

**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  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



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

Georgia Division

October 25, 2012

61 Forsyth Street SW
Suite 17T100
Atlanta, Georgia 30303
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Georgia.fhwa.@fhwa.dot.gov

In Reply Refer To:
HPE-GA

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

Dear Commissioner 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 16 miles.

With respect to the general concept and layout of the proposed project, the Georgia Department of Transportation (GDOT) has developed Concept Reports to provide detailed information on the scope of work required to meet the identified Need and Purpose within the proposed project area. However, the Concept Reports do not contain all the necessary analyses for FHWA to provide Interstate Access Approval. A separate IJR/IMR must be approved by FHWA prior to starting final design. It is understood that the concept may need to be revised as a result of the operations analyses contained in the IJR/IMR or the NEPA process.

Based on the identified benefits to the project area and GDOT's documented conceptual stage information, the Federal Highway Administration (FHWA) Georgia Division Office concurs with GDOT's determination associated with the results of the Concept Reports for the I-75 Managed Lanes Project with additional follow-up items to verify.

FHWA has determined the following items to require additional review:

1. Please ensure that all pedestrian facilities are adequately designed for compliance with the Americans with Disabilities Act (ADA) standards to the fullest extent feasible.
2. Ensure that all cost estimates associated with the complete scope of work for the proposed project are adequately reflected within the cost estimates.

Please provided follow-up to confirm that the items identified above have been addressed prior to moving forward with the start of the official process to advertise the 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

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
PROJECT CONCEPT REPORT**

Project Type: <u>Reconstruction</u>	P.I. Number: <u>0009156</u>
GDOT District: <u>3</u>	County: <u>Henry</u>
Federal Route Number: <u>I-75</u>	State Route Number: <u>SR 401</u>

This project involves the construction of Managed Lanes from Eagles Landing Parkway to SR 155 and associated ITS improvements beginning 2.1 miles south of SR 155 on I-75 south

Submitted for approval:

REVISED PER FHWA COMMENTS: AUGUST 27, 2012

Kevin McKeen, PE, Parsons *Kevin McKeen*

March 7, 2012

Consultant Designer & Firm *Parsons*

DATE
3-13-2012

Office Head (GDOT Office of Innovative Program Delivery)
Bob H. Muller

DATE
03-12-2012

GDOT Project Manager

DATE

* *Recommendations on file*
Recommendation for approval:

Program Control Administrator

DATE
3-19-12

* *Glenn Bowman / KLP*

State Environmental Administrator

DATE
3-28-12

* *Kathy Zahul / KLP*

State Traffic Engineer

DATE
3-15-12

* *Lisa Myer / KLP*

Project Review Engineer

DATE
3-16-12

* *Patrick Allen / KLP*

State Utilities Engineer

DATE
3-14-12

FOR * *Kerry Gore / KLP*

District Engineer

DATE
4-17-12

* *Ben Rabun / KLP*

State Bridge Design Engineer

DATE

State Transportation Financial Management Administrator

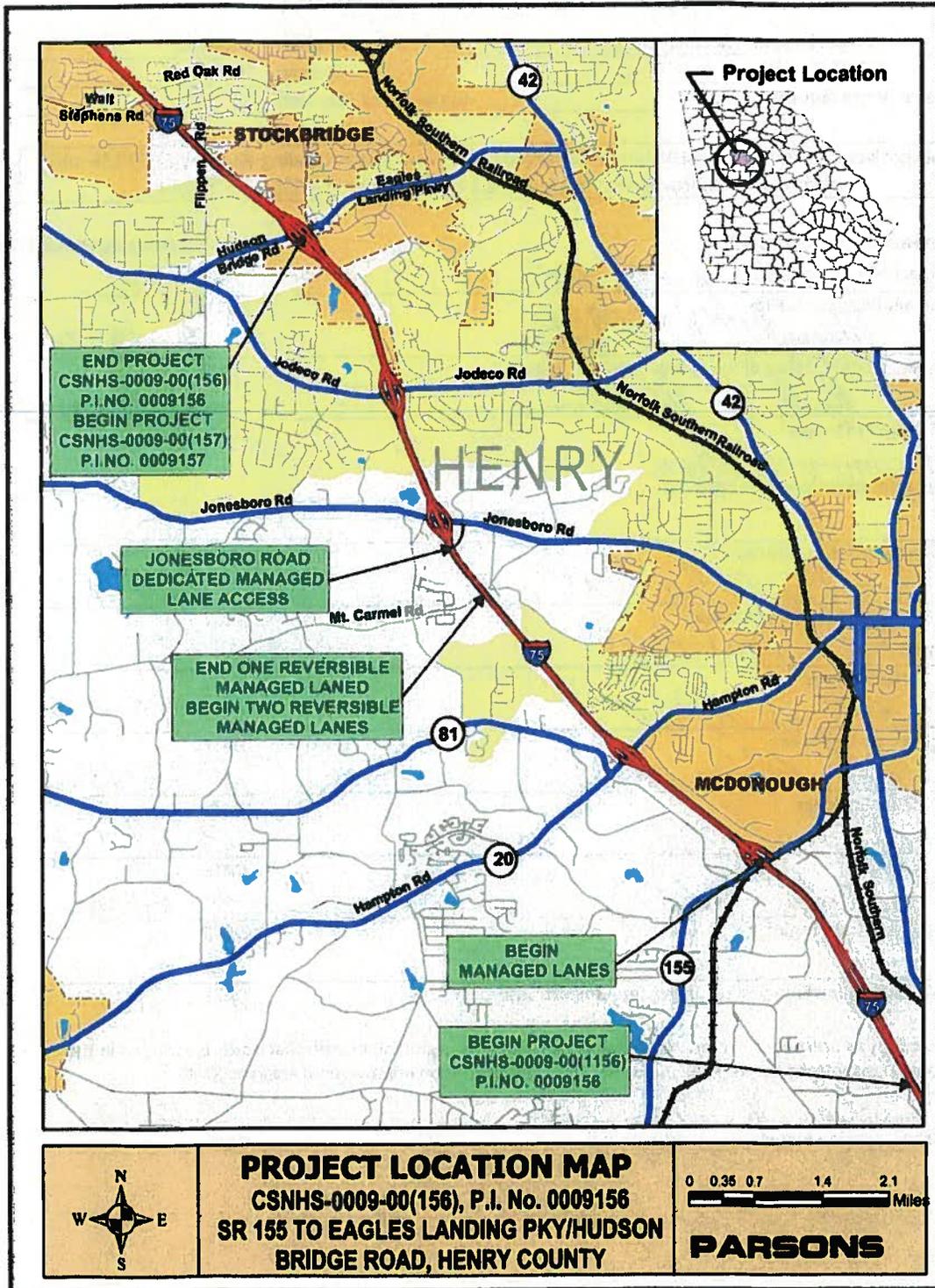
DATE

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

Cynthia L. Vande
State Transportation Planning Administrator

3-22-12
DATE

Project Location Map (not to scale)
Project: CSNHS-0009-00(156), PI No.: 0009156
I-75 South Managed Lanes, Henry County, Georgia



PLANNING & BACKGROUND DATA

Project Justification Statement:

The Georgia Department of Transportation (GDOT), in cooperation with the Federal Highway Administration (FHWA), is studying the proposed construction of express toll lanes in Henry and Clayton Counties on Interstate 75 (I-75) south of Atlanta. Henry and Clayton Counties are located on the southern side of the greater Atlanta metropolitan area and contain a mixture of urban and suburban development. Both counties are members of the ten-county Atlanta Regional Commission (ARC), the designated metropolitan planning organization (MPO) in the Atlanta region.

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 (see location map).

1. Designated Programs

This section of I-75 is among the Tier 1 projects identified in the Managed Lanes System Plan (MLSP), and two projects (GDOT P.I. Numbers 0009156 and 0009157) are included in the conforming *Plan 2040* Constrained Long-Range Transportation Plan and the FY2012-2017 Transportation Improvement Program (TIP), as adopted by the ARC on July 27, 2011 (AR-ML-630 and AR-ML-640). The *Plan 2040* Regional Transportation Plans (RTP) recommends managed lanes to be constructed within the I-75 right-of-way from SR 155 to SR 138. The projects are also consistent with the Joint Henry County/Cities Comprehensive Transportation Plan adopted in 2007. The proposed projects are therefore fully consistent with detailed and well-considered regional and local planning efforts.

2. Project Origin

Like many urban areas, the Atlanta region experiences acute congestion on its transportation system. The ARC forecasts that 2.3 million more people will move to this region in the next 25 years, further adding to interstate travel demand. The ARC adopted *Plan 2040: Blueprint for the Future of the Atlanta Region* and the PLAN 2040 RTP for the 18-county Atlanta metropolitan area in July 2011. The RTP addresses current and expected needs on the region's transportation system through the year 2040. The RTP is the direct result of a comprehensive, cooperative, and continuous process conducted by ARC, local governments, and the GDOT in cooperation with the Federal Highway and Federal Transit Administrations. These administrations found that *Plan 2040* conforms with the transportation requirements of the Clean Air Act (40 CFR 93) on September 6, 2011.

To address transportation consumers' demand for reliable travel time, the ARC and GDOT have proposed a system of managed lanes. Managed lanes are restricted by some combination of eligibility (number of people in the vehicle or type of vehicle) and/or pricing (tolls). Accordingly, on June 21, 2007, the Georgia State Transportation Board adopted policies to:

- Implement new capacity lanes within limited access corridors in Metro-Atlanta as managed lanes;
- Promote more reliable mobility in the managed lanes; and

- Utilize various management concepts such as eligibility, congestion pricing, and/or accessibility as appropriate, tailoring each solution to individual corridor needs within the context of a system-wide plan.

Further, on June 27, 2007, ARC adopted managed lane policies as guidance for decisions in development of the regional transportation plan and transportation improvement program and in future planning decisions. Among the policies were the following:

- Congestion management is the primary goal of the managed lane system.
- The managed lane system is intended to provide reliable travel times to all users.
- Implementation of managed lanes would occur within the context of a regional managed lane system.

Subsequently, on December 10, 2009, the State Transportation Board approved the *Atlanta Regional Managed Lane System Plan (MLSP)* to be used as a guide by GDOT in developing individual managed lane projects within Metro-Atlanta. The MLSP proposed a tiered approach to provide for a systematic implementation plan for ultimate completion of the regional system of managed lanes. Tier 1 projects include the most critical corridors to be implemented earliest in the development of the overall system.

3. Summary of Major Issues

a. Unreliable Travel Times and Impaired Mobility

Travel demand is projected to increase throughout the southern portion of the Atlanta region as population and employment opportunities continue to increase over the next twenty years. GDOT historical (1987–2010) traffic count data was collected for I-75 and the major cross roads within the project corridor. Regression analysis indicated that during the period from 1987 to 2006, I-75 traffic had been growing at an average rate of over approximately 11 percent per year (computed linearly) and the cross roads traffic had been growing at an average rate of approximately 13 percent per year. Existing (2010) average daily traffic for I-75 from SR 155 to SR 138 ranges from 103,200 to 145,800 vehicles per day. The ARC Plan 2040 model was used to develop future forecasts. The average annual growth on all sections of this 12-mile corridor ranges between 1.4% and 2.5% between 2009 and 2015 and between 1.2% and 1.4% between 2015 and 2035 year.

As increasing traffic volumes approach and exceed the capacity of the roadway, congestion occurs, which results in reduced speeds and increased travel times. Table 1 shows estimated peak period travel times and speeds within the limits of the proposed projects. Travel times are substantially higher and travel speeds are substantially lower than could be achieved if travel at the posted speed limit were possible.

Table 1. Travel Times and Speeds: Existing and No-Build

Year/ Scenario	Peak Traffic Direction	Average Travel Time Through Project Limits	Average Travel Speed Through Project Limits	Travel Time at Posted Speed of 65 mph*
2010 Existing	NB (AM)	16.0 min.	49 mph	11.3 min
	SB (PM)	16.9 min.	48 mph	11.3 min
2015 No- Build	NB (AM)	18.9 min.	43 mph	11.3 min
	SB (PM)	19.9 min.	42 mph	11.3 min
2035 No- Build	NB (AM)	21.7 min.	38 mph	11.3 min
	SB (PM)	28.0 min.	32 mph	11.3 min

Source: Traffic Study: I-75 Managed Lanes from SR 138 to SR 155, GDOT, July 2012

Note: Travel times and speeds were calculated using VISSIM, a micro-scale traffic flow simulation model based on roadway parameters and driver behavior. The model outputs the average time that the simulated vehicles take to travel from one end of a freeway segment to the other – the average is for all vehicles during the simulation period. The average travel time shown is the weighted average speed for the corridor based on the average speed per sub-segment of the project i.e. from interchange to interchange. The project corridor for this analysis is from north of the SR 138 interchange to south of the SR 155 interchange.

* Posted speed-limit-south-of Mount Carmel Road is 70mph.

The above discussion and table illustrate the recurring daily congestion resulting in slower travel speeds and increased travel times. However, while the average travel time is increasing, the variability of travel time is increasing as well.

The breakdown in travel conditions also can be measured by level of service (LOS), a rating that identifies the degree of congestion on a particular roadway segment. LOS for this project was calculated using Highway Capacity Software (HCS). LOS A through D are considered desirable LOS for an urban principal arterial; LOS E and F are considered undesirable. Due to commuter traffic utilizing the I-75 corridor as one of the main routes into and out of Atlanta, congestion is more prevalent on I-75 northbound in the morning peak and I-75 southbound in the afternoon peak. The traffic directional split during the AM peak hour is 65% northbound and 35% southbound and during the PM peak hour is 53% southbound and 47% northbound.

In the existing conditions, the LOS deteriorates in the northbound direction in the morning peak hour to LOS D between Jodeco Road and Eagles Landing Parkway/Hudson Bridge Road and between Eagles Landing Parkway/Hudson Bridge Road and I-675 (Table 2). In contrast, the southbound direction at this time of day operates at LOS C or better. During the afternoon peak hour, two segments of I-75 in the southbound direction, Eagles Landing Parkway/Hudson Bridge Road to Jodeco Road and Jodeco Road to Jonesboro Road operate at LOS D (Table 2). Conversely, the northbound direction at that time of day operates at LOS C or better.

These peak direction conditions are expected to worsen by 2015 and even further by 2035. In the opening year No-Build conditions (2015), the LOS deteriorates in the northbound direction in the morning peak hour from a LOS C to a LOS D on I-75 between Jonesboro Road (Table 3). In the southbound direction in the morning, I-75 will operate at LOS C or better. In the design year No-Build conditions (2035), the LOS deteriorates in the northbound direction in the morning peak hour from LOS B through D to LOS C through E (Table 4). Also, eleven on or off-ramps on I-75 northbound deteriorate

from LOS B through E to LOS B through F. Again, the mainline of I-75 in the southbound direction in the morning peak hour will continue to operate at LOS C or better.

In the afternoon peak hour, in the opening year No-Build conditions (2015), the LOS deteriorates in the southbound direction from LOS C to LOS D on I-75 between Jonesboro Road and SR 20/SR 81 (Table 3). In the northbound direction, the mainline of I-75 will operate at LOS C or better. In the design year No-Build conditions (2035), the LOS deteriorates in the southbound direction in the afternoon peak hour from LOS B through LOS D to LOS C through LOS F for all I-75 segments between I-675 and SR 155 (Table 4), with the critical section between Eagles Landing Parkway/Hudson Bridge Road and Jodeco Road operating at LOS F. By 2035, level of service drops from LOS B and D to LOS B through F at some interchange on and off-ramps.

Table 2. Freeway Capacity Analysis Summary (Existing 2010)

Location		AM		PM	
FROM	To	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
I-75 southbound (SB)					
Mt. Zion Rd.	SR 138	9.6	A	16.3	B
SR 138	I-675	11.8	B	15.1	B
I-675	Hudson Bridge Rd./Eagles Landing Pkwy.	13.7	B	20.8	C
Hudson Bridge Rd./ Eagles Landing Pkwy.	Jodeco Rd.	17.1	B	30.5	D
Jodeco Rd.	Jonesboro Rd.	17.5	B	29.7	D
Jonesboro Rd.	SR 20/SR 81	16.1	B	24.4	C
SR 20/SR 81	SR 155	13.0	B	18.4	C
SR 155	South of SR 155	10.2	A	14.0	B
I-675 SB					
North of SR 138	SR 138	10.8	A	27.6	D
SR 138	South of SR 138	9.5	A	17.7	B
I-75 northbound (NB)					
South of SR 155	SR 155	15.5	B	12.7	B
SR 155	SR 20/SR 81	18.1	C	14.0	B
SR 20/SR 81	Jonesboro Rd.	20.9	C	17.2	B
Jonesboro Rd.	Jodeco Rd.	24.6	C	19.6	C
Jodeco Rd.	Hudson Bridge Rd./Eagles Landing Pkwy.	28.4	D	19.2	C
Hudson Bridge Rd./Eagles Landing Pkwy.	I-675	32.2	D	19.8	C
I-675	SR 138	15.4	B	12.7	B
SR 138	Mt. Zion Rd.	16.4	B	10.8	A
I-675 NB					
South of SR 138	SR 138	17.9	B	9.8	A
SR 138	North of SR 138	21.2	C	10.9	A

Source: Traffic Study: I-75 Managed Lanes from SR 138 to SR 155, GDOT, July 2012.

Note: For basic freeway segments, LOS A=0-11 pc/mi/ln; LOS B=11-18 pc/mi/ln; LOS C=18-26 pc/mi/ln; LOS D=26-36 pc/mi/ln; LOS E=36-45 pc/mi/ln; LOS F= >45 pc/mi/ln.

Table 3. Freeway Capacity Analysis Summary (No-Build 2015)

Location		AM		PM	
From	To	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
I-75 southbound (SB)					
Mt. Zion Rd.	SR 138	10.1	A	17.5	B
SR 138	I-675	12.3	B	16.5	B
I-675	Hudson Bridge Rd./Eagles Landing Pkwy.	14.2	B	21.6	C
Hudson Bridge Rd./Eagles Landing Pkwy.	Jodeco Rd.	17.8	B	33.6	D
Jodeco Rd.	Jonesboro Rd.	18.1	C	31.7	D
Jonesboro Rd.	SR 20/SR 81	16.8	B	26.5	D
SR 20/SR 81	SR 155	13.7	B	19.7	C
SR 155	South of SR 155	11.1	B	15.3	B
I-675-SB					
North of SR 138	SR 138	11.3	B	29.6	D
SR 138	South of SR 138	10.0	A	19.4	C
I-75 northbound (NB)					
South of SR 155	SR 155	16.8	B	14.0	B
SR 155	SR 20/SR 81	19.3	C	14.9	B
SR 20/SR 81	Jonesboro Rd.	22.5	C	18.1	C
Jonesboro Rd.	Jodeco Rd.	26.1	D	20.2	C
Jodeco Rd.	Hudson Bridge Rd./Eagles Landing Pkwy.	30.6	D	20.1	C
Hudson Bridge Rd./Eagles Landing Pkwy.	I-675	23.2	C	15.4	B
I-675	SR 138	16.8	B	13.5	B
SR 138	Mt. Zion Rd.	17.6	B	11.6	B
I-675 NB					
South of SR 138	SR 138	19.2	C	10.5	A
SR 138	North of SR 138	22.7	C	11.6	B

Source: Traffic Study: I-75 Managed Lanes from SR 138 to SR 155, GDOT, July 2012.

Notes: For basic freeway segments, LOS A=0-11 pc/mi/ln; LOS B=11-18 pc/mi/ln; LOS C=18-26 pc/mi/ln; LOS D=26-36 pc/mi/ln; LOS E=36-45 pc/mi/ln; LOS F= >45 pc/mi/ln.

Table 4. Freeway Capacity Analysis Summary (No-Build 2035).

Location		AM		PM	
From	To	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
I-75 southbound (SB)					
Mt. Zion Rd.	SR 138	11.7	B	22.3	C
SR 138	I-675	14.0	B	22.5	C
I-675	Hudson Bridge Rd./Eagles Landing Pkwy.	16.5	B	34.6	D
Hudson Bridge Rd./Eagles Landing Pkwy.	Jodeco Rd.	20.9	C	47.4	F
Jodeco Rd.	Jonesboro Rd.	20.7	C	39.9	E
Jonesboro Rd.	SR 20/SR 81	19.8	C	36.0	E

SR 20/SR 81	SR 155	16.9	B	25.0	C
SR 155	South of SR 155	15.0	B	20.7	C
I-675 SB					
North of SR 138	SR 138	13.1	B	38.9	E
SR 138	South of SR 138	11.6	B	27.3	D
I-75 northbound (NB)					
South of SR 155	SR 155	21.9	C	19.4	C
SR 155	SR 20/SR 81	24.8	C	18.6	C
SR 20/SR 81	Jonesboro Rd.	30.0	D	21.9	C
Jonesboro Rd.	Jodeco Rd.	33.2	D	22.4	C
Jodeco Rd.	Hudson Bridge Rd./Eagles Landing Pkwy.	41.5	E	23.7	C
Hudson Bridge Rd./Eagles Landing Pkwy.	I-675	33.2	D	19.5	C
I-675	SR 138	22.9	C	16.7	B
SR 138	Mt. Zion Rd.	23.1	C	14.7	B
I-675 NB					
South of SR 138	SR 138	24.7	C	13.1	B
SR 138	North of SR 138	29.0	D	14.4	B

Source: Traffic Study: I-75 Managed Lanes from SR 138 to SR 155, GDOT, July 2012.

Notes: For basic freeway segments, LOS A=0-11 pc/mi/ln; LOS B=11-18 pc/mi/ln; LOS C=18-26 pc/mi/ln; LOS D=26-36 pc/mi/ln; LOS E=36-45 pc/mi/ln; LOS F=>45 pc/mi/ln.

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

b. Lack of Travel Choices

Under existing conditions, all vehicles, whether single-occupant vehicles (SOV), high-occupancy vehicles (HOV), or transit vehicles, traveling on I-75 must utilize the general purpose lanes. Accordingly, no speed or travel time advantage is gained by ridesharing or using transit. Three express bus routes serve the area. Xpress Routes 431 and 432 access the Stockbridge park and ride lot at the I-75 and SR 138 interchange and travel to central Atlanta. Xpress Route 430 is the McDonough Express Route and accesses the McDonough Park and Ride and also travels to central Atlanta. While express transit services and ride sharing are currently available in the corridor, they are no more reliable than SOV travel because they use the same congested general purpose travel lanes. Higher reliability of travel times could provide inducements to greater usage of transit and ridesharing. In addition, SOV drivers currently have few if any choices available to avoid freeway congestion and the inevitable delays in reaching their destination.

c. Expedite Project Delivery through the Use of Tolling for Financing

GDOT and ARC have established a plan for completing a network of managed lanes in the Atlanta region. Tolling is an integral element in the implementation of the network, both as a tool to accomplish the purposes of the network and as a partial source of funding. These projects are intended to complete a link in that network. The use of tolls is expressly necessary as a method to manage the new lanes in a way that will achieve the reliable travel times and expansion of travel choices discussed previously. More specifically, varying toll rates are envisioned in order to maintain free-flowing traffic in those lanes at a minimum desirable operating speed.

d. Reduce Congestion by Adding Transportation Capacity

As the south Atlanta metropolitan area continues to grow, especially in Henry County, increased travel demands are placed on the existing roadway network. This is evident in the growing traffic volumes and traffic congestion on the interstates. In 2009, interstates and freeways in the region accommodated 36% of the region’s vehicle miles traveled (*2010 Transportation Fact Book*, ARC, 2010). As a result, traffic congestion is worse during morning and afternoon peak hour. Travel demand is projected to increase throughout the southern portion of the Atlanta region as population and employment opportunities continue to increase over the next twenty years. The increasing congestion results in longer and less reliable travel times. Tables 2 through 5 reflect the increasing congestion as measured by level of service. The cause of the congestion is insufficient capacity to serve the travel demand.

4. Explanation of Proposed Project Limits

The northern terminus for the I-75 projects is just beyond the junction of two interstate highways, I-75 and I-675. The southern terminus at SR 155 is consistent with the employment destinations and housing development around the I-75/SR 155 interchange, which represents the southern extent of major development along the I-75 corridor at this time. Population densities in the counties south of Henry County are substantially lower and the next major urban area to the south is the City of Macon, approximately 50 miles away.

In addition, the traffic operations analysis detailed in Section 3. Unreliable Travel Times and Impaired Mobility, and in Table 5, confirms that adequate levels of service on I-75 will occur in the future beyond the proposed termini, except for I-675 southbound (Table 5). The project termini of SR 138 and SR 155 are appropriate to address the travel time, mobility, and congestion concerns in the project corridor.

Table 5. LOS Analysis of Freeway Segments Beyond Limits of Managed Lanes

Year, Scenario, Direction	Location	AM		PM	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
2010 Existing Southbound	I-75 Freeway Segment Between Mt. Zion Rd and SR 138	10.6	A	17.8	B
	I-75 Freeway Segment South of SR 155	11.4	B	15.7	B
	I-675 Freeway Segment North of SR 138	12.3	B	29.0	D
2010 Existing Northbound	I-75 Freeway Segment South of SR 155	17.3	B	14.2	B
	I-75 Freeway Segment Between SR 138 and Mt. Zion Rd	17.9	B	11.9	B
	I-675 Freeway Segment North of SR 138	23.3	C	12.5	B
2015 No-Build Southbound	I-75 Freeway Segment Between Mt. Zion Rd and SR 138	10.1	A	17.5	B
	I-75 Freeway Segment South of SR 155	11.1	B	15.3	B
	I-675 Freeway Segment North of SR 138	11.3	B	29.6	D
2015 No-Build Northbound	I-75 Freeway Segment South of SR 155	16.8	B	14.0	B
	I-75 Freeway Segment Between SR 138 and Mt. Zion Rd	17.6	B	11.6	B
	I-675 Freeway Segment North of SR 138	22.7	C	11.6	B
2035 No-Build Southbound	I-75 Freeway Segment Between Mt. Zion Rd and SR 138	11.7	B	22.3	C
	I-75 Freeway Segment South of SR 155	15.0	B	20.7	C
	I-675 Freeway Segment North of SR 138	13.1	B	38.9	E
2035 No-Build	I-75 Freeway Segment South of SR 155	21.9	C	19.4	C

Year, Scenario, Direction	Location	AM		PM	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Northbound	I-75 Freeway Segment Between SR 138 and Mt. Zion Rd	23.1	C	14.7	B
	I-675 Freeway Segment North of SR 138	29.0	D	14.4	B
2015 Build Southbound	I-75 Freeway Segment Between Mt. Zion Rd and SR 138	10.1	A	23.0	C
	I-75 Freeway Segment South of SR 155	11.1	B	17.7	B
	I-675 Freeway Segment North of SR 138	11.3	B	38.1	E
2015 Build Northbound	I-75 Freeway Segment South of SR 155	19.5	C	13.9	B
	I-75 Freeway Segment Between SR 138 and Mt. Zion Rd	22.5	C	11.6	B
	I-675 Freeway Segment North of SR 138	28.1	C	11.7	B
2035 Build Southbound	I-75 Freeway Segment Between Mt. Zion Rd and SR 138	11.9	B	25.6	C
	I-75 Freeway Segment South of SR 155	14.9	B	22.5	C
	I-675 Freeway Segment North of SR 138	13.3	B	***	F
2035 Build Northbound	I-75 Freeway Segment South of SR 155	23.8	C	19.0	C
	I-75 Freeway Segment Between SR 138 and Mt. Zion Rd	26.6	D	14.6	B
	I-675 Freeway Segment North of SR 138	33.8	D	14.5	B

Source: Traffic Study: I-75 Managed Lanes from SR 138 to SR 155, GDOT, July 2012.

Notes: This data also appears in Tables 2 through 7.

For basic freeway segments, LOS A=0-11 pc/mi/ln; LOS B=11-18 pc/mi/ln; LOS C=18-26 pc/mi/ln; LOS D=26-36 pc/mi/ln; LOS E=36-45 pc/mi/ln; LOS F= >45 pc/mi/ln.

*** Freeway capacity exceeded

At both termini of the I-75 projects, the proposed facility connects to existing lanes capable of receiving the traffic from the new lanes. As stated above, the traffic operations analysis confirms that acceptable levels of service on I-75 will exist beyond the proposed termini under the No-Build, except for I-675 southbound (Table 5). Even without full implementation of the entire managed lanes network, these projects could function with independent utility as a viable transportation facility and adequate levels of service occur beyond the termini, under the Build Condition, as demonstrated in Table 5.

5. Performance Goals

The proposed projects are consistent with both regional and local planning efforts. Data on travel time and level of service indicate that travel times have become unpredictable and congestion occurs now and will worsen in the future. The general purpose lanes are currently the only travel choice for users of I-75, including express buses and vanpools/carpools. Higher reliability of travel times could provide inducements to greater usage of these alternative modes of travel. The implementation of a tolled project would ensure free flow of travel on the express lanes as well as expedite its construction based on the limited transportation funding available in the foreseeable future. The proposed projects will address these needs.

Description of the proposed project:

Project number CSNHS-0009-00(156) involves the construction of a reversible barrier separated managed lane system and ITS infrastructure along southbound I-75 in Henry County, GA. The project begins 2.1 miles south of the I-75 Bridge over SR 155 (MP 214.16) and ends south of the I-75 northbound off ramp to Eagles Landing Parkway/Hudson Bridge Road (MP 223.64), for a total length of

9.48 miles. The managed lanes system begins at the I-75 bridge over SR 155 (MP 216.26) and ends south of the I-75 northbound off ramp to Eagles Landing Parkway/Hudson Bridge Road (MP 223.64) for a length of 7.38 miles. From SR 155 to approximately 1 mile south of Mt. Carmel Road, the managed lane system will consist of one reversible lane transitioning to two reversible lanes at this location. To accommodate the reversible lanes, widening of the southbound general purpose lanes approximately 19 to 31 feet +/- will be required. Additional proposed improvements include the replacement of the existing Mt. Carmel Road Bridge with a new two-lane, two-span bridge with dimensions of 41.42 feet wide x 295 feet long to accommodate the proposed widening; a new managed lane only connection approximately 1600 feet south of Jonesboro Road which consists of a new single lane two-span bridge with dimensions of 43.25 feet wide by 385 feet long and approximately 1900 feet of ramp on new location east of I-75 that ties to Jonesboro Road at Foster Drive (see appendix 13 for concept layout) and addition of a signal and turn lanes to the intersection of Mt. Carmel Road and Jonesboro Road. The proposed pavement types will match existing asphalt section of the corridor and provide paved inside and outside shoulders. Existing guardrail and overhead signs along the corridor will be removed and replaced as necessary along with construction of sound barriers as determined by noise studies. Retaining walls will be constructed along I-75 to minimize right of way impacts. The completed project will support the growth in traffic volumes projected, and improve congestion and traffic movements while reducing the potential for accidents. Mt. Carmel Road will be closed with the construction of the new bridge and a detour will provided (see appendix 14 for detour plan). The proposed southbound reversible lanes, required widening and new ITS and tolling equipment will be constructed within the existing right-of-way. The new managed lane only ramp on new location south of Jonesboro Road will require right-of-way from 3 parcels.

The managed lanes would require 1 to 1-1/2 hours to reverse direction and will be closed twice a day to allow for maintenance and reversing traffic direction.

