medium streams to large rivers with slight to moderate current over sand and gravel substrates and may be linked with muddy sand substrates around tree roots. The aquatic survey did not identify any gulf moccasinshell mussel and determined

that none of the streams in the study area had suitable habitat for this species. Therefore, construction of the project shall have no effect on this species. For additional information, please refer to the Aquatic Survey Report in Appendix 5.

Oval pigtoe mussel

The Oval pigtoe mussel is a small-sized freshwater mussel that is highly variable in appearance and infrequently measures more than 2.4 inches in length. It varies from a compressed, yellow form to an inflated, dark brown form, but it usually has distinct growth lines. River tributaries and main channels in slow to moderate currents over silty sand, muddy sand, sand, and gravel substrates. The aquatic survey did not identify any oval pigtoe mussel and determined that none of the streams in the study area had suitable habitat for this species. Therefore, construction of the project shall have no effect on this species. For additional information, please refer to the Aquatic Survey Report in Appendix 5.

Purple bankclimber mussel

Purple bankclimber mussels are large freshwater mussels that can reach a length of greater than 8.0 inches, but usually measure between 4.0 and 5.5 inches. They have a lumpy gray to black heavy outer shell (periostracum). They reside in main channels of Appalachian-Chattahoochee-Flint (ACF) basin rivers in moderate currents over sand, sand mixed with mud, or gravel substrates. The aquatic survey did not identify any purple bankclimber mussel and determined that none of the streams in the study area had suitable habitat for this species. Therefore, construction of the project shall have no effect on this species. For additional information, please refer to the Aquatic Survey Report in Appendix 5.

Bluestripe Shiner

The Bluestripe Shiner lives in flowing areas in large creeks and medium-sized rivers over rocky substrates, in brownwater streams. The Bluestripe shiner is also an endemic species meaning it appears nowhere outside the Chattahoochee Basin (Corps '98 –ACF report). The project is located within the Flint drainage basin, therefore it does not contain adequate and/or suitable habitat to include this species of fish. No effect is anticipated because the species is not present. For additional information, please refer to the Aquatic Survey Report in Appendix 5.

Highscale Shiner

The Highscale Shiner lives in flowing areas of small to large streams over sand or bedrock substrates, in blackwater and brownwater streams. During aquatic surveys it was determined that the streams in the project corridor did not provide suitable habitat for this species. In addition, no specimens were identified during aquatic surveys. Therefore, the project shall have no effect on this species. For additional information, please refer to the Aquatic Survey Report in Appendix 5.

C. Essential Fish Habitat

Essential fish habitats are those waters and substrates necessary to fish for spawning, feeding, and for growth to maturity. In Georgia, essential fish habitats can be found in the following counties: Camden, Glynn, McIntosh, Liberty, Bryan and Chatham. The project is located in Coweta County, which has no tidally influenced areas. Therefore the project would have no effect on listed species or critical habitat protected by the EFH under NOAA Fisheries purview.

D. Migratory Bird Habitat

As directed under Executive Order 13186, in furtherance of the Migratory Bird Treaty Act (16 U.S.C. 703-711), actions must be taken to avoid or minimize impacts to migratory bird resources and to prevent or abate the detrimental alteration of the environment for the benefit of migratory birds, as practicable.

GDOT has adopted a policy of identifying tracts of contiguous habitat of one hundred or more (≥ 100) acres, which would be impacted by the proposed project. One hundred acres is considered a sufficient size to allow sensitive species to avoid predation and parasitism from other species that will only penetrate a certain distance within a given habitat. In addition, GDOT surveys under bridges and large culverts, which would be reconstructed or removed as part of a proposed project. If birds, such as the barn swallow (*Hirundo rustica*), are observed nesting under a bridge or culvert, demolition or reconstruction of that structure would be scheduled to take place at a time when the nests are not being used.

On August 4, 2007, November 16, 2007, and February 9, 2008, field surveys were conducted to identify migratory birds or habitat that would support migratory bird species. Contiguous habitats of greater than 100 acres or active migratory bird nests were not identified in the project corridor. All culverts identified in the corridor were too small (< 3 ft wide or 36" diameter) to support nesting activities. There are no existing bridges in the proposed project limits, and no existing bridge structures would be modified or demolished as a result of this project. Therefore, this project would have no effect on migratory birds.

