

Phillips, Kim

From: Christy.Poon-Atkins@dot.gov
Sent: Monday, June 03, 2013 11:46 AM
To: Bartlett, Loren
Cc: White, Sherl; Phillips, Kim; Simpson, Jim; VanMeter, Darryl; Hancock, John; Mitchell, Ulysses; Lawrence, Katrina; D'Ambrosio, Katherine; Zahul, Kathy; Peters, Dave
Subject: RE: Approved Concept Report for PI# 0009156, Henry County

Hi Loren,

I greatly appreciate your help in providing the approved traffic analysis document to validate GDOT's determination for the Jonesboro Road @ Foster Drive Intersection. The Traffic Engineering Report provides support for GDOT's proposal at the location, confirms the analysis, and supports signalization for a new 4-leg intersection, as related to the RFP. I will place a copy of the approved Traffic Engineering Report for the Jonesboro Road @ Foster Drive Intersection into the project file. I will also provide a copy of the document to FHWA HQ for confirmation of the acceptability of modifying the existing 3-leg intersection to provide an access point to the I-75 Managed Lanes System.

Again, I greatly appreciate your help.

Thank you,

Christy L. Poon-Atkins, P.E.

*Districts 3 & 4 Transportation Engineer
Federal Highway Administration, Georgia Division
61 Forsyth Street, S.W. Suite 17T100
Atlanta, GA 30303
Phone: (404) 562-3638 Fax: (404) 562-3703
Recognize weaknesses as opportunities to grow stronger!*



Please consider the environment before printing this email

From: Bartlett, Loren [mailto:lbartlett@dot.ga.gov]
Sent: Monday, June 03, 2013 10:40 AM
To: Poon-Atkins, Christy (FHWA)
Cc: White, Sherl; Phillips, Kim; Simpson, Jim; VanMeter, Darryl; Hancock, John; Mitchell, Ulysses; Lawrence, Katrina; D'Ambrosio, Katherine; Zahul, Kathy; Peters, Dave
Subject: RE: Approved Concept Report for PI# 0009156, Henry County

Christy-

In effort to help keep our exchanges below organized, I have dated and initialed each comment and response.

The submissions of the IMR/IJR package date back to August 2012, with comments provided by FHWA and responses from GDOT. Since that time, we have made 4 submissions of this package to FHWA. Based on all of the previous reviews and resubmissions, this e-mail and previous correspondence, this office has provided the requested analyses to

complete a review of the IMR/IJR. It is respectfully requested that this package be forwarded on for further FHWA review. Please let me know if there are any questions regarding the below responses.

Thanks,

Loren F. Bartlett
Innovative Program Delivery
Georgia Department of Transportation
600 West Peachtree Street, NW
19th Floor
Atlanta, Georgia 30308
Phone: 404-631-1642

From: Christy.Poon-Atkins@dot.gov [mailto:Christy.Poon-Atkins@dot.gov]
Sent: Wednesday, May 29, 2013 4:46 PM
To: Bartlett, Loren; Peters, Dave
Cc: White, Sherl; Phillips, Kim; Simpson, Jim; VanMeter, Darryl; Hancock, John; Mitchell, Ulysses; Lawrence, Katrina
Subject: RE: Approved Concept Report for PI# 0009156, Henry County

Hi Loren,

I appreciate your follow-up to the comments provided on the I-75 Managed Lanes Project. However, I have provided some additional comments to clarify anything that was probably not clear before. Please see the follow-up provided below.

- **(5/22CP)** The permit revision included in the concept report notes the I-75 Managed Lanes project as PI 0010126, which is the PI for the Auxiliary Lane Project that is currently in construction.
 - **5/23 (LB) The revised permit with the correct PI #0009156 was included in the attachment sent to you in an e-mail from GDOT Design Policy and Support yesterday morning. I have included the attachment above. In the e-mail from Dave Peters, he had requested how you would like this to be included in the Concept Report, and suggested posting it in the Archive Store as a separate document for reference without changing the approved report. Please let us know if this will be acceptable.**
 - **5/29 (CP)** Please follow GDOT's procedures for ensuring obsolete pages of documents are properly handled to reference to the correct information.
 - **5/31 (LB) This office has discussed the matter with the Office of Design Policy and Support. The sheet will be posted in the Archive Store for reference. Please let me know if there are further questions.**
- **(5/22 CP)** The Traffic Engineering Report is included in the concept report as a 2012 analysis with a 2007 signature page attached to it.
 - o The complete 2007 analysis of the location (Jonesboro Road @ Foster Drive), which considers only 3-legs (not a direct connection to the Managed Lanes facility) has not been provided for review. The information is needed to help clarify GDOT's logic in the determination for this location.
 - **(5/23 LB) GDOT provided the approved signal permit documentation for the existing intersection of Jonesboro Road at Foster Drive. The 2007 analysis is not required to justify the existing operations of this intersection. To echo what the introduction of this e-mail stated, this item pertains to the IMR/IJR and not the Concept Report. In addition, this project is a design-build and the DB team will be responsible for any revisions and updates to the existing permit, as per**

999.1.C.13.c and d. This was presented to FHWA as part of the RFP for advertisement, with concurrence received on March 18, 2013.

- (5/29 CP) Yes, the Division Office agrees that traffic analysis information associated with any aspect of the I-75 Managed Lanes System pertains to the IMR/IJR. However, GDOT only provided the hard copy information in the Concept Report. Furthermore, the Traffic Engineering Report for Jonesboro Road @ Foster Drive does not clearly indicate GDOT confirmation of acceptable operations for location. The information provided only describes the location with no conclusive determination.
 - Are you providing your response to confirm that GDOT determines the operations of the Jonesboro Road @ Foster Drive Intersection to be acceptable within the context of the overall proposal for the I-75 Managed Lanes System in relation to Jonesboro Road, I-75 @ Jonesboro Road Interchange, and the I-75 General Purpose Lanes?
- (5/31 LB) **Please see the signed 2007 Traffic Engineering Report (attached), in addition to the signed 2012 Traffic Engineering Report included with the concept report, and signature page (attached).**
- (5/29 CP) With respect to your reference to 999.1.C.13.c and d. as you noted a concurrence date of March 18, 2013, the document that was provided to the Division Office states the following:
 - 999.1.C.13.c (**Referenced for Specific Locations**): “GDOT is responsible for obtaining traffic signal permits for Mt. Carmel Road/Jonesboro Road and **Foster Drive/Jonesboro Road Express Lanes Ramp** which are based on the information shown in the Costing Plans. If the Contractor changes the approved condition, then coordinate and obtain traffic signal permit revisions from the Locals.”
 - Drawing number 14-006 should be referenced for the condition shown in the Costing Plans, for Foster Drive/Jonesboro Road Express Lanes Ramp.
 - At this point, GDOT has not provided an approved analysis and traffic signal permit for the conditions of Foster Drive/Jonesboro Road Express Lanes Ramp, as shown in the Costing Plans.
 - Please let me know if a meeting is required to further discuss what is stated in the RFP as a GDOT requirement, which also has been frequently requested by the Division Office.
 - 999.1.C.13.c (**No Reference to Specific Locations**): “Upgrade any existing traffic signals that are impacted by the Project. Coordinate and obtain traffic signal permit revisions from the Locals, if required.”
 - It is prudent that major intersections, such as Foster Drive/Jonesboro Road Express Lanes Ramp be considered as part of the I-75 Managed Lanes System, as it is an access point to the system and relevant to the operations of the Interstate system (Managed Lanes and General Purpose). Please ensure that the requirements of the RFP are addressed, as noted in the RFP reference. Please follow-up with the signed Traffic Engineering Report for Jonesboro Road @ Foster Drive.
- (5/31 LB) **We will take a look at this language and determine if an amendment is necessary. If an amendment is issued, FHWA will be copied on the correspondence.**
- (5/22 CP) A revised comprehensive analysis package for the Jonesboro Road @ Foster Drive Intersection including the Foster Drive Spur has not been provided to support GDOT’s determination at the location.
 - (5/23 LB) **A comprehensive analysis package for the Jonesboro Road at Foster Drive Intersection, including the spur was included as Appendix G in the electronic copy of the IMR/IJR submittal that was delivered to FHWA on 5/17/2013.**

- (5/29 CP) The Division Office indicated a need for an actual determination at the location of Foster Drive/Jonesboro Road Express Lanes Ramp. Please reference the attached email for additional information.
 - **(5/31 LB) The purpose of Appendix G was to provide an analysis of the Jonesboro Road/Foster Drive Spur, not for the location of the Express Lanes Ramp itself. The attached e-mail from 5/14 was in reference to the spur, and we have addressed the concerns in the emails in Appendix G that was submitted with the IMR/IJR package on 5/17/2013. A comprehensive analysis package for the Jonesboro Road/Foster Drive 4th leg addition is included in the Traffic Report, approved July 5, 2012. I have pulled the pages from the report for your easy access. This abbreviated package includes discussion regarding this intersection, the 'Signalized Intersections Capacity Analysis Summary' Tables for the build and no-build conditions, and the traffic projections for this intersection.**
- (5/22 CP) Any traffic related information that has any contribution to the review of the I-75 Managed Lanes System should be provided. As previously requested, GDOT should ensure that any document submitted as a final submittal has been properly reviewed internally before being sent to FHWA for review and coordination.
- **(5/23 LB) The Traffic Analysis Report has been provided to FHWA and was approved on April 2012. If you need additional copies of this item, please let me know and we will be happy to provide them.**
 - (5/29 CP) The Division Office is clear on the status of the Traffic Study. Please address the comments associated with the unresolved GDOT confirmation for Foster Drive/Jonesboro Road Express Lanes Ramp.
 - **(5/31 LB) The 2007 TE Report is included as part of this e-mail, and the 2012 TE Report was included in the Concept Report, as requested. The Traffic Study was approved in July 2012. If you need another copy of this document, please let me know and we will be happy to provide this to you immediately. Finally, there is the data provided in the IMR/IJR package that was submitted to FHWA on 5/17/2013.**
 - **(5/23LB) This report (IMR/IJR) has been reviewed and accepted by the Office of Planning. At our last meeting, we had stated that we were comfortable with the package, and were ready for submission. Should there be any questions from FHWA on the local or national levels, we will be prepared to clarify. At that time we were directed to provide 2 clean-copies, 2 red-lines, and an electronic version of the package, and delivered these to FHWA on 5/17/2013.**
 - (5/29CP) The attached email is in reference to the [I-75 Managed Lanes System access point at Jonesboro Road](#). Please see the comments provided above.
 - **(5/31 LB) As previously stated, that e-mail, dated 5/14, is in reference to the spur location at Jonesboro Road and Foster Drive. The Department has provided all traffic related information that has any contribution to the review of the I-75 Managed Lanes System.**

As noted above, the Division Office requests confirmation of GDOT's determination that the operations of the Jonesboro Road @ Foster Drive Intersection are acceptable within the context of the overall proposal for the I-75 Managed Lanes System in relation to Jonesboro Road, I-75 @ Jonesboro Road Interchange, and the I-75 General Purpose Lanes.

- (5/30 CP) Please give me a call at your convenience (Thursday, 5/30/13) to discuss the comments provided, as related to the Jonesboro Road @ Foster Drive Intersection, which is identified as an access point to the Managed Lanes System.

- (5/31 LB) Per our conversation yesterday afternoon, this e-mail should provide all of the necessary confirmation that you requested. Further, the conclusion of the IMR/IJR, page 9-1, is GDOT's determination that the operations of the Jonesboro Road at Foster Drive Intersection are acceptable. Please let me know if you need another copy of this document for your record, and we will be happy to provide it. At this time It is requested that the IMR/IJR submitted on 5/17/2013 be forwarded for further FHWA processing.

Thank you,

Christy L. Poon-Atkins, P.E.

Districts 3 & 4 Transportation Engineer

Federal Highway Administration, Georgia Division

61 Forsyth Street, S.W. Suite 17T100

Atlanta, GA 30303

Phone: (404) 562-3638 Fax: (404) 562-3703

Recognize weaknesses as opportunities to grow stronger!



Please consider the environment before printing this email

From: Bartlett, Loren [<mailto:lbartlett@dot.ga.gov>]

Sent: Thursday, May 23, 2013 4:50 PM

To: Poon-Atkins, Christy (FHWA); Peters, Dave

Cc: White, Sherl; Phillips, Kim; Simpson, Jim; VanMeter, Darryl; Hancock, John; Mitchell, Ulysses; Lawrence, Katrina

Subject: RE: Approved Concept Report for PI# 0009156, Henry County

Christy-

In response to your comments, please see below in **green**.

Please also note that only the first statement is in reference to the previously approved Concept Report. It appears the additional item listed apply to the IJR/IMR.

In the e-mail dated 5/9/2013 (attached), you had requested a status of several items that are part of the IMR/IJR package. As we were working through those items with you, I thought you were in the loop on our status. Since there appears to be a miscommunication, I think it is safe to say that we are caught up on all of the requested items.

We have addressed the comments presented in the letter dated October 25, 2012, approving the Concept Report. It would be appreciated if you would move forward with further processing of the IMR/IJR at this time. Please let me know if you have any questions.

Thanks,

Loren F. Bartlett

Innovative Program Delivery

Georgia Department of Transportation

600 West Peachtree Street, NW

19th Floor

From: Christy.Poon-Atkins@dot.gov [<mailto:Christy.Poon-Atkins@dot.gov>]
Sent: Wednesday, May 22, 2013 11:19 AM
To: Peters, Dave
Cc: Bartlett, Loren; White, Sherl; Phillips, Kim; Simpson, Jim
Subject: RE: Approved Concept Report for PI# 0009156, Henry County

Hi Dave,

In review of the concept reports provided for the I-75 Managed Lanes project (0009156 and 0009157) on May 17, 2013; the following items (including discrepancy and incomplete documentation) were noted:

- The permit revision included in the concept report notes the I-75 Managed Lanes project as PI 0010126, which is the PI for the Auxiliary Lane Project that is currently in construction.
 - **The revised permit with the correct PI #0009156 was included in the attachment sent to you in an e-mail from GDOT Design Policy and Support yesterday morning. I have included the attachment above. In the e-mail from Dave Peters, he had requested how you would like this to be included in the Concept Report, and suggested posting it in the Archive Store as a separate document for reference without changing the approved report. Please let us know if this will be acceptable.**
- The Traffic Engineering Report is included in the concept report as a 2012 analysis with a 2007 signature page attached to it.
 - o The complete 2007 analysis of the location (Jonesboro Road @ Foster Drive), which considers only 3-legs (not a direct connection to the Managed Lanes facility) has not been provided for review. The information is needed to help clarify GDOT's logic in the determination for this location.
 - **GDOT provided the approved signal permit documentation for the existing intersection of Jonesboro Road at Foster Drive. The 2007 analysis is not required to justify the existing operations of this intersection. To echo what the introduction of this e-mail stated, this item pertains to the IMR/IJR and not the Concept Report. In addition, this project is a design-build and the DB team will be responsible for any revisions and updates to the existing permit, as per 999.1.C.13.c and d. This was presented to FHWA as part of the RFP for advertisement, with concurrence received on March 18, 2013.**
- A revised comprehensive analysis package for the Jonesboro Road @ Foster Drive Intersection including the Foster Drive Spur has not been provided to support GDOT's determination at the location.
 - **A comprehensive analysis package for the Jonesboro Road at Foster Drive Intersection, including the spur was included as Appendix G in the electronic copy of the IMR/IJR submittal that was delivered to FHWA on 5/17/2013.**

Any traffic related information that has any contribution to the review of the I-75 Managed Lanes System should be provided. As previously requested, GDOT should ensure that any document submitted as a final submittal has been properly reviewed internally before being sent to FHWA for review and coordination.

- **The Traffic Analysis Report has been provided to FHWA and was approved on April 2012. If you need additional copies of this item, please let me know and we will be happy to provide them.**
- **This report (IMR/IJR) has been reviewed and accepted by the Office of Planning. At our last meeting, we had stated that we were comfortable with the package, and were ready for submission. Should there be any questions from FHWA on the local or national levels, we will be prepared to clarify. At that time we were directed to provide 2 clean-copies, 2 red-lines, and an electronic version of the package, and delivered these to FHWA on 5/17/2013.**

Please let me know if you have any other questions.

Thank you,

Christy L. Poon-Atkins, P.E.

Districts 3 & 4 Transportation Engineer

Federal Highway Administration, Georgia Division

61 Forsyth Street, S.W. Suite 17T100

Atlanta, GA 30303

Phone: (404) 562-3638 Fax: (404) 562-3703

Recognize weaknesses as opportunities to grow stronger!



Please consider the environment before printing this email

From: Peters, Dave [<mailto:dpeters@dot.ga.gov>]
Sent: Wednesday, May 22, 2013 10:12 AM
To: Poon-Atkins, Christy (FHWA)
Cc: Bartlett, Loren; White, Sherl; Phillips, Kim; Simpson, Jim
Subject: RE: Approved Concept Report for PI# 0009156, Henry County

Christy,

The project team has provided the attached update to the Signal Permit that was included in the Approved Concept Report for 0009156 (I-75 Managed Lanes) in Henry County.

Reading through the correspondence, I'm unclear on what you would like us to do the attached information. Did you just want us to provide it to you as a separate document or included as part of the report that has already been approved by FHWA and GDOT? If it's acceptable, I can make it available on the ArchiveStore as a separate document for easy reference without changing the approved report.

Based on the input and information I've received, the updated information didn't change the conclusions represented in the Concept Report.

Please let me know how you'd like the additional data presented.

Dave Peters

(404) 631-1738 (26th floor)

From: Phillips, Kim
Sent: Thursday, May 16, 2013 12:00 PM
To: 'Christy.Poon-Atkins@dot.gov'
Cc: Peters, Dave; Bartlett, Loren
Subject: RE: Approved Concept Report for PI# 0009156, Henry County

I forwarded your comments to the project manager.

From: Christy.Poon-Atkins@dot.gov [<mailto:Christy.Poon-Atkins@dot.gov>]
Sent: Thursday, May 16, 2013 11:56 AM
To: Phillips, Kim
Subject: RE: Approved Concept Report for PI# 0009156, Henry County

Hi Kim,

The correspondence copied below has not been revised to reflect the correct project number and GDOT's determination based on location specific analysis.