Federal Oversight: Full Oversight Exempt State Funded Other

MPO: N/A MPO - Atlanta Regional Commission (ARC)
MPO Project TIP # AR-ML-640

Regional Commission: N/A RC – Atlanta Regional Commission
RC Project ID # N/A

Congressional District(s): 3

Projected Traffic AADT:

I-75

Current Year (2010): 144,200 Open Year (2015): 148,680 Design Year (2035): 166,640

Managed Lanes

Current Year (2010): N/A Open Year (2015): 20,980 Design Year (2035): 24,780

Mt. Carmel Road

Current Year (2010): 2,970 Open Year (2015): 4,520 Design Year (2035): 7,900

Jonesboro Road ML Connection

Current Year (2010): N/A Open Year (2015): 7,700 Design Year (2035): 9,200

Functional Classification (Mainline): Urban Principal Arterial

Functional Classification (Mt. Carmel Road): Urban Collector Street

Functional Classification (Jonesboro Road): Urban Collector Street

Is this project on a designated bike route? No YES

Is this project located on a pedestrian plan? No YES

Is this project located on or part of a transit network? No YES

CONTEXT SENSITIVE SOLUTIONS

Issues of Concern:

1. There is a need for public awareness regarding reversible flow lanes on freeways in Georgia because they are a new type of facility for the state. Such projects, however, have been in operation in numerous locations across the US; one of the first examples was the I-395 Shirley Highway project (Washington DC region) where reversible lanes have been in operation since the mid-1970's. Experiences from these other projects, including signage, lane management techniques, and operational issues, will assist GDOT in managing the system effectively and in providing the highest level of information and education to the motoring public on the use of these lanes. Public outreach during the project construction will be provided to aid in the understanding of daily operations of the reversible facility, including:
 - Implementation of the fully electronic tolling system, which allows customers to pay tolls automatically, thereby eliminating the need for toll booths.
 - Reversible lanes management procedures, including closure of the facility twice a day for a total of 1 to 1½ hours to allow for maintenance and the reversal of the direction of travel. To maximize use of the reversible lanes, analysis would be conducted to identify the specific times of day directional flow of the reversible lanes would change. Mechanical arms and/or barriers would prevent contra-flow traffic from accessing the managed lane system. These barriers would be raised and lowered manually and would be observable through real-time video cameras.
2. Operationally, reversible facilities require additional signage and safety features to ensure commuters can easily and safely access the facility. As noted above, extensive signage and other safety features would be incorporated into the designs based on experience in these types of facilities from across the US. It will be important to continually educate the general public about the new type of facility.

Context Sensitive Solutions:

1. Ongoing education for the public will be important during the development of the project, in its early stages of operation, and on an ongoing basis. Such education will include not only information on the requirements of the managed lanes in terms of number of people in the vehicle, electronic tolling procedures, times of operation, and enforcement procedures, but also in terms of the specific features, operations, and signage of the reversible lanes concept.

Motorists in the Atlanta region have become familiar with concurrent managed lanes whereby vehicles in these lanes travel in the same direction as the adjacent lanes. Education of the motoring public, including providing video of the operations of existing facilities, will allow the public to understand the difference between the concurrent managed lanes and the barrier-separated and gated operations of the reversible managed lanes.

DESIGN AND STRUCTURAL DATA

Mainline Design Features: I-75 Southbound

Feature	Existing	Standard*	Proposed
Typical Section			
- Number of Lanes	3	3	4-5
- Lane Width(s)	12 ft.	11-12 ft.	11-12 ft.
- Median Width & Type	40 ft. Depressed	30-40 ft. Continuous Barrier (6- lanes)	32.5 ft. Continuous Barrier (6- lanes) & Depressed (varies 32-90 ft.)
- Outside Shoulder Width & Type	12 ft. (10 ft. Paved)	12 ft. (10 ft. Paved)	14 ft. (12 ft. Paved)
- Outside Shoulder Slope	6.00%	6.00%	6.00%
- Inside Shoulder Width & Type	10 ft.	10 ft.	8 ft. (Design exception approved)
- Sidewalks	N/A	N/A	N/A
- Auxiliary Lanes	N/A	N/A	N/A
- Bike Lanes	N/A	N/A	N/A
Posted Speed	70 mph (SR 155 to Mt Carmel; 65 mph (Mt Carmel to Eagles Landing Pkwy		70 mph (SR 155 to Mt Carmel; 65 mph (Mt Carmel to Eagles Landing Pkwy
Design Speed	70 mph (SR 155 to Mt Carmel; 65 mph (Mt Carmel to Eagles Landing Pkwy	65 mph	70 mph (SR 155 to Mt Carmel; 65 mph (Mt Carmel to Eagles Landing Pkwy
Min Horizontal Curve Radius	5,729 ft.	1,660 ft.	5,820 ft.
Superelevation Rate	6.00%	6.00%	6.00%
Grade	3.54%	5.00%	3.54%

Access Control	Full	Full	Full
Right-of-Way Width	300 ft. typ. But varies throughout corridor	Varies	300 ft. typ. But varies throughout corridor
Maximum Grade – Crossroad	N/A	N/A	N/A
Design Vehicle	WB-62	WB-67	WB-67
Maximum Grade – Driveway	N/A	N/A	N/A

*According to current GDOT design policy if applicable

Sideroad Design Features: Mt. Carmel Road

Feature	Existing	Standard*	Proposed
Typical Section			
- Number of Lanes	2	2	2
- Lane Width(s)	11 ft.	11-12 ft.	12 ft.
- Median Width & Type	N/A	N/A	N/A
- Outside Shoulder Width & Type	2 ft.	8 ft.	8 ft. (2 ft. Paved)
- Outside Shoulder Slope	6.00%	6.00%	6.00%
- Inside Shoulder Width & Type	N/A	N/A	N/A
- Sidewalks	N/A	N/A	N/A
- Auxiliary Lanes	N/A	N/A	N/A
- Bike Lanes	N/A	N/A	N/A
Posted Speed	45 mph		45 mph
Design Speed	45 mph	35 mph	45 mph
Min Horizontal Curve Radius	1,470 ft.	643 ft.	1,470 ft.
Superelevation Rate	6.00%	6.00%	6.00%
Grade	4.24%	8.00%	3.77%
Access Control	Full	Full	Full
Right-of-Way Width	70 ft.	Varies	70 ft.
Maximum Grade – Crossroad	N/A	N/A	N/A
Design Vehicle	SU	SU	SU
Maximum Grade – Driveway	N/A	N/A	N/A

*According to current GDOT design policy if applicable

Design Features: New Jonesboro Road ML Connection

Feature	Existing	Standard*	Proposed
Typical Section			
- Number of Lanes		2	1 (2 future)
- Lane Width(s)		11-12 ft.	16 ft. (12 ft. future)
- Median Width & Type		N/A	N/A
- Outside Shoulder Width & Type		8 ft.	8 ft. (2 ft. Paved)
- Outside Shoulder Slope		6.00%	6.00%
- Inside Shoulder Width & Type		N/A	N/A

- Sidewalks		N/A	N/A
- Auxiliary Lanes		N/A	N/A
- Bike Lanes		N/A	N/A
Posted Speed			45 mph
Design Speed		45 mph	45 mph
Min Horizontal Curve Radius		643 ft.	Varies 100-690 ft.
Superelevation Rate		6.00%	6.00%
Grade		7.00%	5.00%
Access Control		Full	Full
Right-of-Way Width		Varies	Varies 80 to 130 ft.
Maximum Grade – Crossroad		N/A	N/A
Design Vehicle		BUS	BUS
Maximum Grade – Driveway		N/A	N/A

*According to current GDOT design policy if applicable

Major Structures:

Structure	Existing	Proposed
ID#151-0033-0 Bridge on I-75 over SR 155	Length= 240 ft. Width= 141.6 ft. 4 lanes in each direction 12 ft. travel lane width 20 ft. inside shoulder 14' outside shoulder Sufficiency rating = 85.53	No change anticipated
ID#151-0035-0 4 Barrel Box Culvert at Reeves Creek	Width= 7 ft. Height= 5 ft. Length= 200 ft. Sufficiency rating = 87.15	Extend approx. 30 lf. (I-75 southbound)
ID#151-0036-0 5 Barrel Box Culvert at tributary of Reeves Creek	Width= 7 ft. Height= 5 ft. Length= 184 ft. Sufficiency rating = 85.00	Extend approx. 20 lf. (I-75 southbound)
ID#151-5063-0 Bridge on SR 20 over I-75	Length= 304 ft. Width= 102.5 ft. 2 lanes in each direction 2 left turn lanes 12 ft. travel lane width 6 ft. inside shoulder Sufficiency rating = 92.01	No change anticipated

<p>ID#151-0024-0 Bridge on Mt. Carmel Road over I-75</p>	<p>Length= 218 ft. Width= 30.5 ft. 1 lane in each direction 12 ft. travel lane width 5 ft. shoulder Sufficiency rating = 79.47</p>	<p>Length= 295 ft. Width= 41.42 ft. 1 lane in each direction 12 ft. travel lane width 8 ft. shoulder 5'5" sidewalk</p>
<p>ID#151-0037-0 3 Barrel Box Culvert at Crittle Creek</p>	<p>Width= 7 ft. Height= 5 ft. Length= 206 ft. Sufficiency rating = 98.00</p>	<p>Extend approx. 30 lf. (I-75 southbound). Extend approx. 20 lf. (I-75 northbound)</p>
<p>ID#151-5066-0 Bridge on Jonesboro Rd(SR920) over I-75</p>	<p>Length= 352 ft. Width= 94.5 ft. 2 lanes in each direction 1 left turn lane each direction 12 ft. travel lane width 8 ft. shoulder Sufficiency rating = 93.40</p>	<p>No change anticipated</p>
<p>ID#151-0038-0 4 Barrel Box Culvert at Walnut Creek</p>	<p>Width= 9 ft. Height= 7 ft. Length= 206 ft. Sufficiency rating = 85.00</p>	<p>Extend approx. 20 lf. (I-75 southbound).</p>
<p>ID#151-0028-0 Bridge on Jodeco Rd(CR824) over I-75</p>	<p>Length= 264 ft. Width= 34.7 ft. 1 lane in each direction 12 ft. travel lane width 5 ft. shoulder Sufficiency rating = 71.98</p>	<p>No change anticipated</p>
<p>ID#151-0039-0 4 Barrel Box Culvert at Pates Creek</p>	<p>Width= 9 ft. Height= 7 ft. Length= 206 ft. Sufficiency rating = 85.00</p>	<p>Extend approx. 30 lf. west (I-75 northbound).</p>
<p>ID#151-5070-0 Bridge Eagles Landing Pkwy(CR659) over I-75</p>	<p>Length= 468 ft. Width= 166.4 ft. 2 lanes in each direction 1 left turn lane each direction 12 ft. travel lane width 8 ft. inside shoulder Sufficiency rating = 94.83</p>	<p>No change anticipated</p>

ML Ramp over I-75		Length= 385 ft. Width= 43.25 ft. 1 lane 16 ft. travel lane width 12 ft. shoulder Future: 2 lane 12 ft. travel lane 8 ft. shoulder
Retaining walls	N/A	Anticipated along project to minimize r/w impacts
Other	N/A	N/A

Major Interchanges/Intersections:

- I-75 at SR 155
- I-75 at Hampton-McDonough Road/SR20
- I-75 at Jonesboro Road
- I-75 at Jodeco Road
- I-75 at Eagles Landing Pkwy/Hudson Bridge Road

Utility Involvements:

The following have utilities along the corridor:

- AGL Resources
- AT&T/BellSouth
- City of Stockbridge Water and Sewer
- City of College Park Water, Sewer and Power
- Central Georgia EMC
- Charter Communication
- Comcast Cable
- Clayton County Traffic, Water and Sewer
- GDOT Traffic
- Georgia Power Distribution and Transmission
- Henry County Water and Sewerage
- Snapping Shoals EMC

Public Interest Determination Policy and Procedure recommended (Utilities)? YES NO
 Project Delivery is anticipated to be Design/Build.

SUE Required: Yes No

Railroad Involvement: None

Right-of-Way:

Required Right-of-Way anticipated: YES NO Undetermined
 Easements anticipated: Temporary Permanent Utility Other

Anticipated number of impacted parcels: 3
 Anticipated number of displacements (Total): 0
 Businesses: 0
 Residences: 0
 Other: 0

Location and Design approval: Not Required Required

Off-site Detours Anticipated: No Yes Undetermined

Temporary detour needed for closure of Mt. Carmel Road for demolition and reconstruction of the bridge. Anticipate 9 months closure.

Transportation Management Plan Anticipated: YES NO

The project will be constructed with minimal impact to the traveling public. The proposed southbound reversible lanes and required widening will be constructed within the existing right-of-way. Minimum of 3 lanes will be maintained during peak hours. Special Provision 150.11 will specify allowable lane closures.

Design Exceptions to FHWA/AASHTO controlling criteria anticipated:

FHWA/AASHTO Controlling Criteria	YES	Appvl Date (if applicable)	NO	Undetermined
1. Design Speed	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
2. Lane Width	<input checked="" type="checkbox"/>	9/15/2011	<input type="checkbox"/>	<input type="checkbox"/>
3. Shoulder Width	<input checked="" type="checkbox"/>	9/15/2011	<input type="checkbox"/>	<input type="checkbox"/>
4. Bridge Width	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Horizontal Alignment	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Superelevation	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Vertical Alignment	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Grade	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. Stopping Sight Distance	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. Cross Slope	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
11. Vertical Clearance	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
12. Lateral Offset to Obstruction	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
13. Bridge Structural Capacity	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>

Design Exception required for substandard ramp speed design for the Jonesboro Managed Lanes dedicated access. Approved Design Exceptions for lane width and shoulder width are attached to the report.

Design Variances to GDOT standard criteria anticipated:

GDOT Standard Criteria	Reviewing Office	YES	Appvl Date (if applicable)	NO	Undetermined
1. Access Control - Median Opening Spacing	DP&S	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Median Usage & Width	DP&S	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Intersection Skew Angle	DP&S	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Lateral Offset to Obstruction	DP&S	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Intersection Sight Distance	DP&S	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Bike & Pedestrian Accommodations	DP&S	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. GDOT Drainage Manual	DP&S	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Georgia Standard Drawings	DP&S	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. GDOT Bridge & Structural Manual	Bridge	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Design			
10. Roundabout Illumination - (if applicable)	DP&S	<input type="checkbox"/>		<input checked="" type="checkbox"/>
11. Rumble Strips/Safety Edge	DP&S	<input type="checkbox"/>		<input checked="" type="checkbox"/>

VE Study anticipated: No Yes Completed – Date: 8/16/2011

ENVIRONMENTAL DATA

Anticipated Environmental Document:

GEPA: NEPA: Categorical Exclusion EA/FONSI EIS

Air Quality:

Is the project located in a PM 2.5 Non-attainment area? No Yes
 Is the project located in an Ozone Non-attainment area? No Yes

The proposed project concept matches the conforming plan’s model description for providing managed lanes within the project limits of the interchanges at SR 155 and Eagles Landing Parkway/Hudson Bridge Road (Please see Attachment 7). The existing six lane facility will be increased to a total of eight through lanes and is scheduled to open to traffic in 2015.

Environmental Permits/Variations/Commitments/Coordination anticipated:

Permit/ Variance/ Commitment/ Coordination Anticipated	YES	NO	Remarks
1. U.S. Coast Guard Permit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2. Forest Service/Corps Land	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3. CWA Section 404 Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	To be obtained by the Design/Build Team
4. Tennessee Valley Authority Permit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
5. Buffer Variance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	To be obtained by the Design/Build Team
6. Coastal Zone Management Coordination	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
7. NPDES	<input checked="" type="checkbox"/>	<input type="checkbox"/>	To be obtained by the Design/Build Team
8. FEMA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
9. Cemetery Permit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
10. Other Permits	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
11. Other Commitments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Special Provision 107.23:Protection of Species of Management Concern and Migratory Birds
12. Other Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	FWCA coordination for impacts to streams.

Is a PAR required? No Yes Completed – Date:

With the consent of the United States Army Corps of Engineers (USACE), the proposed action can be authorized under Nationwide 14.

NEPA/GEPA: The NEPA document is an Environmental Assessment (EA). For the purposes of logical termini, the NEPA document addresses this project and the adjacent project CSNHS-0009-00(157), PI 0009157. Preparation of the Draft EA is underway; anticipate submittal February 2012. No Section 4(f) impacts are anticipated.

Ecology: The initial Ecology Resource Survey and Assessment of Effects Report was approved on April 15, 2011. An Addendum to this report was approved on August 11, 2011. A second Addendum for the project is currently under review. With the exception of migratory birds, no protected species or suitable habitats were identified with the project area. No seasonal surveys for protected species are required.

History: Historic resources survey was conducted in 2010. One eligible resource was identified. SHPO concurrence on the Historic Resources Survey Report (HRSR) was received on September 24, 2010. The project was reevaluated in 2011. One additional eligible resource was identified. The HRSR Addendum was approved by SHPO on February 14, 2012.

Archeology: Archaeology survey conducted in 2011. No sites identified. Short Form of Negative Findings approved on August 11, 2011. An Addendum to the Short Form was approved by GDOT on January 6, 2012. A subsequent survey was conducted in July 2012 to include three intersections. A short form of negative findings is currently under review.

Air: This project was evaluated for its consistency with state and federal air quality goals, including CO, ozone, PM 2.5, and MSATs. Results indicate that the project is consistent with the State Implementation Plan for the attainment of clean air quality in Georgia and is in compliance with both state and federal air quality standards. The PM 2.5 Letter of Determination is currently under review at FHWA.

Noise: This project meets the criteria for a Type I project established in 23 CFR Part 772 and requires an analysis for highway traffic noise impacts. A Noise Impact Assessment and Barrier Analysis have been conducted. Six noise walls have been found to be reasonable and feasible.

Public Involvement: Community and Agency Meetings; Newsletters; Website; Unstaffed Koisks. PIOH and PHOH; PIOH's held April 26th and 28th, 2011; July 12th 2011; December 13th and 15th, 2011. See attachment 10 for summary.

Major stakeholders: Travelling public.

CONSTRUCTION

Issues potentially affecting constructability/construction schedule: None

Early Completion Incentives recommended for consideration:

No

Yes

PROJECT RESPONSIBILITIES

Project Activities:

Project Activity	Party Responsible for Performing Task(s)
Concept Development	GDOT (Parsons as Consultant)
Design	GDOT (Parsons as Consultant)
Right-of-Way Acquisition	GDOT
Utility Relocation	GDOT
Letting to Contract	GDOT
Construction Supervision	GDOT
Toll Integration	Design/Build Team
Providing Material Pits	Design/Build Team
Providing Detours	Design/Build Team
Environmental Studies, Documents, and Permits	GDOT (Parsons as Consultant)
Environmental Mitigation	GDOT
Construction Inspection & Materials Testing	GDOT

Lighting required: No Yes

Initial Concept Meeting: An Initial concept team meeting was held on December 15th, 2010. Meeting minutes attached as attachment 8 Concept team meetings.

Concept Meeting: A concept team meeting was held on May 4th, 2011. Meeting minutes attached as attachment 9, concept team meetings.

Other projects in the area

- PI No. 0009157 – I-75 Managed Lanes from Eagles Landing Pkwy/Hudson Bridge Road to SR 138.
- PI No. 0010126 – I-75 Auxiliary Lane from Eagles Landing Pkwy/Hudson Bridge Road to I-675.
- PI No. 0006333 – I-75 South ATMS/Comm/Surveillance from SR 155 to Eagles Landing Pkwy/Hudson Bridge Rd.
- PI No. 312160 – Interchange capacity improvements for I-75 at Jodeco Road.

Other coordination to date:

- Henry County Board of Commissioners briefing held April 4th, 2011.
- Clayton County Board of Commissioners briefing held April 12th, 2011.
- Senator Rick Jeffares briefing held September 8, 2011.
- Crown Manor Residents; Fred Auletta, Henry County District 2 Commissioner meeting held September 9, 2011.
- GDOT Congressional District 13 Board Member Dana Lemon briefing held September 15, 2011.
- Southside Christian Fellowship Church briefing held September 19, 2011.
- Rowanshyre residents briefing on September 26, 2011
- Bi-weekly progress meetings with FHWA.
- Georgia State Road and Tollway Authority.

Project Cost Estimate and Funding Responsibilities:

County: Henry ...

	Breakdown of PE	ROW	Utility	CST*	Environmental Mitigation	Total Cost
By Whom	GDOT	GDOT	GDOT	GDOT	GDOT	
\$amount	\$2,000,000	\$1,759,000	\$100,368	\$87,748,042	TBD	\$89,607,393
Date of Estimate		2/28/2012	3/29/2011	8/24/2012		

*CST Cost includes: Construction, 5% Engineering and Inspection, and Liquid AC Cost Adjustment.

ALTERNATIVES DISCUSSION

Alternative selection:

Preferred Alternative / Alternative 1: Widen I-75 southbound to accommodate 2 reversible managed lanes with dedicated ML access at Jonesboro Road.			
Estimated Property Impacts:	3 parcels	Estimated Total Cost:	\$89,607,393
Estimated ROW Cost:	\$1,759,000	Estimated CST Time:	18 months
Rationale: This alternative is recommended as the preferred alternative because it meets the intent of the project and public acceptance of the ML access at Jonesboro Road.			

Alternative 2: Widen I-75 southbound to accommodate 2 reversible managed lanes with dedicated ML access at Mt. Carmel Road.			
Estimated Property Impacts:	4 parcels	Estimated Total Cost:	\$68,236,379
Estimated ROW Cost:	\$211,100	Estimated CST Time:	18 months
Rationale: This alternative was eliminated due to the public outcry of residents along Mt. Carmel against the ML connection at Mt. Carmel Road.			

Alternative 3: Widen I-75 northbound to accommodate 2 reversible managed lanes.			
Estimated Property Impacts:	4 parcels	Estimated Total Cost:	\$68,236,379
Estimated ROW Cost:	\$211,100	Estimated CST Time:	18 months
Rationale: This alternate was eliminated due to Intersection Sight Distance issues at Flippen Road and Dustin Drive just north of existing I-75 Bridge over Flippen Road on PI 0009157.			

Alternative 4: Build concurrent managed lanes (one lane in each direction) within the median.			
Estimated Property Impacts:	0 parcels	Estimated Total Cost:	\$43,185,000
Estimated ROW Cost:	\$0	Estimated CST Time:	18 months
Rationale: This alternate was eliminated due to the reduced operation of the system, higher enforcement requirements and O&M cost.			

No-Build/Alternative 5: No-Build			
Estimated Property Impacts:	None	Estimated Total Cost:	\$0
Estimated ROW Cost:	\$0	Estimated CST Time:	N/A
Rationale: This alternate was eliminated since this does not meet the need and purposed of the project.			

Comments: Concept Report includes latest cost estimate; The project meets ADA requirements.

Attachments:

1. Typical Sections
2. Detailed Cost Estimates:
 - a. Construction including Engineering and Inspection
 - b. Completed Fuel & Asphalt Price Adjustment forms
 - c. Right-of-Way
 - d. Utilities
3. Crash Summaries
4. Traffic Volumes
5. Capacity analysis summary
6. TE Study
 - a. Intersection of Jonesboro Road and Mt. Carmel Road
 - b. Intersection of Jonesboro Road and Foster Drive
7. Bridge Inventory
8. Conforming plan's network schematics showing thru lanes
9. Minutes of Concept Team meetings
10. VE implementation Letter
11. Public Involvement Summary
12. Approved Design Exception
13. Jonesboro Road Managed Lanes Connection Layout
14. Mt. Carmel Road Detour Plan

APPROVALS

Concur: Bill R. McManis
Director of Engineering

Approve: Y. Melendez Please refer to FHWA
for Division Administrator, FHWA letter from 10/25/12

Approve: QAO M. Ren
Chief Engineer

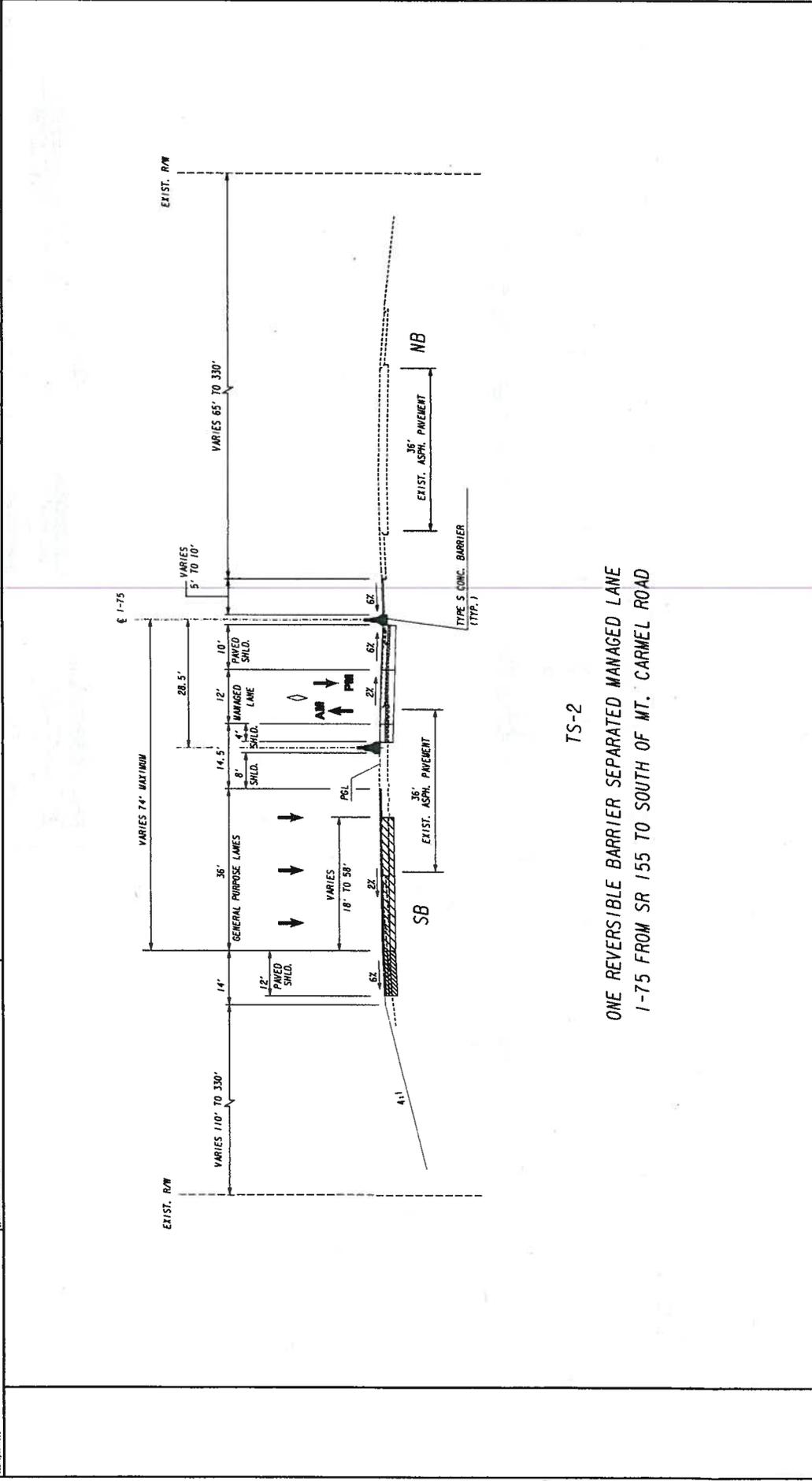
11/06/2012
Date

ATTACHMENT 1

Typical Sections

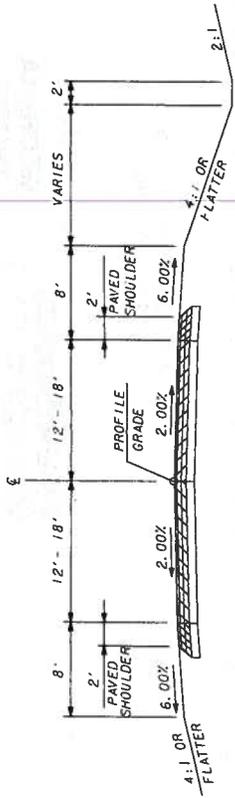
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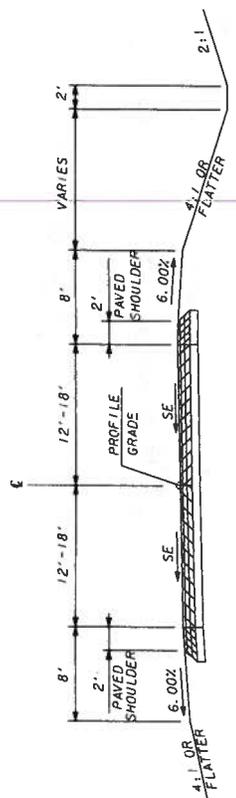


TS-2
 ONE REVERSIBLE BARRIER SEPARATED MANAGED LANE
 I-75 FROM SR 155 TO SOUTH OF MT. CARMEL ROAD

PARSONS 3577 PARKWAY LANE, SUITE 100 NORCROSS, GA 30092	NOT TO SCALE	GEORGIA DEPARTMENT OF TRANSPORTATION	REVISION DATES	STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE: INNOVATIVE PROGRAM DELIVERY TYPICAL SECTIONS	1-75 WIDENING 5-02
			PROJECT NUMBER	SHEET NO.	TOTAL SHEETS



TYPICAL SECTION
TANGENT SECTION



TYPICAL SECTION
SUPERELEVATION SECTION

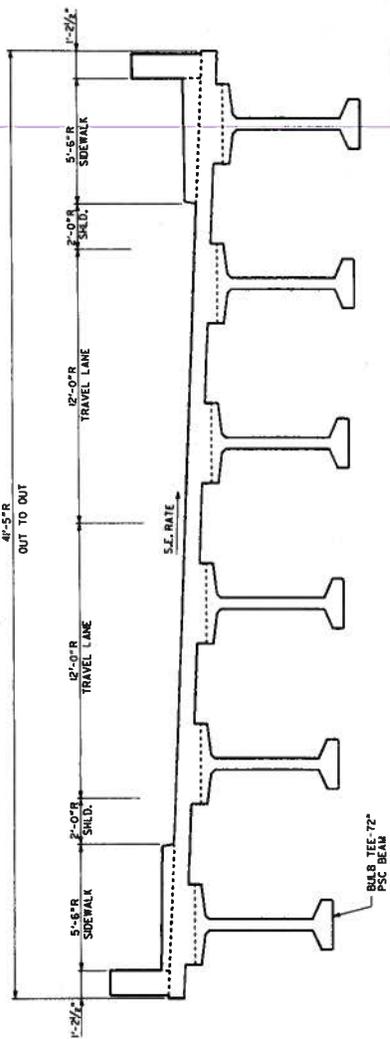
NOTES:
 ALGEBRAIC DIFFERENCE IN PAVING AND SHOULDER SLOPE NOT TO EXCEED 8.0%

SLOPE CONTROL FILL & CUT	
SLOPE	HEIGHT FROM SHLD. PT.
4:1	0'-10'
*2:1	OVER 10'
*GUARDRAIL IS REQUIRED ON ALL SLOPES.	