E. Bald and Golden Eagle Protection Act

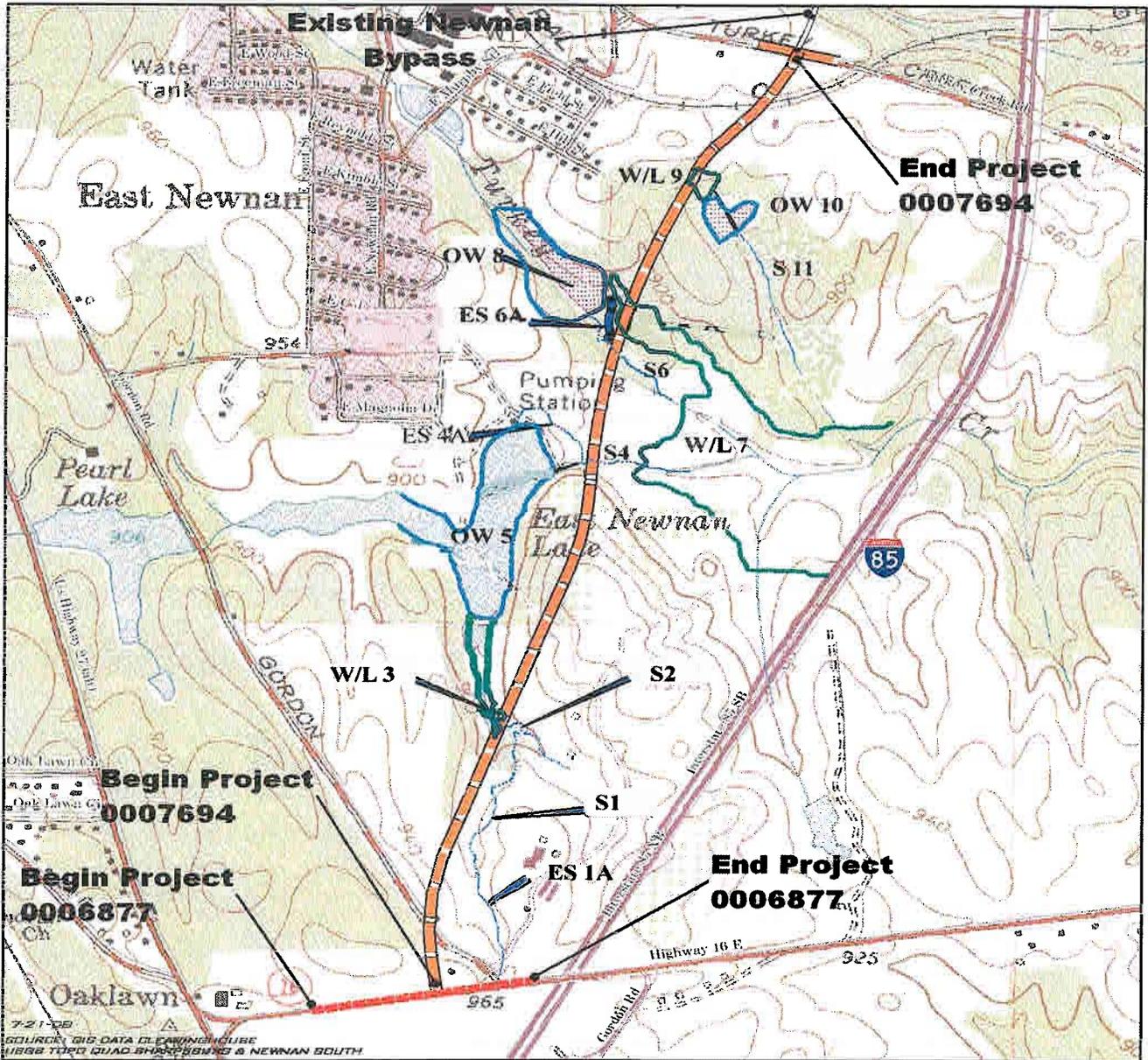
Although the project corridor contains some marginally suitable foraging habitat for the bald eagle, there is no bald eagle nest located within one mile of the proposed project. In addition, no bald eagles were identified during corridor surveys. The proposed project would not result in "take", as defined under the Bald and Golden Eagle Protection Act. Therefore, the proposed project would have "no effect" on the bald eagle.

F. Invasive Species

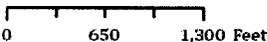
As directed by Executive Order 13112, a survey for invasive species populations with the potential to spread during construction was conducted for this project. Surveys were conducted for those invasive species identified by GDOT as having the highest priority due to environmental and economic impacts caused by those species. Both the selected species and the management practices specified will be re-evaluated and revised as appropriate and as more information is obtained.

The following invasive species were identified within the project area ROW: Japanese honeysuckle, kudzu (*Pueraria montana*), princess tree (*Paulownia tomentosa*), autumn olive (*Elaeagnus umbellata*), Chinese wisteria (*Wisteria sinensis*), Chinese privet, European privet, Nepalese browntop (*Microstegium vimineum*), multiflora rose (*Rosa multiflora*), and Johnsongrass (*Sorghum halepense*).

Figure 2-Project Waters Map



 Project 0007694
 Project 0006877

PROJECT WATERS MAP
NEWNAN BYPASS - SOUTHEAST SEGMENT
STP-0007-00(694) & CSSTP-0006-00(877)
PI #s 0007694 & 0006877