Also the complete document that goes along with the 2007 signal permit signature page was not attached. Furthermore, the GDOT project team noted that it was GDOT's policy to use the original signal permit information instead of providing information relevant to the current condition and actions at the location.

Please ensure that the complete information is provided for the intersection, per GDOT policy.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE: Henry County
SR 920/Jonesboro Rd @ Foster Dr

OFFICE: ATLANTA-TMC

DATE: January 23, 2013

FROM: ^{KZ} Kathy Zahul, P.E., State Traffic Engineer

TO: Mike England, District Traffic Engineer, Thomaston
Attn: Scott Parker

SUBJECT: Permit Revision for Stop and Go Traffic Signal

Attached for further handling is a revised permit for the stop and go traffic signal at the intersection of State Route 920/Jonesboro Road at Foster Drive in Henry County.

The revision is part of the I-75 Managed Lane Project, PI 0010126, which is reconstructing the interstate and adding a managed lane system, including a ramp from the project over the interstate to align with the existing Foster Dr intersection. The revised design reflects the new ramp alignment and configuration which consists one left turn lane, one through lane and two right turn lanes as well as the addition of a through lane on Foster Dr to the new ramp. An updated phasing diagram and upgraded pedestrian accommodations are included.

Please keep a copy of this approved permit for your files. Please feel free to contact this office if you should have any questions concerning this matter.

KZ:PD:ktd
Attachments

Please let me know if you have any questions.

Thank you,

Christy L. Poon-Atkins, P.E.

Phone: (404) 562-3638 Fax: (404) 562-3703

From: Phillips, Kim [<mailto:kiphillips@dot.ga.gov>]

Sent: Tuesday, May 14, 2013 3:27 PM

To: Hilliard, Bobby; Rice-Singleton, Genetha; Bowman, Glenn; VanDyke, Cindy; Rabun, Ben; Zahul, Kathy; Robinson, Angie; Myers, Lisa; Hasty, Charles A. (Chuck); Bolden, Mike; Tanner, Paul; Howell, Thomas; Rountree, Bill; Gore, Kerry; Bartlett, Loren

Cc: Carpenter, Joe; Story, Brent; Simpson, Jim; Thompson, Ken; Osmon, Elizabeth; Norwood, David; Poon-Atkins, Christy (FHWA); Matthews, Steve; OFM Concept Reports; Parker, Scott; Woods, Dan; Brigman, Terry; Highway Systems Administrator

Subject: Approved Concept Report for PI# 0009156, Henry County

To view the Approved Concept Report, access the PI# in the Archives Store:

<\\gdot.ad.local\Preconstruction\RoadDesign\Archivestore\0009156>

Open the "Concept Report" folder, and then click the file to open. If you have any problems, please contact me.

NOTE: This link will NOT work outside the DOT network. The document(s) can be accessed from the GeoTRAQs link on the GDOT external webpage.

ORIGINAL TO GENERAL FILES

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

**OFFICE OF DESIGN POLICY & SUPPORT
INTERDEPARTMENTAL CORRESPONDENCE**

FILE P.I. # 0009156 **OFFICE** Design Policy & Support
CSNHS-0009-00(156)
Henry County
GDOT District 3 - Thomaston **DATE** May 14, 2013
I-75 FM EAGLES LANDING PKWY TO SR 155 -
MANAGED LANES - PH I

FROM  for Brent Story, State Design Policy Engineer

TO SEE DISTRIBUTION

SUBJECT APPROVED CONCEPT REPORT

Attached is the approved Concept Report for the above subject project.

Attachment

DISTRIBUTION:

Bobby Hilliard, Program Control Administrator
Genetha Rice-Singleton, State Program Delivery Engineer
Glenn Bowman, State Environmental Administrator
Cindy VanDyke, State Transportation Planning Administrator
Ben Rabun, State Bridge Engineer
Kathy Zahul, State Traffic Engineer
Angela Robinson, Financial Management Administrator
Lisa Myers, State Project Review Engineer
Charles "Chuck" Hasty, State Materials Engineer
Mike Bolden, State Utilities Engineer
Paul Tanner, Asst. State Transportation Data Administrator
Attn: Systems & Classification Branch
Ken Thompson, Statewide Location Bureau Chief
Thomas Howell, District Engineer
Bill Rountree, District Preconstruction Engineer
Kerry Gore, District Utilities Engineer
Loren Frost Bartlett, Project Manager
BOARD MEMBER -3rd and 13th Congressional Districts
FHWA – attn: Rodney Barry, Georgia Division Administrator

Thanks,

Kim Phillips

404-631-1775

Georgia DOT provides funding and technical assistance to Georgia's airport system which contributes an economic value of \$62.6 billion and more than 471,100 jobs to the state's transportation and economic infrastructure. Georgia's airport system is made up of 104 publicly-owned, public-use airports.

Visit us at <http://www.dot.ga.gov>; or follow us on <http://www.facebook.com/GeorgiaDOT> and <http://twitter.com/gadepftoftrans>

Georgia DOT provides funding and technical assistance to Georgia's airport system which contributes an economic value of \$62.6 billion and more than 471,100 jobs to the state's transportation and economic infrastructure. Georgia's airport system is made up of 104 publicly-owned, public-use airports.

Visit us at <http://www.dot.ga.gov>; or follow us on <http://www.facebook.com/GeorgiaDOT> and <http://twitter.com/gadepftoftrans>

Georgia DOT provides funding and technical assistance to Georgia's airport system which contributes an economic value of \$62.6 billion and more than 471,100 jobs to the state's transportation and economic infrastructure. Georgia's airport system is made up of 104 publicly-owned, public-use airports.

Visit us at <http://www.dot.ga.gov>; or follow us on <http://www.facebook.com/GeorgiaDOT> and <http://twitter.com/gadepftoftrans>

The Georgia Department of Transportation continues its RoadWorks 2013 construction program. Dozens of important roadway improvement projects are ongoing throughout the state this summer as we work to deliver projects on time and on budget while keeping our transportation network the nation's finest. Pardon the necessary inconvenience and please drive cautiously and safely at all times, especially in work zones.

Visit us at <http://www.dot.ga.gov>; or follow us on <http://www.facebook.com/GeorgiaDOT> and <http://twitter.com/gadepftoftrans>



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

Georgia Division

July 5, 2012

61 Forsyth Street S. W.
Suite 17T100
Atlanta, Georgia 30303
Phone 404-562-3630
Fax 404-562-3703
GA.fhwa.@fhwa.dot.gov

Mr. Keith Golden
Commissioner
Georgia Department of Transportation
One Georgia Center, 600 West Peachtree Street, NW
Atlanta, GA 30308

In Reply Refer To:
HPE-GA

Dear Mr. Golden:

As noted in the project description, Project units 0009156 and 0009157 are expected to add managed lanes along I-75 in Henry and Clayton Counties. The project area begins approximately two miles south of the I-75 Bridge over SR 155 and ends approximately two miles north of the I-75 southbound off ramp to SR 138 (Stockbridge Highway) and approximately two miles north of SR 138 (Stockbridge Highway) on I-675 in Clayton County for a total length of approximately 18 miles.

With respect to the operational sufficiency of the proposed project to adequately provide reliable and congestion-free trips in the proposed managed lanes along I-75; the Georgia Department of Transportation (GDOT) has completed a Traffic Study to verify the efficiency of the managed lanes within the project area.

The results of the traffic study seem to operationally support the overall goals of I-75 Managed Lanes project to: (1) manage high levels of congestion; (2) reduce emissions in a nonattainment area or maintenance area; (3) finance the expansion of a highway, for the purpose of reducing traffic congestion, by constructing one or more managed lanes on the Interstate System; (4) enhance safety by reducing congestion-related crashes; and (5) create economic opportunity. Although the traffic study identifies areas along the project corridor that will experience some increase in the delay measure of effectiveness; GDOT has determined that the identified locations will be addressed with various programming efforts. Based on the identified benefits to the project area and GDOT's documented assessments, the Federal Highway Administration Georgia Division Office concurs with GDOT's determination associated with the results of the Traffic Study for the I-75 Managed Lanes Project.

If you have any questions or comments, please contact Christy Poon-Atkins, P.E. at 404-562-3638.

Sincerely,

Rodney Barry, P.E.
Division Administrator

CC:
File:
Reader File:

For calculation purposes, managed lanes traffic was removed from those links that include both general purpose and managed lanes traffic (i.e., the links that the managed lanes traffic uses to get to and from the managed lanes) and separate estimates were made for growth on the general purpose lanes and the managed lanes before the two were then recombined. This was necessary for computation purposes (in order to avoid double-counting) and also in order to develop origin-destination (O/D) tables for use in the microsimulation analysis (described more fully later in this document).

5.3 Traffic Forecast

5.3.1 No-Build Condition

Using output from computation steps described in the previous section, year 2015 and 2035 No-Build ADT and peak hour (a.m. and p.m.) volumes were estimated. Peak hour volumes were derived from the peak period volumes reported by the ARC model based on ratios of peak hour to 4-hour period derived from existing counts. Traffic “turning movement” volumes (including breakdowns of vehicles making all turns at study intersections and ramps) were developed based on standard traffic engineering methodologies that use existing turning movement counts and future link forecasts to estimate future year turns (described in *National Cooperative Highway Research Program Report 255*).

Based on discussions with GDOT Office of Planning staff and the most recent traffic data collected from GDOT Traffic Polling and Analysis System (TPAS), it was determined that the truck percentage would be 16% and 10% for daily and peak hour traffic, respectively, for the horizon years.

5.3.2 Build Condition

The Build Condition considered for this project is the reversible managed lanes concept that is also included as the Build alternative in the environmental assessment for this project. The reversible managed lanes concept is also incorporated into the Plan 2040 ARC model. The reversible managed lanes (ML) alternative consists of two reversible lanes from SR 138 to south of Mt. Carmel Road and one managed lane from south of Mt. Carmel Road to SR 155, dedicated ML ramps from/to I-675, a direct-connection ML interchange located between Mt. Carmel Road and Jonesboro, for traffic from/to the north, and a northbound ingress/southbound egress point south of Mt. Carmel Road in addition to the ML access at the beginning and end of the project. **This direct-connection ML interchange would connect to Jonesboro Road at the intersection with Foster Drive, located to the east of the I-75 interchange. The direct-connection ML interchange will not connect to roadways to the west of I-75.**

The 2010, 2015 and 2035 No-Build and Build ADT and peak hour volume diagrams are included in Appendix A.

6. Capacity Analysis

Capacity analysis is a set of procedures for estimating traffic-carrying ability and operational performance of roadway facilities. It provides tools to assess facilities and to plan and design improved facilities [Highway Capacity Manual 2000]. Level of service (LOS) is a qualitative measure describing operational Conditions, which is represented by six letters, from A to F, with LOS A representing the best operating Conditions and LOS F the worst. For freeways, density is the measure of effectiveness (MOE) determining LOS, and for intersections, control delay is the MOE determining LOS. The LOS criteria for basic freeway segments, ramp merge and diverge areas, weaving segments, and signalized intersections defined in Highway Capacity Manual 2000 are included in **Tables 4** through **Table 7** respectively.

Table 18: Signalized Intersections Capacity Analysis Summary (Existing 2010)

Intersection	AM		PM	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
SR 138/Stockbridge Road at Daniel Drive	23.3	C	54.4	D
SR 138/Stockbridge Road at Davison Parkway	36.5	D	35.0	C
SR 138/Stockbridge Road at I-675 Northbound Ramp	32.9	C	29.4	C
SR 138/Stockbridge Road at I-675 Southbound Ramp	15.9	B	168.3	F
SR 138/Stockbridge Road at Hanover Parkway	20.8	C	47.4	D
SR 138/Stockbridge Road at Mt. Zion Road	12.0	B	33.6	C
SR 138/Stockbridge Road at I-75 Northbound Ramp	35.4	D	14.6	B
SR 138/Stockbridge Road at I-75 Southbound Ramp	19.4	B	36.0	D
SR 138/Stockbridge Road at Mt. Zion Parkway	33.3	C	36.3	D
Eagles Landing Parkway at Patrick Henry Parkway	39.4	D	42.1	D
Hudson Bridge Road/Eagles Landing Parkway at I-75 Northbound Ramp	124.6	F	21.1	C
Hudson Bridge Road/Eagles Landing Parkway at I-75 Southbound Ramp	38.1	D	33.3	C
Hudson Bridge Road at Shopping Center Entrance	42.1	D	42.2	D
Jodeco Road at Patrick Henry Parkway	30.9	C	15.7	B
Jodeco Road at I-75 Northbound Ramp	44.3	D	23.8	C
Jodeco Road at I-75 Southbound Ramp	85.7	F	59.7	E
Jonesboro Road at Foster Drive	17.2	B	15.9	B
Jonesboro Road at I-75 Northbound Ramp	40.5	D	29.5	C
Jonesboro Road at I-75 Southbound Ramp	18.7	B	49.0	D
Jonesboro Road at Mill Road	38.2	D	53.8	D
SR 20 at Industrial Boulevard	140.8	F	66.0	E
SR 20 at Old Industrial Boulevard	22.9	C	32.6	C
SR 20 at I-75 Northbound Ramp	16.0	B	13.6	B
SR 20 at I-75 Southbound Ramp	52.0	D	50.1	D
SR 20 at SR 81/Nec Drive	39.3	D	35.7	D
SR 155 at Industrial Boulevard/King Mill Road	48.2	D	46.0	D
SR 155 at I-75 Northbound Ramp	31.5	C	22.6	C
SR 155 at I-75 Southbound Ramp	26.9	C	37.3	D

Notes: Yellow shading indicates LOS E, while orange shading indicates LOS F.

The analysis results indicate that, currently, all signalized intersections on the cross roads within the study area operate at LOS D or better during both AM and PM peak hours except for four intersections. For the purpose of the Existing Conditions analysis, signal timings received from the counties were not optimized. The intersection of SR 138 at the I-675 southbound ramps operates at LOS F in the PM peak hour. The I-75 northbound ramps intersection at Hudson Bridge Road/Eagles Landing Parkway operates at LOS F in the AM peak hour. The I-75 southbound ramps intersection at Jodeco Road operates at LOS F and E in the AM and PM peak hours, respectively. The SR 20 intersection at Industrial Boulevard operates at LOS F and E in the AM and PM peak hours, respectively.

6.2.2 No-Build Condition

The results for the signalized intersections in the No-Build Conditions are summarized in **Table 19** and **Table 20**.

Table 19: Signalized Intersections Capacity Analysis Summary (2015 No-Build)

Intersection	AM		PM	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
SR 138/Stockbridge Road at Daniel Drive	22.0	C	52.8	D
SR 138/Stockbridge Road at Davison Parkway	32.9	C	46.3	D
SR 138/Stockbridge Road at I-675 Northbound Ramp	25.5	C	20.1	C
SR 138/Stockbridge Road at I-675 Southbound Ramp	11.0	B	173.5	F
SR 138/Stockbridge Road at Hanover Parkway	16.8	B	54.4	D
SR 138/Stockbridge Road at Mt. Zion Road	13.8	B	36.7	D
SR 138/Stockbridge Road at I-75 Northbound Ramp	32.0	C	11.9	B
SR 138/Stockbridge Road at I-75 Southbound Ramp	17.2	B	39.5	D
SR 138/Stockbridge Road at Mt. Zion Parkway	35.7	D	31.7	C
Eagles Landing Parkway at Patrick Henry Parkway	36.6	D	45.8	D
Hudson Bridge Road/Eagles Landing Parkway at I-75 Northbound Ramp	60.4	E	22.8	C
Hudson Bridge Road/Eagles Landing Parkway at I-75 Southbound Ramp	22.5	C	36.4	D
Hudson Bridge Road at Shopping Center Entrance	31.4	C	33.4	C
Jodeco Road at Patrick Henry Parkway	15.4	C	11.5	B
Jodeco Road at I-75 Northbound Ramp	17.3	B	18.3	B
Jodeco Road at I-75 Southbound Ramp	20.8	C	22.3	C
Jonesboro Road at Foster Drive	17.3	B	14.5	B
Jonesboro Road at I-75 Northbound Ramp	33.8	C	28.3	C
Jonesboro Road at I-75 Southbound Ramp	19.5	B	46.5	D
Jonesboro Road at Mill Road	34.7	C	56.1	E
SR 20 at Industrial Boulevard	156.4	F	85.1	F
SR 20 at Old Industrial Boulevard	20.2	C	31.8	C
SR 20 at I-75 Northbound Ramp	14.7	B	13.4	B
SR 20 at I-75 Southbound Ramp	49.9	D	57.5	E
SR 20 at SR 81/Nec Drive	42.8	D	42.8	D
SR 155 at Industrial Boulevard/King Mill Road	77.3	E	68.2	E
SR 155 at I-75 Northbound Ramp	15.7	B	22.2	C
SR 155 at I-75 Southbound Ramp	27.4	C	44.8	D

Notes: Yellow shading indicates LOS E, while orange shading indicates LOS F.

As shown above, under the No-Build Conditions in the opening year (2015), all intersections would operate at LOS D or better during both the AM and PM peak hour, with the exception of six intersections that would operate at LOS E/F for either/both peak hours. For the purpose of the No-Build analysis, the signal timings were optimized to reflect changes that would be made over time to improve operations. The intersection of SR 138 at the I-675 southbound ramps would operate at LOS F in the PM peak hour. The I-75 northbound ramps at Hudson Bridge Road/Eagles Landing Parkway would operate at LOS E in the AM peak hour. The intersection of Jonesboro Road at Mill Road would operate at LOS E in the PM peak hour. The SR 20 intersection at Industrial Boulevard would operate at LOS F in both peak hours. The intersection of SR 20 at the I-75 southbound ramps would operate at LOS E in the PM peak hour. The SR 155 intersection at Industrial Boulevard/King Mill Road would operate at LOS F in both peak hours.