PARSONS 3577 PARKWAY LANE, SUITE 100 NORCROSS, GA 30062	GEORGIA DEPARTMENT OF TRANSPORTATION	STATE OF GEORGIA	DEPARTMENT OF TRANSPORTATION OFFICE: INNOVATIVE PROGRAM DELIVERY TYPICAL SECTIONS	MT CARMEL ROAD I-75 WIDENING	DRAWING NO. 5-07
		NOT TO SCALE			
REVISION DATES					

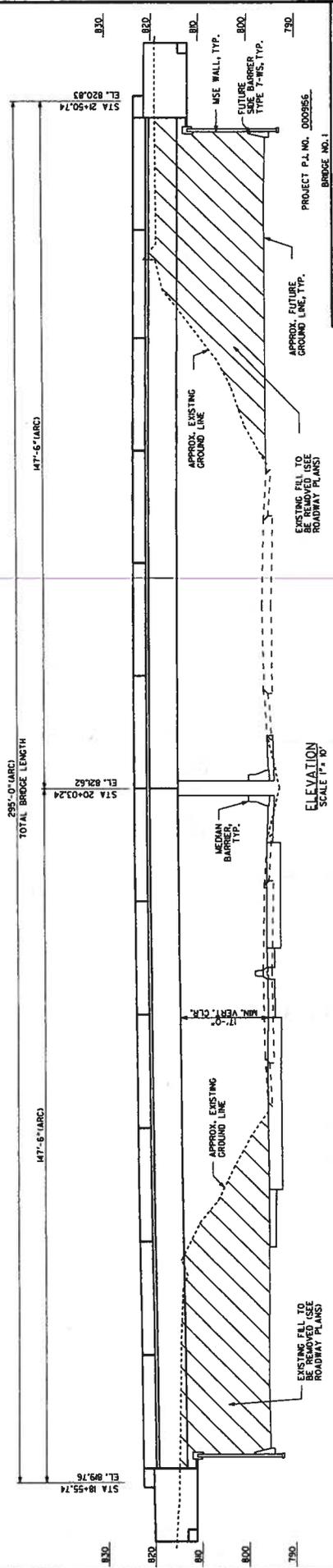
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

CONSTRUCTION SEQUENCE:
 THE CONSTRUCTION SEQUENCE SHALL BE COORDINATED WITH ROADWAY OPERATIONS. SEE ROADWAY PLANS. THE CONTRACTOR MAY SUBMIT A PROPOSED CONSTRUCTION SEQUENCE FOR APPROVAL.



TYPICAL SECTION
 PROPOSED BRIDGE
 LOOKING EAST
 1/4" = 1'-0"

* MEASURED NORMAL TO BEAMS
 R - DEMOTES RADIAL



PARSONS
 GEORGIA
 2577 PARKWAY LAKE, SUITE 100
 ADDRESS, GA 30092

DEPARTMENT OF TRANSPORTATION
 ENGINEERING DIVISION-OFFICE OF BRIDGES AND STRUCTURES

CONCEPT LAYOUT
 MOUNT CARMEL ROAD OVER I-75

HENRY COUNTY CSNHS-0009-00(156)

SCALE: AS SHOWN DECEMBER 2011

DATE

DESIGNED BY: [] CHECKED BY: []

DATE

DESIGNED BY: [] CHECKED BY: []

DATE

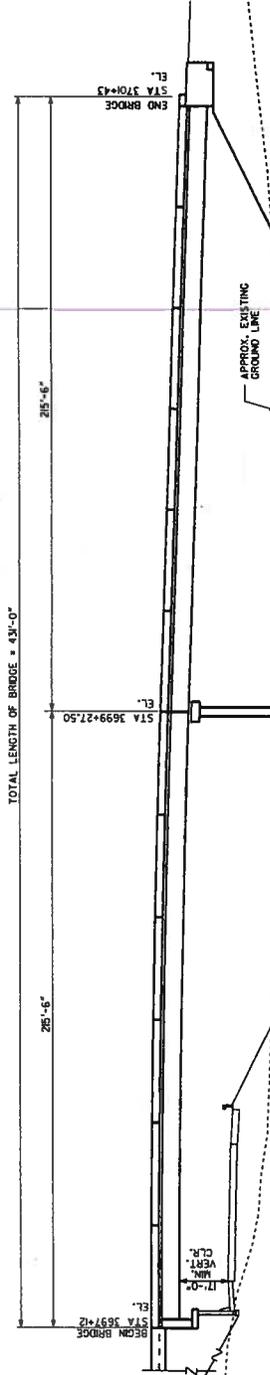
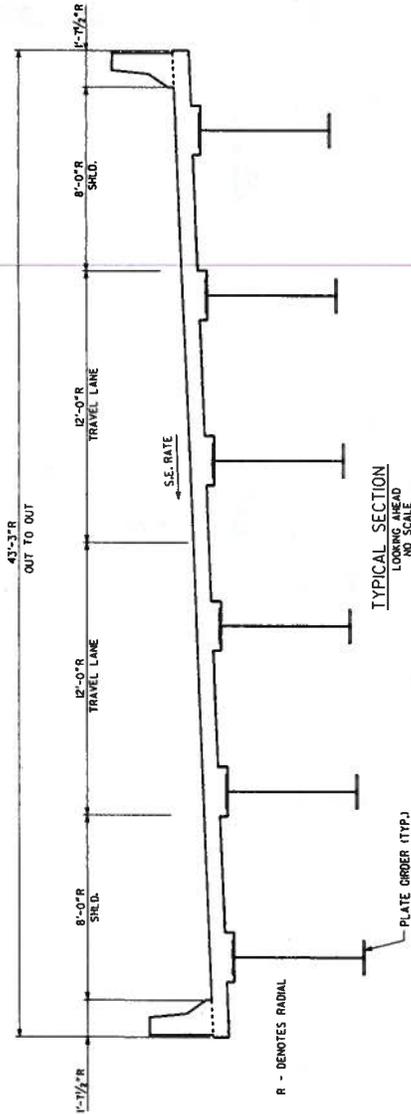
DESIGNED BY: [] CHECKED BY: []

DATE

ELEVATION
 SCALE 1" = 10'

PIV STA 20+00.00
 PVI EL. 823.25
 2.3120%
 550 FT. V.C.
 -2.9769%
 PROPOSED GRADE DATA
 MOUNT CARMEL ROAD

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



PROJECT P.J. NO. 000956
BRIDGE NO. 2



GEORGIA
DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION-OFFICE OF BRIDGES AND STRUCTURES

CONCEPT LAYOUT
JONESBORO ROAD ACCESS OVER I-75 NB
HENRY COUNTY CSNHS-0009-00(156)

SCALE: AS SHOWN
DATE: MAY 2002

DATE	REVISIONS

DRAWING NO.
35-01
BRIDGE SHEET
1 OF 1

SCALE: 1 INCH WHEN PRINTED FULL SIZE

ATTACHMENT 2

Detailed Cost Estimates

Estimated costs for various items and services, including materials, labor, and overhead. The table below provides a breakdown of these costs.

Item/Service	Quantity	Unit Cost	Total Cost
Material A	100	\$1.50	\$150.00
Material B	200	\$2.00	\$400.00
Labor (Hourly)	500	\$15.00	\$7,500.00
Overhead (Fixed)	-	-	\$1,000.00
Total Estimated Cost			\$9,050.00

Additional cost estimates for specialized equipment and subcontractor services. These costs are subject to market fluctuations and availability.

Item/Service	Quantity	Unit Cost	Total Cost
Specialized Equipment	1	\$5,000.00	\$5,000.00
Subcontractor Services	100	\$100.00	\$10,000.00
Total Estimated Cost			\$15,000.00

Summary of total project costs, including contingencies and reserves. The total project cost is estimated to be \$24,050.00.

Category	Amount
Materials and Labor	\$9,050.00
Equipment and Subcontractors	\$15,000.00
Total Project Cost	\$24,050.00

Notes: All costs are estimates and subject to change. Contingencies are included for unforeseen circumstances. The project budget is set at \$24,050.00.

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE PROJECT No. , **OFFICE**
 DATE

P.I. No.

FROM

TO Ronald E. Wishon, Project Review Engineer

SUBJECT REVISIONS TO PROGRAMMED COSTS

PROJECT MANAGER

MNGT LET DATE

MNGT R/W DATE

PROGRAMMED COST (TPro W/OUT INFLATION)

CONSTRUCTION \$

RIGHT OF WAY \$

UTILITIES \$

LAST ESTIMATE UPDATE

DATE

DATE

DATE

REVISED COST ESTIMATES

CONSTRUCTION* \$

RIGHT OF WAY \$

UTILITIES** \$

* Costs contain % Engineering and Inspection and % Construction Contingencies.

** Costs contain % contingency.

REASON FOR COST INCREASE

Concept revision - Inclusion of reversible lanes.

CONTINGENCY SUMMARY

Construction Cost Estimate: \$ (Base Estimate)

Engineering and Inspection: \$ (Base Estimate x %)

Construction Contingency: \$ (Base Estimate x %)

Total Fuel Adjustment \$ (From attached worksheet)

Total Liquid AC Adjustment \$ (From attached worksheet)

(The Construction Contingency is based on the Project Improvement Type in TPro.)

Construction Total: \$

Utility Cost Estimate: \$

Utility Contingency: \$ %

Utility Total: \$

REIMBURSABLE UTILITY COST

Utility Owner

Reimbursable Cost

Central Georgia EMC	\$60,368
Georgia Power (Distribution)	\$40,000
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Attachments

c: Genetha Rice-Singleton, State Program Control Administrator

JOB ESTIMATE REPORT

JOB NUMBER : 0009156_SB_FIN SPEC YEAR: 01
DESCRIPTION: I-75 REVERSIBLE LANES (SR 155 TO EAGLES LANDING)

***** This job contains obsolete items *****

COST GROUPS FOR JOB 0009156_SB_FIN

COST GROUP	DESCRIPTION	QUANTITY	PRICE	AMOUNT	ACTIVE?
ERTHLS	EARTHWORK (LS)	1.000			N
ASPH	ASPHALT (TN)				N
BASE	BASE/AGGREGATE (TN)				N
CONC	CONCRETE (SY)				N
DRNGEA	DRAINAGE (EA)				N
DRNGLF	DRAINAGE (LF)				N
EROC	EROSION CONTROL (SY)				N
GDRL	GUARDRAIL/BARRIER (LF)				N
GENR	GENERAL/FIELD OFFICE/ETC (LS)				N
MILL	MILLING (SY)				N
MISC	MISCELLANEOUS (LS)				N
NONR	NON-ROADWAY (LS)				N
RPMK	RAISED PAVEMENT MARKING				N
SRFT	SURFACE TREATMENT (SY)				N
TRFT	TRAFFIC CONTROL-TEMPORARY (LS)				N
STRO	STRUCTURES, OTHER (SF)				N
WALL	WALLS (SF)				N
RMVL	REMOVALS (LS)				N
SSGN	SMALL ROADSIDE SIGNS				N
PFPM	PREFORMED PLASTIC PAVEMENT MARKING/SYMBOLS				N
PLSY	PLASTIC PAVEMENT MARKING BY SQUARE YARD				N
SIGNPCTO	SIGNS (PERCENT OF JOB)	0.000		0.00	N
THSL	THERMO PLASTIC LINEAR PAVEMENT MARKING				N
THSY	THERMO PLASTIC MARKING SQUARE YARDS				N
SBAR	SOUND BARRIERS (SF)				N
ACTIVE COST GROUP TOTAL					0.00
INFLATED COST GROUP TOTAL					0.00

ITEMS FOR JOB 0009156_SB_FIN

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0010	210-0100		LS	GRADING COMPLETE - 0009156	1.000	6700000.00	6700000.00
0011	432-0211		SY	MILL ASPH CONC PVMT/ 2.75" DEP	218573.000	1.39	303816.47
0012	456-2012		GLM	INTENT. RUMB. STRIPS - GRND-IN-PL (CONT)	15.800	658.51	10404.61
0015	400-3604		TN	ASPH CONC 12.5 MM SMA, GP2, INCL P-MBM&HL	34506.000	91.87	3170073.81

JOB ESTIMATE REPORT

0020	400-3624	TN	ASPH CONC 12.5 MM PEM,GP2,INCL P-MBM&HL	30338.000	67.63	2052016.81
0025	402-3121	TN	RECYL AC 25MM SP,GP1/2,BM&HL	71854.000	51.93	3731764.79
0030	402-3130	TN	RECYL AC 12.5MM SP,GP2,BM&HL	8144.000	62.95	512743.88
0035	402-3190	TN	RECYL AC 19 MM SP,GP 1 OR 2 , INC BM&HL	46493.000	51.79	2408159.33
0040	413-1000	GL	BITUM TACK COAT	31212.000	1.79	56131.66
0045	310-1101	TN	GR AGGR BASE CRS, INCL MATL	229656.000	14.15	3250348.93
0046	439-0022	SY	PLN PC CONC PVMT CL3 10" THK	204924.000	62.00	12705288.00
0050	441-0204	SY	PLAIN CONC DITCH PAVING, 4 IN	5000.000	24.13	120661.50
0055	610-1055	LF	REM GUARDRAIL	6324.000	2.17	13724.79
0060	610-1075	EA	REM GUARDRAIL ANCH, ALL TYPES	15.000	143.76	2156.49
0065	621-6002	LF	CONC BARRIER, TP S-2	65065.000	70.48	4585781.20
0070	621-6003	LF	CONC BARRIER, TP S-3	9350.000	193.39	1808196.50
0085	641-5001	EA	GUARDRAIL ANCHORAGE, TP 1	16.000	605.37	9686.07
0090	641-5012	EA	GUARDRAIL ANCHORAGE, TP 12	16.000	1802.10	28833.61
0095	641-1100	LF	GUARDRAIL, TP T	1000.000	30.63	30633.44
0100	641-1200	LF	GUARDRAIL, TP W	12500.000	13.90	173781.50
0105	649-0018	LF	CONCRETE GLARE SCREEN, 18 INCH	28806.000	14.56	419415.36
0110	550-1180	LF	STM DR PIPE 18",H 1-10	25323.000	24.04	608866.47
0115	550-1240	LF	STM DR PIPE 24",H 1-10	1315.000	35.30	46430.05
0120	550-1300	LF	STM DR PIPE 30",H 1-10	316.000	40.90	12926.44
0125	550-1360	LF	STM DR PIPE 36",H 1-10	189.000	58.71	11097.25
0130	550-1420	LF	STM DR PIPE 42",H 1-10	30.000	81.37	2441.23
0135	550-1480	LF	STM DR PIPE 48",H 1-10	140.000	83.17	11644.99
0140	550-4218	EA	FLARED END SECT 18 IN, ST DR	26.000	398.47	10360.23
0145	550-4224	EA	FLARED END SECT 24 IN, ST DR	14.000	541.50	7581.02
0150	550-4230	EA	FLARED END SECT 30 IN, ST DR	8.000	572.48	4579.91
0155	550-4236	EA	FLARED END SECT 36 IN, ST DR	4.000	1018.08	4072.33
0160	441-0600	CY	CONC HEADWALLS	30.000	989.71	29691.49
0165	500-3101	CY	CLASS A CONCRETE	930.000	337.02	313428.93
0170	511-1000	LB	BAR REINF STEEL	101124.000	0.62	63640.37
0175	615-1000	LF	JACK OR BORE PIPE - 18"	1923.000	411.81	791925.92
0180	615-1000	LF	JACK OR BORE PIPE - 24	1422.000	260.22	370038.51
0185	668-2100	EA	DROP INLET, GP 1	1.000	1886.66	1886.67
0190	668-2105	EA	DROP INLET, GP 1, SPCL DES M1	35.000	1601.38	56048.52
0195	668-2105	EA	DROP INLET, GP 1, SPCL DES M2	114.000	1601.38	182558.02
0200	668-2110	LF	DROP INLET, GP 1, ADDL DEPTH	229.000	151.29	34646.38
0205	668-2231	EA	DROP INLET,GP 1,MOD TP M-1	19.000	1600.00	30400.00
0210	163-0232	AC	TEMPORARY GRASSING	135.000	49.23	6646.20
0215	163-0240	TN	MULCH	4725.000	107.75	509124.33
0220	163-0300	EA	CONSTRUCTION EXIT	20.000	748.96	14979.33
0225	163-0503	EA	CONSTR AND REMOVE SILT CONTROL GATE, TP 3	80.000	305.93	24474.47
0230	163-0520	LF	CONSTR AND REMOVE TEMP PIPE SLOPE DRAIN	2300.000	11.50	26465.76
0235	163-0521	EA	CONSTR AND REMOVE TEMP DITCH CHECKS	1750.000	164.57	287997.50
0240	163-0530	LF	CONSTR AND REMOVE BALED STRW EROSION CHK	8000.000	2.58	20706.32
0245	163-0541	EA	CONSTR & REM ROCK FILTER DAMS	800.000	121.54	97237.54
0250	163-0550	EA	CONS & REM INLET SEDIMENT TRAP	200.000	144.51	28903.54
0255	165-0010	LF	MAINT OF TEMP SILT FENCE, TP A	25000.000	0.47	11864.00
0260	165-0020	LF	MAINT OF TEMP SILT FENCE, TP B	20000.000	0.63	17714.20

JOB ESTIMATE REPORT

DATE : 08/28/2012

PAGE : 3

0265	165-0030	LF	MAINT OF TEMP SILT FENCE, TP C	17500.000	0.50	8849.40
0270	165-0040	EA	MAINT OF EROSION CTRL CHKDAMS/DITCH CHKS	17500.000	51.83	90705.25
0275	165-0070	LF	MAINT OF BALED STRAW EROSION CHECK	8000.000	0.89	7125.20
0280	165-0087	EA	MAINT OF SILT CONTROL GATE, TP 3	80.000	81.59	6527.29
0285	165-0101	EA	MAINT OF CONST EXIT	20.000	245.39	4907.81
0290	165-0110	EA	MAINT OF ROCK FILTER DAM	800.000	152.17	121737.79
0295	167-1000	EA	WATER QUALITY MONITORING AND SAMPLING	15.000	379.39	5690.94
0300	167-1500	MO	WATER QUALITY INSPECTIONS	54.000	444.99	24029.91
0305	171-0010	LF	TEMPORARY SILT FENCE, TYPE A	50000.000	1.23	61738.00
0310	171-0020	LF	TEMPORARY SILT FENCE, TYPE B	40000.000	1.05	42369.60
0315	171-0030	LF	TEMPORARY SILT FENCE, TYPE C	35000.000	2.45	85752.80
0320	603-2180	SY	STN DUMPED RIP RAP, TP 3, 12"	2500.000	30.89	77245.60
0325	603-7000	SY	PLASTIC FILTER FABRIC	2500.000	3.32	8300.55
0330	700-6910	AC	PERMANENT GRASSING	68.000	440.69	29967.46
0335	700-7000	TN	AGRICULTURAL LIME	120.000	40.76	4891.32
0340	700-7010	GL	LIQUID LIME	200.000	15.13	3026.52
0345	700-8100	LB	FERTILIZER NITROGEN CONTENT	2500.000	1.70	4255.38
0350	715-2100	SY	BITUM TRTD ROVING, SLOPES	25000.000	1.80	45079.25
0355	716-2000	SY	EROSION CONTROL MATS, SLOPES	40000.000	0.94	37825.20
0360	654-1003	EA	RAISED PVMT MARKERS TP 3	20125.000	2.22	44740.69
0365	636-1020	SF	HWY SGN, TP1MAT,REFL SH TP3	2600.000	11.74	30537.13
0370	636-1033	SF	HWY SIGNS, TP1MAT,REFL SH TP 9	1250.000	17.85	22320.19
0375	636-2020	LF	GALV STEEL POSTS, TP 2	300.000	23.49	7047.00
0380	636-2070	LF	GALV STEEL POSTS, TP 7	350.000	7.93	2777.59
0385	636-2090	LF	GALV STEEL POSTS, TP 9	400.000	7.77	3110.58
0390	636-5100	EA	MILEPOST SIGNS	20.000	129.90	2598.15
0405	657-1054	LF	PRF PL SD PVMT MKG,5",WH,TP PB	150000.000	2.40	361224.00
0410	657-3054	GLF	PRF PL SK PVMT MKG,5",WH,TP PB	17500.000	2.35	41298.60
0415	657-3085	GLF	PRF PL SK PVMT MKG,8",B/W,TPPB	17500.000	2.60	45589.25
0420	657-6054	LF	PRF PL SD PVMT MKG,5",YW,TP PB	140000.000	2.04	285720.40
0425	652-5801	LF	SOLID TRAF STRIPE, 8 IN, WHITE	220000.000	0.64	142872.40
0430	652-8351	GLF	SKIP POLYUREA TRAF STRIPE,5 IN,WHITE	44000.000	8.50	374000.00
0435	657-9111	LF	WET REFL SOL PVMT MKGS,5",YEL	160000.000	10.00	160000.00
0440	657-9515	EA	WET REFL PREF PVMT MKGS WRDS OR SYMB	275.000	500.00	137500.00
0443	543-9000	LS	CONSTR OF BRIDGE COMPLETE - JONESBORO ROAD	1.000	1065680.00	1065680.00
0444	543-1100	LS	CONSTR BR-COMP-BOTTOM OF CAP JONESBORO ROAD	1.000	456720.00	456720.00
0445	543-9000	LS	CONSTR OF BRIDGE COMPLETE - MT. CARMEL ROAD	1.000	979055.00	979055.00
0446	543-1100	LS	CONSTR BR-COMP-BOTTOM OF CAP MT. CARMEL ROAD	1.000	419595.00	419595.00
0447	540-1102	LS	REM OF EX BR, BR NO - MT. CARMEL ROAD	1.000	200000.00	200000.00
0450	627-1010	SF	MSE WALL FACE, 10 - 20 FT HT, WALL NO - 0009156	72850.000	35.48	2584718.00
0455	624-0410	SF	SOUND BARRIER	50000.000	20.00	1000000.00
0460	150-1000	LS	TRAFFIC CONTROL - 0009156	1.000	4500000.00	4500000.00
0465	009-3000	LS	MISCELLANEOUS CONSTRUCTION ITS ACTIVITIES	1.000	5250000.00	5250000.00

JOB ESTIMATE REPORT

ITEM TOTAL	INFLATED ITEM TOTAL				
0470	009-3000	LS	MISCELLANEOUS CONSTRUCTION TOLL	1.000	3500000.00
			INFRASTRUCTURE		
0475	009-3000	LS	MISCELLANEOUS CONSTRUCTION GANTRIES & SIGNING-MARKING	1.000	6610000.00
0476	683-1101	EA	LIGHT TOW/STEL/100'MH/LW EQUIP	1.000	25000.00
0480	639-2001	LF	STEEL WIRE STRAND CABLE, 1/4"	2000.000	1.74
0485	639-4004	EA	STRAIN POLE, TP IV	4.000	5501.41
0490	647-1000	LS	TRAF SIGNAL INSTALLATION NO - JONESBORO ROAD	1.000	50375.96
0495	936-1001	EA	CCTV SYSTEM, TYPE B	1.000	5629.41
0500	936-8000	LS	TESTING	1.000	5460.00
0505	939-4040	EA	TYPE D CABINET	1.000	5034.11
0510	999-2010	LS	DESIGN COMPLETE	1.000	5706627.77
ITEM TOTAL					80449748.49
INFLATED ITEM TOTAL					80449748.49

TOTALS FOR JOB 0009156_SB_FIN

ESTIMATED COST:	80449748.53
CONTINGENCY PERCENT (0.0):	0.00
ESTIMATED TOTAL:	80449748.53

PROJ. NO. CSNHS-0009-00(156) - REVERSIBLE LANE
P.I. NO. 0009156
DATE 8/28/2012

CALL NO.

INDEX (TYPE) **DATE** **INDEX**
 REG. UNLEADED Aug-12 \$ 3.209
 DIESEL \$ 3.863
 LIQUID AC \$ 567.00

Link to Fuel and AC Index:
<http://www.dot.ga.gov/doingbusiness/Materials/Pages/asphaltcementindex.aspx>

LIQUID AC ADJUSTMENTS

PA=[(APM-APL)/APL]xTMTxAPL

Asphalt
 Price Adjustment (PA) Max. Cap 60% 3230181.99 \$ 3,230,181.99
 Monthly Asphalt Cement Price month placed (APM) \$ 907.20
 Monthly Asphalt Cement Price month project let (APL) \$ 567.00
 Total Monthly Tonnage of asphalt cement (TMT) 9494.95

ASPHALT	Tons	%AC	AC ton
Leveling		5.0%	0
12.5 OGFC		5.0%	0
12.5 mm	71552	5.0%	3577.6
9.5 mm SP		5.0%	0
25 mm SP	71854	5.0%	3592.7
19 mm SP	46493	5.0%	2324.65
	189899		9494.95

BITUMINOUS TACK COAT

Price Adjustment (PA) Max. Cap 60% 45,606.77 \$ 45,606.77
 Monthly Asphalt Cement Price month placed (APM) \$ 907.20
 Monthly Asphalt Cement Price month project let (APL) \$ 567.00
 Total Monthly Tonnage of asphalt cement (TMT) 134.05869

Bitum Tack
 Gals 31212
 gals/ton 232.8234
 tons 134.05869

PROJ. NO.

P.I. NO.

DATE

CSNHS-0009-00(156) - REVERSIBLE LANE

0009156

8/28/2012

CALL NO.

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)

Monthly Asphalt Cement Price month placed (APM)

Monthly Asphalt Cement Price month project let (APL)

Total Monthly Tonnage of asphalt cement (TMT)

\$ 0
\$ 907.20
\$ 567.00
0

60%

Max. Cap

Bitum Tack

Single Surf. Trmt.

Double Surf. Trmt.

Triple Surf. Trmt

SY

Gals/SY

Gals

gals/ton

tons

0.20
0.44
0.71

0
0
0

232.8234
232.8234
232.8234

0
0
0
0

TOTAL LIQUID AC ADJUSTMENT

\$ 3,275,788.76

GEORGIA DEPARTMENT OF TRANSPORTATION
PRELIMINARY ROW COST ESTIMATE SUMMARY

Date: 1/4/2012 Project: CSNHS-0009-00(156)
 Revised: 2/28/2012 County: Henry
 PI: 0009156

Description: Alternate 11
 Project Termini: I-75 Managed Lanes from SR 155 to SR 138

Parcels: 5 Existing ROW: Varies
 Required ROW: Varies

Land and Improvements \$1,647,000.00

Proximity Damage	\$0.00
Consequential Damage	\$0.00
Cost to Cures	\$0.00
Trade Fixtures	\$0.00
Improvements	\$45,000.00

Valuation Services \$15,625.00

Legal Services \$40,875.00

Relocation \$10,000.00

Demolition \$0.00

Administrative \$45,000.00

TOTAL ESTIMATED COSTS \$1,758,500.00

TOTAL ESTIMATED COSTS (ROUNDED) \$1,759,000.00

Preparation Credits	Hours	Signature

Prepared By: Lashone Alexander CG#: 2886999 Date: 02/28/2012
 Approved By: Debra Floyd CG#: 2886999 Date: 02/28/2012

NOTE: No Market Appreciation is included in this Preliminary Cost Estimate

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE **CSNHS-0009-00(156), Henry County, P.I. # 0009156** OFFICE Thomaston
I-75 from Eagles Landing Pky to SR-155 - Managed Lanes - PH 1
DATE March 29, 2011

FROM Kerry Gore, District Utilities Engineer

TO Mike Dover, Project Manager

SUBJECT **PRELIMINARY UTILITY COST (ESTIMATE)**

As requested by your office, we are furnishing you with a Preliminary Utility Cost estimate for each utility with facilities potentially located within the project limits.

<u>FACILITY OWNER</u>	<u>NON-REIMBURSABLE</u>	<u>REIMBURSABLE</u>
Atlanta Gas Light	120,900	0
Central Georgia EMC	0	60,368
Charter Communications	10,350	0
Georgia Power (Distribution)	0	40,000
Henry County Water & Sewer	11,510	0
TOTALS	\$142,760	\$100,368

Total Preliminary Utility Cost Estimate **\$243,128**.

If you have any questions, please contact Harland Smith at 706-646-6696.

KG/pls

cc: Jeff Baker, P.E., State Utilities Engineer (*via: e-mail*)
Angela Robinson, Office of Financial Management (*via: e-mail*)
Mark Sanford, Area Engineer (*via: e-mail*)

CRASH ANALYSIS

The most recent three years (2006 – 2008) crash data available for I-75 between SR 138 and SR 155 was collected from Georgia Department of Transportation (GDOT) Office of Traffic Safety and Design and summarized in Table 1.

Table 1 Crash Data Summary

Year	Crash Type										
	Angle		Head On		Not a Collision w/ A Motor Vehicle		Rear End		Sideswipe		Total
2006	130	8.7%	13	0.9%	249	16.7%	873	58.8%	222	14.9%	1487
2007	94	6.6%	19	1.3%	246	17.3%	870	61.1%	195	13.7%	1424
2008	96	8.1%	15	1.3%	231	19.5%	679	57.2%	165	13.9%	1186

The data indicates that a total of 1487, 1424 and 1186 crashes occurred on I-75 between SR 138 and SR 155 in 2006, 2007 and 2008, respectively. Among all types of crashes, rear end crash accounted for more than 50% in all three years.

Fatality rate, injury rate and overall crash rate were calculated and compared with statewide average rates for urban interstate highways, and summarized in Table 2.

Table 2 Crash Rates Summary

Year	Fatality			Injury			All Crashes		
	No. of Fatalities	Fatality Rate (100 MVM)	Statewide Average Fatality Rate (100 MVM)	No. of Injuries	Injury Rate (100 MVM)	Statewide Average Injury Rate (100 MVM)	No. of Crashes	Crash Rate (100 MVM)	Statewide Average Crash Rate (100 MVM)
2006	5	0.85	0.73	458	78	69	1487	252	200
2007	5	0.86	0.58	447	77	63	1424	246	186
2008	5	0.86	0.62	326	56	63	1186	205	187

The overall crash rate and fatality rate for this segment of I-75 was higher than statewide average rates for urban interstate highways for all three years while the injury rate was higher than the statewide average rate for 2006 and 2007 but was lower in 2008.

ATTACHMENT 4

Traffic Volumes

Table 1: Traffic Volumes at Key Intersections

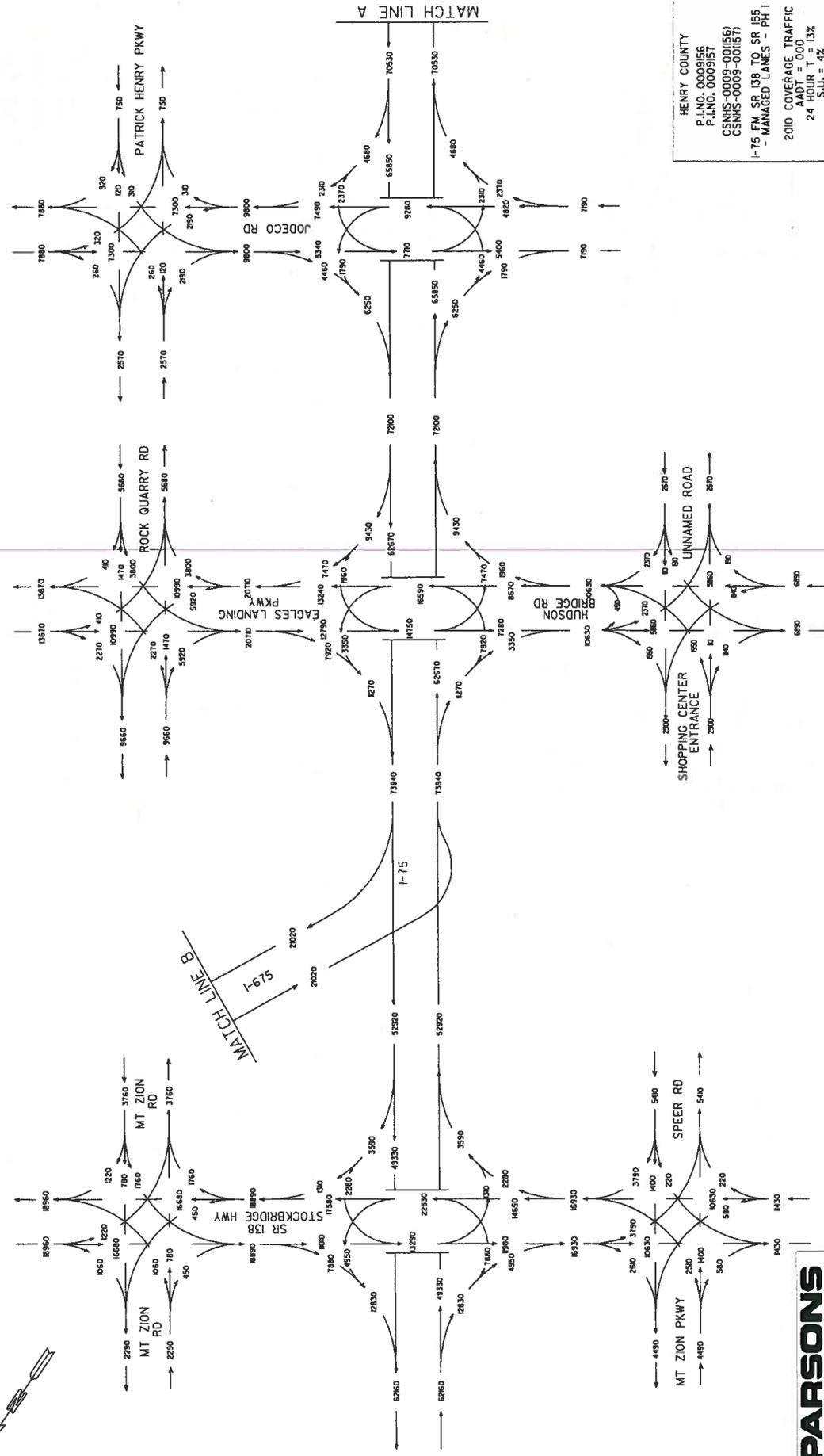
Location	Direction	Volume
Intersection 1	Northbound	1200
	Southbound	1100
	Eastbound	800
	Westbound	700
Intersection 2	Northbound	900
	Southbound	850
	Eastbound	600
	Westbound	550

Table 2: Traffic Volumes at Key Intersections

Location	Direction	Volume
Intersection 3	Northbound	1000
	Southbound	950
	Eastbound	700
	Westbound	650
Intersection 4	Northbound	800
	Southbound	750
	Eastbound	500
	Westbound	450

Table 3: Traffic Volumes at Key Intersections

Location	Direction	Volume
Intersection 5	Northbound	1100
	Southbound	1050
	Eastbound	800
	Westbound	750
Intersection 6	Northbound	950
	Southbound	900
	Eastbound	650
	Westbound	600

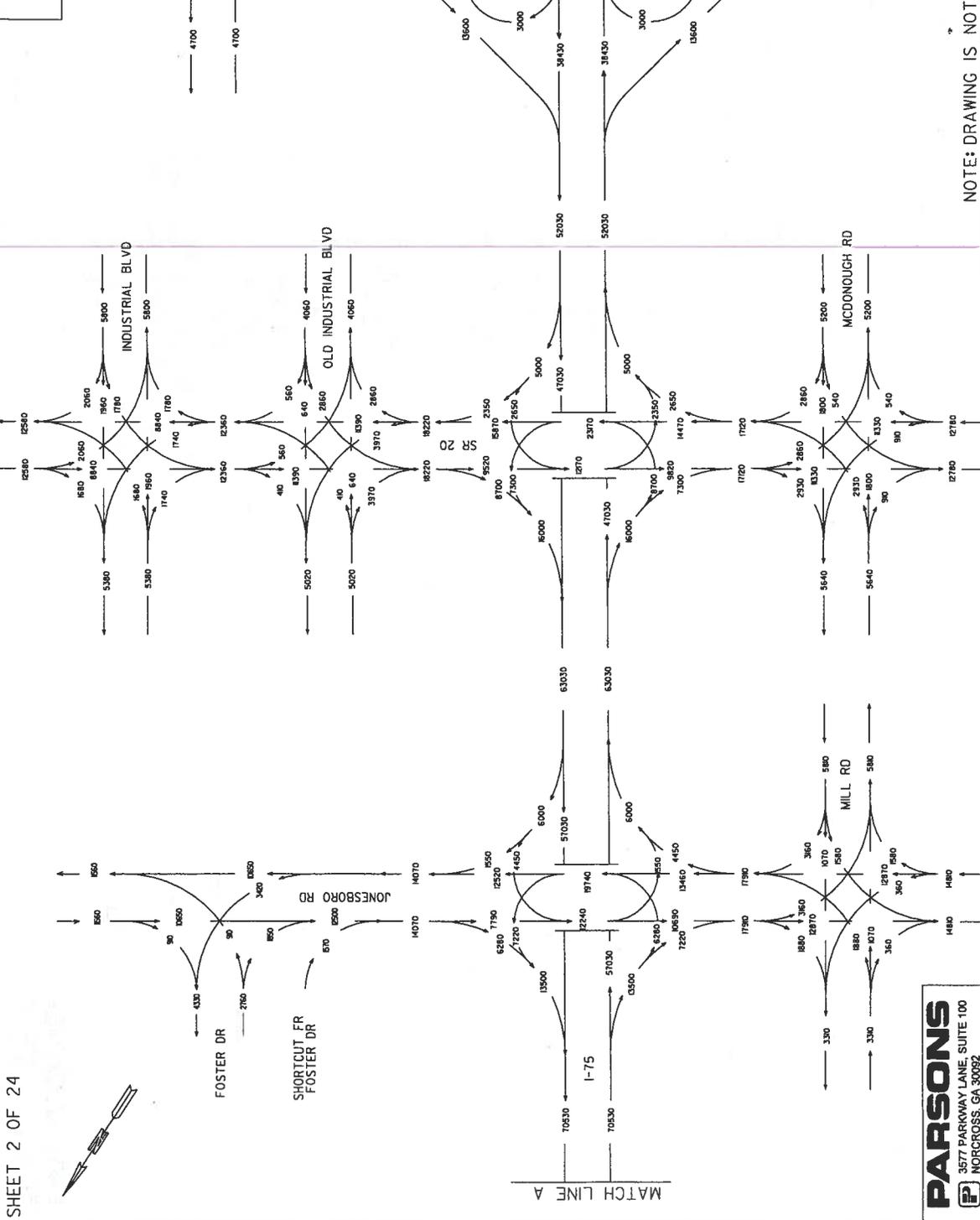


HENRY COUNTY
P.L.NO. 000916
P.L.NO. 000917
CSNHS-0009-001(56)
CSNHS-0009-001(57)
I-75 FM SR 138 TO SR 155
2010 COVERAGE TRAFFIC
A.A.D.T. = 000
24 HOUR T = 13%
S.L.U. = 4%
COMB. = 9%
10/2011

NOTE: DRAWING IS NOT TO SCALE.



GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING



HENRY COUNTY
P.L.N.O. 0009156
P.L.N.O. 0009157
CSNHS-0009-001(56)
CSNHS-0009-001(57)
I-75 FM SR 138 TO SR 155
- MANAGED LANES - PH I
200 COVERAGE TRAFFIC
AADT = 000
24 HOUR T = 13%
SUB = 4%
COMB. = 5%
ID/2011

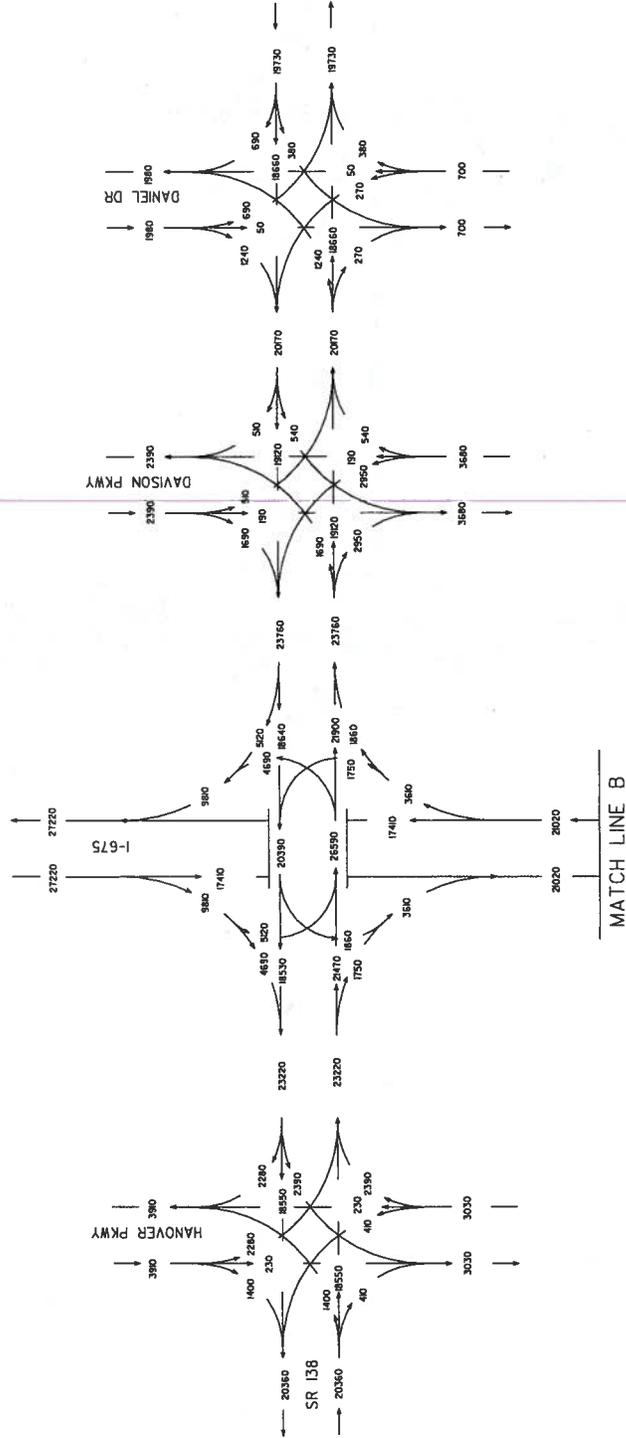
NOTE: DRAWING IS NOT TO SCALE.

PARSONS
3577 PARKWAY LANE, SUITE 100
NORCROSS, GA 30092

MATCH LINE A

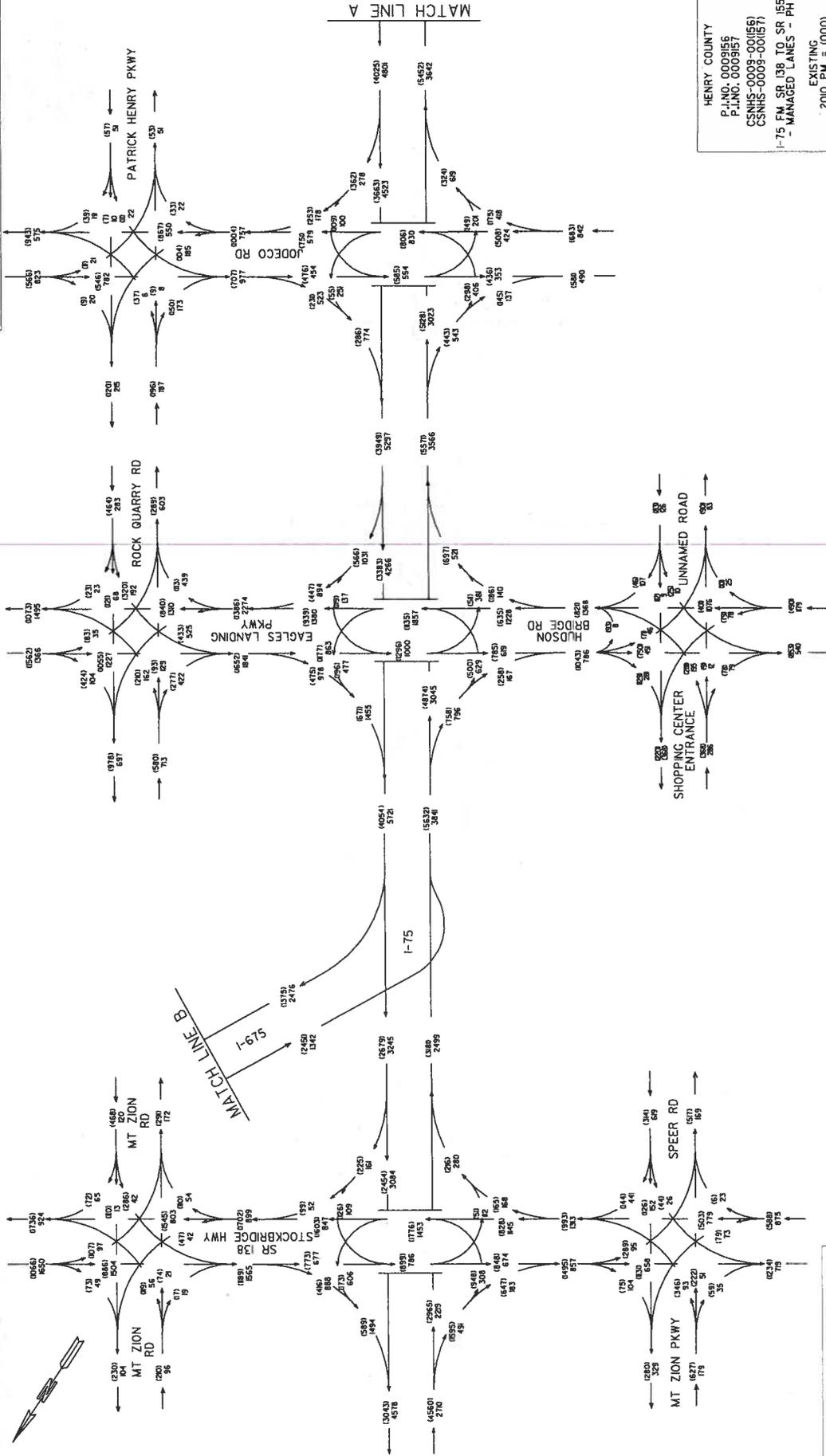


GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING



HENRY COUNTY
 P.L.N.O. 0009156
 P.L.N.O. 0009157
 CSNHS-0005-001(56)
 CSNHS-0005-001(57)
 I-75 FM SR 138 TO SR 165
 - MANAGED LANES - PH 1
 2010 COVERAGE TRAFFIC
 24 HOUR T = 13%
 S.U.J. = 4%
 COMB. = 5%
 10/2011

NOTE: DRAWING IS NOT TO SCALE.

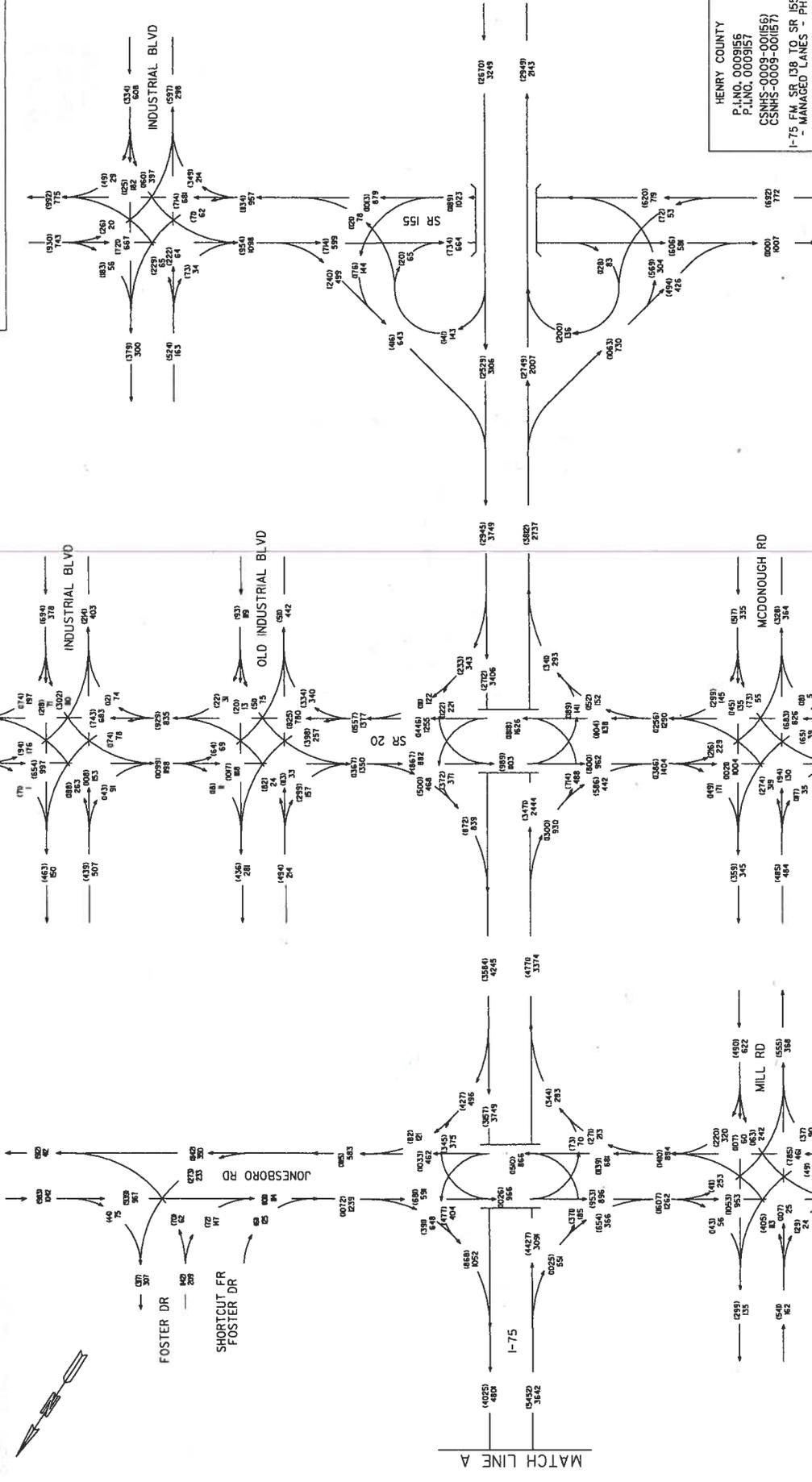


HENRY COUNTY
 P.L.N.O. 0009156
 P.L.N.C. 0009157
 CSNHS-0009-001(56)
 CSNHS-0009-001(57)
 I-75 FM SR 138 TO SR 155
 - MANAGED LANES - PH I

EXISTING
 2010 PM = (000)
 2010 AM = 000
 24 HOUR = 134

10/20/11

NOTE: DRAWING IS NOT TO SCALE.

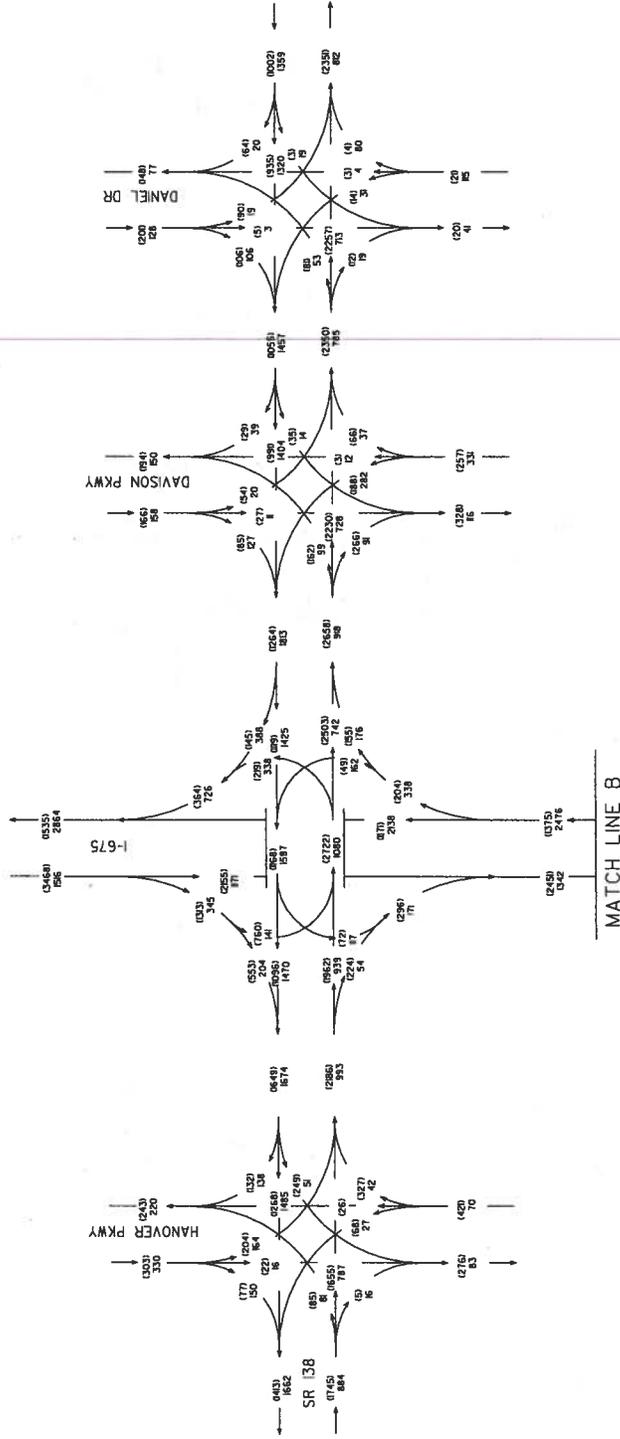
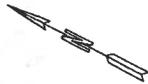


HENRY COUNTY
 P.L.N.O. 0009156
 P.L.N.O. 0009157
 C.S.N.H.S.-0009-001(56)
 C.S.N.H.S.-0009-001(57)
 I-75 P.L. SR 158 TO SR 155
 - MANAGED LANES - PH I

EXISTING
 2010 PM = 1000
 2010 AM = 000
 24 HOUR T = 13%

1" = 50'

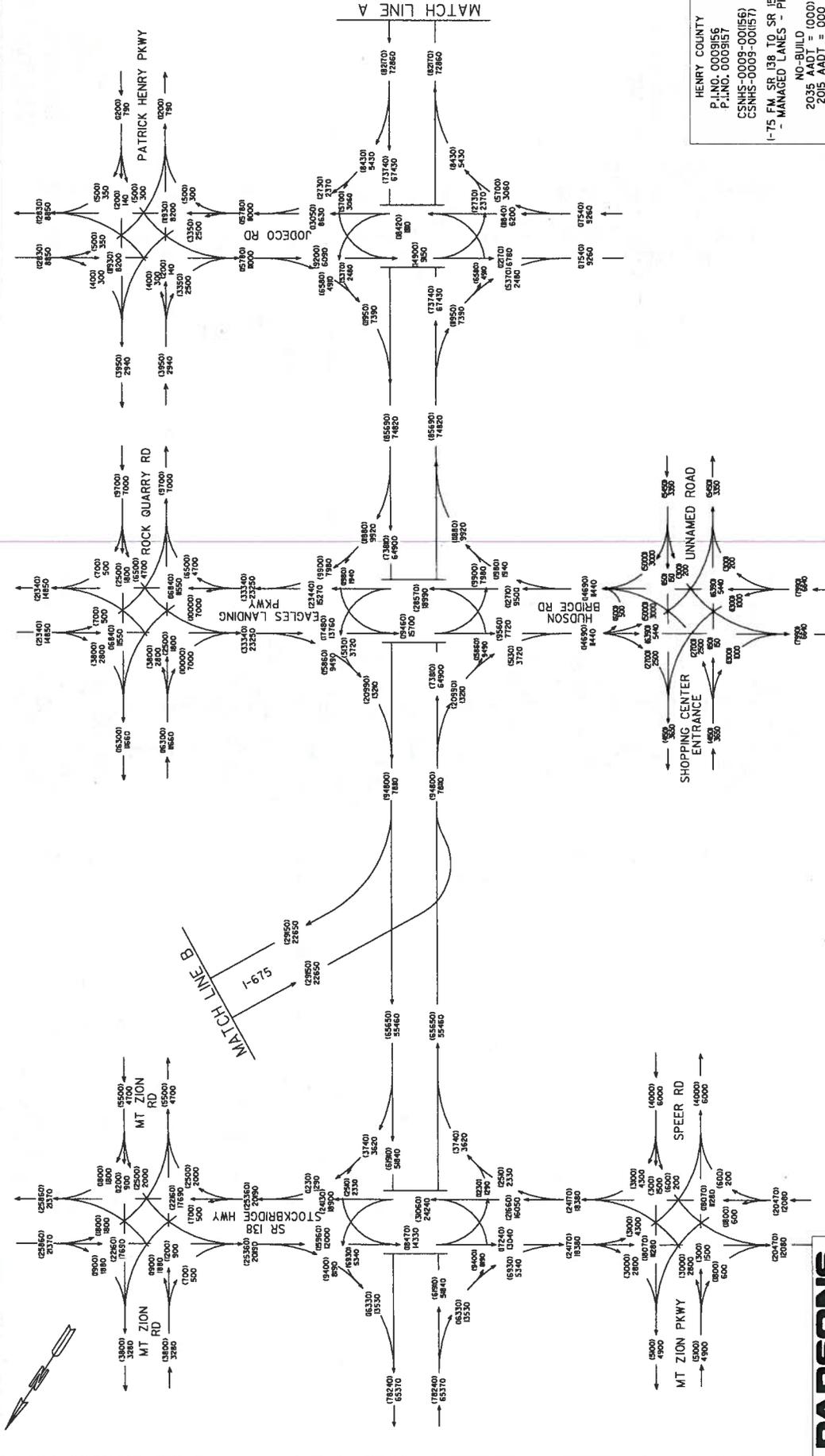
NOTE: DRAWING IS NOT TO SCALE.



HENRY COUNTY
P.L.N.D. 0009156
P.L.N.D. 0009157
CSNHS-0009-00156
CSNHS-0009-00157
I-75 FM SR 138 TO SR 155
- MANAGED LANES - PH I

EXISTING
200 PM = 1000
200 AM = 000
24 HOUR = 13%

NOTE: DRAWING IS NOT TO SCALE.

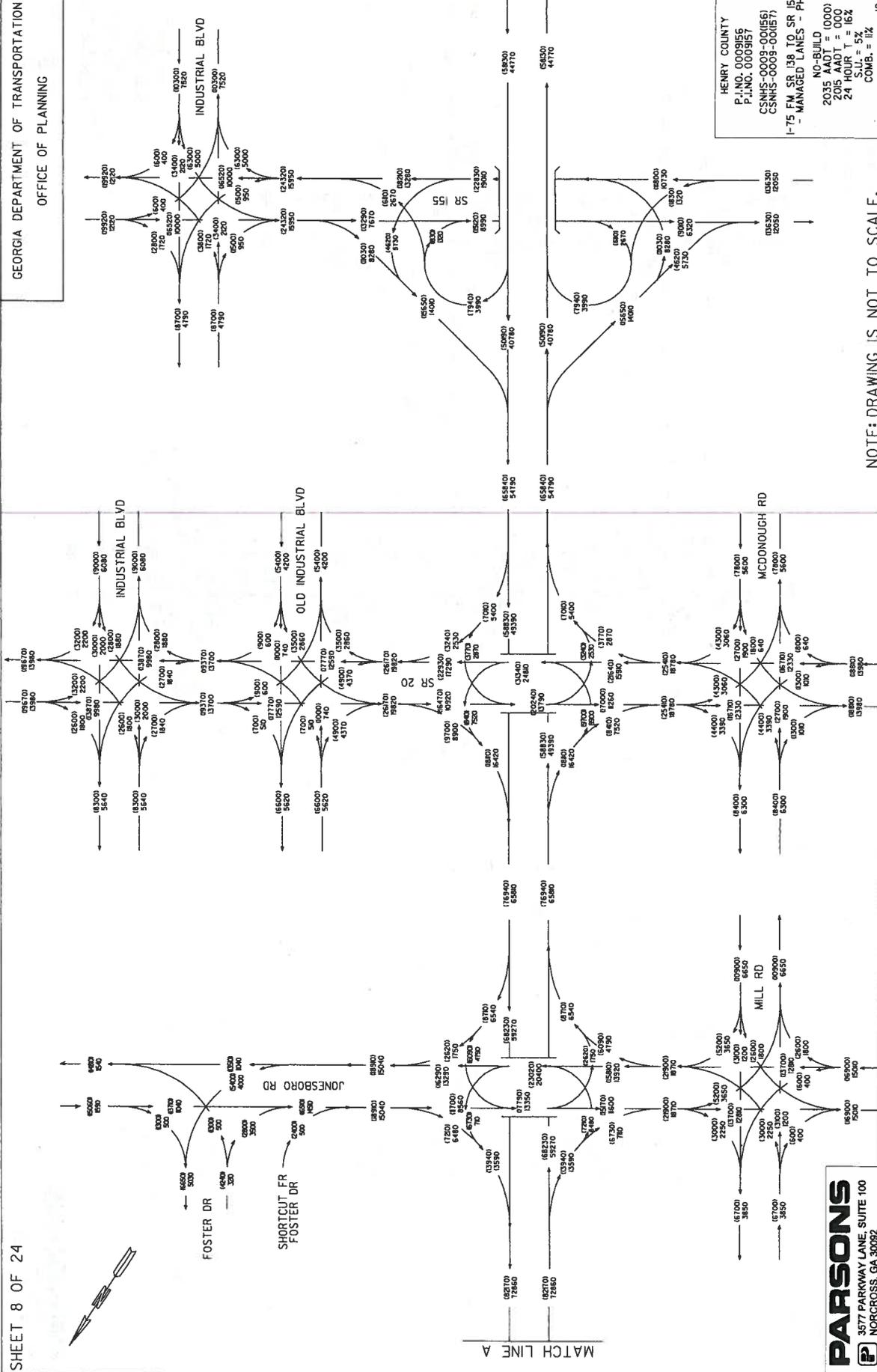


HENRY COUNTY
 P.L.NO. 000956
 P.L.NO. 000957
 CSNHS-0008-00156)
 CSNHS-0009-00157)
 I-75 FM SR 138 TO SR 155
 NO-BUILD
 2035 AADT = 6000
 2015 AADT = 6000
 24 HOUR = 57162
 COMB. = 11%

NOTE: DRAWING IS NOT TO SCALE.