Table 20: Signalized Intersections Capacity Analysis Summary (2035 No-Build)

Intersection	AM		PM	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
SR 138/Stockbridge Road at Daniel Drive	31.3	C	96.9	F
SR 138/Stockbridge Road at Davison Parkway	81.4	F	89.7	F
SR 138/Stockbridge Road at I-675 Northbound Ramp	73.2	E	55.5	E
SR 138/Stockbridge Road at I-675 Southbound Ramp	14.8	B	220.8	F
SR 138/Stockbridge Road at Hanover Parkway	43.2	D	118.8	F
SR 138/Stockbridge Road at Mt. Zion Road	24.5	C	76.5	E
SR 138/Stockbridge Road at I-75 Northbound Ramp	75.2	E	13.2	B
SR 138/Stockbridge Road at I-75 Southbound Ramp	18.8	B	41.0	D
SR 138/Stockbridge Road at Mt. Zion Parkway	71.5	E	47.9	D
Eagles Landing Parkway at Patrick Henry Parkway	59.2	E	65.9	E
Hudson Bridge Road/Eagles Landing Parkway at I-75 Northbound Ramp	92.1	F	29.4	C
Hudson Bridge Road/Eagles Landing Parkway at I-75 Southbound Ramp	26.5	C	48.3	D
Hudson Bridge Road at Shopping Center Entrance	44.2	D	40.9	D
Jodeco Road at Patrick Henry Parkway	21.0	C	14.0	B
Jodeco Road at I-75 Northbound Ramp	44.8	D	15.7	B
Jodeco Road at I-75 Southbound Ramp	20.3	C	39.6	D
Jonesboro Road at Foster Drive	25.0	C	21.8	C
Jonesboro Road at I-75 Northbound Ramp	65.1	E	37.5	D
Jonesboro Road at I-75 Southbound Ramp	18.0	B	51.5	D
Jonesboro Road at Mill Road	60.5	E	126.7	F
SR 20 at Industrial Boulevard	103.6	F	111.2	F
SR 20 at Old Industrial Boulevard	21.2	C	40.7	D
SR 20 at I-75 Northbound Ramp	17.6	B	18.1	B
SR 20 at I-75 Southbound Ramp	103.5	F	138.3	F
SR 20 at SR 81/Nec Drive	101.2	F	117.0	F
SR 155 at Industrial Boulevard/King Mill Road	100.0	F	74.4	E
SR 155 at I-75 Northbound Ramp	91.6	F	143.2	F
SR 155 at I-75 Southbound Ramp	43.4	D	100.2	F

Notes: Yellow shading indicates LOS E, while orange shading indicates LOS F.

By 2035, for the No-Build Conditions, approximately two thirds (18 of 28) of the study area intersections are anticipated to operate at LOS E/F. These results indicate that improvements would be needed at these intersections to accommodate the long term regional growth.

6.2.3 Build Conditions

The capacity analysis results for the signalized intersections for the Build Conditions are summarized in **Table 21** and **Table 22**.

Table 21: Signalized Intersections Capacity Analysis Summary (2015 Build)

Intersection	AM		PM	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
SR 138/Stockbridge Road at Daniel Drive	22.3	C	50.1	D
SR 138/Stockbridge Road at Davison Parkway	31.7	C	46.8	D
SR 138/Stockbridge Road at I-675 Northbound Ramp	24.6	C	18.0	B
SR 138/Stockbridge Road at I-675 Southbound Ramp	11.2	B	176.4	F
SR 138/Stockbridge Road at Hanover Parkway	17.1	B	40.7	D
SR 138/Stockbridge Road at Mt. Zion Road	13.7	B	36.9	D
SR 138/Stockbridge Road at I-75 Northbound Ramp	46.2	D	13.0	B
SR 138/Stockbridge Road at I-75 Southbound Ramp	17.9	B	47.9	D
SR 138/Stockbridge Road at Mt. Zion Parkway	40.0	D	34.4	C
Eagles Landing Parkway at Patrick Henry Parkway	36.4	D	44.1	D
Hudson Bridge Road/Eagles Landing Parkway at I-75 Northbound Ramp	60.6	E	18.0	B
Hudson Bridge Road/Eagles Landing Parkway at I-75 Southbound Ramp	22.9	C	32.8	C
Hudson Bridge Road at Shopping Center Entrance	29.1	C	28.3	C
Jodeco Road at Patrick Henry Parkway	15.6	B	11.5	B
Jodeco Road at I-75 Northbound Ramp	16.3	B	18.6	B
Jodeco Road at I-75 Southbound Ramp	21.0	C	21.4	C
Jonesboro Road at Foster Drive	15.9	B	36.7	D
Jonesboro Road at I-75 Northbound Ramp	37.7	D	22.6	C
Jonesboro Road at I-75 Southbound Ramp	20.7	C	46.7	D
Jonesboro Road at Mill Road	34.8	C	58.0	E
SR 20 at Industrial Boulevard	199.7	F	122.6	F
SR 20 at Old Industrial Boulevard	18.9	B	29.0	C
SR 20 at I-75 Northbound Ramp	17.0	B	12.6	B
SR 20 at I-75 Southbound Ramp	72.0	E	114.1	F
SR 20 at SR 81/Nec Drive	51.1	D	38.8	D
SR 155 at Industrial Boulevard/King Mill Road	137.1	F	88.0	F
SR 155 at I-75 Northbound Ramp	19.7	B	48.2	D
SR 155 at I-75 Southbound Ramp	27.6	C	85.3	F

Notes: Yellow shading indicates LOS E, while orange shading indicates LOS F.

Table 22: Signalized Intersections Capacity Analysis Summary (2035 Build)

Intersection	AM		PM	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
SR 138/Stockbridge Road at Daniel Drive	24.6	C	79.7	E
SR 138/Stockbridge Road at Davison Parkway	53.1	D	82.6	F
SR 138/Stockbridge Road at I-675 Northbound Ramp	51.4	D	40.8	D
SR 138/Stockbridge Road at I-675 Southbound Ramp	12.2	B	182.3	F
SR 138/Stockbridge Road at Hanover Parkway	25.8	C	95.5	F
SR 138/Stockbridge Road at Mt. Zion Road	18.0	B	67.9	E
SR 138/Stockbridge Road at I-75 Northbound Ramp	120.8	F	13.8	B
SR 138/Stockbridge Road at I-75 Southbound Ramp	14.8	B	58.6	E
SR 138/Stockbridge Road at Mt. Zion Parkway	87.5	F	52.6	D
Eagles Landing Parkway at Patrick Henry Parkway	57.3	E	67.4	E
Hudson Bridge Road/Eagles Landing Parkway at I-75 Northbound Ramp	81.7	F	31.5	C
Hudson Bridge Road/Eagles Landing Parkway at I-75 Southbound Ramp	27.2	C	44.2	D
Hudson Bridge Road at Shopping Center Entrance	39.2	D	38.0	D
Jodeco Road at Patrick Henry Parkway	23.7	C	13.7	B
Jodeco Road at I-75 Northbound Ramp	22.8	C	17.0	B
Jodeco Road at I-75 Southbound Ramp	21.2	C	31.9	C
Jonesboro Road at Foster Drive	18.6	B	52.8	D
Jonesboro Road at I-75 Northbound Ramp	36.5	D	71.6	E
Jonesboro Road at I-75 Southbound Ramp	19.1	B	44.4	D
Jonesboro Road at Mill Road	64.5	E	156.9	F
SR 20 at Industrial Boulevard	141.1	F	105.7	F
SR 20 at Old Industrial Boulevard	23.6	C	38.1	D
SR 20 at I-75 Northbound Ramp	23.6	C	27.2	C
SR 20 at I-75 Southbound Ramp	132.5	F	181.3	F
SR 20 at SR 81/Nec Drive	108.0	F	131.9	F
SR 155 at Industrial Boulevard/King Mill Road	119.2	F	69.6	E
SR 155 at I-75 Northbound Ramp	72.7	E	180.7	F
SR 155 at I-75 Southbound Ramp	33.7	C	163.3	F

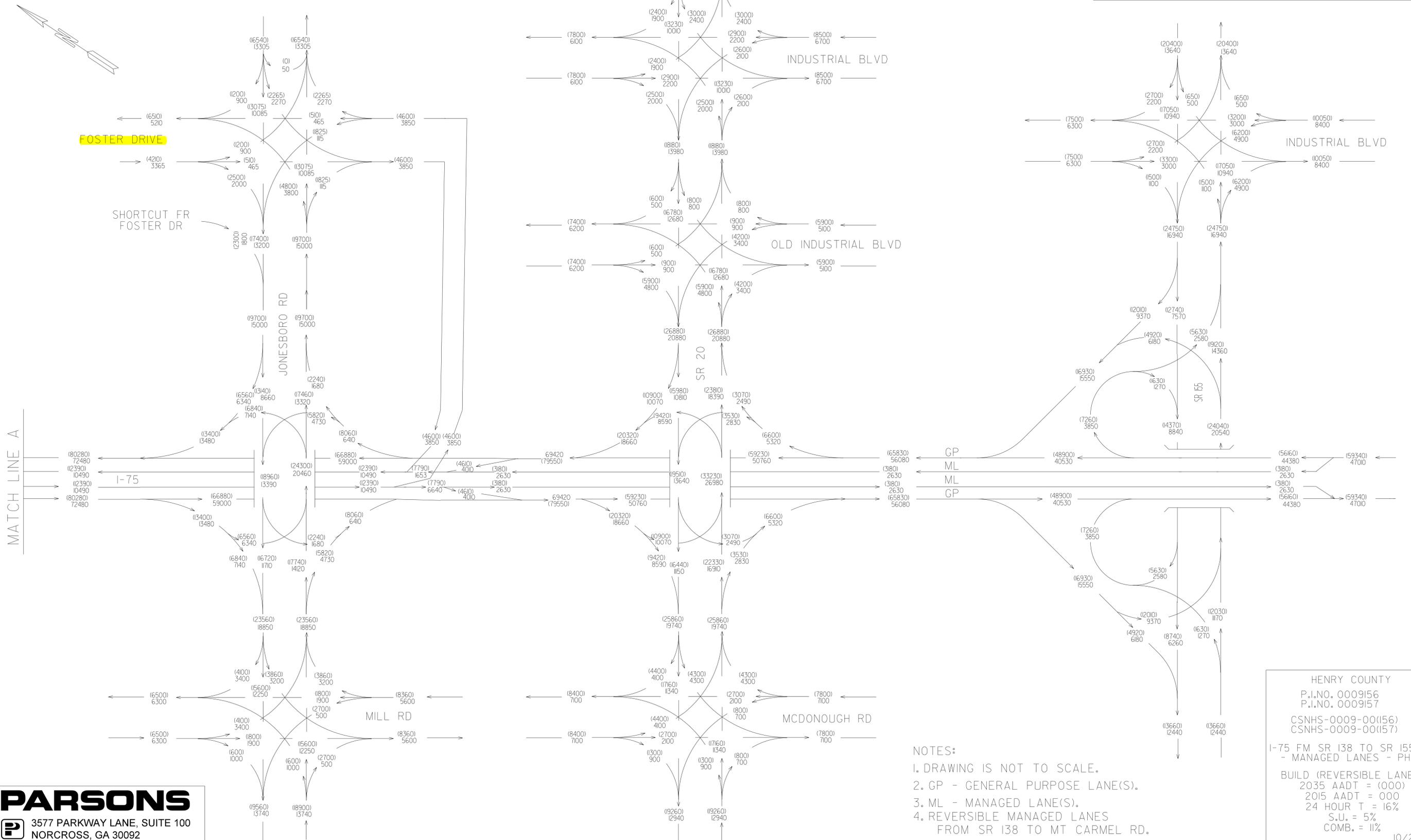
Notes: Yellow shading indicates LOS E, while orange shading indicates LOS F.

For the 2015 Build Conditions, a total of seven intersections would operate at LOS E/F for either/both peak hours. By 2035, under the Build Conditions, 18 of the 28 study area intersections would operate at LOS E/F. This number is the same number as in the No-Build Condition. As the number of intersections is the same between the two alternatives, the cause for intersections to operate at LOS E/F in the future is due to regional growth in traffic and not specifically to this project. Geometric improvements that could be considered to improve operations at a number of these intersections are discussed in the next section.

6.3 Discussions of Results

The analysis of traffic operations indicates that the number of intersections operating at LOS E/F remain the same between the No-Build and Build Conditions. Likewise, the number of freeway segments, ramp merge and diverge areas that would operate at LOS F is expected to decrease in the Build Conditions compared to the No-Build. While the analysis indicates that congested conditions would occur at few locations within the study network even under the Build Conditions, overall traffic operations along the corridor and region in general would improve with the implementation of the managed lanes project as fewer locations would operate at undesirable LOS (i.e. LOS E or F) compared to no-build condition. Both the No-Build and Build Conditions analysis included the projects that are identified in the ARC’s Plan 2040’s constrained long range plan.

While examining freeway operations for its performance, both the segments and ramp areas need to be reviewed side-by-side. Often when back-to-back on-ramp/off-ramp are at LOS E/F, it is usually

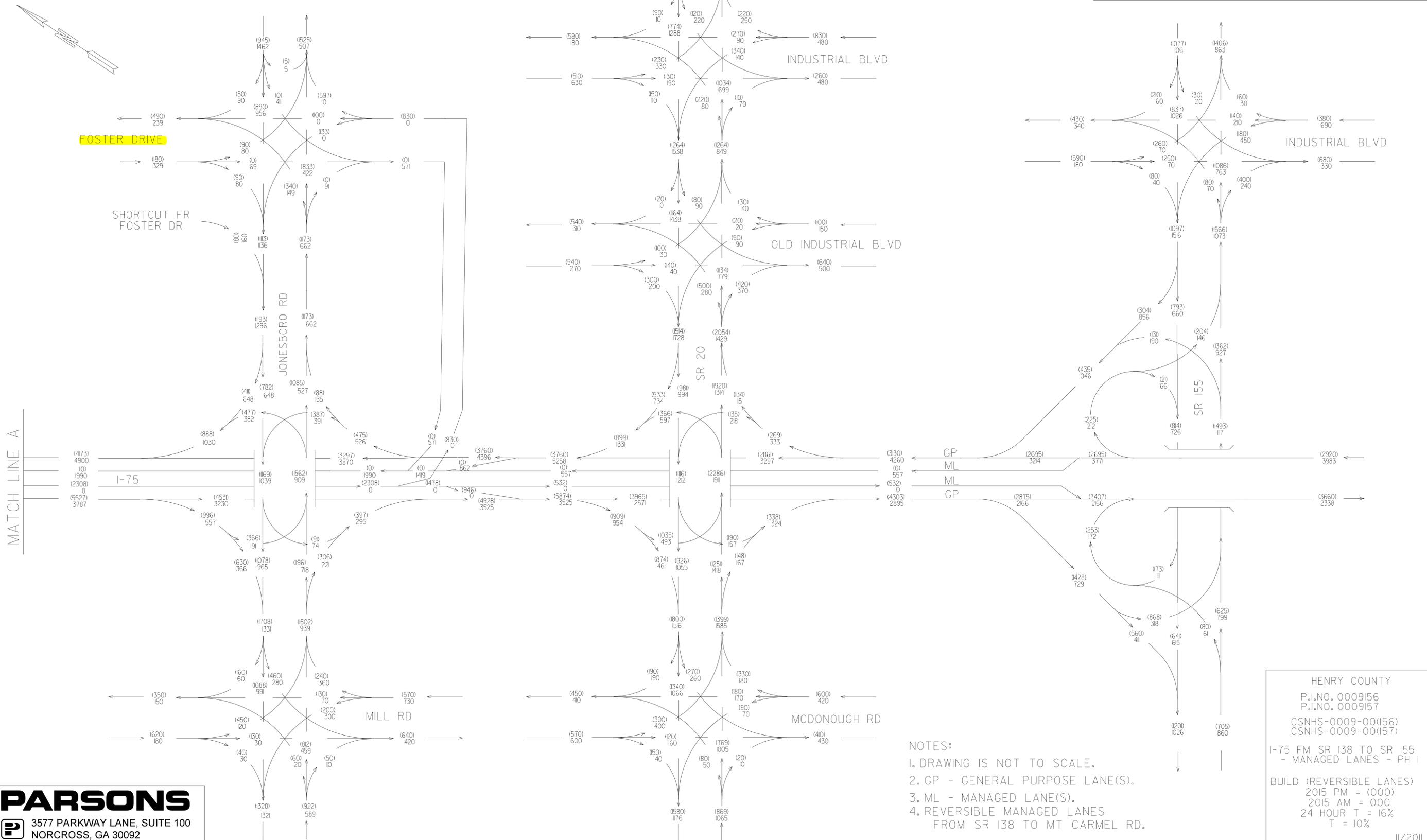


MATCH LINE A

- NOTES:
1. DRAWING IS NOT TO SCALE.
 2. GP - GENERAL PURPOSE LANE(S).
 3. ML - MANAGED LANE(S).
 4. REVERSIBLE MANAGED LANES FROM SR 138 TO MT CARMEL RD.