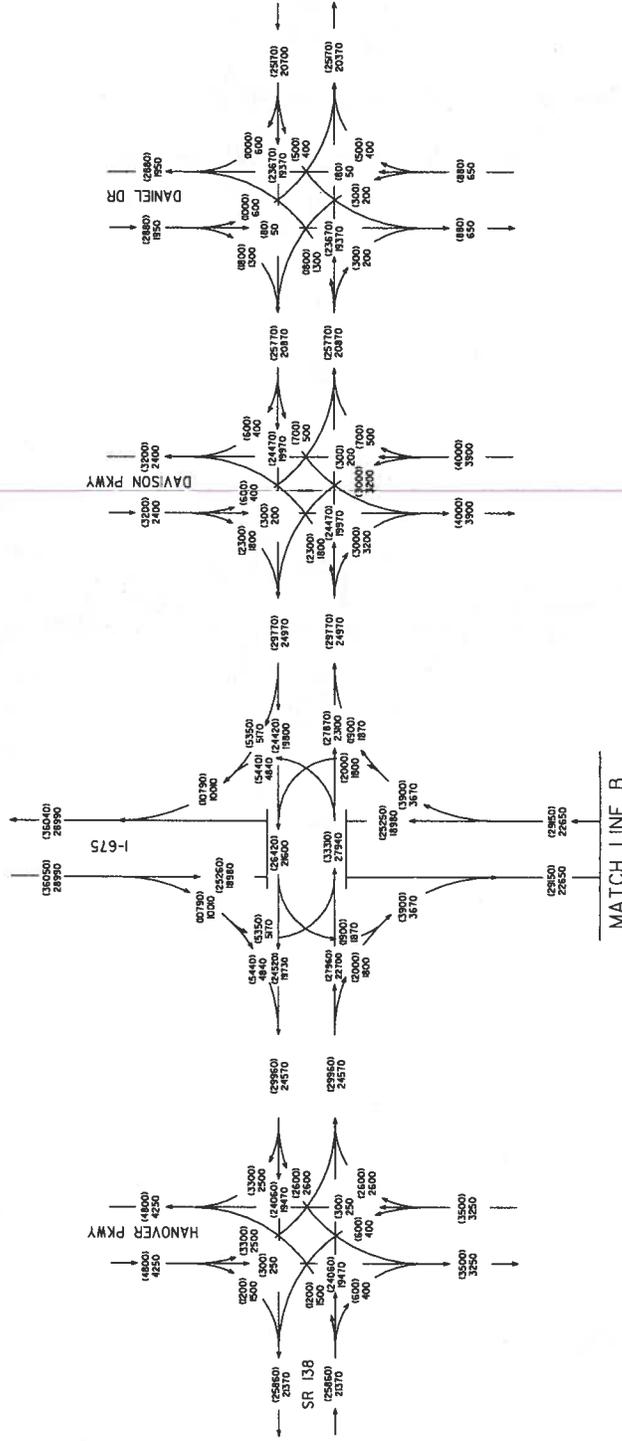
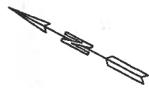
GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING



HENRY COUNTY
 P.I. NO. 0009156
 P.L. NO. 0009157
 CSNHS-0009-00(156)
 CSNHS-0009-00(157)
 I-75 FM SR 138 TO SR 155
 - MANAGED LANES - PH I

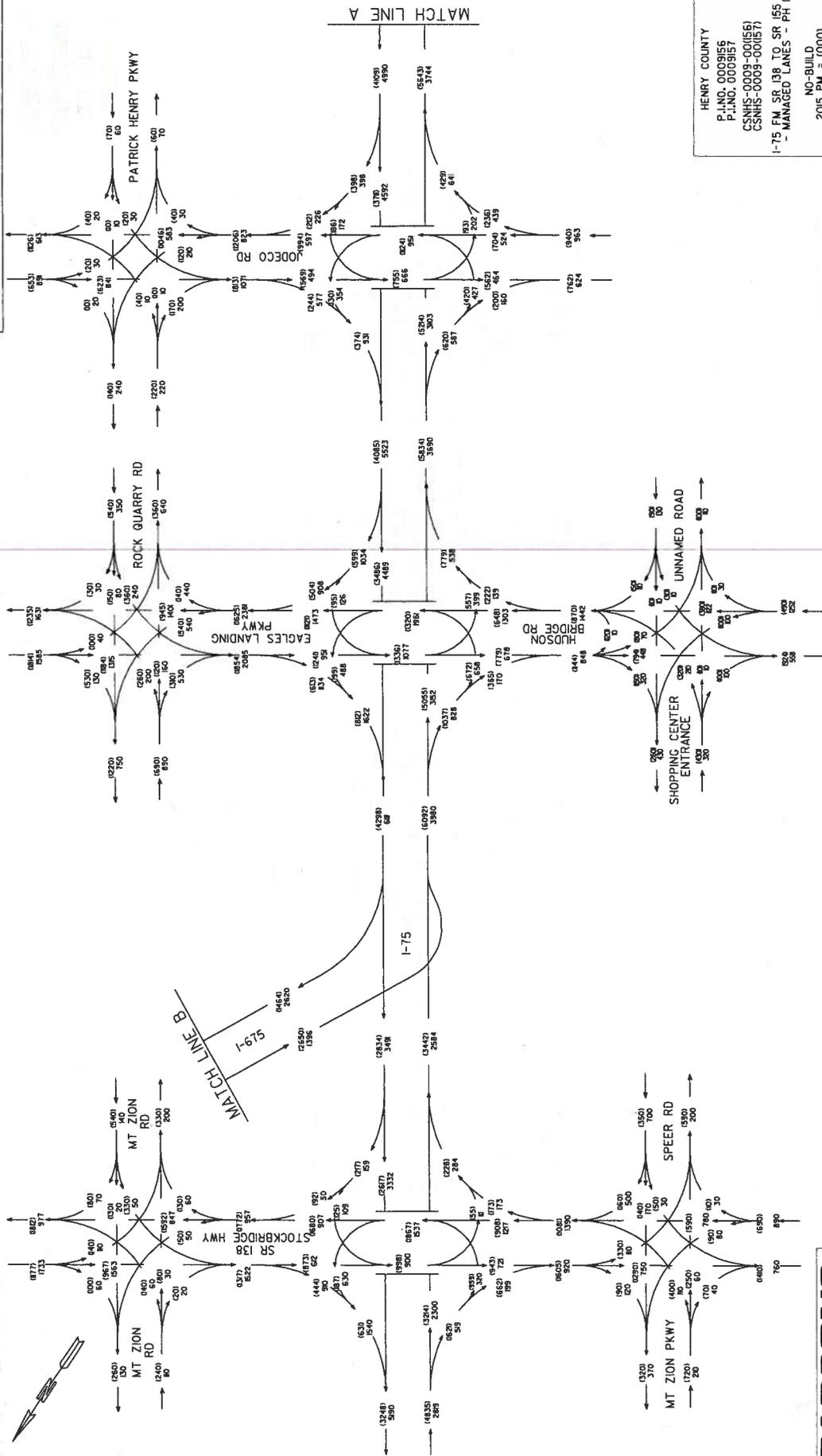
NO-BUILD
 2035 AADT = 0000
 2015 AADT = 000
 24 HOUR T = 16%
 S.L. = 5%
 COMB. = 11%
 10/20/01

NOTE: DRAWING IS NOT TO SCALE.



HENRY COUNTY
 P.I.NO. 0009156
 P.I.NO. 0009157
 CSNHS-0009-00156
 CSNHS-0003-00157
 I-75 FM SR 138 TO SR 155
 - MANAGED LANES - PH I
 NO-BUILD
 2035 AADT = 1000
 2015 AADT = 000
 24 HOUR = 5%
 COMB. = 11%
 10/2011

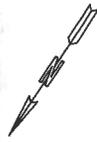
NOTE: DRAWING IS NOT TO SCALE.



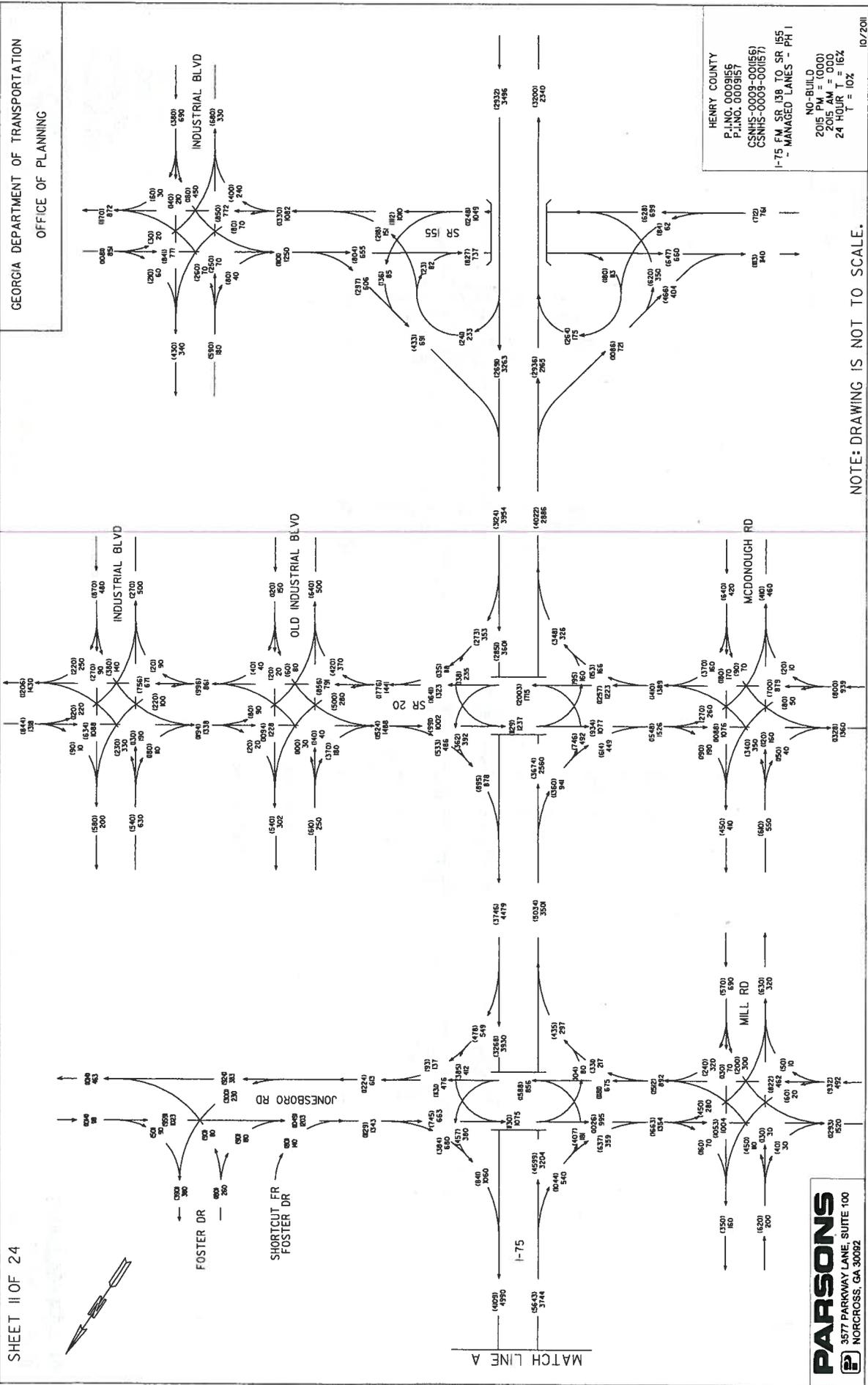
HENRY COUNTY
 P.L.N.O. 0009156
 P.L.N.O. 0009157
 CSNHS-0009-00156
 CSNHS-0009-00157
 I-75 FM SR 138 TO SR 155
 - MANAGED LANES - PH I

NO-BUILD
 2015 PM = 1000
 2015 AM = 000
 24 HOUR T = 162
 T = 102

NOTE: DRAWING IS NOT TO SCALE.



GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

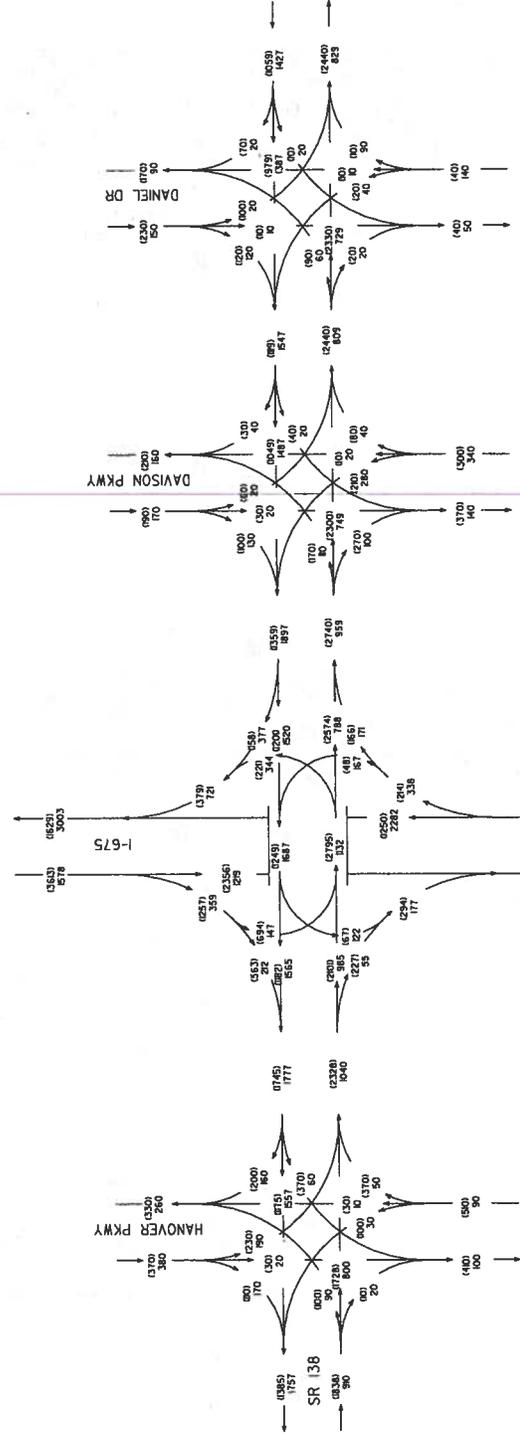
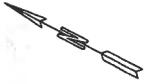


HENRY COUNTY
 P.I. NO. 0009156
 P.L. NO. 0009157
 CSNHS-0009-001(56)
 CSNHS-0009-001(57)
 I-75 FM SR 138 TO SR 155
 I - MANAGED LANES - PH I

NO-BUILD
 2015 11 10 10:00
 2015 11 10 10:00
 24 HOUR T = 16Z
 T = 10Z

NOTE: DRAWING IS NOT TO SCALE.

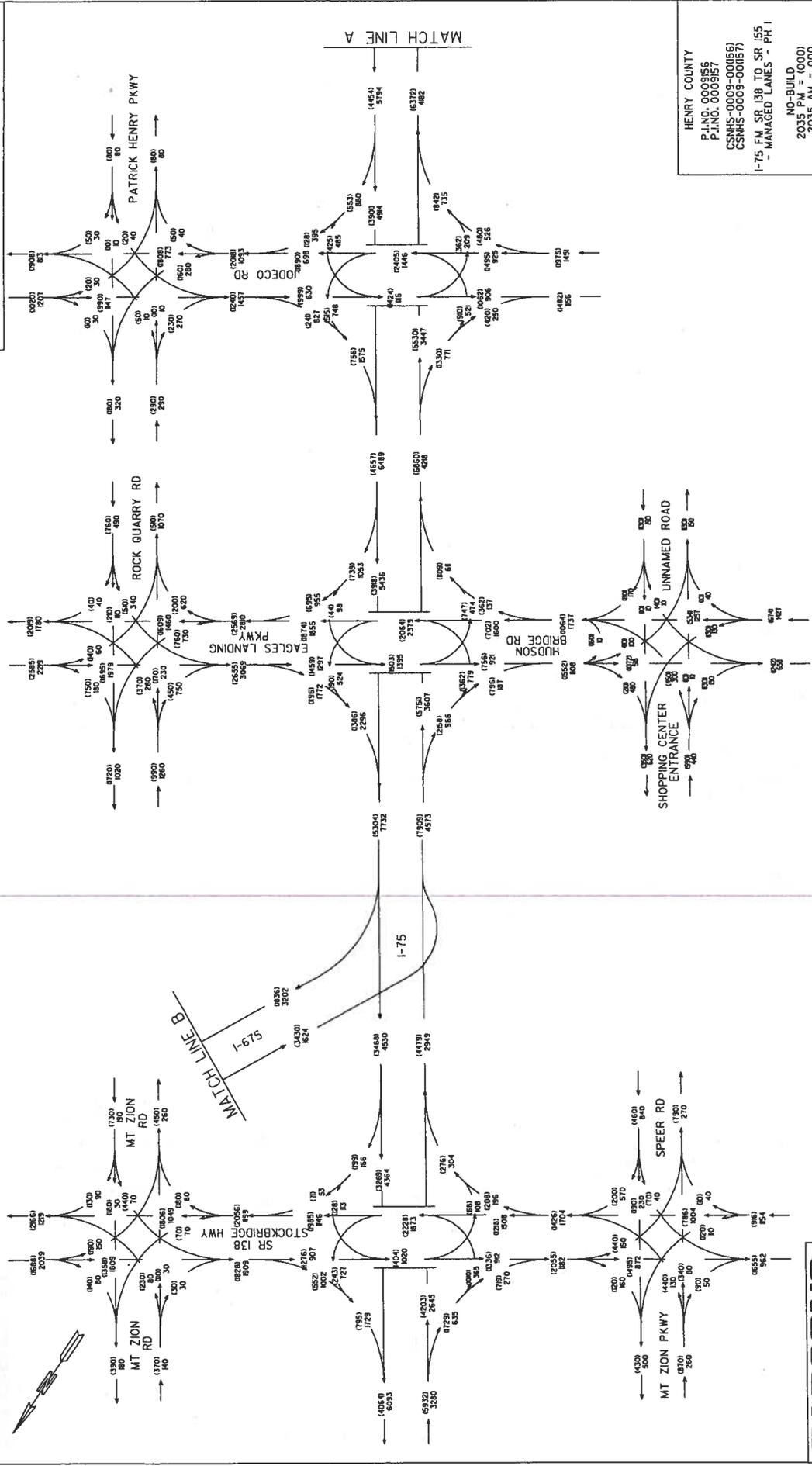
MATCH LINE A



HENRY COUNTY
 P.I.NO. 000956
 P.I.NO. 000957
 CSNHS-0009-00156)
 CSNHS-0009-00157)
 I-75 FM SR 138 TO SR 155
 - MANAGED LANES - PH I

NO-BUILD
 2015 PM = (000)
 2015 AM = (000)
 24 HOUR = 184
 1" = 102'

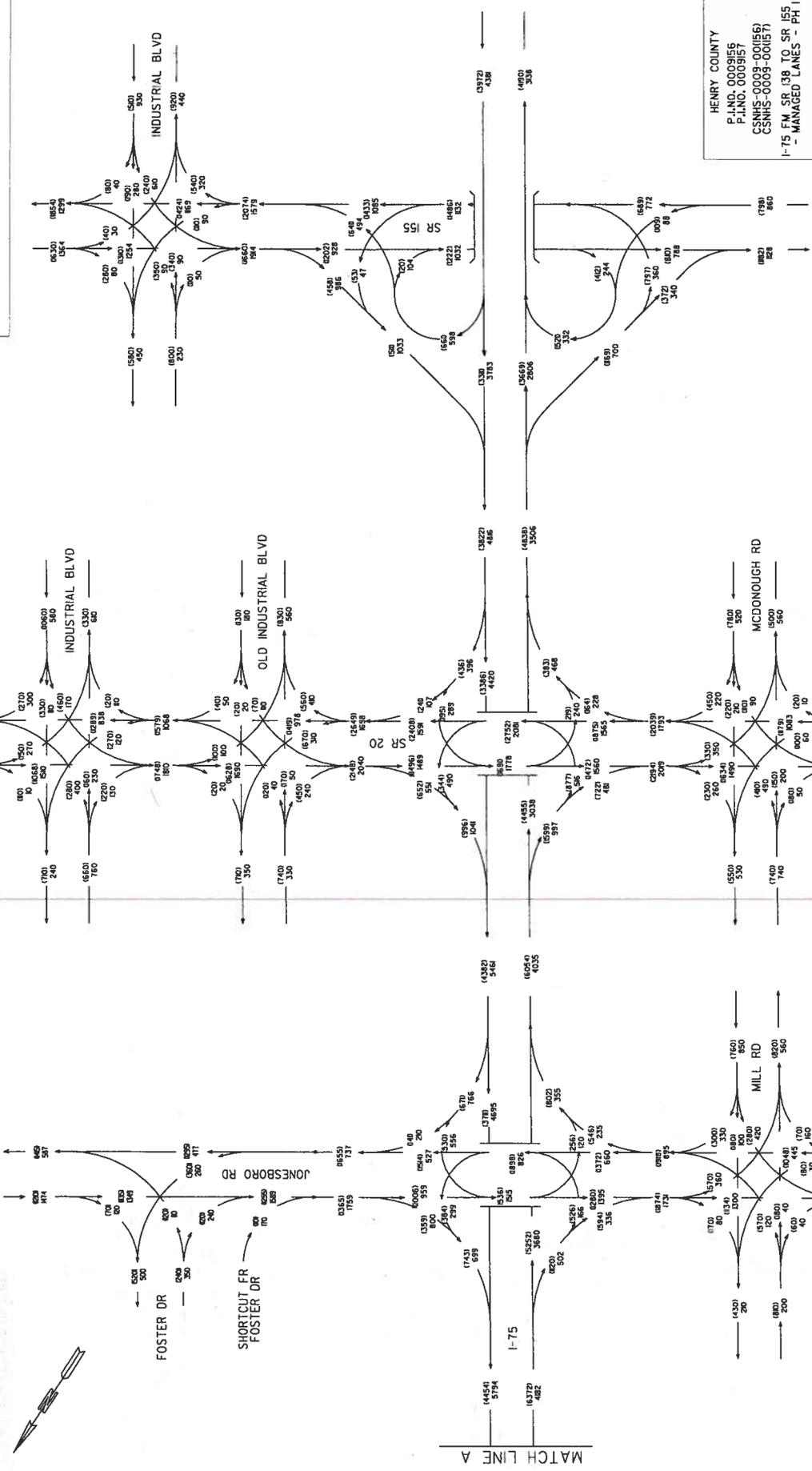
NOTE: DRAWING IS NOT TO SCALE.



HENRY COUNTY
P.L.N.O. 0009156
P.L.N.O. 0009157
CSNHS-0009-00156
CSNHS-0009-00157
I-75 FM SR 138 TO SR 155
- MANAGED LANES - PH I

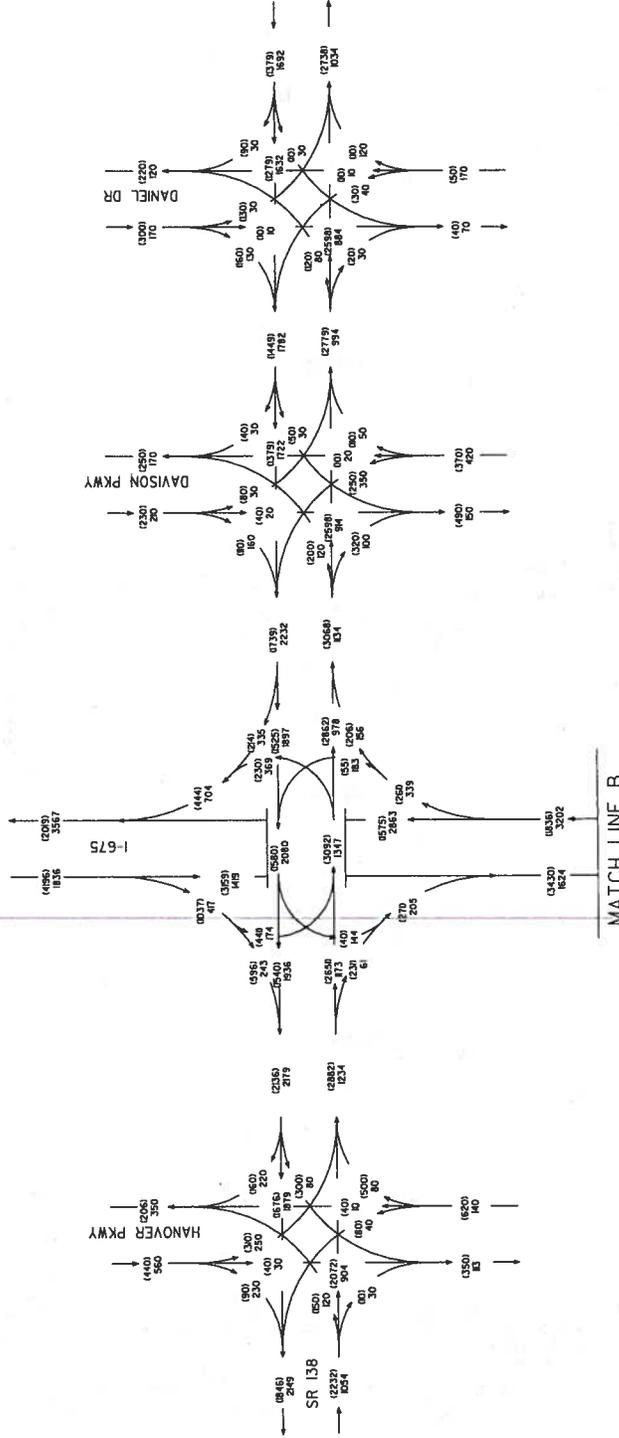
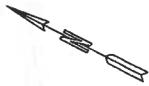
NO-BUILD
2035 PM = 0000
2030 AM = 162
T = 10%

NOTE: DRAWING IS NOT TO SCALE.



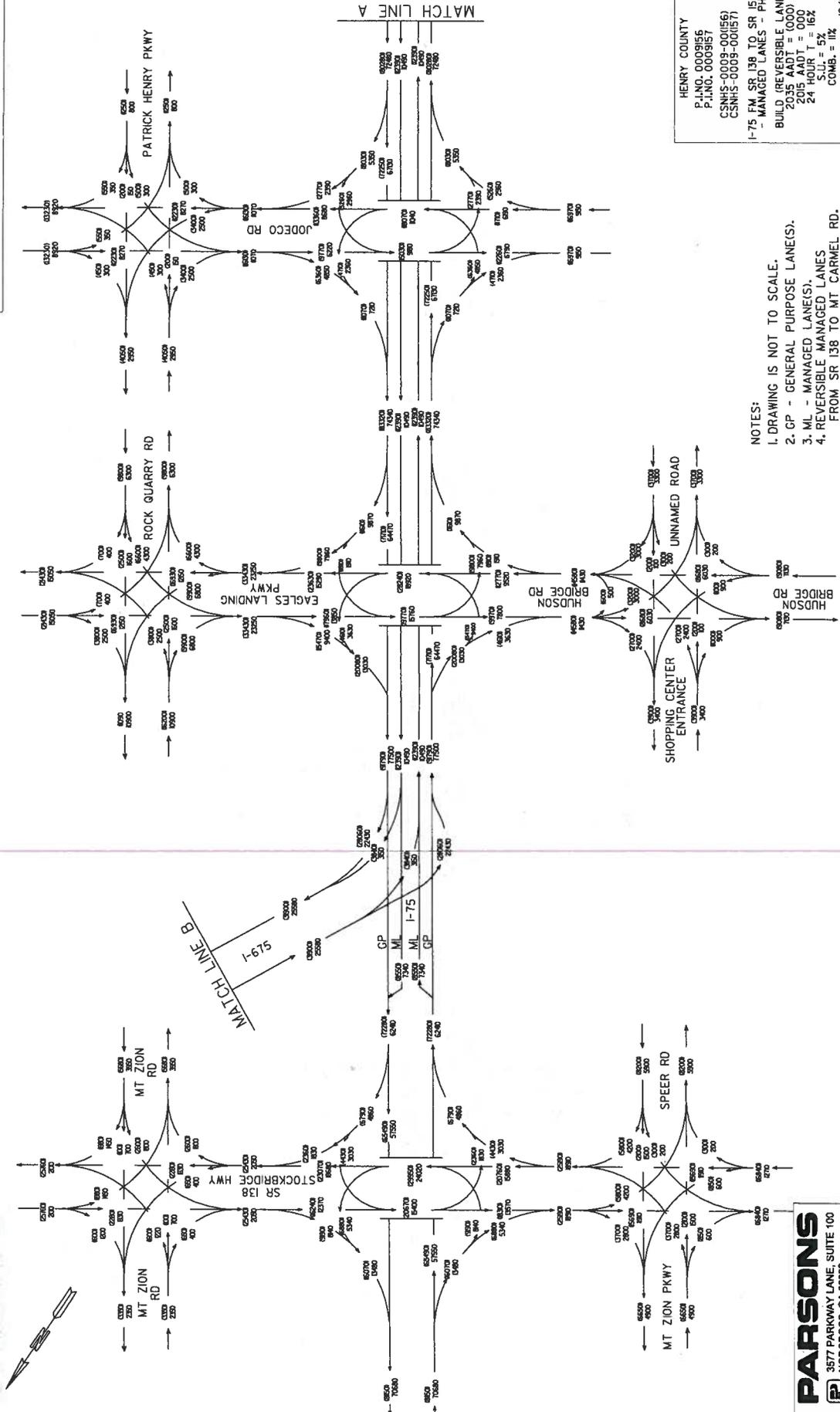
HENRY COUNTY
 P.I.NO. 0009156
 P.I.NO. 0009157
 CSNHS-0009-00156)
 CSNHS-0009-00157)
 I-75 FM SR 138 TO SR 155
 PH I
 NO. BUILD
 2015 PH I (0.00)
 2035 AM = 0.00
 24 HOUR T = 16%
 T = 10%

NOTE: DRAWING IS NOT TO SCALE.



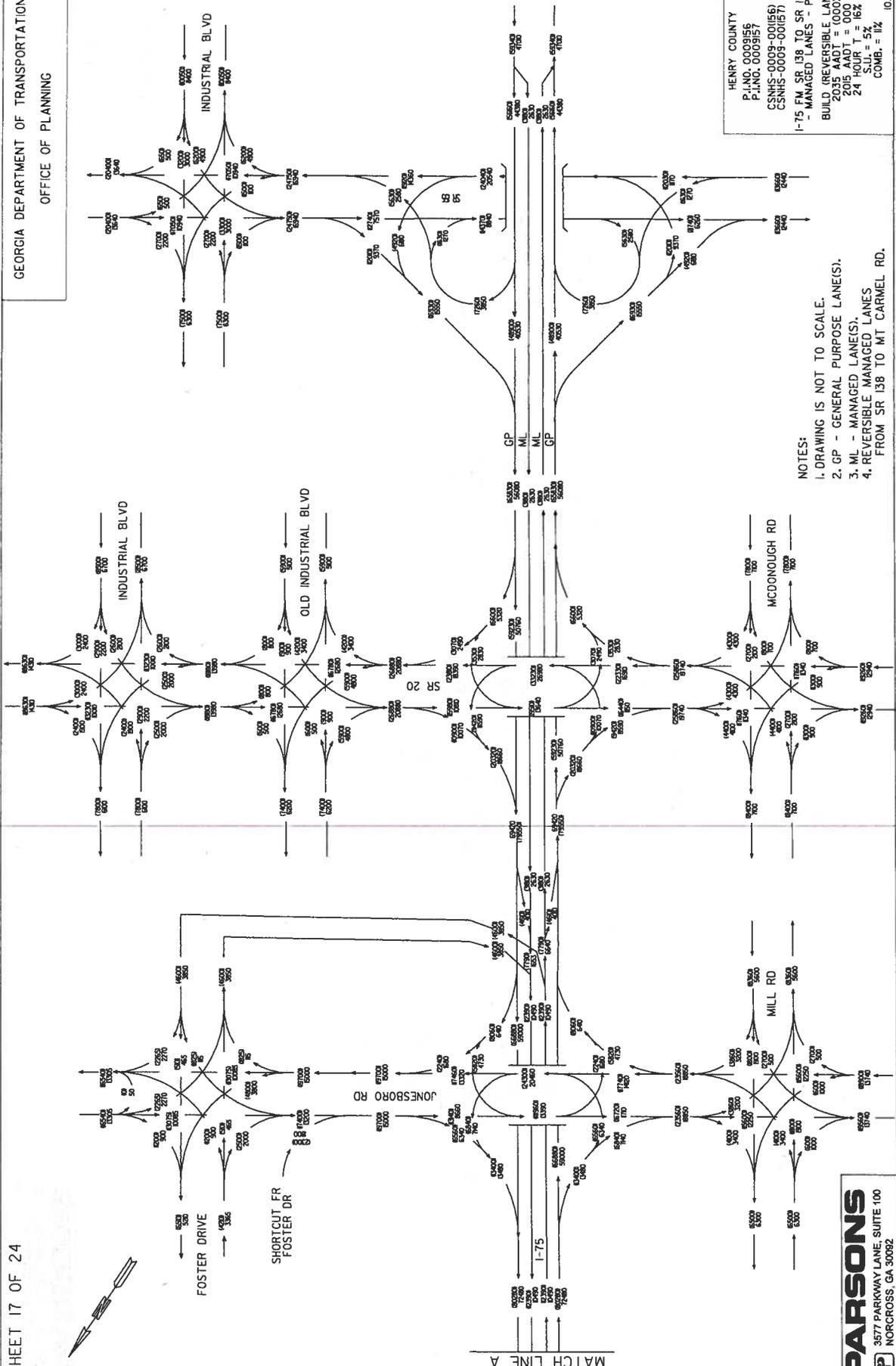
HENRY COUNTY
P.L. NO. 00085E
P.L. NO. 00092E
CSNHS-0003-0015F
CSNHS-0003-0015F
NO. BUILD
2035 PM (0000)
2035 AM = 000
24 HOUR T = 16Z
T = 10Z
10/2011

NOTE: DRAWING IS NOT TO SCALE.