HENRY COUNTY
P.I.NO. 0009156
P.I.NO. 0009157
CSNHS-0009-00(156)
CSNHS-0009-00(157)
I-75 FM SR 138 TO SR 155
- MANAGED LANES - PH I
BUILD (REVERSIBLE LANES)
2035 AADT = (000)
2015 AADT = 000
24 HOUR T = 16%
S.U. = 5%
COMB. = 11%
10/2011



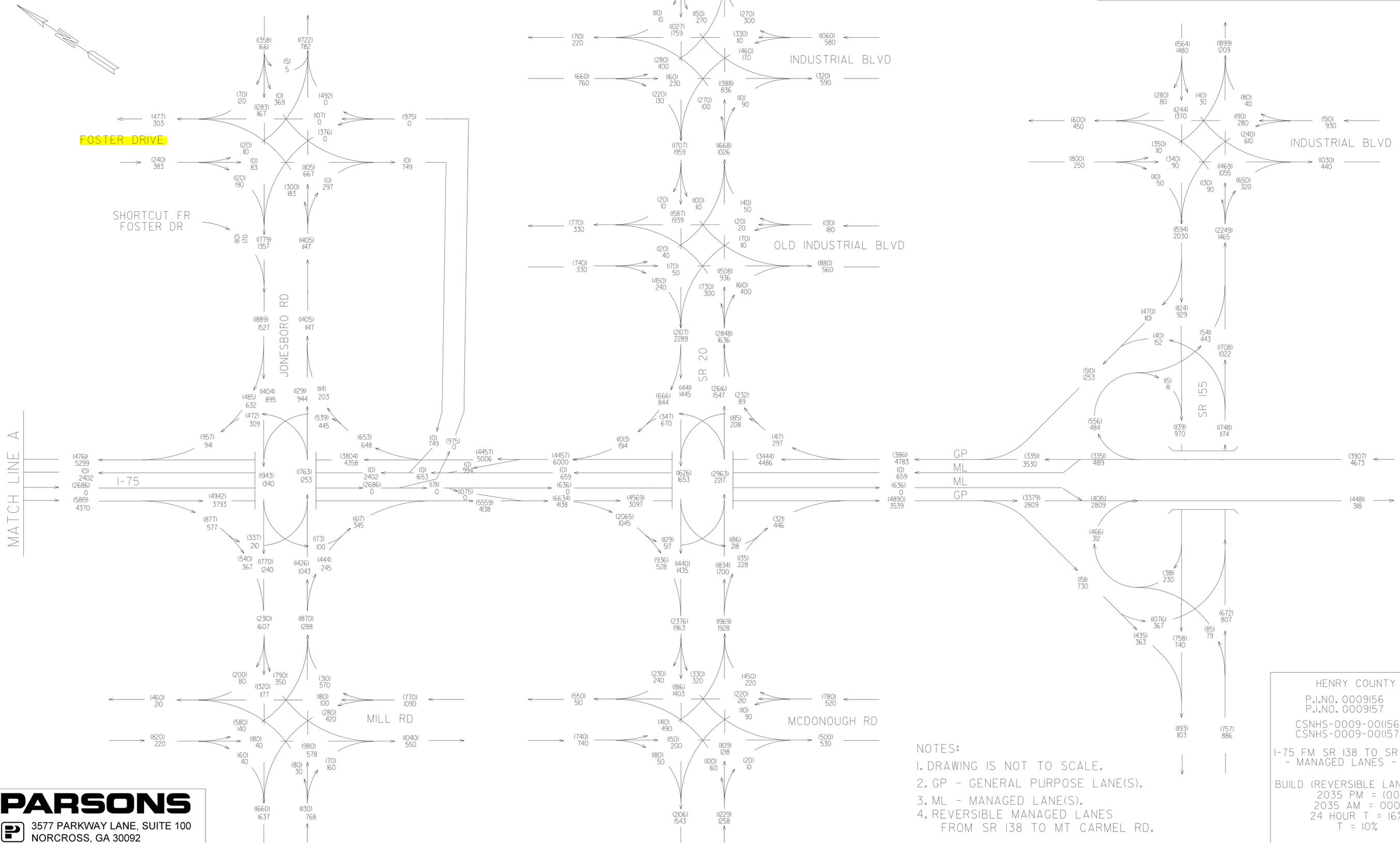


MATCH LINE A



- NOTES:
1. DRAWING IS NOT TO SCALE.
 2. GP - GENERAL PURPOSE LANE(S).
 3. ML - MANAGED LANE(S).
 4. REVERSIBLE MANAGED LANES FROM SR 138 TO MT CARMEL RD.

HENRY COUNTY
P.I.NO. 0009156
P.I.NO. 0009157
CSNHS-0009-00(156)
CSNHS-0009-00(157)
I-75 FM SR 138 TO SR 155
- MANAGED LANES - PH I
BUILD (REVERSIBLE LANES)
2015 PM = (000)
2015 AM = (000)
24 HOUR T = 16%
T = 10%



MATCH LINE A



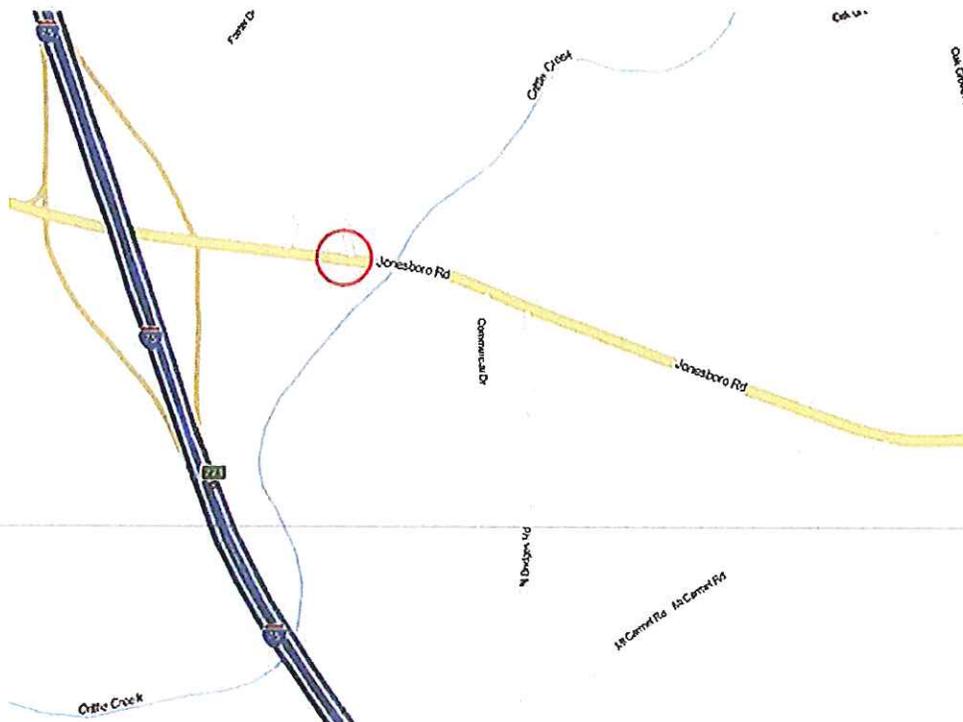
- NOTES:
1. DRAWING IS NOT TO SCALE.
 2. GP - GENERAL PURPOSE LANE(S).
 3. ML - MANAGED LANE(S).
 4. REVERSIBLE MANAGED LANES FROM SR 138 TO MT CARMEL RD.

HENRY COUNTY
P.I.NO. 0009156
P.I.NO. 0009157
CSNHS-0009-00(156)
CSNHS-0009-00(157)
I-75 FM SR 138 TO SR 155
- MANAGED LANES - PH I
BUILD (REVERSIBLE LANES)
2035 PM = (00)
2035 AM = 000
24 HOUR T = 16%
T = 10%
11/2011

Traffic Engineering Report
Jonesboro Road at Foster Drive
Henry County
August, 2012

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
TRAFFIC ENGINEERING REPORT

For the intersection of:
Jonesboro Road and Foster Drive
Henry County
At Mile Log: 5.67



Report Prepared by:
Sunita Nadella, PE, PTOE
Senior Traffic Engineer/Planner
PARSONS
3577, Parkway Place, Building 5, Suite 100
Norcross GA 30092
Ph: 678-969-2304
Fax: 770-446-4910
Email: sunita.nadella@parsons.com

Date report prepared: 04/20/2012
Revised: August 2012

Location: The study intersection, Jonesboro Road at Foster Drive, is located in Henry County, Georgia. Jonesboro Road at the study location travels east-west, and Foster Drive travels north from the intersection. Vicinity map and intersection location is attached in Appendix A.

Reason for the Investigation: The consideration of placing a fourth leg to the existing three legged signalized intersection at this location is based on an on-going GDOT projects (P.I. No. 0009156 and 0009157) for addition of reversible express lanes along I-75. The access ramp to the express lane from Jonesboro Road will be aligned as the fourth leg at the intersection of Jonesboro Road and Foster Drive. This report is being prepared to evaluate the need for modification of the existing traffic signal at the intersection.

Description of Intersection: The study is along Jonesboro Road in Henry County, Georgia. Jonesboro Road runs in the east-west direction from Henry County Line to downtown McDonough. It is classified as an urban minor arterial by Georgia Department of Transportation (GDOT). At the study intersection it has two lanes in both directions with a raised median separator. Foster Drive is functionally classified as an urban local road by GDOT, and it travels north from its intersection with Jonesboro Road to its intersection with Oak Grove Road where it ends. At its intersection with Jonesboro Road, Foster Drive has single lane in each direction. The study intersection is a signalized three-way intersection.

Table 1: Traffic Volumes in vehicle per day (vpd):

Latest year percent trucks: 6%

Direction hourly volumes at the intersections are attached. There is no GDOT count station on Foster Drive.

Table 1: AADT Volumes	
YEAR	Jonesboro Road
2010	23,180
2009	23,140
2008	21,650
2007	21,990

In the future with the proposed express lane ramp coming in as the fourth leg of Foster Drive, the intersection is anticipated to have increased traffic volumes with the addition of the fourth leg.

Existing Traffic Control: In the existing condition the intersection of Jonesboro Road and Foster Drive is signalized three-way intersection.

Traffic Engineering Report
 Jonesboro Road at Foster Drive
 Henry County
 August, 2012

Vehicular Speeds: Posted Speed limit for both Jonesboro Road and Foster Drive at the intersection is 45 mph.

Pedestrian movements: The study intersection is located in urban area. There are no existing sidewalks at the intersection and pedestrian activity was not observed.

Other modes of transportation present: Other modes of transportation are not available in the area.

Delay: The Intersection is signalized in existing conditions and has minimal delays.

Parking: There was no parking observed or expected at the intersection.

Crash Analysis: Crash data for the intersection was obtained from CARE software for the years 2007-2009. Crash diagram for the intersection is attached in the Appendix B.

Table 2: Crash Analysis									
Year	Accidents							Injuries	Fatalities
	Rear-End	Side-swipe	Angle	Head-on	Object	Run off the road	Total		
2007	18	2	2	--	--	--	22	3	--
2008	17	1	7	--	--	--	25	6	--
2009	12	--	--	1	--	--	13	2	--

Adjacent Signalized Intersections:

The next signal to the east of the study intersection is the intersection of Willow Lane and Jonesboro Road which is at 4000'. At 3200' east, at the intersection of Mt. Carmel Road a signal permit is being requested. To the west the intersection of I-75 ramps and Jonesboro Road is at 950'.

Warrant Analysis: The intersection is currently signalized.

Roundabout Analysis: The intersection is currently signalized.

Capacity Analysis:

Capacity analysis was performed at the intersection for existing conditions with the intersection being signalized and with three legs at the intersection. For the open year and build year conditions capacity analysis was performed with the fourth leg coming in from the express lane access. The fourth leg will have a northbound left-turn lane, a through lane, and dual right-turn lanes. The traffic volumes for the future conditions are derived from the traffic report and travel demand model for the area that was developed to evaluate the performance of the express lanes.

Table 3: Capacity Analysis												
Intersection	2010 - Existing				2015 - Open				2035 - Build			
	AM		PM		AM		PM		AM		PM	
	Delay (sec/veh)	LOS										
Foster Dr at Jonesboro Rd	17.2	B	15.9	B	15.9	B	36.7	D	18.6	B	52.8	D

The intersection's levels of service are at acceptable levels with the proposed signal modification of the intersections. Capacity analysis reports are attached in Appendix C.

Traffic Engineering Report
Jonesboro Road at Foster Drive
Henry County
April 20, 2012

Recommendations:

Based on the capacity analysis and existing conditions, it is established that the intersection of Jonesboro Road and Foster Drive warrant a signal in the existing conditions and will continue to require a signal at that intersection with the proposed project adding the fourth leg at the intersection.

RECOMMENDED BY: Kenn M. Mullen
Parsons

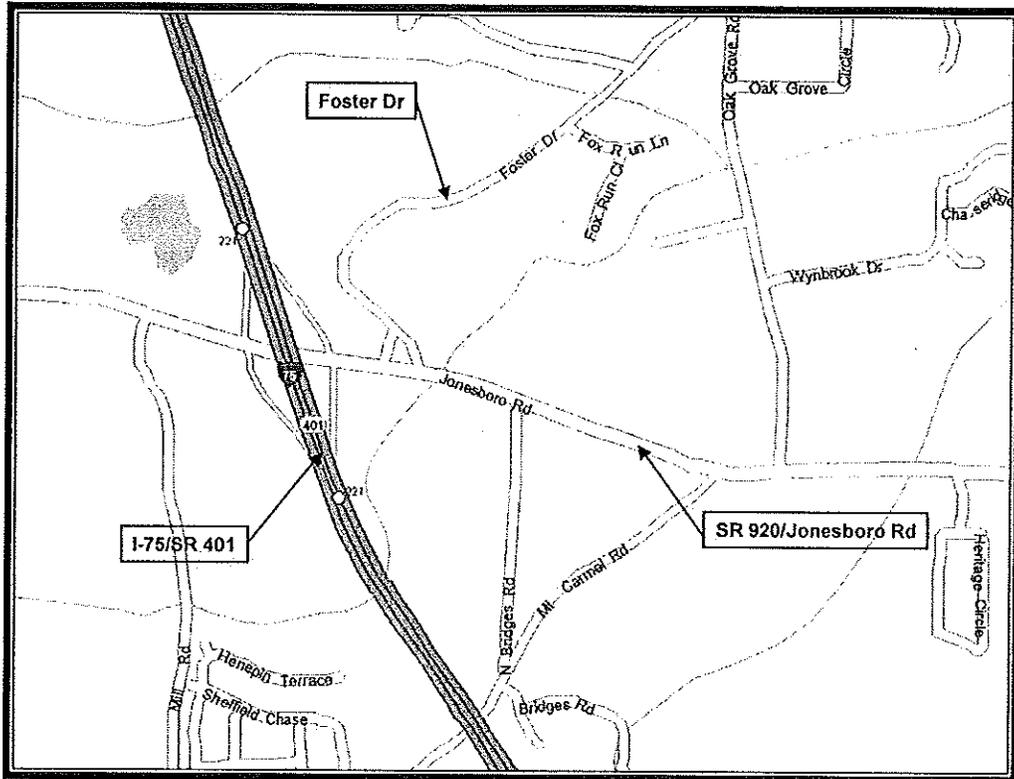
Date: 05/31/2013

RECOMMENDED BY: Kathleen Quinn
State Traffic Operations Engineer

Date: 5-31-13

TRAFFIC ENGINEERING REPORT

SR 920/JONESBORO ROAD @ FOSTER DRIVE, McDONOUGH, GA



Report prepared by:

Speedy Boutwell, P.E., PTOE
Speedy.Boutwell@wolverton-assoc.com

TRAFFIC ENGINEERING REPORT

SR 920/JONESBORO ROAD @ FOSTER DRIVE, McDONOUGH, GA

LOCATION: SR 920/Jonesboro Road @ Foster Drive

REASON FOR INVESTIGATION: To determine the traffic impacts of a proposed retail center to be located on the north side of the SR 920/Jonesboro Road and Foster Drive intersection, east of the I-75 interchange in Henry County, Georgia.

FUTURE GDOT PROJECTS: Project STP-1583(11) is currently widening Jonesboro Road, east of Foster Dr, from 2-lanes to 4-lanes. Construction is well underway and is scheduled to be completed in 2007.

DESCRIPTION OF THE FACILITIES AND INTERSECTIONS:

- Jonesboro Road is a four-lane, arterial roadway with an average daily traffic of 20,607 vehicles in the vicinity of Foster Drive. The grade of this section of roadway is approximately 6%.
- Foster Drive is a two-lane rural arterial with an average daily traffic of 1,580 vehicles.
- At its intersection with Jonesboro Road, Foster Drive's right turns are channelized via a "jug handle".

TRAFFIC VOLUMES IN VEHICLES PER DAY (VPD): GDOT historical count data was collected on Jonesboro Road, in the vicinity of the site, to develop a growth rate. Table 1 shows the data and resulting growth rate of approximately 4.7% on Jonesboro Road from 2001 to 2004. Although 2005 count data was available at the time of this report, those counts were omitted from this calculation due to very low volumes (approximately half the volume counted in 2004). This is more than likely due to the current construction activity. Excluding this data gives a more conservative outlook for growth in the project area.

Table 1: GDOT Historical Count Data

Year	County	TC No.	Route	From	To	AADT
2001	Henry	214	920	I-75 NB Ramps	N Bridges Rd	17964
2002	Henry	214	920	I-75 NB Ramps	N Bridges Rd	17754
2003	Henry	214	920	I-75 NB Ramps	N Bridges Rd	22167
2004	Henry	214	920	I-75 NB Ramps	N Bridges Rd	20607

Weekday AM and PM peak hour turning movement count data was collected for this project and are included in Appendix A.

EXISTING TRAFFIC CONTROL: The intersection of Jonesboro Road and Foster Drive currently operates with stop control on the minor approach (Foster Drive).

VEHICULAR SPEEDS: The posted speed limit on Jonesboro Road is 45 mph. The posted speed limit on Foster Drive is 45 mph.

PEDESTRIAN MOVEMENTS: There are no sidewalk facilities along Jonesboro Road within the study area.

OTHER MODES OF TRANSPORTATION PRESENT: N/A

DELAY: Analysis showed that with the current traffic control and projected volumes the intersection of SR 920/Jonesboro Road and Foster Drive will experience excessive delays during both the AM and PM peak periods. A Synchro model showing these delays is presented in Appendix B.

PARKING: Parking is neither currently provided nor anticipated at the study intersection.

ACCIDENT HISTORY: Accident data was not evaluated as part of this study analysis.

ADJACENT SIGNALIZED INTERSECTIONS: The nearest traffic signal is approximately ¼ mile west on Jonesboro Road at the I-75 NB ramps.

WARRANT ANALYSIS: A signal warrant analysis, based upon the 8 warranting conditions of the Manual on Uniform Traffic Control Devices (MUTCD), was performed for the intersection of Jonesboro Road and Foster Drive using the Projected Hourly Traffic shown in Table 2.