HENRY COUNTY
P.L.NO. 0009155
P.L.NO. 0009157
CSNHS-0009-00156
CSNHS-0009-00157
I-75 FM SR 138 TO SR 155
- MANAGED LANES - PH 1
BUILD (REVERSIBLE LANES)
2035 AADT = 1000
2015 AADT = 000
24 HOUR T = 16%
S.U.L. = 5%
COMB. = 1%
10/2011

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

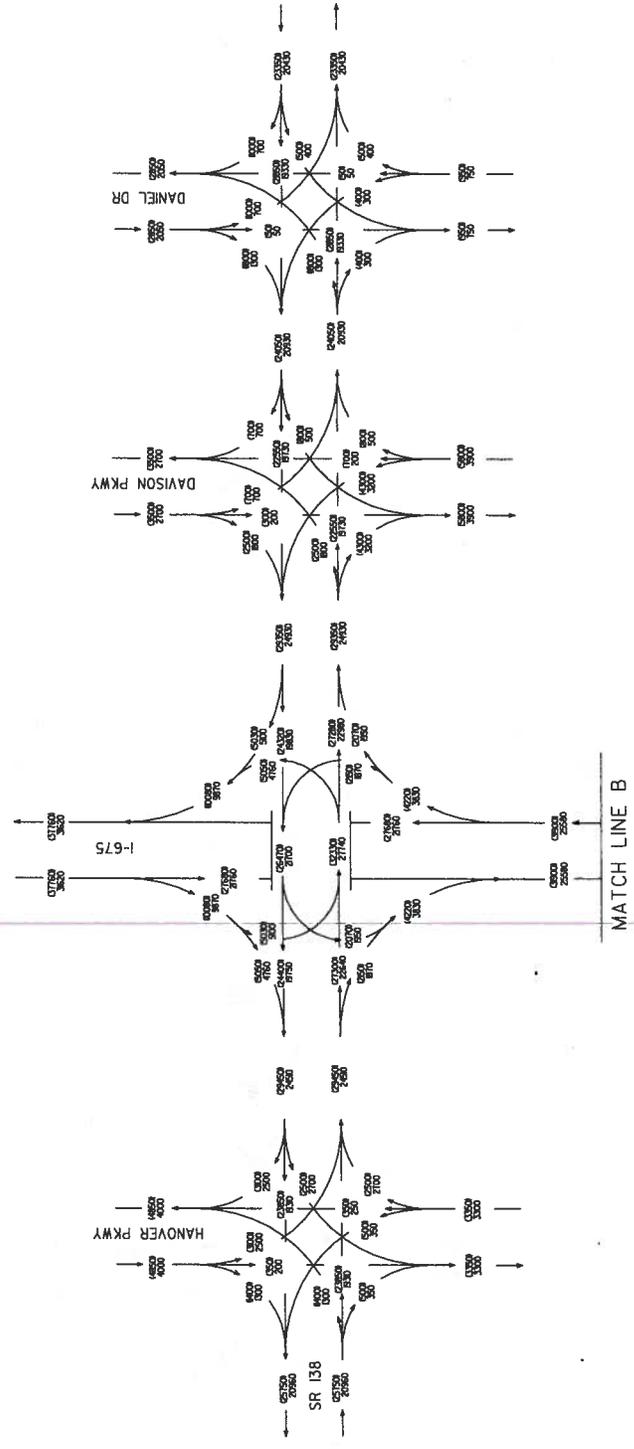
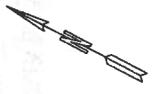


SHEET 17 OF 24



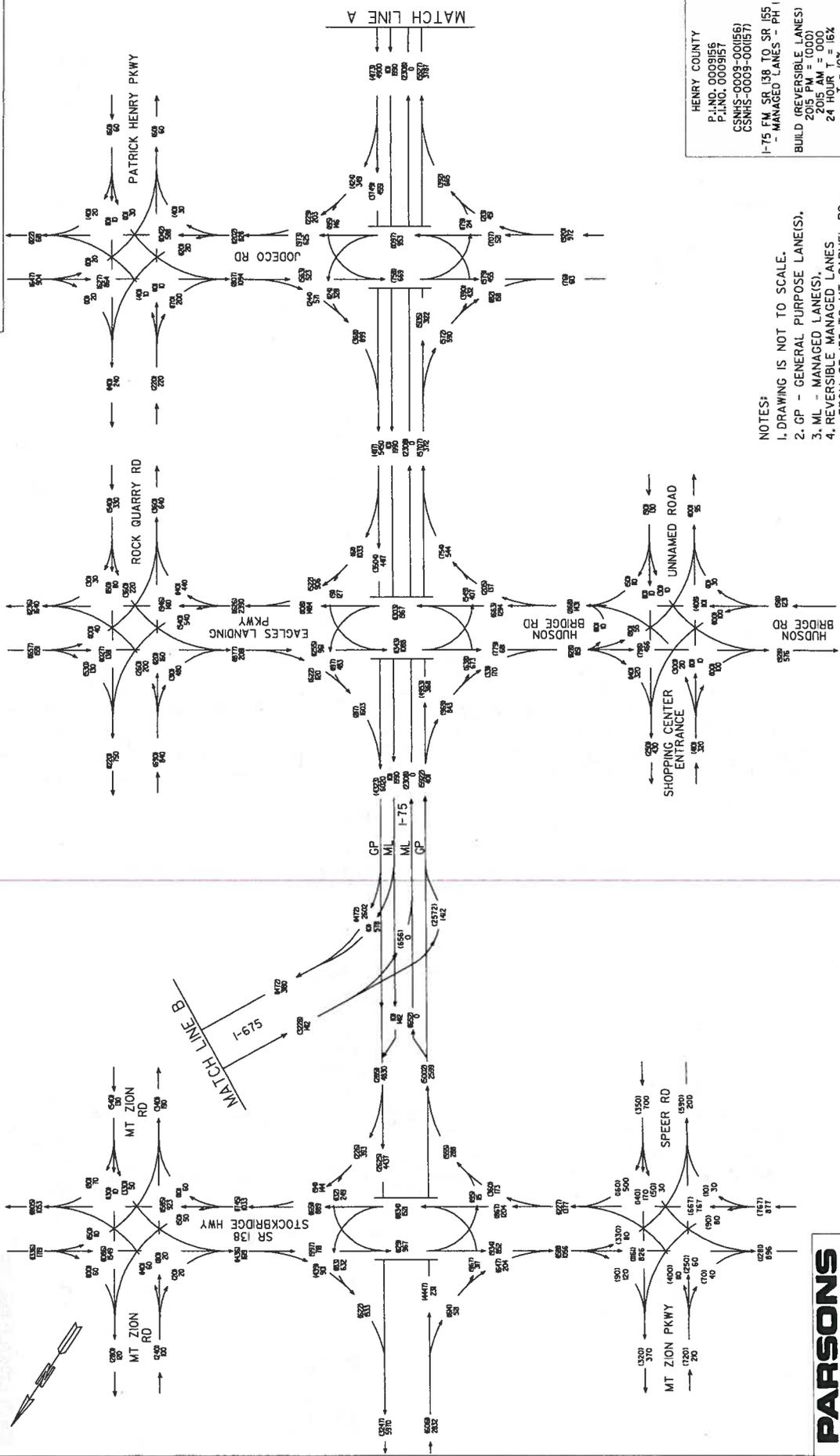
HENRY COUNTY
P.L.N.O. 0009156
P.L.N.O. 0009157
CSNHS-0009-00156)
CSNHS-0009-00157)
I-75 FM SR 138 TO SR 155
- MANAGED LANES - PH I
BUILD (REVERSIBLE LANES)
2015 AADT = 1000
2035 AADT = 000
24 HOUR T = 16%
S.U. = 5%
COMB. = 1%
10/2011

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



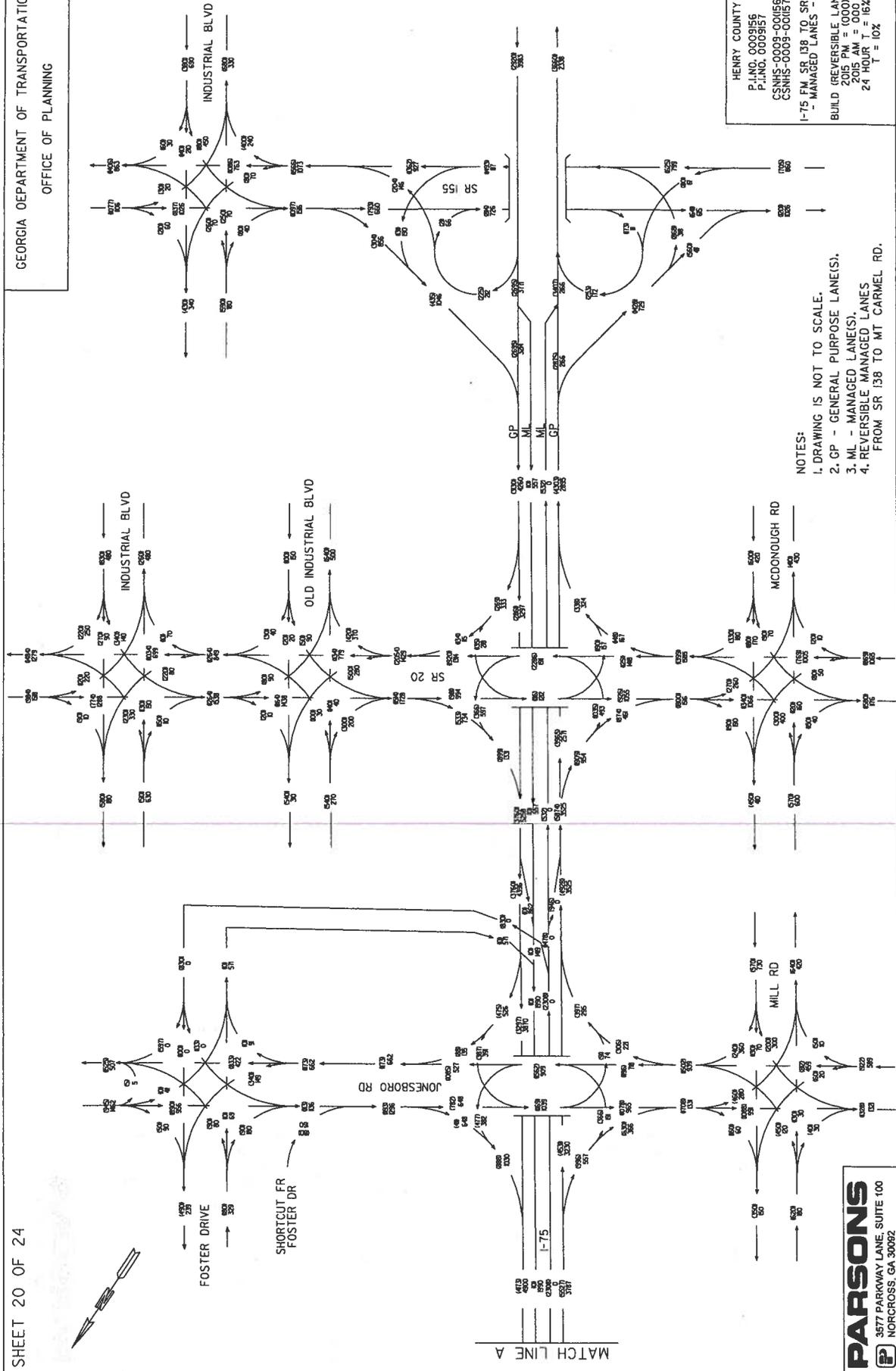
HENRY COUNTY
P.L.N.O. 000956
P.L.N.O. 000957
CSNHS-0008-00165
CSNHS-0008-00167
I-75 FM SR 138 TO SR 155
- MANAGED LANES - PH 1
BUILD (REVERSIBLE LANES)
2035 AADT = 1000
2015 AADT = 000
24' SIDEWALK = 16%
S.U.I. = 5%
COMB. = 11%
10/2011

NOTES: DRAWING IS NOT TO SCALE.



HENRY COUNTY
P.I.NO. 0009156
P.I.NO. 0009157
CSNHS-0009-00456)
CSNHS-0009-00457)
I-75 FM SR 138 TO SR 155
BUILD (REVERSIBLE LANES)
2015 PM = 1000
24 HOUR T = 162
T = 10%

- 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 RO.

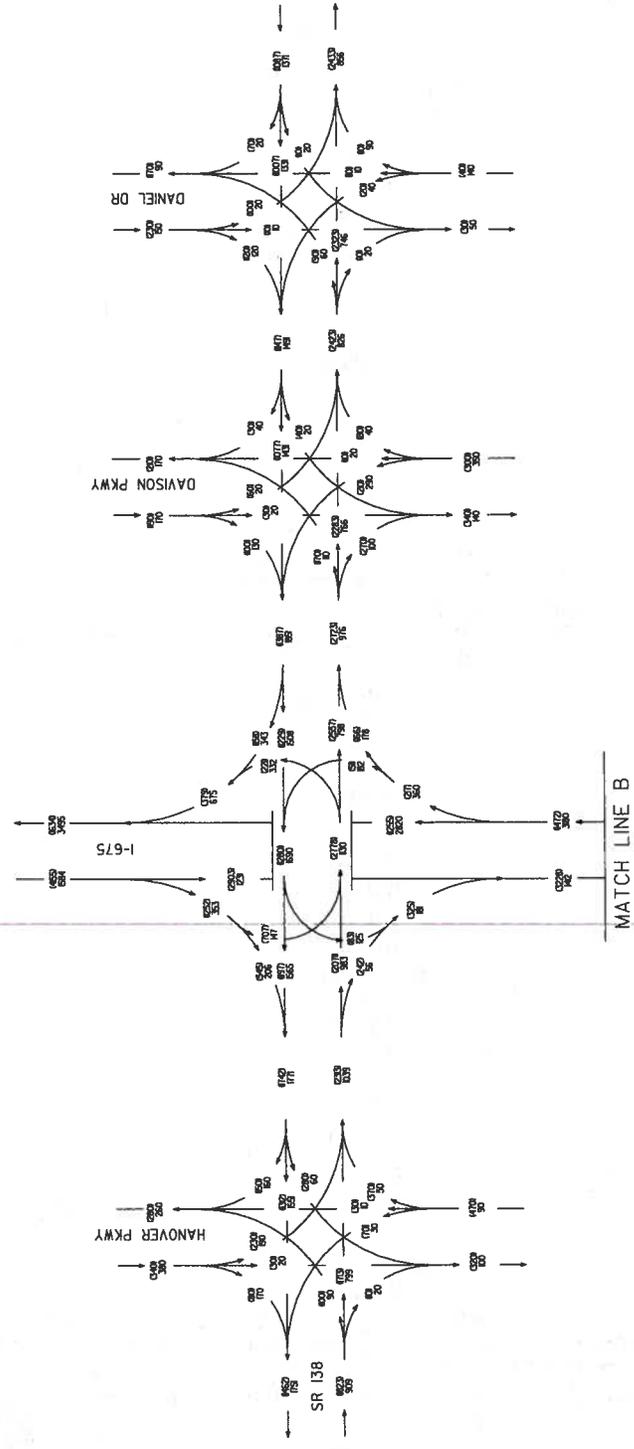
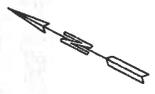


HENRY COUNTY
P.L.N.C. 000915
P.L.N.C. 000915
CSNHS-0009-00155)
CSNHS-0009-00157)
I-75 FM SR 138 TO SR 155
- - MANAGED LANES - PH I
BUILD (REVERSIBLE LANES)
2015 AM = 1000
2015 PM = 1000
24 HOUR T = 16%
T = 10%
8/2011

- 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.

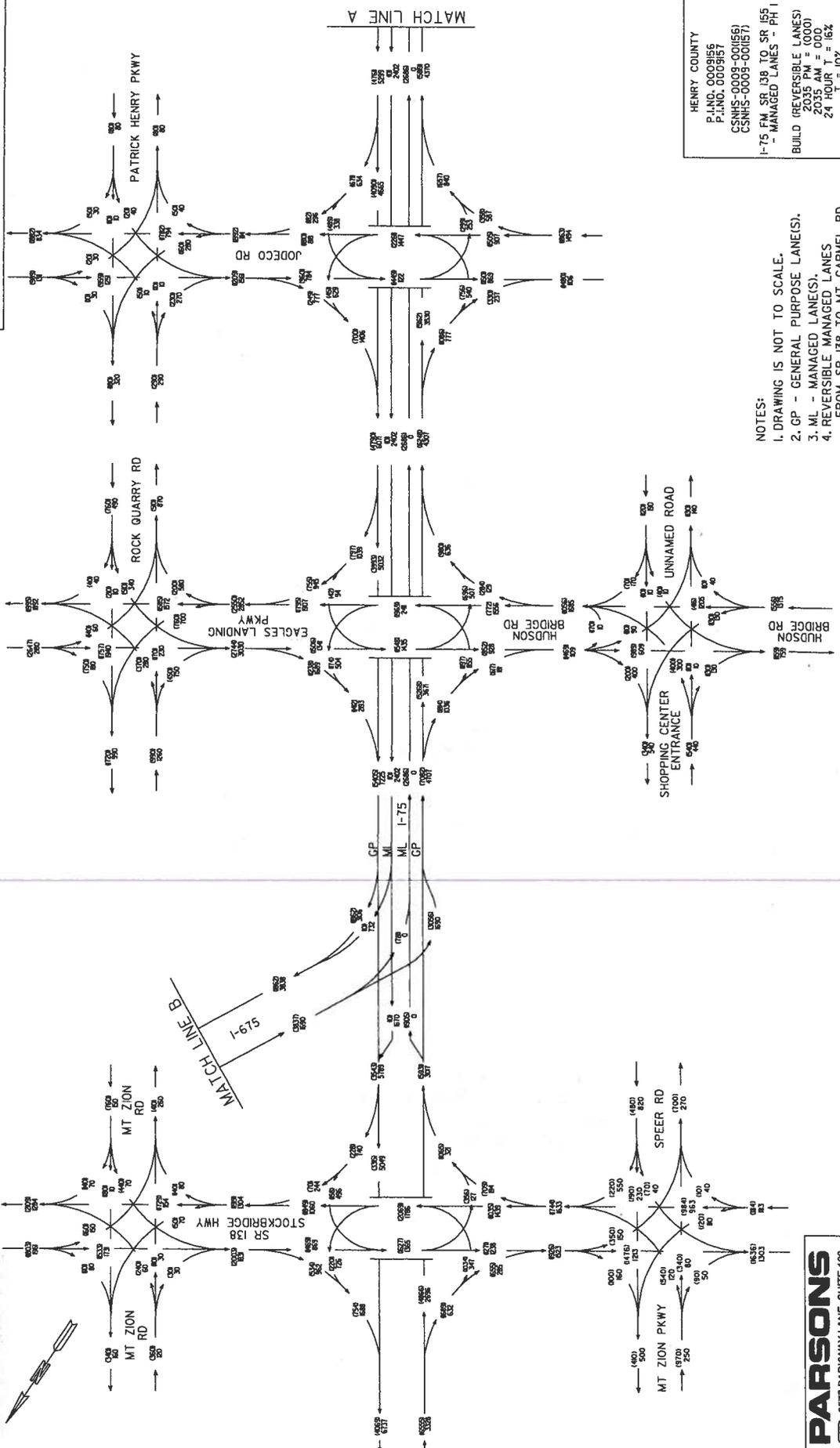
PARSONS
3577 PARKWAY LANE, SUITE 100
NORCROSS, GA 30092

MATCH LINE A



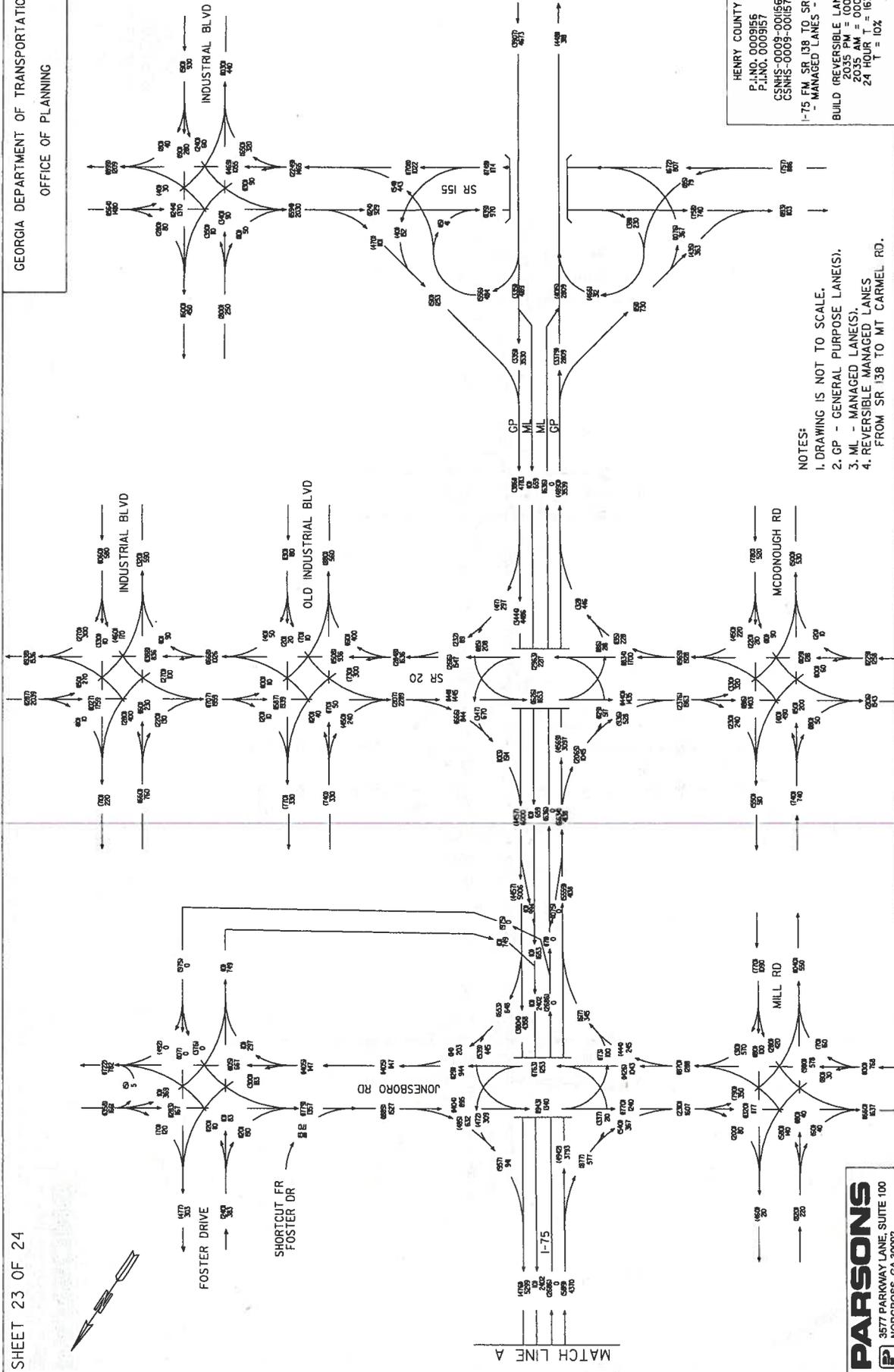
HENRY COUNTY
 P.I. NO. 0009156
 P.I. NO. 0009157
 CSNHS--0009-00155)
 CSNHS--0009-00157)
 I-75 FM SR 138 TO SR 155
 I - MANAGED LANES - PH I
 BUILD (REVERSIBLE LANES)
 205' FM = 100'
 24 HOUR T = 16%
 T = 10%
 1/2011

NOTES: DRAWING IS NOT TO SCALE.



HENRY COUNTY
P.I.NO. 0009156
P.I.NO. 0009157
CSNHS-0009-00156
CSNHS-0009-00157
I-75 FM SR 138 TO SR 155
- - - MANAGED LANES - PH I
BUILD (REVERSIBLE LANES)
2035 AM = 000
24 HOUR T = 16%
T = 10%
1/2011

- 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.

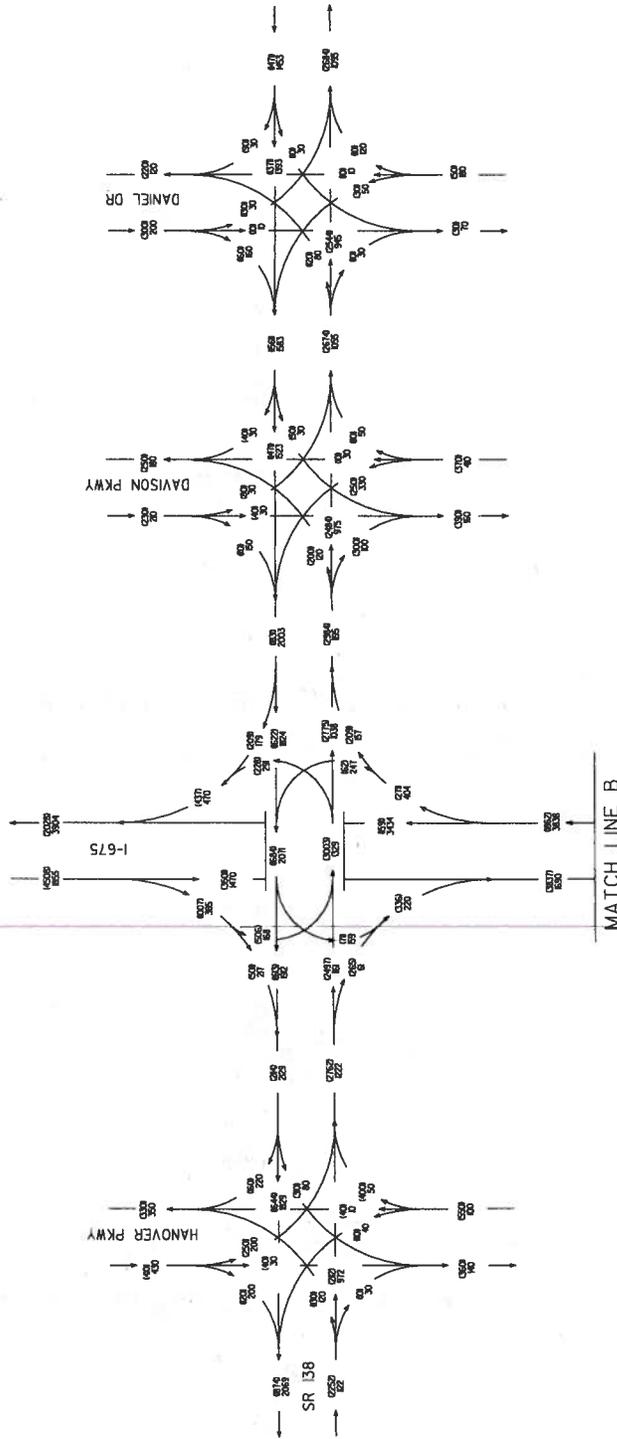


HENRY COUNTY
 P.I. NO. 0009156
 P.L. NO. 0009157
 CSNHS-0009-00155
 CSNHS-0009-00157
 I-75 FM SR 138 TO SR 155
 BUILD (REVERSIBLE LANES)
 2035 PM = 1000'
 24 HOUR T = 16%
 T = 10%
 1/2011

- 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.

PARSONS
 3577 PARKWAY LANE, SUITE 100
 NORCROSS, GA 30092

MATCH LINE A



HENRY COUNTY
 P.L. NO. 000185
 P.L. NO. 000187
 CSNHS-0003-00166
 CSNHS-0003-00167
 I-75 FM. SR. 138 TO SR. 165
 BUILD (REVERSIBLE LANES)
 - MANAGED LANES - PH 1
 2035 PM = 000
 2035 AM = 000
 24 HOUR T = 16Z
 11/2011

NOTES: DRAWING IS NOT TO SCALE.

ATTACHMENT 5

Capacity Analysis Summary

The following table provides a summary of the capacity analysis results. The analysis was conducted based on the assumptions and data provided in the project description. The results indicate that the system is capable of handling the projected demand under the specified conditions.

Category	Item	Value	Unit
Capacity	Max Throughput	1000	Items/Day
	Min Throughput	500	Items/Day
	Avg Throughput	750	Items/Day
	Max Inventory	2000	Items
Performance	Lead Time (Days)	5	Days
	Order Accuracy (%)	99.5	%
	Customer Satisfaction	4.5	Score
	Operational Efficiency	85	%

CAPACITY ANALYSIS

Capacity analysis was performed for both a.m. and p.m. peak hours for 2010 opening year (2015) and design year (2035) no-build and build conditions for basic freeway segments, ramp merge and diverge areas, and signalized intersections. Highway Capacity Software (HCS) was used for freeway analysis and SYNCHRO was used for intersections analysis. The analysis results are summarized in the following tables. (Note: The capacity analysis results included in the following tables are preliminary and have not been reviewed by GDOT.)

1. 2010 CONDITION

Table 1. I-75 Freeway Capacity Analysis Summary (Existing 2010)

Location		AM		PM	
From	To	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
I-75 southbound (SB)					
Hudson Bridge Rd./Eagles Landing Pkwy.	Jodeco Rd.	17.1	B	30.8	D
Jodeco Rd.	Jonesboro Rd.	17.5	B	29.7	D
Jonesboro Rd.	SR 20/SR 81	16.1	B	24.4	C
SR 20/SR 81	SR 155	13.0	B	18.4	C
SR 155	South of SR 155	10.2	A	14.0	B
I-75 northbound (NB)					
South of SR 155	SR 155	15.5	B	12.7	B
SR 155	SR 20/SR 81	18.1	C	14.0	B
SR 20/SR 81	Jonesboro Rd.	20.9	C	17.2	B
Jonesboro Rd.	Jodeco Rd.	24.6	C	19.6	C
Jodeco Rd.	Hudson Bridge Rd./Eagles Landing Pkwy.	28.4	D	19.2	C
Hudson Bridge Rd./Eagles Landing Pkwy.	I-675	32.2	D	19.8	C

Table 2. Ramp Merge and Diverge Capacity Analysis Summary (Existing 2010)

Type	Location	AM		PM	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
I-75 southbound (SB)					
Off-Ramp	To Hudson Bridge Rd./Eagles Landing Pkwy.	11.2	B	16.4	B
On-Ramp	From Hudson Bridge Rd./Eagles Landing Pkwy.	18.3	B	28.9	D
Off-Ramp	To Jodeco Rd.	23.3	C	32.4	D
On-Ramp	From Jodeco Rd.	21.7	C	30.8	D
Off-Ramp	To Jonesboro Rd.	24.0	C	32.5	D
On-Ramp	From Jonesboro Rd.	18.4	B	25.5	C
Off-Ramp	To SR 20/SR 81	23.0	C	30.5	D
On-Ramp	From SR 20/SR 81	16.2	B	22.0	C
Off-Ramp	To SR 155	17.2	B	23.5	C
On-Ramp	From SR 155	7.5	A	11.8	B
I-75 northbound (NB)					
Off-Ramp	To SR 155	12.6	B	9.4	A
On-Ramp	From SR 155	20.6	C	15.9	B
Off-Ramp	To SR 20/SR 81	23.9	C	19.5	B
On-Ramp	From SR 20/SR 81	25.2	C	22.0	C
Off-Ramp	To Jonesboro Rd.	25.8	C	22.4	C
On-Ramp	From Jonesboro Rd.	28.2	D	23.8	C
Off-Ramp	To Jodeco Rd.	31.6	D	27.1	C
On-Ramp	From Jodeco Rd.	30.6	D	22.5	C
Off-Ramp	To Hudson Bridge Rd./Eagles Landing Pkwy.	34.6	D	27.0	C
On-Ramp	From Hudson Bridge Rd./Eagles Landing Pkwy.	13.3	B	3.0	A

Table 3. Signalized Intersections Capacity Analysis Summary (Existing 2010)

Intersection	AM		PM	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
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.

2. NO-BUILD CONDITION

Table 4. Freeway Capacity Analysis Summary (2015 No-Build)

Location		AM		PM	
From	To	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
I-75 southbound (SB)					
Hudson Bridge Rd./Eagles Landing Pkwy.	Jodeco Rd.	17.8	B	33.6	D
Jodeco Rd.	Jonesboro Rd.	18.1	C	31.7	D
Jonesboro Rd.	SR 20/SR 81	16.8	B	26.5	D
SR 20/SR 81	SR 155	13.7	B	19.7	C
SR 155	South of SR 155	11.1	B	15.3	B
I-75 northbound (NB)					
South of SR 155	SR 155	16.8	B	14.0	B
SR 155	SR 20/SR 81	19.3	C	14.9	B
SR 20/SR 81	Jonesboro Rd.	22.5	C	18.1	C
Jonesboro Rd.	Jodeco Rd.	26.1	D	20.2	C
Jodeco Rd.	Hudson Bridge Rd./Eagles Landing Pkwy.	30.6	D	20.1	C
Hudson Bridge Rd./Eagles Landing Pkwy.	I-675	23.2	C	15.4	B

Table 5. Freeway Capacity Analysis Summary (2035 No-Build)

Location		AM		PM	
From	To	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
I-75 southbound (SB)					
Hudson Bridge Rd./Eagles Landing Pkwy.	Jodeco Rd.	20.9	C	47.4	F
Jodeco Rd.	Jonesboro Rd.	20.7	C	39.9	E
Jonesboro Rd.	SR 20/SR 81	19.8	C	36.0	E
SR 20/SR 81	SR 155	16.9	B	25.0	C
SR 155	South of SR 155	15.0	B	20.7	C
I-75 northbound (NB)					
South of SR 155	SR 155	21.9	C	19.4	C
SR 155	SR 20/SR 81	24.8	C	18.6	C
SR 20/SR 81	Jonesboro Rd.	30.0	D	21.9	C
Jonesboro Rd.	Jodeco Rd.	33.2	D	22.4	C
Jodeco Rd.	Hudson Bridge Rd./Eagles Landing Pkwy.	41.5	E	23.7	C
Hudson Bridge Rd./Eagles Landing Pkwy.	I-675	33.2	D	19.5	C

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

Table 6. Ramp Merge and Diverge Capacity Analysis Summary (2015 No-Build)

Type	Location	AM		PM	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
I-75 southbound (SB)					
Off-Ramp	To Hudson Bridge Rd./Eagles Landing Pkwy.	11.6	B	17.78	B
On-Ramp	From Hudson Bridge Rd./Eagles Landing Pkwy.	19.1	B	30.6	D
Off-Ramp	To Jodeco Rd.	22.5	C	33.9	D
On-Ramp	From Jodeco Rd.	21.6	C	32.3	D
Off-Ramp	To Jonesboro Rd.	24.7	C	33.4	D
On-Ramp	From Jonesboro Rd.	19.1	B	27.2	C
Off-Ramp	To SR 20/SR 81	23.7	C	31.9	D
On-Ramp	From SR 20/SR 81	17.0	B	23.2	C
Off-Ramp	To SR 155	18.0	B	24.7	C
On-Ramp	From SR 155	8.7	A	13.3	B
I-75 northbound (NB)					
Off-Ramp	To SR 155	14.1	B	11.1	B
On-Ramp	From SR 155	21.9	C	16.9	B
Off-Ramp	To SR 20/SR 81	25.1	C	20.6	C
On-Ramp	From SR 20/SR 81	26.6	C	23.0	C
Off-Ramp	To Jonesboro Rd.	27.1	C	23.4	C
On-Ramp	From Jonesboro Rd.	29.3	D	24.2	C
Off-Ramp	To Jodeco Rd.	33.0	D	27.6	C
On-Ramp	From Jodeco Rd.	32.6	D	23.6	C
Off-Ramp	To Hudson Bridge Rd./Eagles Landing Pkwy.	36.3	E	27.9	C
On-Ramp	From Hudson Bridge Rd./Eagles Landing Pkwy.	0.42**	-	0.19**	-

Notes: ** v/c ratio for a major merge area and capacity check was performed for upstream and downstream freeway and the ramp.
 - Not Applicable

Table 7. Ramp Merge and Diverge Capacity Analysis Summary (2035 No-Build)

Type	Location	AM		PM	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
I-75 southbound (SB)					
Off-Ramp	To Hudson Bridge Rd./Eagles Landing Pkwy.	13.3	B	23.09	C
On-Ramp	From Hudson Bridge Rd./Eagles Landing Pkwy.	22.0	C	***	F
Off-Ramp	To Jodeco Rd.	27.2	C	***	F
On-Ramp	From Jodeco Rd.	24.8	C	***	F
Off-Ramp	To Jonesboro Rd.	27.1	C	***	F
On-Ramp	From Jonesboro Rd.	22.0	C	33.3	D
Off-Ramp	To SR 20/SR 81	26.5	C	36.5	E
On-Ramp	From SR 20/SR 81	20.6	C	27.6	D
Off-Ramp	To SR 155	21.3	C	28.6	D
On-Ramp	From SR 155	13.2	B	19.2	B
I-75 northbound (NB)					
Off-Ramp	To SR 155	19.2	B	17.3	B
On-Ramp	From SR 155	27.2	C	20.7	C
Off-Ramp	To SR 20/SR 81	27.8	C	24.5	C
On-Ramp	From SR 20/SR 81	31.9	D	26.4	C
Off-Ramp	To Jonesboro Rd.	31.8	D	26.9	C
On-Ramp	From Jonesboro Rd.	30.8	D	25.7	C
Off-Ramp	To Jodeco Rd.	35.3	E	29.1	D
On-Ramp	From Jodeco Rd.	***	F	27.5	C
Off-Ramp	To Hudson Bridge Rd./Eagles Landing Pkwy.	***	F	31.1	D
On-Ramp	From Hudson Bridge Rd./Eagles Landing Pkwy.	0.6**	-	0.36**	-

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

** v/c ratio for a major merge area and capacity check was performed for upstream and downstream freeway and the ramp.

*** Freeway capacity is exceeded

- Not Applicable

Table 8. Signalized Intersections Capacity Analysis Summary (2015 No-Build)

Intersection	AM		PM	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
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.

Table 9. Signalized Intersections Capacity Analysis Summary (2035 No-Build)

Intersection	AM		PM	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
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.

3. BUILD CONDITION

Table 10. Freeway Capacity Analysis Summary (2015 Build)

Location		AM		PM	
From	To	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
I-75 southbound (SB)					
Hudson Bridge Rd./Eagles Landing Pkwy.	Jodeco Rd.	18.0	B	32.2	D
Jodeco Rd.	Jonesboro Rd.	18.4	C	30.6	D
Jonesboro Rd.	SR 20/SR 81	17.0	B	-	-
Jonesboro Rd.	Slip Ramp	-	-	25.7	C
Slip Ramp	SR 20/SR 81	-	-	34.0	D
SR 20/SR 81	SR 155	13.8	B	21.4	C
SR 155	South of SR 155	11.1	B	17.7	B
I-75 SB Managed Lanes					
Off-Ramp to Jonesboro Rd. connector.	Slip Ramp to General-Purpose Lanes	-	-	16.1	B
Slip Ramp	SR 155	-	-	7.4	A
I-75 northbound (NB)					
South of SR 155	SR 155	19.5	C	13.9	B
SR 155	SR 20/SR 81	21.1	C	14.9	B
SR 20/SR 81	Jonesboro Rd.	-	-	18.2	C
SR 20/SR 81	Slip Ramp	28.3	D	-	-
Slip Ramp	Jonesboro Rd.	22.0	C	-	-
Jonesboro Rd.	Jodeco Rd.	25.4	C	20.6	C
Jodeco Rd.	Hudson Bridge Rd./Eagles Landing Pkwy.	29.9	D	20.3	C
Hudson Bridge Rd./Eagles Landing Pkwy.	I-675	22.8	C	15.5	B
I-75 NB Managed Lanes					
SR 155	Slip Ramp	7.8	A	-	-
Slip Ramp from General-Purpose Lanes	On-Ramp from Jonesboro Rd. connector	6.0	A	-	-
Jonesboro Rd	I-675	13.8	B	-	-

Notes: - Not Applicable

Table 11. Freeway Capacity Analysis Summary (2035 Build)

Location		AM		PM	
From	To	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
I-75 southbound (SB)					
Hudson Bridge Rd./Eagles Landing Pkwy.	Jodeco Rd.	21.4	C	38.3	E
Jodeco Rd.	Jonesboro Rd.	21.8	C	33.4	D
Jonesboro Rd.	SR 20/SR 81	20.4	C	-	-
Jonesboro Rd.	Slip Ramp	-	-	30.9	D
Slip Ramp	SR 20/SR 81	-	-	43.7	E
SR 20/SR 81	SR 155	17.0	B	25.4	C
SR 155	South of SR 155	14.9	B	22.5	C
I-75 SB Managed Lanes					
Off-Ramp to Jonesboro Rd. connector	Slip Ramp to General-Purpose Lanes	-	-	11.9	B
Slip Ramp	SR 155	-	-	8.8	A
I-75 northbound (NB)					
South of SR 155	SR 155	23.8	C	19.0	C
SR 155	SR 20/SR 81	24.6	C	18.8	C
SR 20/SR 81	Jonesboro Rd.	-	-	22.4	C
SR 20/SR 81	Slip Ramp	35.4	E	-	-
Slip Ramp	Jonesboro Rd.	26.2	D	-	-
Jonesboro Rd.	Jodeco Rd.	28.6	D	24.4	C
Jodeco Rd.	Hudson Bridge Rd./Eagles Landing Pkwy.	36.2	E	24.7	C
Hudson Bridge Rd./Eagles Landing Pkwy.	I-675	29.6	D	19.9	C
I-75 NB Managed Lanes					
SR 155	Slip Ramp	9.1	A	-	-
Slip Ramp from General-Purpose Lanes	On-Ramp from Jonesboro Rd. connector	11.5	B	-	-
On-Ramp from Jonesboro Rd. connector	I-675	16.8	B	-	-

Notes: Yellow shading indicates LOS E

- Not Applicable

Table 12. Ramp Merge and Diverge Capacity Analysis Summary (2015 Build)

Type	Location	AM		PM	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
I-75 southbound (SB)					
Off-Ramp	To Hudson Bridge Rd./Eagles Landing Pkwy.	11.7	B	17.2	B
On-Ramp	From Hudson Bridge Rd./Eagles Landing Pkwy.	19.2	B	29.9	D
Off-Ramp	To Jodeco Rd.	20.3	C	29.4	D
On-Ramp	From Jodeco Rd.	19.9	B	28.0	D
Off-Ramp	To Jonesboro Rd.	21.2	C	29.4	D
On-Ramp	From Jonesboro Rd.	20.1	C	27.3	C
On-Ramp	From the Managed Lanes (East of Mt. Carmel Rd.)	-	-	36.7	E
Off-Ramp	To SR 20/SR 81	21.0	C	38.4	E
On-Ramp	From SR 20/SR 81	17.0	B	24.1	C
Off-Ramp	To SR 155	16.4	B	25.2	C
On-Ramp	From the end of the Managed Lanes	-	-	19.3	B
On-Ramp	From SR 155	8.6	A	15.7	B
I-75 SB Managed Lanes					
Off-Ramp	To Jonesboro Rd. connector	-	-	17.7	B
Off-Ramp	To General-Purpose Lanes (East of Mt. Carmel Rd.)	-	-	12.8	B
I-75 northbound (NB)					
Off-Ramp	To SR 155	16.6	B	11.0	B
Off-Ramp	To the beginning of the Managed Lanes	25.1	C	-	-
On-Ramp	From SR 155	25.5	C	18.1	B
Off-Ramp	To SR 20/SR 81	28.3	C	20.6	C
On-Ramp	From SR 20/SR 81	29.1	D	23.1	C
Off-Ramp	To the Managed Lanes (East of Mt. Carmel Rd.)	38.9	E	-	-
Off-Ramp	To Jonesboro Rd.	24.3	C	21.1	C
On-Ramp	From Jonesboro Rd.	28.7	D	24.8	C
Off-Ramp	To Jodeco Rd.	32.4	D	28.0	C
On-Ramp	From Jodeco Rd.	32.1	D	23.7	C
Off-Ramp	To Hudson Bridge Rd./Eagles Landing Pkwy.	35.9	E	28.1	D
On-Ramp	From Hudson Bridge Rd./Eagles Landing Pkwy.	0.41**	-	0.21**	-
On-Ramp	From the end of the Managed Lanes	0.35**	-	-	-
I-75 NB Managed Lanes					
On-Ramp	From General-Purpose Lanes (East of Mt. Carmel Rd.)	13.3	B	-	-
On-Ramp	From Jonesboro Rd. connector	16.3	B	-	-

Notes: Yellow shading indicates LOS E.

** v/c ratio for a major merge area and capacity check was performed for upstream and downstream freeway and the ramp.

- Not Applicable

Table 13. Ramp Merge and Diverge Capacity Analysis Summary (2035 Build)

Type	Location	AM		PM	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
I-75 southbound (SB)					
Off-Ramp	To Hudson Bridge Rd./Eagles Landing Pkwy.	12.8	B	19.2	B
On-Ramp	From Hudson Bridge Rd./Eagles Landing Pkwy.	22.5	C	33.3	D
Off-Ramp	To Jodeco Rd.	23.8	C	34.0	D
On-Ramp	From Jodeco Rd.	23.3	C	30.2	D
Off-Ramp	To Jonesboro Rd.	24.5	C	30.4	D
On-Ramp	From Jonesboro Rd.	23.3	C	30.8	D
On-Ramp	From the Managed Lanes (East of Mt. Carmel Rd.)	-	-	42.0	E
Off-Ramp	To SR 20/SR 81	24.3	C	***	F
On-Ramp	From SR 20/SR 81	20.6	C	28.4	D
Off-Ramp	To SR 155	19.8	B	28.0	C
On-Ramp	From the end of the Managed Lanes	-	-	22.8	C
On-Ramp	From SR 155	13.1	B	20.5	C
I-75 SB Managed Lanes					
Off-Ramp	To Jonesboro Rd. connector	-	-	21.1	C
Off-Ramp	To General-Purpose Lanes (East of Mt. Carmel Rd.)	-	-	12.8	B
I-75 northbound (NB)					
Off-Ramp	To SR 155	22.1	C	16.8	B
Off-Ramp	To the beginning of the Managed Lanes	27.5	C	-	-
On-Ramp	From SR 155	28.0	C	22.0	C
Off-Ramp	To SR 20/SR 81	31.5	D	24.7	C
On-Ramp	From SR 20/SR 81	36.0	E	26.9	C
Off-Ramp	To the Managed Lanes (East of Mt. Carmel Rd.)	44.3	E	-	-
Off-Ramp	To Jonesboro Rd.	27.3	C	24.8	C
On-Ramp	From Jonesboro Rd.	30.5	D	27.8	C
Off-Ramp	To Jodeco Rd.	34.7	D	30.8	D
On-Ramp	From Jodeco Rd.	36.7	E	28.0	D
Off-Ramp	To Hudson Bridge Rd./Eagles Landing Pkwy.	40.6	E	31.9	D
On-Ramp	From Hudson Bridge Rd./Eagles Landing Pkwy.	0.53**	-	0.34**	-
On-Ramp	From the end of the Managed Lanes	0.17**	-	-	-
I-75 NB Managed Lanes					
On-Ramp	From General-Purpose Lanes (East of Mt. Carmel Rd.)	15.1	B	-	-
On-Ramp	From Jonesboro Rd. connector	19.6	B	-	-

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

** v/c ratio for a major merge area and capacity check was performed for upstream and downstream freeway and the ramp.

- Not Applicable

Table 14. Signalized Intersections Capacity Analysis Summary (2015 Build)

Intersection	AM		PM	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
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 15. Signalized Intersections Capacity Analysis Summary (2035 Build)

Intersection	AM		PM	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
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.

ATTACHMENT 6

TE Study

1. The following table shows the results of a study on the effect of a new teaching method on student performance.

2. The data is as follows:

3. The results show that the new teaching method significantly improved student performance.

4. The improvement was statistically significant, with a p-value of less than 0.05.



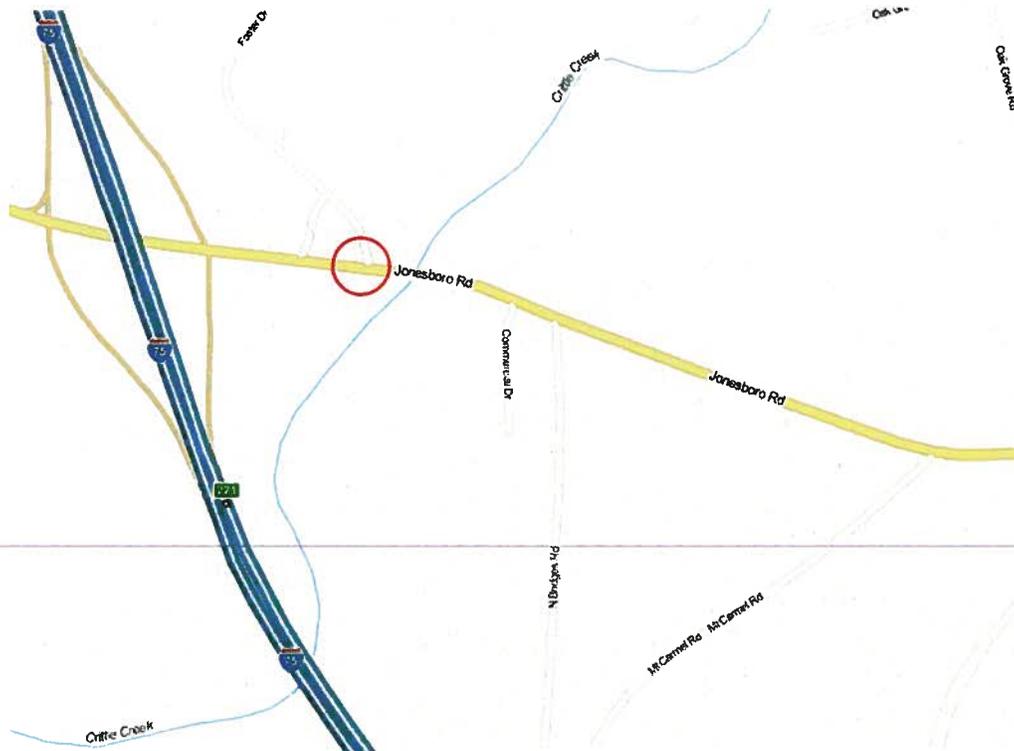
5. The results of the study are consistent with previous research on the effectiveness of this teaching method.

6. The study was conducted over a period of six months.

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
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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
August, 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: _____
Parsons

Date: _____

RECOMMENDED BY: _____
District Traffic Engineer

Date: _____

RECOMMENDED BY: _____
State Traffic Operations Engineer

Date: _____

RECOMMENDED BY: _____
Director of Operations

Date: _____

State Route 920 @ Foster Drive:

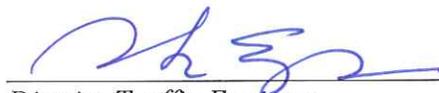
RECOMMENDATIONS:

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

DEPARTMENT OF TRANSPORTATION

STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

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

OFFICE: ATLANTA-TMC

DATE: January 23, 2013

^{KZ}
FROM: 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

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
TRAFFIC SIGNAL AUTHORIZATION



The Georgia Department of Transportation hereby approves, subject to the conditions set forth herein, the use of a Traffic Signal device as described below and as shown on the attached drawing.

LOCATION OF SIGNAL

County: Henry City: _____ Mile Point: 5 . 67

Local Highway or Street Names: Jonesboro Road At Foster Drive

State Route and U.S. Route Numbers: SR 920 At _____

GDOT Intersection Number: 0011743

TYPE SIGNAL

- Stop and Go Flashing Beacon School Beacon Other _____
- Pedestrian Push Buttons Pedestrian Heads RR Pre-emption Other Pre-emption
- Interconnected local controller
Master/Local

Controller shall meet Georgia D.O.T Specifications. Controller Phasing and signal heads shall conform to the details on the attached drawing.

The signal device as described in this document is to be maintained and operated by:

- The Georgia Department of Transportation
- _____

Special Requirements: _____

Stop and Go signals shall flash during all times when not in Stop and Go operation and during emergency repairs. Signal heads, except for School Beacons, are to be hooded or taken down when for any reason the signal is not operating as a Stop and Go Signal or Flasher during a period of more than six consecutive days or when requested by the District Traffic Engineer. The traffic control signal equipment, its installation and operation covered by this authorization shall not be materially altered without the written approval of the Georgia Department of Transportation.

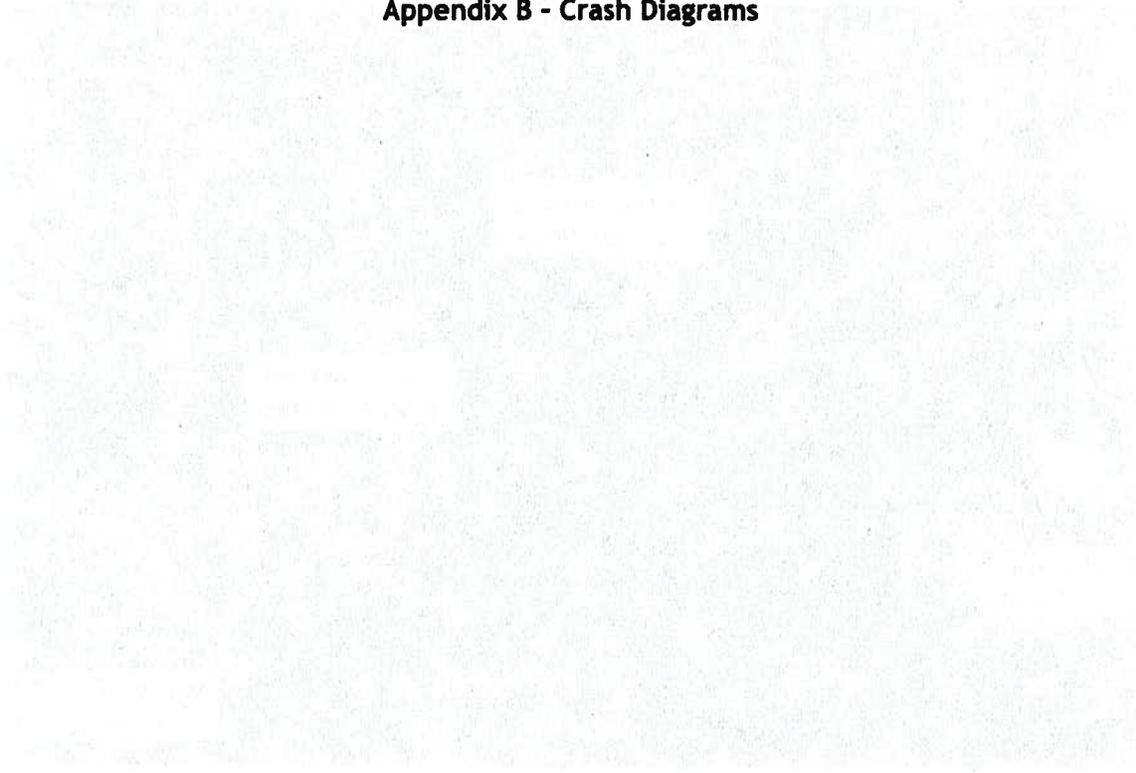
NOTE: This authorization is valid only so long as equipment used is standard equipment as specified and is maintained and operated in accordance with the terms of this authorization and the requirements of the current Manual on Uniform Traffic Control Devices.

REVISION APPROVED: Kathman Abdul
State Traffic Safety and Design Engineer

Appendix A - Vicinity Map and Intersection Location

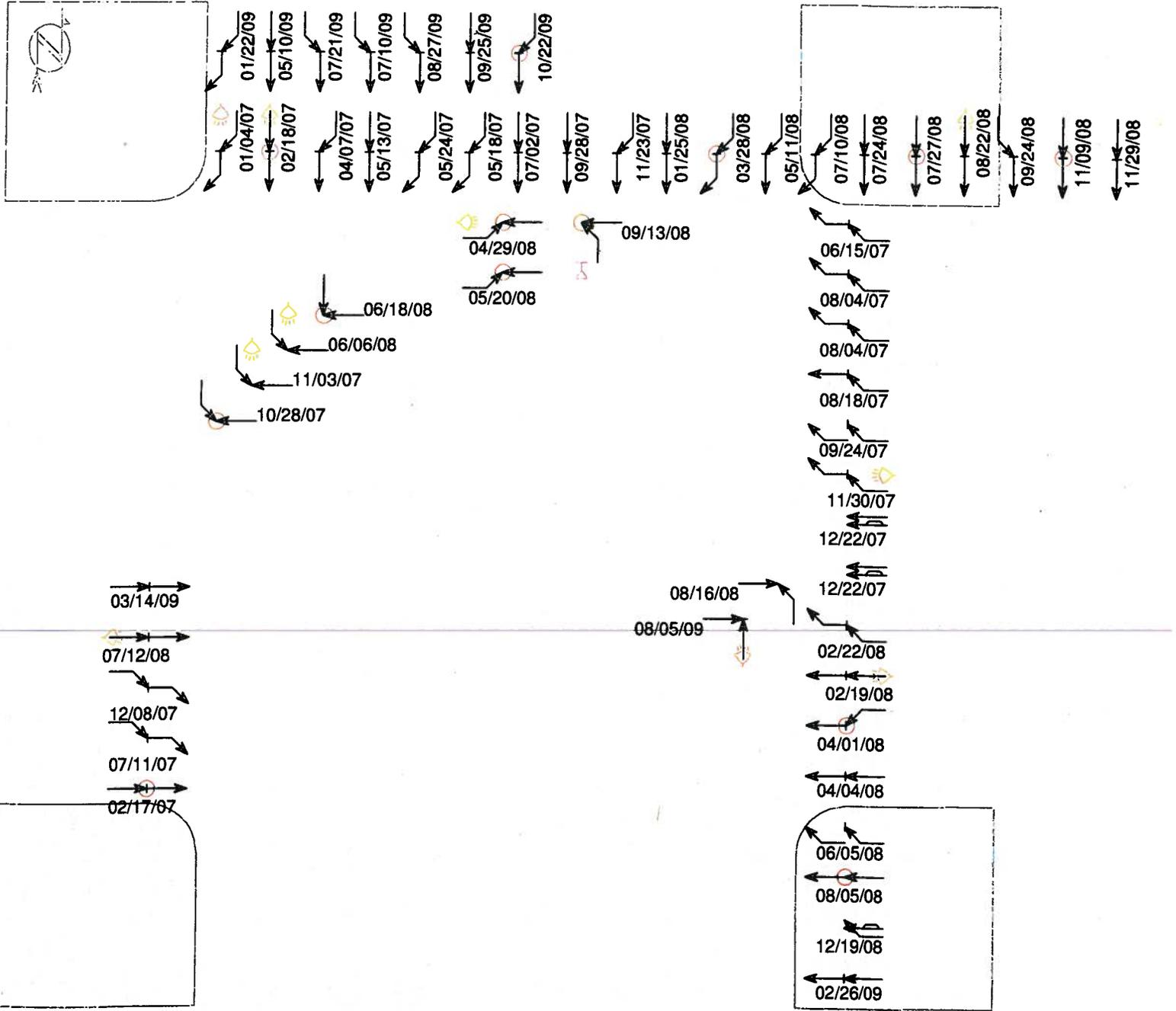


Appendix B - Crash Diagrams



60 Accidents

JONESBORO RD at FOSTER DR
01/01/00 - 12/31/09



(clear filter), (0) accidents with insufficient data for display

- | | | | |
|--------------|------------------|--------------|----------------|
| ← Straight | ▭ Parked | ⊗ Pedestrian | Fixed objects: |
| ← Stopped | ⚡ Erratic | ⊗ Bicycle | □ General |
| ← Unknown | ⚡ Out of control | ○ Injury | ▣ Signal |
| ↔ Backing | ↘ Right turn | ⊙ Fatality | ▣ Tree |
| ↔ Overtaking | ↙ Left turn | 🕒 Nighttime | ⬅ 3rd vehicle |
| ↔ Sideswipe | ↻ U-turn | 🚔 DUI | * Extra data |

HCM Signalized Intersection Capacity Analysis
 41: Jonesboro Rd & Foster Dr

2035 PM_ALT 3A
 11/1/2011



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗			↘	↗	↗	↘	↑	↗	↘	↑
Volume (vph)	300	1105	0	5	0	1283	70	376	107	492	120	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	0.95			1.00	0.95	1.00	1.00	1.00	0.88	1.00	
Frt	1.00	1.00			1.00	1.00	0.85	1.00	1.00	0.85	1.00	
Flt Protected	0.95	1.00			0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Satd. Flow (prot)	1656	3312			1656	3312	1482	1770	1863	2787	1656	
Flt Permitted	0.07	1.00			0.21	1.00	1.00	0.72	1.00	1.00	0.64	
Satd. Flow (perm)	122	3312			370	3312	1482	1341	1863	2787	1117	
Peak-hour factor, PHF	0.97	0.97	0.90	0.97	0.90	0.97	0.97	0.90	0.90	0.90	0.97	0.90
Adj. Flow (vph)	309	1139	0	5	0	1323	72	418	119	547	124	0
RTOR Reduction (vph)	0	0	0	0	0	0	18	0	0	476	0	0
Lane Group Flow (vph)	309	1139	0	0	5	1323	54	418	119	71	124	0
Heavy Vehicles (%)	9%	9%	2%	9%	2%	9%	9%	2%	2%	2%	9%	2%
Tum Type	pm+pt			pm+pt	pm+pt		Perm	pm+pt		Perm	pm+pt	
Protected Phases	5	2		1	1	6		3	8		7	4
Permitted Phases	2			6	6		6	8		8	4	
Actuated Green, G (s)	75.6	66.6			54.0	51.0	51.0	32.2	16.2	16.2	30.6	
Effective Green, g (s)	75.6	66.6			54.0	51.0	51.0	32.2	16.2	16.2	30.6	
Actuated g/C Ratio	0.60	0.53			0.43	0.41	0.41	0.26	0.13	0.13	0.24	
Clearance Time (s)	6.0	6.0			6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	302	1765			191	1351	605	400	241	361	339	
v/s Ratio Prot	c0.15	0.34			0.00	0.40		c0.13	0.06		0.04	
v/s Ratio Perm	c0.47				0.01		0.04	c0.14		0.03	0.05	
v/c Ratio	1.02	0.65			0.03	0.98	0.09	1.04	0.49	0.20	0.37	
Uniform Delay, d1	41.4	20.8			20.5	36.5	22.7	45.5	50.6	48.6	38.5	
Progression Factor	0.88	1.20			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	52.3	1.5			0.1	20.0	0.3	57.2	1.6	0.3	0.7	
Delay (s)	88.6	26.4			20.5	56.5	23.0	102.7	52.2	48.9	39.2	
Level of Service	F	C			C	E	C	F	D	D	D	
Approach Delay (s)		39.7				54.6			70.0			44.0
Approach LOS		D				D			E			D