Table 2: Projected Hourly Traffic at Study Intersection

Jonesboro Road @ Foster Drive

Hour	MAIN STREET VOLUME (Total Both Approaches)					MINOR STREET VOLUME (Largest Volume Approach) Foster Southbound ↓				
	Existing		Generated		Projected Volumes	Existing	Generated		Projected Volumes	
	EB	WB	EB	WB			Lefts	Rights	w/out rights	w/rights
10-11 AM	79	718	88	90	975	11	90	44	101	145
11-12 Noon	215	763	88	90	1,156	11	117	56	128	184
12-1 PM	502	771	88	90	1,451	15	114	55	129	184
1-2 PM	516	656	80	82	1,334	10	104	50	114	165
2-3 PM	466	705	104	107	1,382	22	108	52	130	183
3-4 PM	530	645	111	114	1,400	10	132	64	142	206
4-5 PM	653	686	112	115	1,567	14	145	70	159	228
5-6 PM	663	756	119	123	1,661	12	153	74	165	239
6-7 PM	782	689	86	88	1,645	4	115	56	119	175
7-8 PM	821	502	63	64	1,450	7	74	36	81	116
8-9 PM	935	304	49	50	1,338	3	60	29	63	92
9-10 PM	982	239	22	23	1,266	6	25	12	31	43

Table 3 shows that Warrant 1 – Condition A is met for eight (8) hours of the day and Condition B is met for eleven (11) hours of the day. These results show that Warrant 1, Conditions A and B, are satisfied.

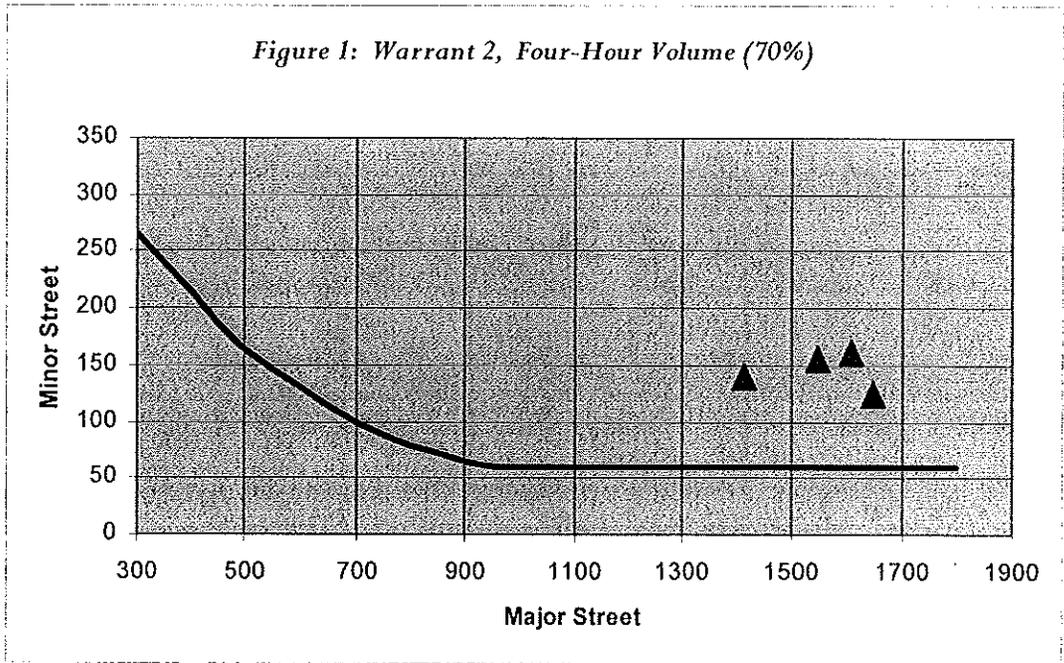
Table 3: Warrant 1 – Eight Hour Vehicular Volume

Jonesboro Road @ Foster Drive

Major Street Geometry: 2 lanes
 Minor Street Geometry: 1 lanes
 Speed Limit > 40 mph: YES

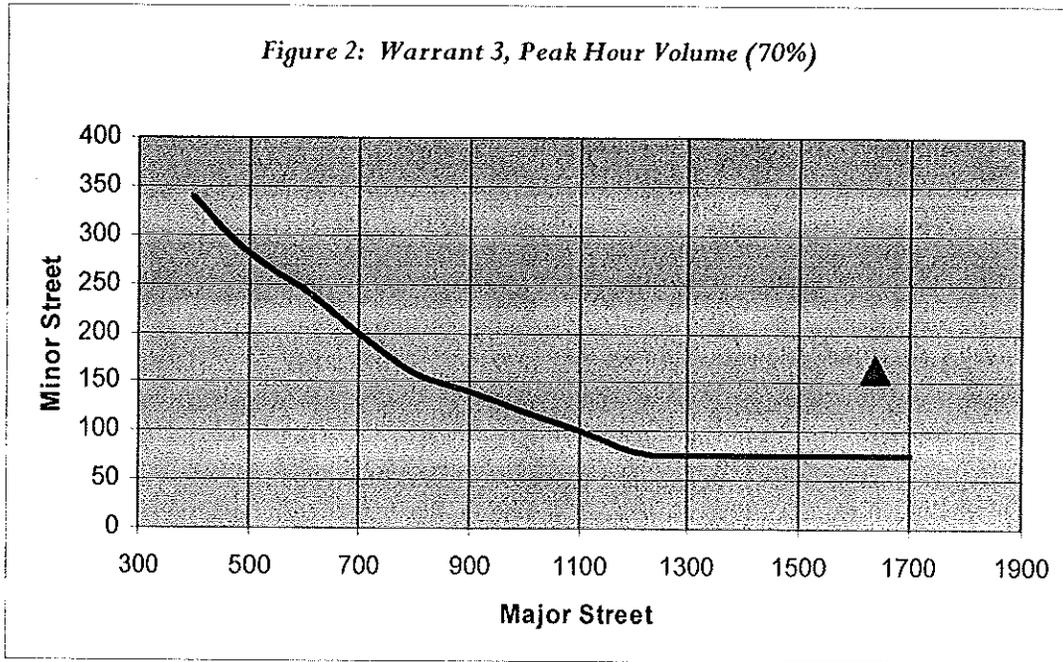
Hour	Traffic Volume		Condition A Satisfied ?		Condition B Satisfied ?	
	Major Approach	Minor Approach w/o Rights	Major Approach	Minor Approach	Major Approach	Minor Approach
			(420)	(105)	(630)	(53)
10-11 AM	975	101	YES	NO	YES	YES
11-12 Noon	1,156	128	YES	YES	YES	YES
12-1 PM	1,451	129	YES	YES	YES	YES
1-2 PM	1,334	114	YES	YES	YES	YES
2-3 PM	1,382	130	YES	YES	YES	YES
3-4 PM	1,400	142	YES	YES	YES	YES
4-5 PM	1,567	159	YES	YES	YES	YES
5-6 PM	1,661	165	YES	YES	YES	YES
6-7 PM	1,645	119	YES	YES	YES	YES
7-8 PM	1,450	81	YES	NO	YES	YES
8-9 PM	1,338	63	YES	NO	YES	YES
9-10 PM	1,266	31	YES	NO	YES	NO

Figure 1 shows the results of Warrant 2 graphically, as directed in the MUTCD. The four highest volumes at this intersection, 3:00 PM, 4:00 PM, 5:00 PM and 6:00 PM, all fall above the threshold volume curve. Therefore, Warrant 2 is satisfied.



The result of Warrant 3 is illustrated, per MUTCD guidelines, in Figure 2. The peak hour volume, 5:00 PM, lies above the required threshold volume curve. Therefore, Warrant 3 is satisfied.

Figure 2: Warrant 3, Peak Hour Volume (70%)



Warrants 4 through 8 are not applicable to this intersection, and were therefore not included in the analysis. Table 4 summarizes the signal warrant analysis for the intersection of SR 920/Jonesboro Road and Foster Drive, and indicates that a traffic signal is warranted for this intersection.

Table 4: Signal Warrant Summary

WARRANT	SR 920/Jonesboro Road @ Foster Drive
1. Eight-Hour Vehicular Volume	Satisfied
2. Four-Hour Vehicular Volume	Satisfied
3. Peak Hour	Satisfied
4. Pedestrian Volume	Not Applicable
5. School Crossing	Not Applicable
6. Coordinated Signal System	Not Applicable
7. Crash Experience	Not Applicable
8. Roadway Network	Not Applicable

CONCLUSIONS

Based on the information presented in this study, it can be concluded that a traffic signal will be needed at the intersection of SR 920/Jonesboro Road and Foster Drive as a result of the proposed retail development.

RECOMMENDATIONS

It is recommended that GDOT issue a permit to install a traffic signal at the intersection of SR 920/Jonesboro Road and Foster Drive. If approved, the developer shall incur all costs associated with the installation of the traffic signal as well as any communications necessary to incorporate this signal into the current system.

PREPARED BY: *Speedy*
Speedy Boutwell, P.E., PTOE

DATE: 9/18/06

RECOMMENDED BY: _____
District Traffic Engineer (GDOT)

DATE: _____

RECOMMENDED BY: _____
State Traffic Operations Engineer (GDOT)

DATE: _____

RECOMMENDED BY: _____
Division Director (GDOT)

DATE: _____



State Route 920 @ Foster Drive:

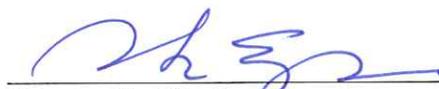
RECOMMENDATIONS:

Due to the existing high volume of left turns from State Route 920 eastbound to Foster Drive and the projected volumes produced by the proposed development, it is recommended that Henry County be issued a permit to install a stop and go signal.



Scott Parker, District Traffic Operations Engineer

1-11-07
Date



District Traffic Engineer

1/11/07
Date



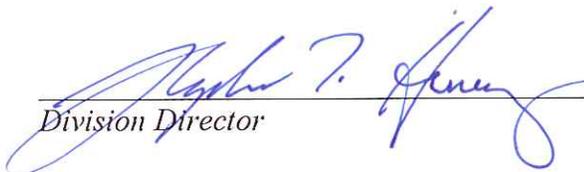
District Engineer

1/12/07
Date



State Traffic Safety and Design Engineer

2-27-06
Date



Division Director

7/5/07
Date

WARRANT STUDY USING EXISTING CONDITIONS

*This study uses the attached State Route 920 left turn counts as the side street volumes and the State Route 920 westbound ADT as the main street volumes.

Date/Time/Volume/Average Speed/Temperature Report

HI-Star ID: 2678 Street: SR 920 State: Ga City: County: Henry	Begin: 01/09/2007 04:00 PM Lane: EB LT Oper: skp Posted: 45 AADT Factor: 1	End: 01/10/2007 04:00 PM Hours: 24:00 Period: 60 Raw Count: 2136 AADT Count: 2136
---	--	---

NC97				
Date & Time Range	Count	Avg Speed	Temp	Wet/Dry

01/09/2007 [04:00 PM-05:00 PM]	178	32 mph	54 F	Dry
01/09/2007 [05:00 PM-06:00 PM]	187	19 mph	52 F	Dry
01/09/2007 [06:00 PM-07:00 PM]	171	19 mph	48 F	Dry
01/09/2007 [07:00 PM-08:00 PM]	130	20 mph	46 F	Dry
01/09/2007 [08:00 PM-09:00 PM]	102	22 mph	44 F	Dry
01/09/2007 [09:00 PM-10:00 PM]	72	23 mph	42 F	Dry
01/09/2007 [10:00 PM-11:00 PM]	32	22 mph	41 F	Dry
01/09/2007 [11:00 PM-12:00 AM]	26	21 mph	39 F	Dry
01/10/2007 [12:00 AM-01:00 AM]	19	22 mph	39 F	Dry
01/10/2007 [01:00 AM-02:00 AM]	13	21 mph	39 F	Dry
01/10/2007 [02:00 AM-03:00 AM]	19	21 mph	37 F	Dry
01/10/2007 [03:00 AM-04:00 AM]	9	16 mph	37 F	Dry
01/10/2007 [04:00 AM-05:00 AM]	12	18 mph	35 F	Dry
01/10/2007 [05:00 AM-06:00 AM]	15	20 mph	35 F	Dry
01/10/2007 [06:00 AM-07:00 AM]	40	19 mph	35 F	Dry
01/10/2007 [07:00 AM-08:00 AM]	140	18 mph	35 F	Dry
01/10/2007 [08:00 AM-09:00 AM]	102	20 mph	42 F	Dry
01/10/2007 [09:00 AM-10:00 AM]	71	20 mph	48 F	Dry
01/10/2007 [10:00 AM-11:00 AM]	99	18 mph	60 F	Dry
01/10/2007 [11:00 AM-12:00 PM]	105	20 mph	68 F	Dry
01/10/2007 [12:00 PM-01:00 PM]	155	18 mph	72 F	Dry
01/10/2007 [01:00 PM-02:00 PM]	127	20 mph	72 F	Dry
01/10/2007 [02:00 PM-03:00 PM]	156	19 mph	60 F	Dry
01/10/2007 [03:00 PM-04:00 PM]	156	21 mph	56 F	Dry

State Route 920 @ Foster Drive

Using Projected Volumes

June 5,2007

Study Name : SR 920 @ Foster

Signal Warrants - Summary

Major Street Approaches

Eastbound: SR 920

Number of Lanes: 2

Approach Speed: 39

Total Approach Volume: 8,154

Westbound: SR 920

Number of Lanes: 2

Approach Speed: 35

Total Approach Volume: 8,470

Minor Street Approaches

Northbound:

Number of Lanes: 1

Total Approach Volume: 0

Southbound: Foster Drive

Number of Lanes: 1

Total Approach Volume: 1,362

Warrant Summary (Urban values apply.)

Warrant 1 - Eight Hour Vehicular Volumes	Satisfied
Warrant 1A - Minimum Vehicular Volume	Not Satisfied
Required volumes reached for 2 hours, 8 are needed	
Warrant 1B - Interruption of Continuous Traffic	Satisfied
Required volumes reached for 10 hours, 8 are needed	
Warrant 1 A&B - Combination of Warrants	Not Satisfied
Required volumes reached for 6 hours, 8 are needed	
Warrant 2 - Four Hour Volumes	Satisfied
Number of hours (9) volumes exceed minimum >= minimum required (4).	
Warrant 3 - Peak Hour	Satisfied
Warrant 3A - Peak Hour Delay	Not Satisfied
Total approach volumes and delays on minor street do not exceed minimums for any hour.	
Warrant 3B - Peak Hour Volumes	Satisfied
Volumes exceed minimums for at least one hour.	
Warrant 4 - Pedestrian Volumes	Not Satisfied
Required 4 Hr pedestrian volume reached for 0 hour(s) and the single hour volume for 0 hour(s)	
Warrant 5 - School Crossing	Not Satisfied
Number of gaps > .0 seconds (0) exceeds the number of minutes in the crossing period (0).	
Warrant 6 - Coordinated Signal System	Not Satisfied
No adjacent coordinated signals are present	
Warrant 7 - Crash Experience	Not Satisfied
Number of accidents (-1) is less than minimum (5). Volume minimums are met.	
Warrant 8 - Roadway Network	Not Satisfied
Major Route conditions not met. One or more volume requirement met.	

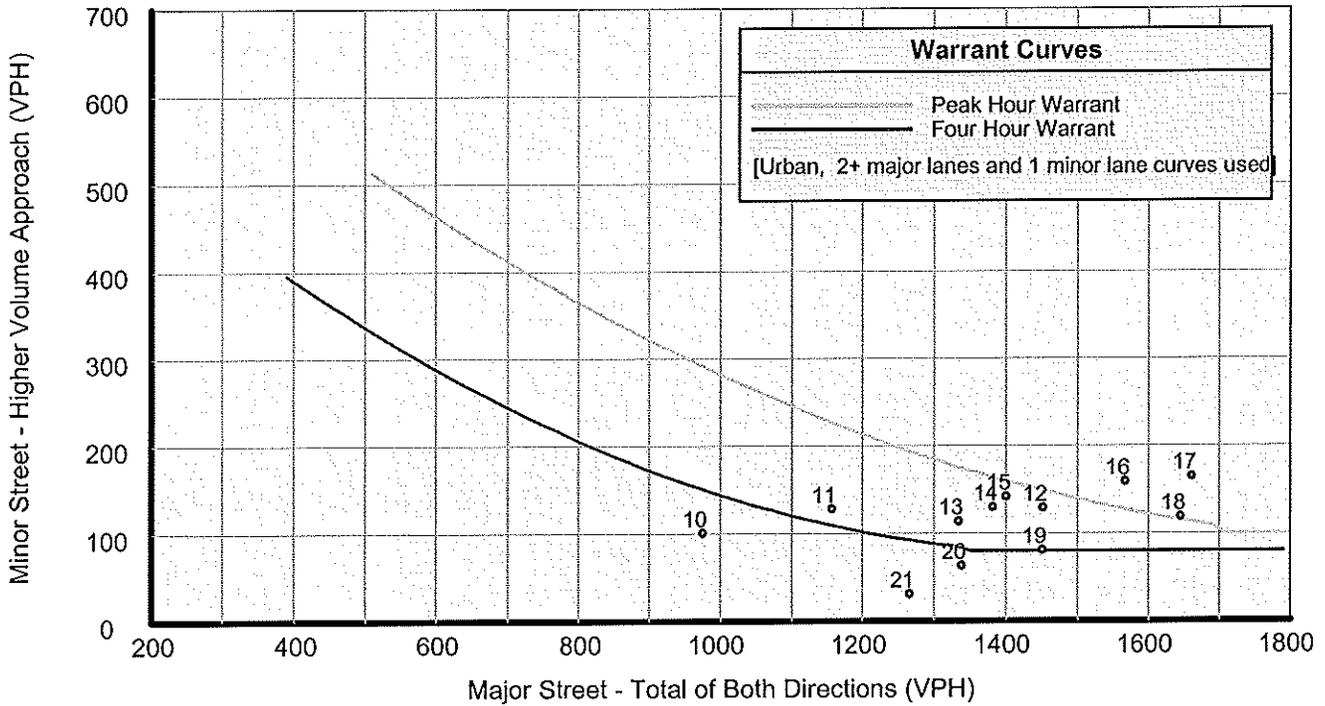
State Route 920 @ Foster Drive

Using Projected Volumes

June 5, 2007

Study Name : SR 920 @ Foster

Signal Warrants - Summary



Analysis of 8-Hour Volume Warrants:

Hour Begin	Major Total	Higher Minor		War-1A			War-1B			War-1A&B		
		Vol	Dir	Major Crit	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?
00:00	0	0	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
01:00	0	0	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
02:00	0	0	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
03:00	0	0	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
04:00	0	0	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
05:00	0	0	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
06:00	0	0	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
07:00	0	0	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
08:00	0	0	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
09:00	0	0	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
10:00	975	101	SB	600-Yes	150-No	Major	900-Yes	75-Yes	Both	720-Yes	120-No	Major
11:00	1,156	128	SB	600-Yes	150-No	Major	900-Yes	75-Yes	Both	720-Yes	120-Yes	Both
12:00	1,451	129	SB	600-Yes	150-No	Major	900-Yes	75-Yes	Both	720-Yes	120-Yes	Both
13:00	1,334	114	SB	600-Yes	150-No	Major	900-Yes	75-Yes	Both	720-Yes	120-No	Major
14:00	1,382	130	SB	600-Yes	150-No	Major	900-Yes	75-Yes	Both	720-Yes	120-Yes	Both
15:00	1,400	142	SB	600-Yes	150-No	Major	900-Yes	75-Yes	Both	720-Yes	120-Yes	Both
16:00	1,566	159	SB	600-Yes	150-Yes	Both	900-Yes	75-Yes	Both	720-Yes	120-Yes	Both
17:00	1,661	165	SB	600-Yes	150-Yes	Both	900-Yes	75-Yes	Both	720-Yes	120-Yes	Both
18:00	1,645	119	SB	600-Yes	150-No	Major	900-Yes	75-Yes	Both	720-Yes	120-No	Major
19:00	1,450	81	SB	600-Yes	150-No	Major	900-Yes	75-Yes	Both	720-Yes	120-No	Major
20:00	1,338	63	SB	600-Yes	150-No	Major	900-Yes	75-No	Major	720-Yes	120-No	Major
21:00	1,266	31	SB	600-Yes	150-No	Major	900-Yes	75-No	Major	720-Yes	120-No	Major
22:00	0	0	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
23:00	0	0	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---

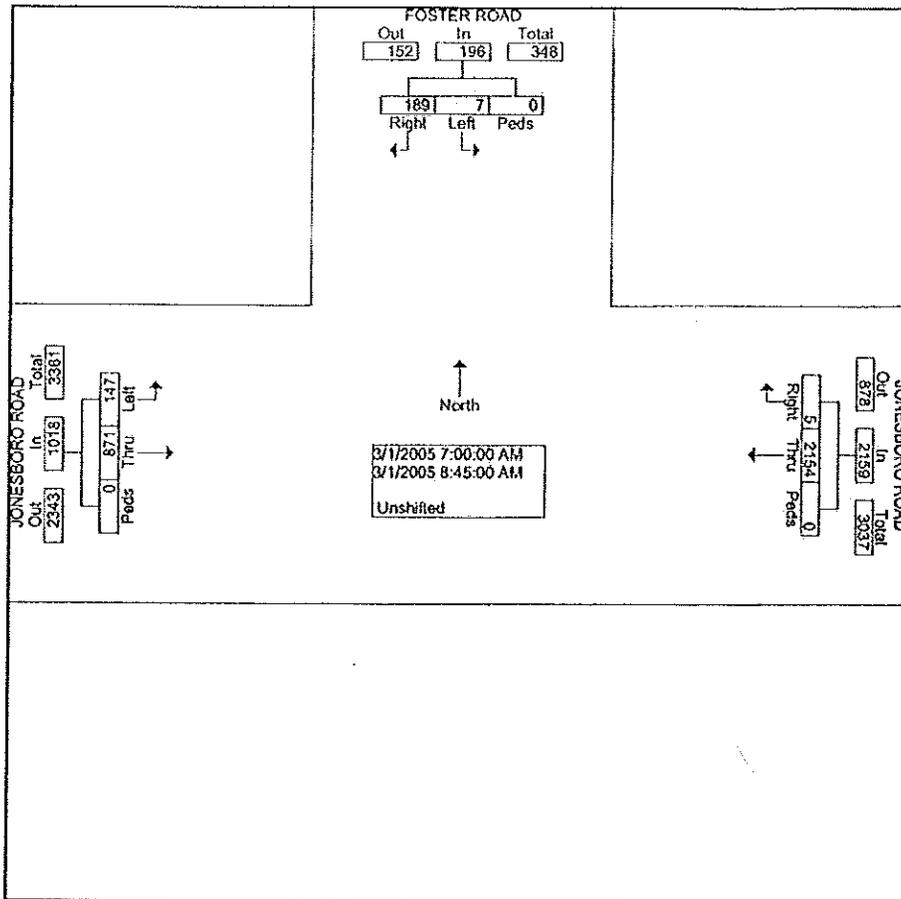
APPENDIX A
TURNING MOVEMENT COUNTS

All Traffic Data Services, Inc.
 1111 Kinnett Road
 Covington, Ga. 30016
 Ph. 404-374-1283

File Name : Foster&JonesboroAM
 Site Code : 00000000
 Start Date : 3/1/2005
 Page No : 1

Groups Printed- Unshifted

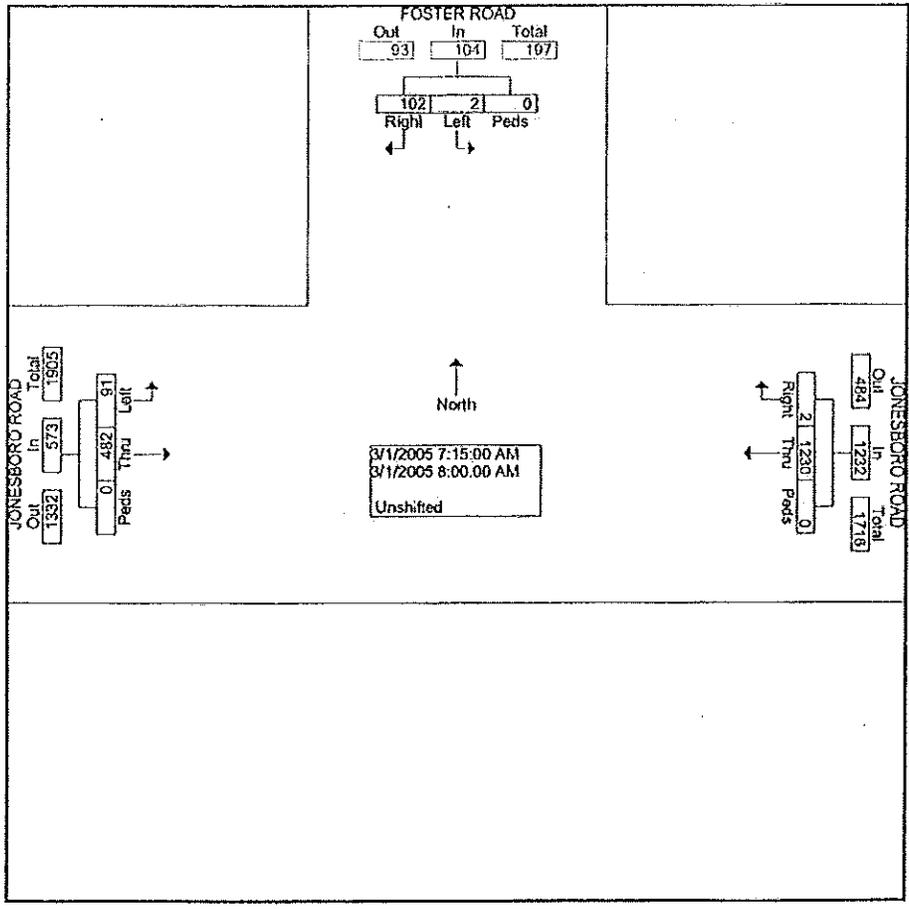
Start Time Factor	FOSTER ROAD Southbound				JONESBORO ROAD Westbound				Northbound				JONESBORO ROAD Eastbound				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
07:00 AM	1	0	17	0	0	308	1	0	0	0	0	0	8	69	0	0	404
07:15 AM	0	0	24	0	0	336	0	0	0	0	0	0	18	111	0	0	469
07:30 AM	0	0	24	0	0	319	2	0	0	0	0	0	31	121	0	0	497
07:45 AM	2	0	24	0	0	308	0	0	0	0	0	0	28	125	0	0	487
Total	3	0	89	0	0	1271	3	0	0	0	0	0	85	426	0	0	1877
08:00 AM	0	0	30	0	0	267	0	0	0	0	0	0	14	125	0	0	436
08:15 AM	0	0	28	0	0	213	0	0	0	0	0	0	21	118	0	0	380
08:30 AM	0	0	19	0	0	215	1	0	0	0	0	0	11	115	0	0	361
08:45 AM	4	0	23	0	0	185	1	0	0	0	0	0	16	87	0	0	319
Total	4	0	100	0	0	883	2	0	0	0	0	0	62	445	0	0	1496
Grand Total	7	0	180	0	0	2154	5	0	0	0	0	0	147	871	0	0	3373
Apprch %	3.6	0.0	96.4	0.0	0.0	99.8	0.2	0.0	0.0	0.0	0.0	0.0	14.4	85.6	0.0	0.0	
Total %	0.2	0.0	5.6	0.0	0.0	63.9	0.1	0.0	0.0	0.0	0.0	0.0	4.4	25.8	0.0	0.0	



All Traffic Data Services, Inc.
 1111 Kinnett Road
 Covington, Ga. 30016
 Ph. 404-374-1283

File Name : Foster&JonesboroAM
 Site Code : 00000000
 Start Date : 3/1/2005
 Page No : 2

Start Time	FOSTER ROAD Southbound					JONESBORO ROAD Westbound					Northbound					JONESBORO ROAD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection 07:15 AM																					
Volume	2	0	102	0	104	0	123	2	0	1232	0	0	0	0	0	91	482	0	0	573	1909
Percent	1.9	0.0	98.1	0.0		0.0	99.8	0.2	0.0		0.0	0.0	0.0	0.0		15.9	84.1	0.0	0.0		
07:30 Volume	0	0	24	0	24	0	319	2	0	321	0	0	0	0	0	31	121	0	0	152	497
Peak Factor	08:00 AM					07:15 AM					6:45:00 AM					07:45 AM					0.960
High Int. Volume	0	0	30	0	30	0	336	0	0	336	0	0	0	0	0	28	125	0	0	153	
Peak Factor	0.867					0.917										0.936					

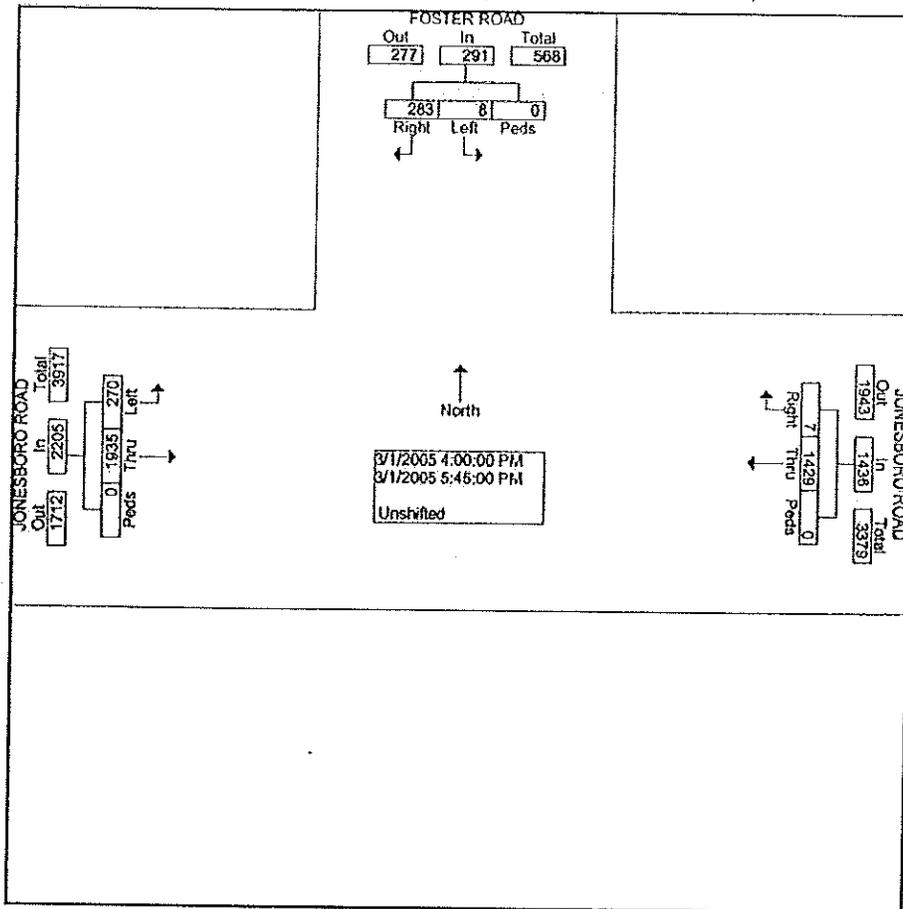


All Traffic Data Services, Inc.
 1111 Kinnett Road
 Covington, Ga. 30016
 Ph. 404-374-1283

File Name : Foster&JonesboroPM
 Site Code : 00000000
 Start Date : 3/1/2005
 Page No : 1

Groups Printed- Unshifted

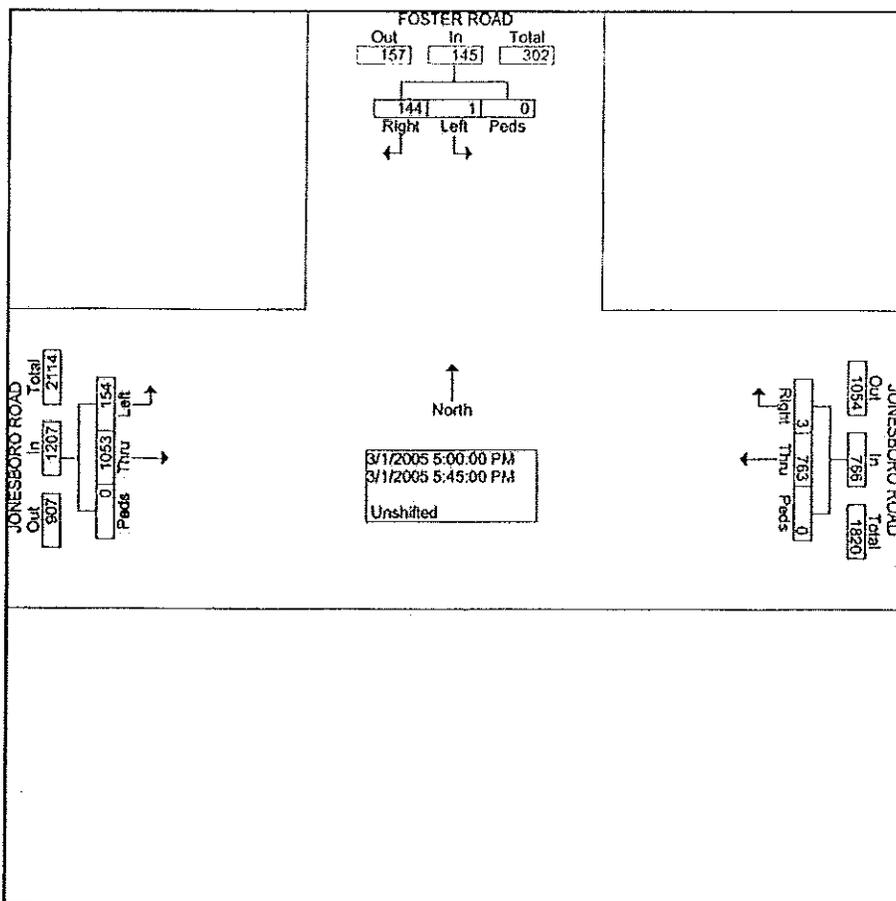
Start Time	FOSTER ROAD Southbound				JONESBORO ROAD Westbound				Northbound				JONESBORO ROAD Eastbound				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
04:00 PM	3	0	28	0	0	171	0	0	0	0	0	0	30	200	0	0	430
04:15 PM	3	0	37	0	0	142	3	0	0	0	0	0	23	217	0	0	425
04:30 PM	0	0	38	0	0	165	0	0	0	0	0	0	31	208	0	0	442
04:45 PM	1	0	38	0	0	188	1	0	0	0	0	0	32	257	0	0	517
Total	7	0	139	0	0	666	4	0	0	0	0	0	116	882	0	0	1814
05:00 PM	0	0	34	0	0	193	1	0	0	0	0	0	40	258	0	0	628
05:15 PM	0	0	34	0	0	219	1	0	0	0	0	0	42	244	0	0	540
05:30 PM	1	0	43	0	0	178	1	0	0	0	0	0	39	261	0	0	523
05:45 PM	0	0	33	0	0	173	0	0	0	0	0	0	33	200	0	0	520
Total	1	0	144	0	0	763	3	0	0	0	0	0	154	1053	0	0	2118
Grand Total	8	0	283	0	0	1429	7	0	0	0	0	0	270	1935	0	0	3932
Approch %	2.7	0.0	97.3	0.0	0.0	99.5	0.5	0.0	0.0	0.0	0.0	0.0	12.2	87.8	0.0	0.0	
Total %	0.2	0.0	7.2	0.0	0.0	36.3	0.2	0.0	0.0	0.0	0.0	0.0	6.9	49.2	0.0	0.0	



All Traffic Data Services, Inc.
 1111 Kinnett Road
 Covington, Ga. 30016
 Ph. 404-374-1283

File Name : Foster&JonesboroPM
 Site Code : 00000000
 Start Date : 3/1/2005
 Page No : 2

Start Time	FOSTER ROAD Southbound					JONESBORO ROAD Westbound					Northbound					JONESBORO ROAD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection 05:00 PM																					
Volume	1	0	144	0	145	0	763	3	0	766	0	0	0	0	0	154	1053	0	0	1207	2118
Percent	0.7	0.0	99.3	0.0		0.0	99.6	0.4	0.0		0.0	0.0	0.0	0.0		12.8	87.2	0.0	0.0		
05:15 Volume	0	0	34	0	34	0	219	1	0	220	0	0	0	0	0	42	244	0	0	286	540
Peak Factor																					
High Int. 05:30 PM						05:15 PM					3:45:00 PM					05:45 PM					0.981
Volume	1	0	43	0	44	0	219	1	0	220	0	0	0	0	0	33	290	0	0	323	
Peak Factor	0.824					0.870										0.934					



B. Site Trip Generation

LAI used the Shoppes at Henry Crossing Retail Center development site plan to develop trip generation projections for the study area. Trip generation projections were prepared for the sites using Microtrans Trip Generation software. This software projects trips for land uses in accordance with the Institute of Transportation Engineers' *Trip Generation*, 7th Edition, 2003. The proposed mixed use site is scheduled to be completed in two phases. Phase I development includes a 41,800 square feet health club, a multiplex movie theater with 2,600 seats, two 4,900 square foot high turnover (sit-down)restaurants, a 6,400 square feet high turnover (sit-down)restaurant and a 6,000 square feet high turnover (sit-down)restaurant. Phase II development includes 157,408 square feet of retail and a 7,200 square feet high turnover (sit-down) restaurant. The projected 24-hour, two-way traffic volume for the two phase development excluding the Multiplex movie theater is 11,873 vehicles on an average weekday.

Table 1 shows a summary of the projected trips to the site. A copy of these projections is located in Appendix B.

Table 1. Trip Generation Projections

Land Use	Size (SF)	AM Peak Hour		PM Peak Hour	
		Enter	Exit	Enter	Exit
Phase-I developments					
Multiplex Movie Theater	2600 seats	N/A	N/A	78	130
High Turnover (sit-down) Restaurant	6,000 SF	36	33	40	26
Health/Fitness club	41,800 SF	21	29	87	83
High Turnover (sit-down) Restaurant	4,900 SF	29	27	33	21
High Turnover (sit-down) Restaurant	6,400 SF	38	35	43	27
High Turnover (sit-down) Restaurant	4,900 SF	29	27	33	21
Phase-II developments					
Retail Shopping Center	157,408 SF	99	63	283	307
High Turnover (sit-down) Restaurant	7,200 SF	43	40	48	31
Total	-	295	254	645	646

N/A - Not Available

The estimated new trips were separated into primary and pass-by trips. Primary trips are predicted to have the site as their final destination and they exit the site in the opposite direction they enter the site. Pass-by trips are predicted to have the site as a stop on their way to their final destination and they exit the site in the same direction from which they enter the site. Pass-by trip generation projections were prepared for the sites using Microtrans Trip Generation software.

The pass-by trips are added to the site driveways but are not added as new trips to the adjacent street network. A copy of these projections is located in Appendix B.

Table 2 shows a summary of the projected Primary and pass-by trips to the site during the AM and PM Peak hour conditions.

Table 2. Primary & Pass-by Trip Generation Projections

Land Use	AM Peak			PM Peak		
	Total	Primary	Pass-By	Total	Primary	Pass-By
Phase - I Developments						
Movie Theater						
Enter	N/A	N/A	N/A	78	78	0
Exit	N/A	N/A	N/A	130	130	0
Sit-Down Restaurant						
Enter	36	36	0	40	23	17
Exit	33	33	0	26	15	11
Health/Fitness Club						
Enter	21	21	0	87	87	0
Exit	29	29	0	83	83	0
Sit-Down Restaurant						
Enter	29	29	0	33	19	14
Exit	27	27	0	21	12	9
Sit-Down Restaurant						
Enter	38	38	0	43	25	18
Exit	35	35	0	27	15	12
Sit-Down Restaurant						
Enter	29	29	0	33	19	14
Exit	27	27	0	21	12	9
Phase - II Developments						
Retail						
Enter	99	99	0	283	187	96
Exit	63	63	0	307	202	105
Sit-Down Restaurant						
Enter	43	43	0	48	27	21
Exit	40	40	0	31	18	13
TOTAL						
Enter	295	295	0	645	465	180
Exit	254	254	0	646	487	159

N/A -- Not Available

C. Site Trip Assignment

LAI prepared a site traffic assignment for the Henry Crossing Retail Center development projected traffic. Morning and evening peak hour site-trips are assigned to the proposed access roads based upon traffic volumes for surrounding roadways. An analysis of the existing traffic volumes at the study intersections and the layout of the site's driveways determined the overall distribution of traffic to and from the sites. LAI projected the site traffic on Foster Drive to the north and south of the site location and onto Jonesboro Road east and west of Foster Drive. The trips at the intersection were distributed based upon the directional distribution of existing traffic on Jonesboro Road and Foster Drive.

Figure 5 shows the percentage of trips proposed to use each of the driveways for each land use in the development during the AM and PM Peak hour. The site traffic generation's trips entering and exiting the site is multiplied by the percentages to assign trips to the Henry Crossing Retail Center driveways.

Figure 6 shows the total AM Peak hour site generated trips for the Phase I developments. Figures 7-9 show the Primary, Pass-by and Total Peak hour site generated trips during the PM Peak hour for the Phase I developments.

Finally, the site-generated volumes were added to the existing volumes and the total traffic volumes are shown in Figures 10 and 11. Figure 10 and Figure 11 show the total projected trips with the site generated trips for the Phase I developments during the AM and PM peak hour, respectively.

Figure 12 show the AM Peak hour site generated trips for the Phase I + Phase II developments.

Figures 13-15 show the Primary, Pass-by and Total Peak hour site generated trips during the PM Peak hour for the Phase I +Phase II developments, respectively.

Finally, the site-generated volumes were added to the projected volumes and the total traffic volumes are shown in Figures 16 and 17. Figure 16 and Figure 17 show the total projected trips with the site generated trips for the Phase I + phase II developments during the AM and PM peak hour, respectively.

LAI compiled previous years' AADT from GDOT to estimate a historical growth rate for the background traffic. Table 3 shows the AADT for 4 years and the percent growth. An average increase in traffic per year of 7.34% was used to project traffic one year into the future for the total build out of the site.

Table 3. Historical Traffic Growth

Collected By	Year	AADT (vpd)	Growth/Year
LAI	2005	24,443	5.00%
GDOT	2003	22,170	13.09%
GDOT	2002	19,603	3.92%
GDOT	2001	18,864	

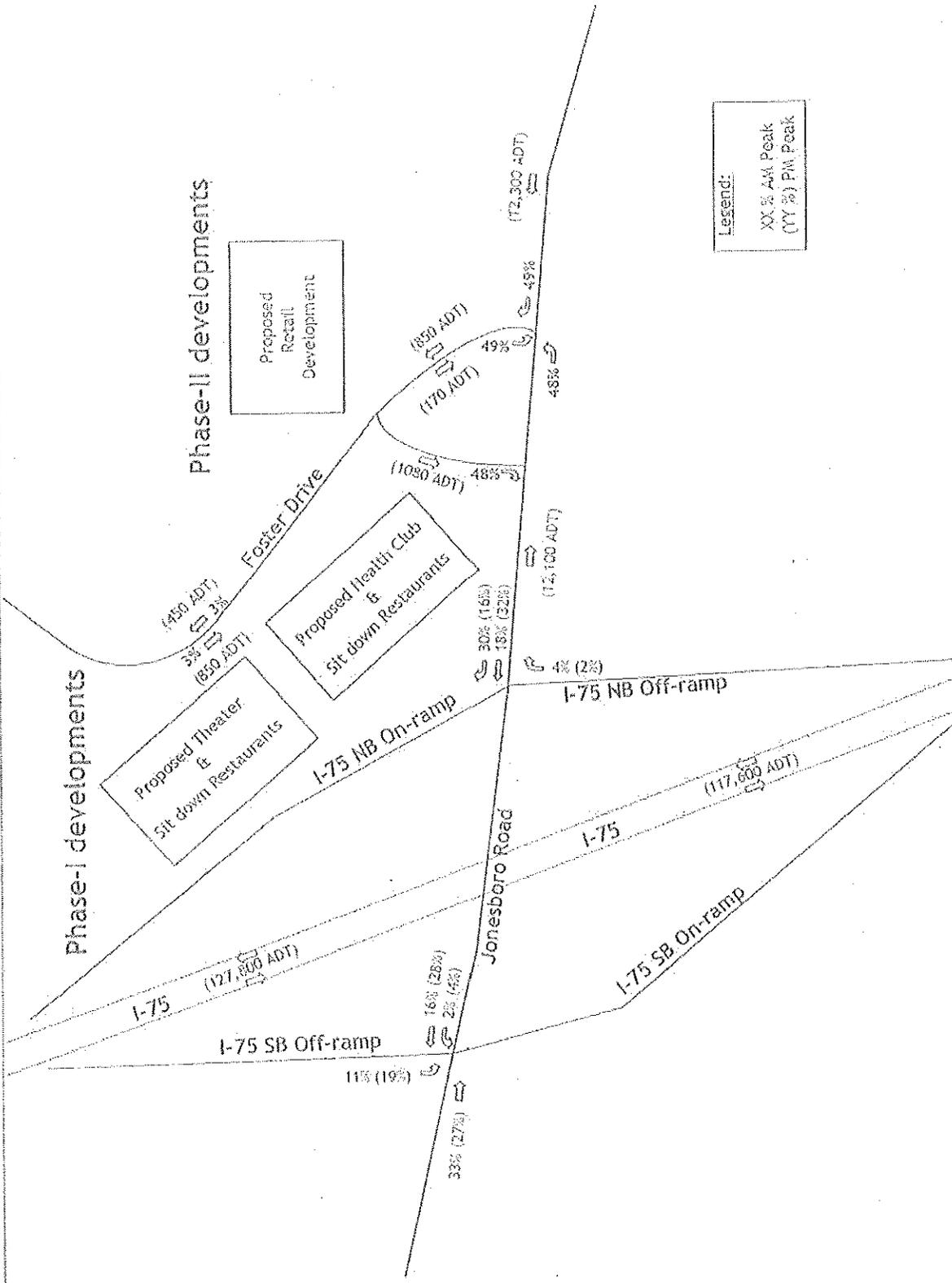
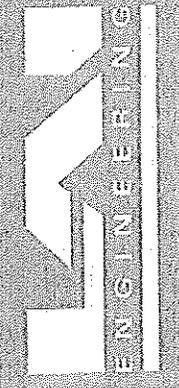


FIGURE 5. % Trip Distribution

DATE	08-01-07
JOB NO.	0707-0007
DRAWN BY	0707-0007
CHECKED BY	
DATE	
JOB NO.	
DRAWN BY	
CHECKED BY	

HENRY CROSSING RETAIL CENTER
 PREPARED FOR
 HENRY COUNTY DEVELOPMENT
 HENRY COUNTY

LAI ENGINEERING
 PARKWAY CENTER -
 1800 PARKWAY PL. - STE. 720
 MARIETTA, GA 30067
 PHONE: 770-423-0307
 FAX: 770-423-1202
 INFO@LAIENGINEERING.COM



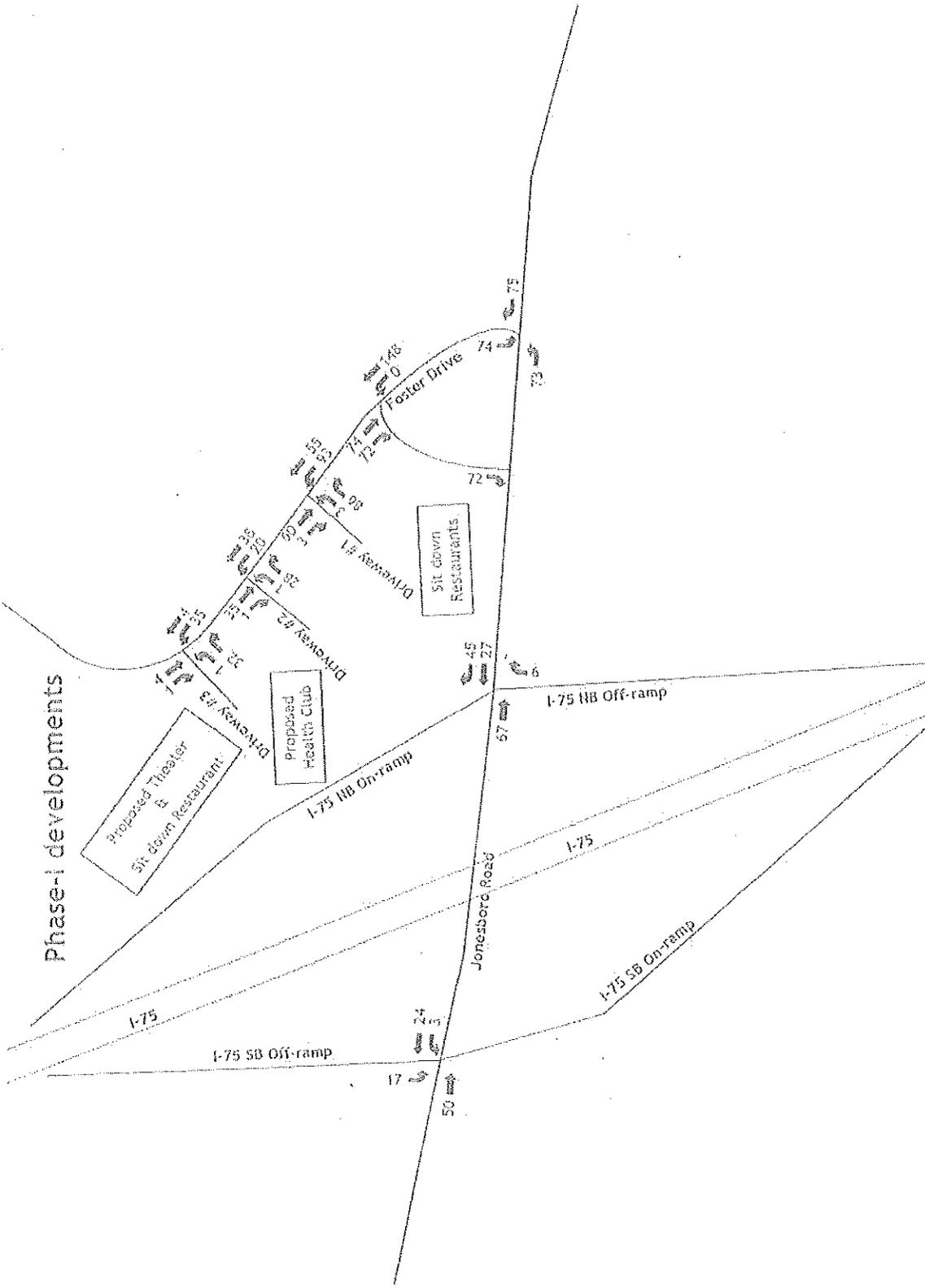
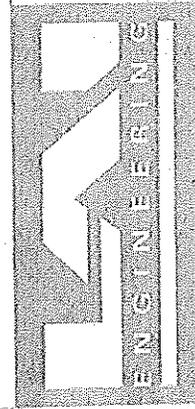


FIGURE 6. Phase-I Total AM Peak trips to the site

DATE: 03-26-05
JOB NO: 4627
DWG NO: 1820
SCALE: 1"=100'
SHEET: 26

HENRY CROSSING METAL CENTER
 HENRY COUNTY DEVELOPMENT
 10000 HENRY ROAD, HENRY, GA 30424

LAI ENGINEERING
 PARKWAY CENTER -
 1800 PARKWAY PL. - STL: 720
 MARIETTA, GA 30067
 PHONE: 770-423-0887
 FAX: 770-423-1262
 INFO@LAIENGINEERING.COM



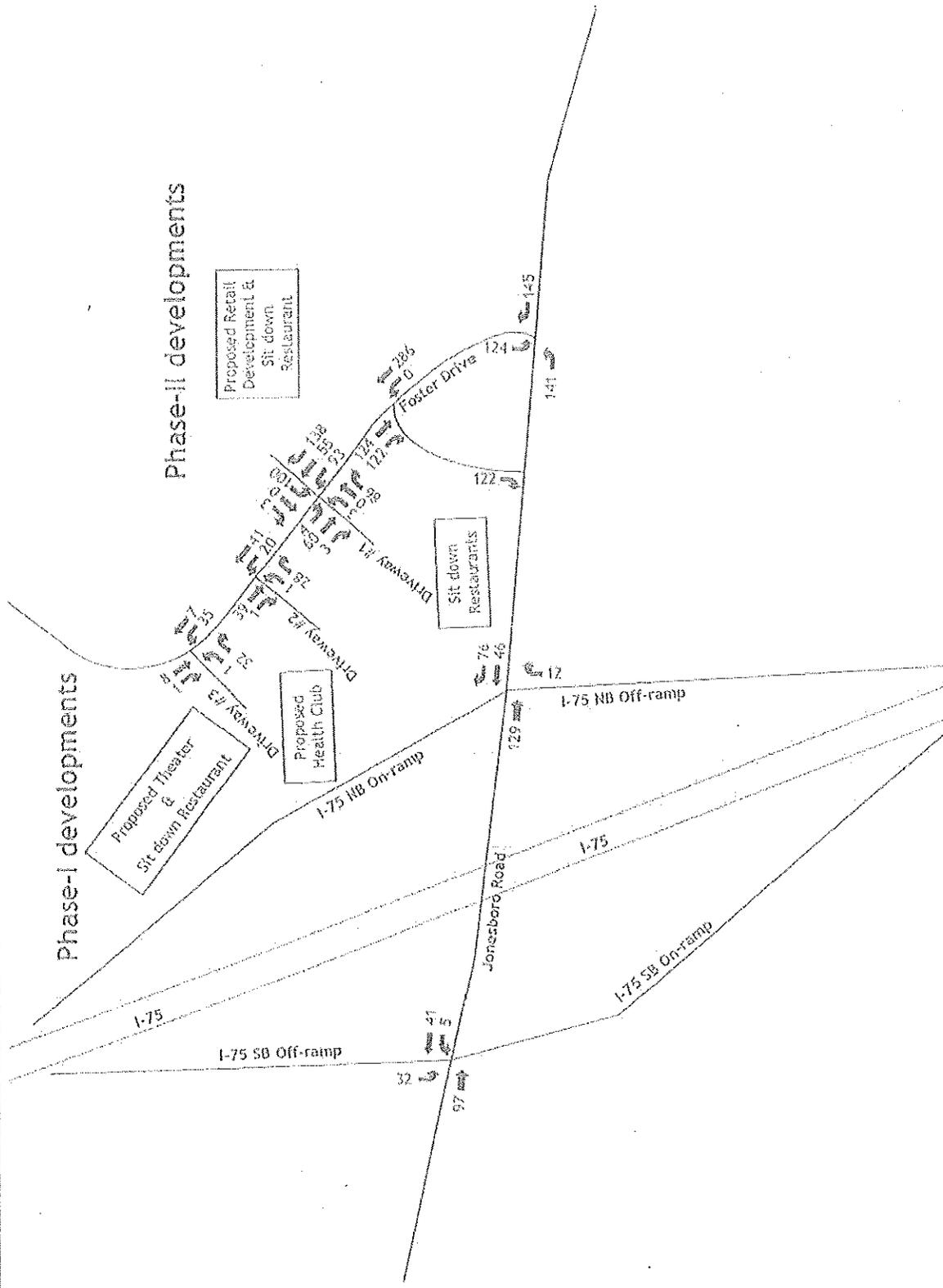
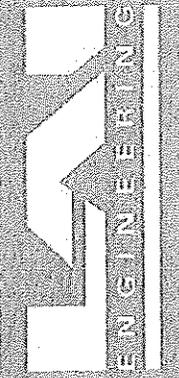


FIGURE 12. AM Peak Phase-I-II Site trips

	LAI ENGINEERING PARKWAY CENTER - 1800 PARKWAY PL. - STE. 720 MARIETTA, GA 30067 PHONE: 770-423-0807 FAX: 770-423-1262 INFO@LAIENGINEERING.COM	HENRY CROSSING RETAIL CENTER PREPARED FOR HENRY COUNTY DEVELOPMENT HENRY COUNTY	DATE: 05-20-05 JOB NO: 4427 DRAWING NO:
	HENRY COUNTY HENRY COUNTY, GEORGIA	SHEET OF	DATE:

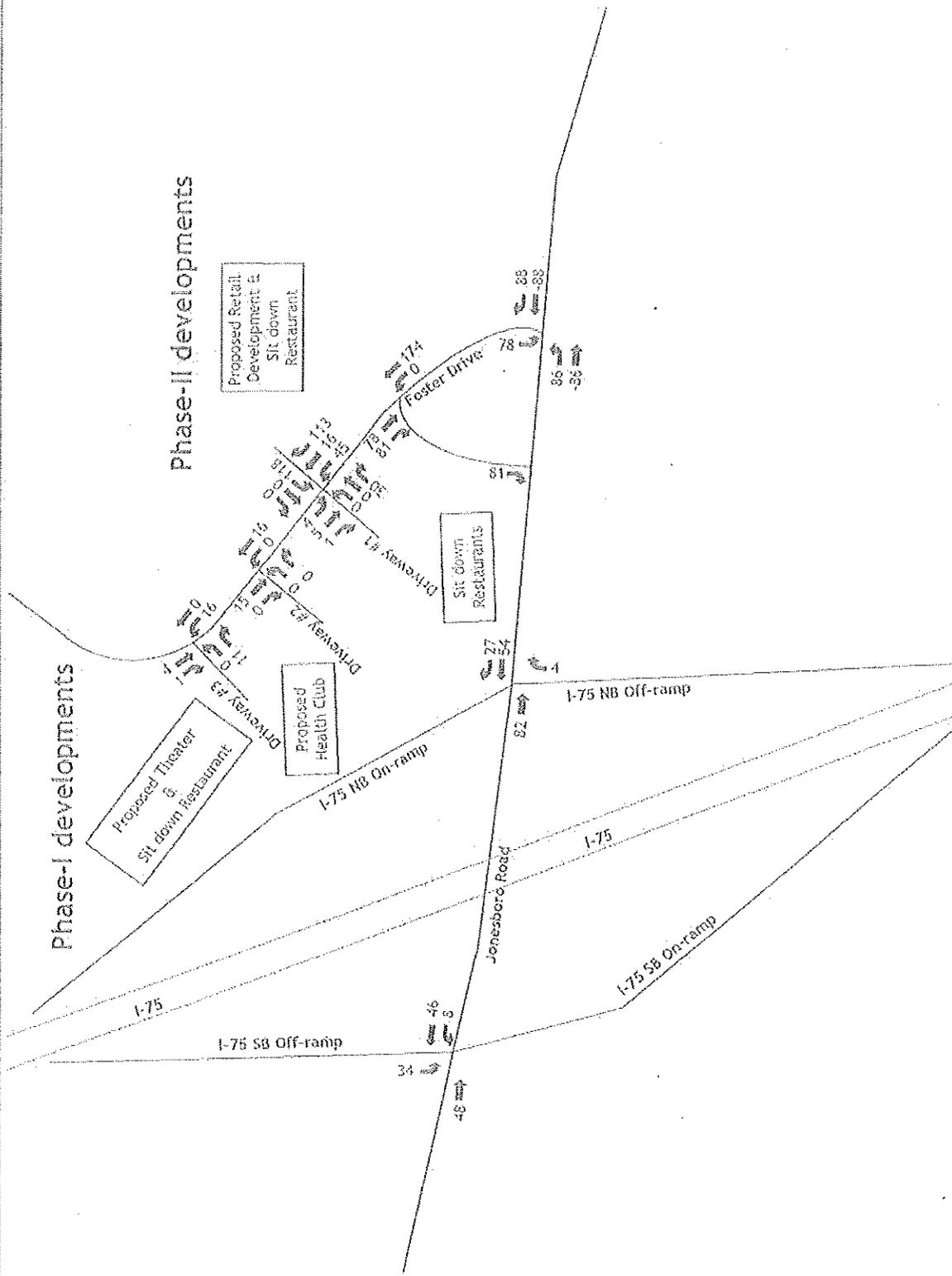
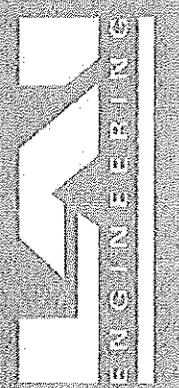


FIGURE 14. Phase-I+II PM Peak Pass-by site trips

DATE	02-28-05
JOB NO.	04-007
DWG. NAME	TWD
SCALE	
DATE	

HENRY CROSSING RETAIL CENTER
 HENRY COUNTY DEVELOPMENT
 HENRY COUNTY

LAI ENGINEERING
 PARKWAY CENTER
 1800 PARKWAY PL. - STE. 720
 MARIETTA, GA 30067
 PHONE: 770-423-0807
 FAX: 770-423-1262
 INFO@LAIENGINEERING.COM



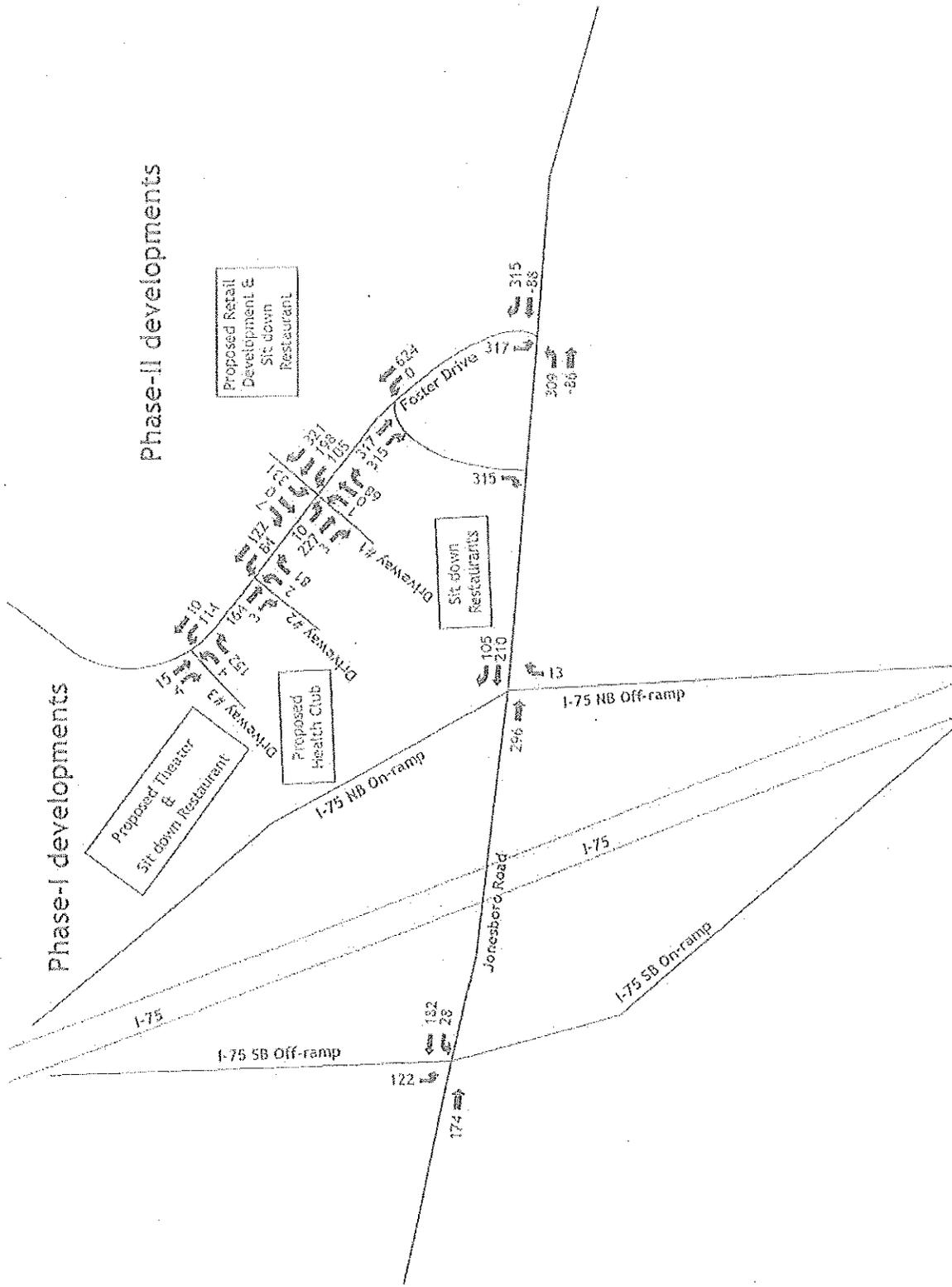
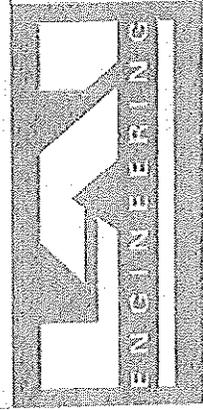


FIGURE 15. Phase-I+II Total PM Peak site trips

DATE: 08-26-08	BY: JCS/NOV/2007
DRAWING NO: 1193	
SCALE: 1"=100'	
PROJECT: HENRY COUNTY DEVELOPMENT	
SHEET: 11	

HENRY CROSSING RETAIL CENTER
 PREPARED FOR
 HENRY COUNTY DEVELOPMENT
 HENRY COUNTY

LAI ENGINEERING
 PARKWAY CENTER -
 1800 PARKWAY PL. - STE. 720
 MARIETTA, GA 30067
 PHONE: 770.423.0807
 FAX: 770.423.1252
 INFO@LAIENGINEERING.COM



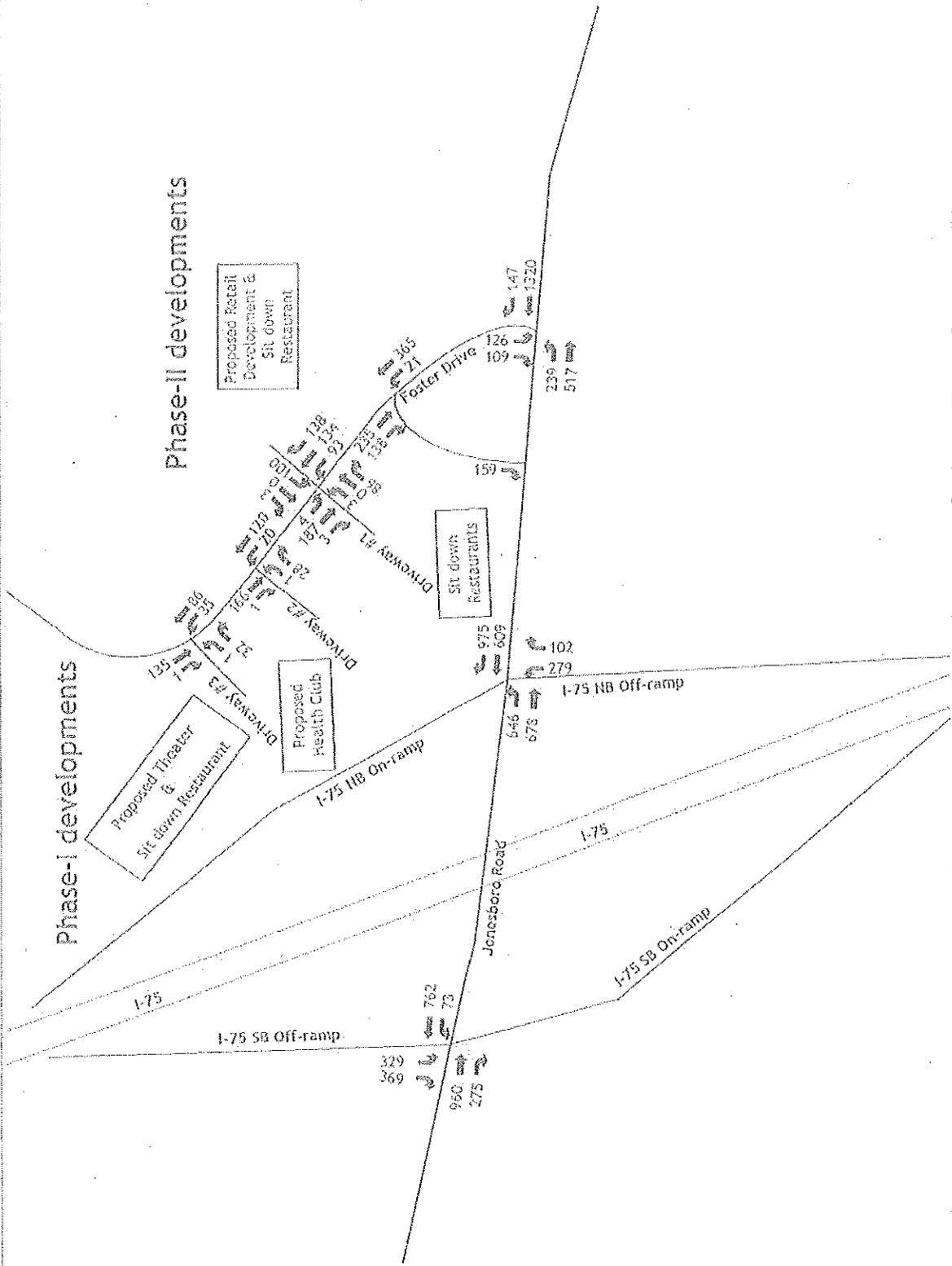
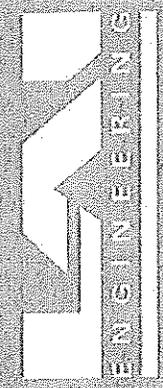


FIGURE 16. Phase-I+II Projected AM Peak traffic

	<p>LAI ENGINEERING PARKWAY CENTER - 1800 PARKWAY PL. - STE. 720 MARIETTA, GA 30067 PHONE: 770.423.0807 FAX: 770.423.1262 INFO@LAIENGINEERING.COM</p>	<p>HENRY CROSSING PETAL CENTER PREPARED FOR</p>	<p>DATE: 05-20-08 JOB NO: 4027 DRAWING TITLE</p>
	<p>HENRY COUNTY DEVELOPMENT HENRY COUNTY</p>	<p>PLAN</p>	<p>DATE: 05-20-08</p>

APPENDIX B
SYNCHRO PRINTOUTS

HCM Unsignalized Intersection Capacity Analysis
 1: Jonesboro Road & Foster Drive

9/14/2006



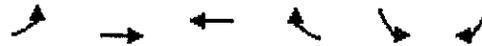
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑	↑↑	↵	↵	↵
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	188	607	1548	78	77	201
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	204	660	1683	85	84	218
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1767			2421	841	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1767			2421	841	
iC, single (s)	4.1			6.8	6.9	
iC, 2 stage (s)						
iF (s)	2.2			3.5	3.3	
p0 queue free %	41			0	29	
cM capacity (veh/h)	349			11	308	

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1	SB 2
Volume Total	204	330	330	841	841	85	84	218
Volume Left	204	0	0	0	0	0	84	0
Volume Right	0	0	0	0	0	85	0	218
cSH	349	1700	1700	1700	1700	1700	11	308
Volume to Capacity	0.59	0.19	0.19	0.49	0.49	0.05	7.53	0.71
Queue Length 95th (ft)	89	0	0	0	0	0	Err	126
Control Delay (s)	28.9	0.0	0.0	0.0	0.0	0.0	Err	40.8
Lane LOS	D						F	E
Approach Delay (s)	6.8			0.0			2799.0	
Approach LOS							F	

Intersection Summary		
Average Delay		290.3
Intersection Capacity Utilization	67.5%	ICU Level of Service C
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis
 1: Jonesboro Road & Foster Drive

9/14/2006



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↕	↕	↗	↶	↗
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	344	1295	929	157	155	330
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	374	1408	1010	171	168	359
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1180				2461	505
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1180				2461	505
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	36				0	30
cM capacity (veh/h)	587				9	512

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1	SB 2
Volume Total	374	704	704	505	505	171	168	359
Volume Left	374	0	0	0	0	0	168	0
Volume Right	0	0	0	0	0	171	0	359
cSH	587	1700	1700	1700	1700	1700	9	512
Volume to Capacity	0.64	0.41	0.41	0.30	0.30	0.10	18.41	0.70
Queue Length 95th (ft)	112	0	0	0	0	0	Err	136
Control Delay (s)	21.2	0.0	0.0	0.0	0.0	0.0	Err	26.8
Lane LOS	C						F	D
Approach Delay (s)	4.5			0.0			3213.8	
Approach LOS							F	

Intersection Summary		
Average Delay	487.8	
Intersection Capacity Utilization	63.3%	IGU Level of Service B
Analysis Period (min)	15	