Intersection Summary

HCM Average Control Delay	52.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 41: Jonesboro Rd & Foster Dr

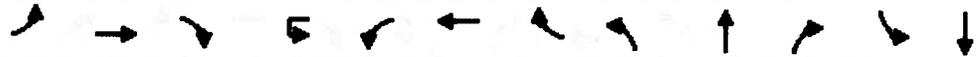
2035 AM_ALT 3A
 11/1/2011

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↙	↑			↘	↑	↗	↙	↑	↘	↙	↑
Volume (vph)	183	667	297	5	369	1167	120	0	0	0	110	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0				6.0	6.0
Lane Util. Factor	1.00	0.95			1.00	0.95	1.00				1.00	1.00
Flt	1.00	0.95			1.00	1.00	0.85				1.00	1.00
Flt Protected	0.95	1.00			0.95	1.00	1.00				0.95	1.00
Satd. Flow (prot)	1656	3218			1768	3312	1482				1656	1863
Flt Permitted	0.22	1.00			0.16	1.00	1.00				0.95	1.00
Satd. Flow (perm)	376	3218			304	3312	1482				1656	1863
Peak-hour factor, PHF	0.97	0.97	0.90	0.97	0.90	0.97	0.97	0.90	0.90	0.90	0.97	0.90
Adj. Flow (vph)	189	688	330	5	410	1203	124	0	0	0	113	92
RTOR Reduction (vph)	0	36	0	0	0	0	24	0	0	0	0	0
Lane Group Flow (vph)	189	982	0	0	415	1203	100	0	0	0	113	92
Heavy Vehicles (%)	9%	9%	2%	9%	2%	9%	9%	2%	2%	2%	9%	2%
Turn Type	pm+pt			pm+pt	pm+pt		Perm	Perm		Perm	Split	
Protected Phases	5	2		1	1	6			8		4	4
Permitted Phases	2			6	6		6	8		8		
Actuated Green, G (s)	75.6	59.8			97.6	75.8	75.8				15.4	15.4
Effective Green, g (s)	75.6	59.8			97.6	75.8	75.8				15.4	15.4
Actuated g/C Ratio	0.60	0.48			0.78	0.61	0.61				0.12	0.12
Clearance Time (s)	6.0	6.0			6.0	6.0	6.0				6.0	6.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0				3.0	3.0
Lane Grp Cap (vph)	389	1539			610	2008	899				204	230
v/s Ratio Prot	0.06	0.31			c0.17	0.36					c0.07	0.05
v/s Ratio Perm	0.23				c0.36		0.07					
v/c Ratio	0.49	0.64			0.68	0.60	0.11				0.55	0.40
Uniform Delay, d1	11.2	24.5			19.3	15.2	10.4				51.6	50.5
Progression Factor	1.26	0.25			1.00	1.00	1.00				1.00	1.00
Incremental Delay, d2	0.9	1.8			3.1	1.3	0.2				3.2	1.1
Delay (s)	14.9	8.1			22.4	16.5	10.6				54.8	51.7
Level of Service	B	A			C	B	B				D	D
Approach Delay (s)		9.1				17.5		0.0				51.3
Approach LOS		A				B		A				D

Intersection Summary			
HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
41: Jonesboro Rd & Foster Dr

2015 PM_ALT 3A
11/2/2011



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↕			↙	↕	↘	↙	↕	↘	↙	↕
Volume (vph)	340	833	0	5	0	890	50	133	100	597	90	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	0.95			1.00	0.95	1.00	1.00	1.00	0.88	1.00	
Frt	1.00	1.00			1.00	1.00	0.85	1.00	1.00	0.85	1.00	
Flt Protected	0.95	1.00			0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Satd. Flow (prot)	1656	3312			1656	3312	1482	1770	1863	2787	1656	
Flt Permitted	0.15	1.00			0.33	1.00	1.00	0.76	1.00	1.00	0.63	
Satd. Flow (perm)	254	3312			575	3312	1482	1410	1863	2787	1103	
Peak-hour factor, PHF	0.97	0.97	0.90	0.97	0.90	0.97	0.97	0.90	0.90	0.90	0.97	0.90
Adj. Flow (vph)	351	859	0	5	0	918	52	148	111	663	93	0
RTOR Reduction (vph)	0	0	0	0	0	0	18	0	0	567	0	0
Lane Group Flow (vph)	351	859	0	0	5	918	34	148	111	96	93	0
Heavy Vehicles (%)	9%	9%	2%	9%	2%	9%	9%	2%	2%	2%	9%	2%
Turn Type	pm+pt			pm+pt	pm+pt		Perm	pm+pt		Perm	pm+pt	
Protected Phases	5	2		1	1	6		3	8		7	4
Permitted Phases	2			6	6		6	8		8	4	
Actuated Green, G (s)	76.5	67.5			50.5	47.5	47.5	30.5	15.5	15.5	30.5	
Effective Green, g (s)	76.5	67.5			50.5	47.5	47.5	30.5	15.5	15.5	30.5	
Actuated g/C Ratio	0.61	0.54			0.40	0.38	0.38	0.24	0.12	0.12	0.24	
Clearance Time (s)	6.0	6.0			6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	413	1788			258	1259	563	387	231	346	335	
v/s Ratio Prot	c0.16	0.26			0.00	0.28		c0.05	c0.06		0.03	
v/s Ratio Perm	c0.36				0.01		0.02	0.05		0.03	0.03	
v/c Ratio	0.85	0.48			0.02	0.73	0.06	0.38	0.48	0.28	0.28	
Uniform Delay, d1	27.0	17.9			22.3	33.2	24.6	39.0	51.0	49.7	37.9	
Progression Factor	1.34	0.93			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	13.4	0.8			0.0	3.7	0.2	0.6	1.6	0.4	0.5	
Delay (s)	49.6	17.4			22.3	37.0	24.8	39.6	52.6	50.1	38.3	
Level of Service	D	B			C	D	C	D	D	D	D	
Approach Delay (s)		26.8				36.2			48.7			43.4
Approach LOS		C				D			D			D

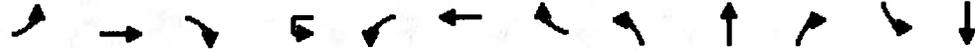
Intersection Summary

HCM Average Control Delay	36.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
41: Jonesboro Rd & Foster Dr

2015 AM_ALT 3A
11/2/2011



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↘			↘	↑↑	↗	↘	↑	↗↗	↘	↑
Volume (vph)	149	422	91	5	411	956	90	0	0	0	80	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0				6.0	6.0
Lane Util. Factor	1.00	0.95			1.00	0.95	1.00				1.00	1.00
Fr _t	1.00	0.97			1.00	1.00	0.85				1.00	1.00
Fit Protected	0.95	1.00			0.95	1.00	1.00				0.95	1.00
Satd. Flow (prot)	1656	3258			1768	3312	1482				1656	1863
Fit Permitted	0.29	1.00			0.38	1.00	1.00				0.95	1.00
Satd. Flow (perm)	507	3258			699	3312	1482				1656	1863
Peak-hour factor, PHF	0.97	0.97	0.90	0.97	0.90	0.97	0.97	0.90	0.90	0.90	0.97	0.90
Adj. Flow (vph)	154	435	101	5	457	986	93	0	0	0	82	77
RTOR Reduction (vph)	0	11	0	0	0	0	22	0	0	0	0	0
Lane Group Flow (vph)	154	525	0	0	462	986	71	0	0	0	82	77
Heavy Vehicles (%)	9%	9%	2%	9%	2%	9%	9%	2%	2%	2%	9%	2%
Turn Type	pm+pt			pm+pt	pm+pt		Perm	Perm		Perm	Split	
Protected Phases	5	2		1	1	6			8		4	4
Permitted Phases	2			6	6		6	8		8		
Actuated Green, G (s)	77.4	62.4			97.6	76.6	76.6				15.4	15.4
Effective Green, g (s)	77.4	62.4			97.6	76.6	76.6				15.4	15.4
Actuated g/C Ratio	0.62	0.50			0.78	0.61	0.61				0.12	0.12
Clearance Time (s)	6.0	6.0			6.0	6.0	6.0				6.0	6.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0				3.0	3.0
Lane Grp Cap (vph)	452	1626			795	2030	908				204	230
v/s Ratio Prot	0.04	0.16			c0.14	0.30					c0.05	0.04
v/s Ratio Perm	0.17				c0.32		0.05					
v/c Ratio	0.34	0.32			0.58	0.49	0.08				0.40	0.33
Uniform Delay, d1	10.0	18.7			5.3	13.3	9.8				50.6	50.1
Progression Factor	0.88	0.40			1.00	1.00	1.00				1.00	1.00
Incremental Delay, d2	0.4	0.5			1.1	0.8	0.2				1.3	0.9
Delay (s)	9.2	7.9			6.4	14.2	10.0				51.9	51.0
Level of Service	A	A			A	B	B				D	D
Approach Delay (s)		8.2				11.6			0.0			50.2
Approach LOS		A				B			A			D

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 41 : Jonesboro Rd & Foster Dr

10/11/2011



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations	↘	↗	↔	↗	↘	↘	↗
Volume (vph)	273	842	1	939	44	70	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1656	3312	1656	3312	1482	1656	1482
Flt Permitted	0.23	1.00	0.33	1.00	1.00	0.95	1.00
Satd. Flow (perm)	394	3312	569	3312	1482	1656	1482
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	281	868	1	968	45	72	74
RTOR Reduction (vph)	0	0	0	0	12	0	65
Lane Group Flow (vph)	281	868	1	968	33	72	9
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%	9%
Turn Type	pm+pt		Perm		Perm		Perm
Protected Phases	5	2		6		4	
Permitted Phases	2		6		6		4
Actuated Green, G (s)	98.0	98.0	76.1	76.1	76.1	15.0	15.0
Effective Green, g (s)	98.0	98.0	76.1	76.1	76.1	15.0	15.0
Actuated g/C Ratio	0.78	0.78	0.61	0.61	0.61	0.12	0.12
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	469	2597	346	2016	902	199	178
v/s Ratio Prot	c0.08	0.26		0.29		c0.04	
v/s Ratio Perm	c0.39		0.00		0.02		0.01
v/c Ratio	0.60	0.33	0.00	0.48	0.04	0.36	0.05
Uniform Delay, d1	6.8	4.0	9.6	13.5	9.8	50.6	48.7
Progression Factor	3.67	2.08	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.9	0.3	0.0	0.8	0.1	1.1	0.1
Delay (s)	26.7	8.5	9.6	14.3	9.9	51.7	48.8
Level of Service	C	A	A	B	A	D	D
Approach Delay (s)		13.0		14.1		50.2	
Approach LOS		B		B		D	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 41: Jonesboro Rd & Foster Dr

10/11/2011

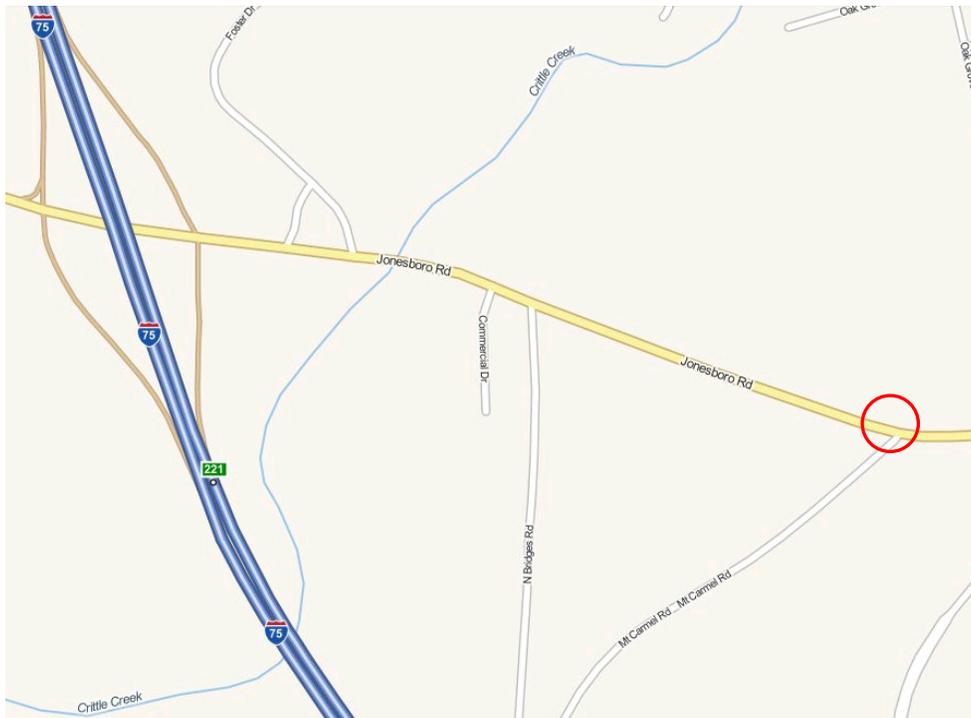


Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↔	↑↑	↗	↘	↗
Volume (vph)	233	350	1	967	75	62	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1656	3312	1656	3312	1482	1656	1482
Flt Permitted	0.22	1.00	0.54	1.00	1.00	0.95	1.00
Satd. Flow (perm)	382	3312	935	3312	1482	1656	1482
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	240	361	1	997	77	64	152
RTOR Reduction (vph)	0	0	0	0	20	0	134
Lane Group Flow (vph)	240	361	1	997	57	64	18
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%	9%
Turn Type	pm+pt		Perm		Perm		Perm
Protected Phases	5	2		6		4	
Permitted Phases	2		6		6		4
Actuated Green, G (s)	98.0	98.0	77.0	77.0	77.0	15.0	15.0
Effective Green, g (s)	98.0	98.0	77.0	77.0	77.0	15.0	15.0
Actuated g/C Ratio	0.78	0.78	0.62	0.62	0.62	0.12	0.12
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	452	2597	576	2040	913	199	178
v/s Ratio Prot	c0.06	0.11		0.30		c0.04	
v/s Ratio Perm	c0.35		0.00		0.04		0.01
v/c Ratio	0.53	0.14	0.00	0.49	0.06	0.32	0.10
Uniform Delay, d1	6.4	3.3	9.2	13.2	9.6	50.3	49.0
Progression Factor	3.94	0.61	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	0.1	0.0	0.8	0.1	0.9	0.3
Delay (s)	26.4	2.1	9.2	14.0	9.7	51.3	49.3
Level of Service	C	A	A	B	A	D	D
Approach Delay (s)		11.8		13.7		49.9	
Approach LOS		B		B		D	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
TRAFFIC ENGINEERING REPORT

For the intersection of:
Jonesboro Road and Mt.Carmel Road
Henry County
At Mile Log: 6.31



Report Prepared by:
Sunita Nadella, PE, PTOE
Senior Traffic Engineer/Planner
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Email: sunita.nadella@parsons.com

Date report prepared: November 12, 2012

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

Reason for the investigation: The consideration of placing a stop-and-go traffic signal at this location is based on an on-going GDOT project (P.I. No. 0009156) for addition of reversible express lanes along I-75. The side street at the intersection is currently stop controlled and experiences severe delays.

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. Mt. Carmel Road is functionally classified as an urban collector street by GDOT. It travels north from its intersection with SR 81 to its intersection with Jonesboro Road where it ends. At its intersection with Jonesboro Road, Mt. Carmel Road has single lane in each direction. The study intersection is a three-way intersection with Mt. Carmel Road being stop controlled.

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

Latest year percent trucks: 6%

Direction hourly volumes at the intersections are attached.

Table 1: AADT Volumes		
YEAR	Jonesboro Road	Mt.Carmel Road
2010	23,180	2,930
2009	23,140	2,970
2008	21,650	2,680
2007	21,990	2,700

Existing Traffic Control: In the existing condition, Jonesboro Road is free-flow and Mt. Carmel Road is stop controlled.

Vehicular Speeds: Posted Speed limit for both Jonesboro Road and Mt. Carmel Road 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: Observation during peak traffic periods revealed motorists on the side street experienced delays in the existing conditions. For the build year of the project significant delays are expected for the side street traffic.

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. The crash data shows that in the past three years there have been two angled crashes at the intersection that could be corrected by the installation of a traffic signal. Crash diagram for the intersection is attached in the Appendix B.

Table 2: Crash Analysis								
Year	Accidents							
	Rear-End	Side-swipe	Angle	Head-on	Object	Total	Injuries	Fatalities
2007	3	1	2	--	1	7	2	--
2008	3	--	--	--	2	5	1	--
2009	3	--	--	--	--	3	0	--

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 850'. To the west the intersection of Foster Drive is at 3,200'. Due to close proximity of the study intersection to Willow Lane at Jonesboro Road it is recommended that these two intersections be interconnected.

Warrant Analysis:

Warrant analysis for the opening year (2015) and design year (2035) was performed for both intersections by following the procedures for Warrant 1, Eight-Hour Vehicular Volume, presented in the Manual on Uniform Traffic Control Devices (MUTCD) 2009, and was supplemented with guidance provided in the Georgia Department of Transportation (GDOT) Design Policy Manual (v. 09/2009). The eighth-hour volume was estimated at 5.6% of the Annual Daily Traffic (ADT) per the GDOT Design Policy Manual and then compared with the MUTCD Table 4C-1 values. Table 3 shows a summary of the results and volume calculations are in Appendix C.

Table 3: Warrant 1 Analysis Summary					
Intersection	Approach	2015		2035	
		Volume	Status	Volume	Status
Mt. Carmel Road at Jonesboro Road	Major	1415	Meets conditions A & B	1860	Meets conditions A & B
Mt. Carmel Road at Jonesboro Road	Minor	230	Meets conditions A & B	265	Meets conditions A & B

Roundabout Analysis

GDOT’s Roundabout Analysis Tool (version v1.3) was used to determine the performance (delay and level of service) of proposed roundabout at the Mt. Carmel Road intersections.

For a multi-lane roundabout, the thresholds to justify roundabout analysis are ADT less than 45,000 and less than 90 percent traffic on the major road. For a single lane roundabout the thresholds are ADT less than 25,000 and less than 90 percent of traffic on the major road. The intersection meets these requirements and a detailed roundabout analysis was conducted and the study intersection was analyzed as a multi-lane roundabout.

The GDOT Roundabout Analysis Tool computes the entry capacity based on the NCHRP-572 formula, and the UK formula referenced in the 2000 FHWA Roundabout Guide, given the appropriate conflicting flow, the entry leg volume-to-capacity ratio, the approach control delay, the approach LOS, and the 95th Queue length at unsignalized intersection. The NCHRP Model is based on an analytical method based on gap acceptance behavior on roundabouts in the United States. The formula yields a lower value of capacity because of source data taken from US roundabouts where driver familiarity is lower. The UK model is based on an empirical method based on the geometric features of the source roundabouts. The formula typically yields a higher value of capacity because the source data taken is taken from roundabouts in the UK where familiarity is higher. As suggested by the GDOT Roundabout Analysis Tool, the NCHRP-572 model yields a conservative entry capacity and is best applied to the opening year when the driver familiarity is low; while the UK model yields a liberal entry

capacity and is best applied for the design year when driver familiarity has increased. Tables 4 and 5 summarize the GDOT roundabout analysis results for the opening year 2015 and the design year 2035 for both am and pm peak hours. The analysis reports are enclosed in Appendix D.

Table 4: Existing Intersections on Mt. Carmel Road Roundabout Analysis Summary								
	Roundabout Critical Lane Control Delay (second/pcu)/ LOS							
	NCHRP-572 Model				UK-Model			
	AM		PM		AM		PM	
Mt. Carmel Road at Jonesboro Road	116.2	F	445.1	F	49.5	E	16.5	C

Table 5: Existing Intersections on Mt. Carmel Road Roundabout Analysis Summary								
	Roundabout Critical Lane Control Delay (second/pcu)/ LOS							
	NCHRP-572 Model				UK-Model			
	AM		PM		AM		PM	
Mt. Carmel Road at Jonesboro Road	250.8	F	1091.1	F	162.5	F	115.3	F

Following the procedures of the GDOT’s Roundabout Analysis Tool, the intersection will operate at LOS F in 2015 and 2035 during both peak hour hours (based on the results from the NCHRP-572 model).

Capacity Analysis:

Capacity analysis was performed at the study intersection for AM and PM peak hours for open year (2015) and build year (2035). The results are listed in the table below. The results indicate that the intersections perform at unacceptable levels of service in the both years without signalization.

From Tables 6 & 7, it is observed that the intersection delays are reduced significantly with the signalization of the intersection. Capacity analysis reports are attached in Appendix E.

Table 6: Unsignalized and Signalized Capacity Analysis Summary (2015)								
Intersection	2015 (Unsignalized)				2015 (Signalized)			
	AM		PM		AM		PM	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Mt. Carmel Road at Jonesboro Road	>990	F	>1000	F	10.2	B	16.1	B

Note: The delay and LOS for unsignalized intersections represent the operation of the critical movement with the highest delay

Table 7: Unsignalized and Signalized Capacity Analysis Summary (2035)								
Intersection	2035 (Unsignalized)				2035 (Signalized)			
	AM		PM		AM		PM	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Mt. Carmel Road at Jonesboro Road	>1000	F	>1000	F	15.4	B	29.0	C

Note: The delay and LOS for unsignalized intersections represent the operation of the critical movement with the highest delay.

The intersection's levels of service are at acceptable levels with the proposed signalization of the intersections.

CONCLUSION: Recent volume updates for State Route 920 shows 25,910 as an ADT, with Mt. Carmel Road volumes shown as 2,890. Page 5 of the report notes the 2015 capacity as **F** for an un-signalized condition and as **B** under signal control. Consultant analysis for traffic signal evaluation was conducted at the 100 percent and 70 percent volume requirements as required and noted on page 1 of Appendix C, signal analysis for the present conditions, page 2 of the analysis was not included in this section. The intersection evaluation includes analysis as a roundabout controlled intersection, in Appendix D. AM and PM 2015 evaluation for westbound left turn signal phases onto Mt. Carmel Road shows a product analysis of 277,980, 246 westbound left turns opposed by 1,130 eastbound through vehicles; PM analysis shows 487,200 as a product of 240 westbound left turning vehicles opposed by 2,030 eastbound vehicles.

RECOMMENDATIONS:

Based on the consultant study and review of the data, a traffic signal is recommended to be installed as part of the managed lanes project, PI 0010126.

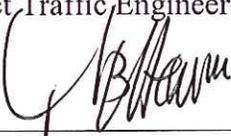
The traffic signal is to be constructed as shown on the attached traffic signal design, including interconnection to the adjacent traffic signal at Foster Drive for remote operation and diagnostics.

Upon completion of the traffic signal construction and a successful equipment test period, the new signal installation will be operated and maintained by District Three's Traffic Signal Division



District Traffic Engineer

2/28/2013
Date



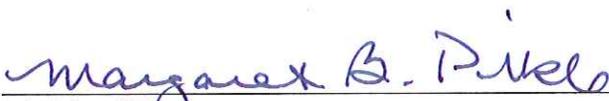
District Engineer

2/20/13
Date



State Traffic Safety and Design Engineer

3.13.13
Date



Division Director

3.18.13
Date

Appendix A - Vicinity Map and Intersection Location

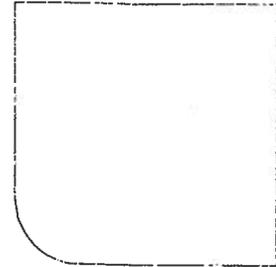
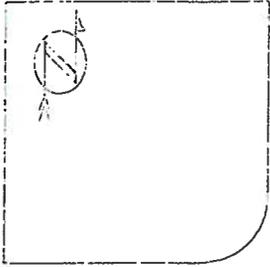


Appendix B - Crash Diagrams



15 Accidents

JONESBORO RD at MT CARMEL RD
01/01/00 - 12/31/09



02/02/07
05/21/07
07/25/07

08/26/09

05/01/09

08/30/08

07/17/08

05/21/08

07/28/07

01/25/07

03/03/07
04/01/07

02/23/09
09/09/08
07/29/08

(clear filter), (0) accidents with insufficient data for display

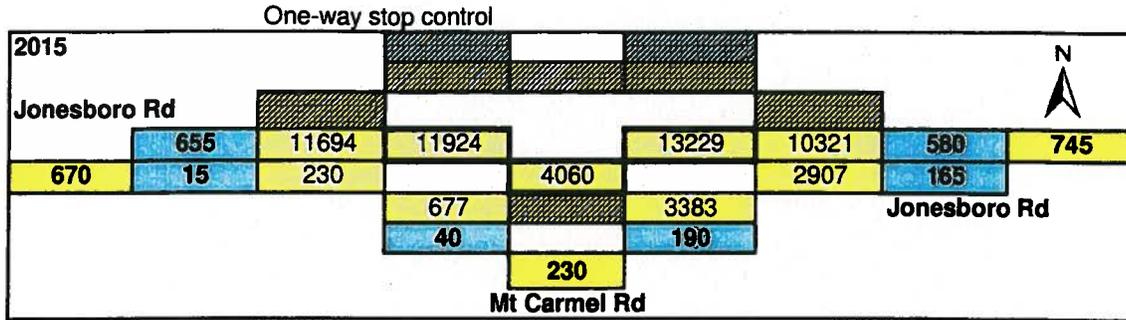
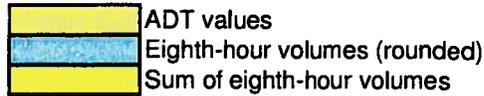
- | | | | | |
|--------------|------------------|--------------|----------------|----------|
| ← Straight | ▨ Parked | × Pedestrian | Fixed objects: | |
| ← Stopped | ⚡ Erratic | ⊗ Bicycle | □ General | ▣ Pole |
| ← Unknown | ⚡ Out of control | ○ Injury | ▣ Signal | ▣ Curb |
| ↔ Backing | ↘ Right turn | ⊙ Fatality | ▣ Tree | ⊗ Animal |
| ↔ Overtaking | ↙ Left turn | 👁 Nighttime | ◁ 3rd vehicle | |
| ↔ Sideswipe | ↻ U-turn | 🚔 DUI | * Extra data | |

Appendix C - Signal Warrant Analysis

1. [Illegible text]

MT CARMEL ROAD EXISTING INTERSECTIONS SIGNAL WARRANT ANALYSIS

Eighth-hour volume = 5.6 % ADT



100% columns - MUTCD Table 4C-1 (2 or more lanes)

Major street	1415	Meets Condition B / Meets Condition A
Minor street	230	Meets Condition B / Meets Condition A

Minor RT considered as this movement experiences the highest delay for capacity analysis of unsignalized conditions

70% columns - MUTCD Table 4C-1 (2 or more lanes), Jonesboro Rd speed limit 45 mph

Major street	1415	Meets Condition B / Meets Condition A
Minor street	230	Meets Condition B / Meets Condition A

Minor RT considered as this movement experiences the highest delay for capacity analysis of unsignalized conditions

100% columns - MUTCD Table 4C-1 (1 lane minor approach)

Major street	1415	Meets Condition B
(NO RT) Minor street	40	Does not meet Condition B

70% columns - MUTCD Table 4C-1 (1 lane minor approach) Jonesboro Rd speed limit 45 mph

Major street	1415	Meets Condition B
(NO RT) Minor street	40	Does not meet Condition B

100% columns - MUTCD Table 4C-1, Major left turn as minor vs major opposing

Major street	655	Does not meet Condition B / Meets Condition A
Minor street	165	Meets Condition B / Meets Condition A

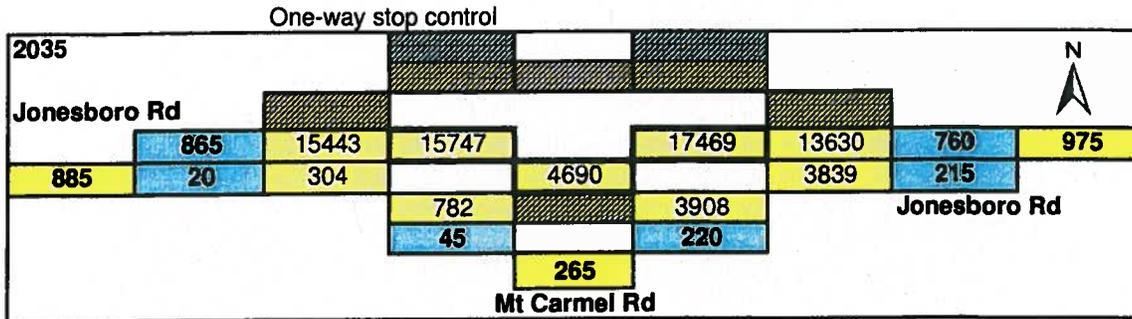
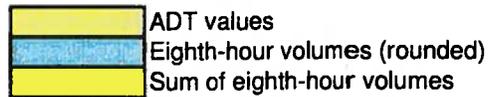
70% columns - MUTCD Table 4C-1, Jonesboro Rd speed limit 45 mph, Major left-turn vs. Major opposing

Major street	655	Does not meet Condition B / Meets Condition A
Minor street	165	Meets Condition B / Meets Condition A

→ **MEETS WARRANT 1**

MT CARMEL ROAD EXISTING INTERSECTIONS SIGNAL WARRANT ANALYSIS

Eighth-hour volume = 5.6 % ADT



100% columns - MUTCD Table 4C-1 (2 or more lanes)

Major street	1860	Meets Condition B / Meets Condition A
Minor street	265	Meets Condition B / Meets Condition A

Minor RT considered as this movement experiences the highest delay for capacity analysis of unsignalized conditions

70% columns - MUTCD Table 4C-1 (2 or more lanes), Jonesboro Rd speed limit 45 mph

Major street	1860	Meets Condition B / Meets Condition A
Minor street	265	Meets Condition B / Meets Condition A

Minor RT considered as this movement experiences the highest delay for capacity analysis of unsignalized conditions

100% columns - MUTCD Table 4C-1 (1 lane minor approach)

Major street	1860	Meets Condition B
(NO RT) Minor street	45	Does not meet Condition B

70% columns - MUTCD Table 4C-1 (1 lane minor approach) Jonesboro Rd speed limit 45 mph

Major street	1860	Meets Condition B
(NO RT) Minor street	45	Does not meet Condition B

100% columns - MUTCD Table 4C-1, Major left turn as minor vs major opposing

Major street	865	Does not meet Condition B / Meets Condition A
Minor street	215	Meets Condition B / Meets Condition A

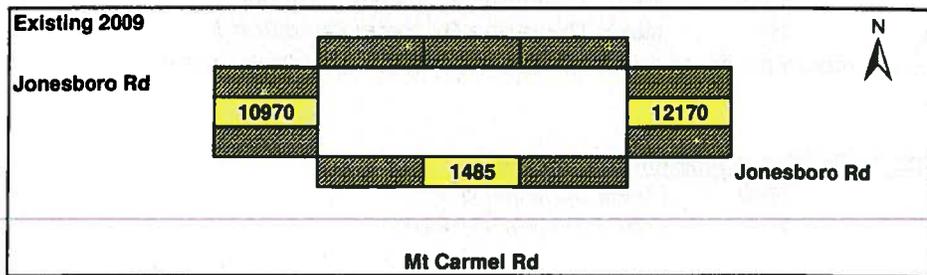
70% columns - MUTCD Table 4C-1, Jonesboro Rd speed limit 45 mph, Major left-turn vs. Major opposing

Major street	865	Does not meet Condition B / Meets Condition A
Minor street	215	Meets Condition B / Meets Condition A

→ **MEETS WARRANT 1**

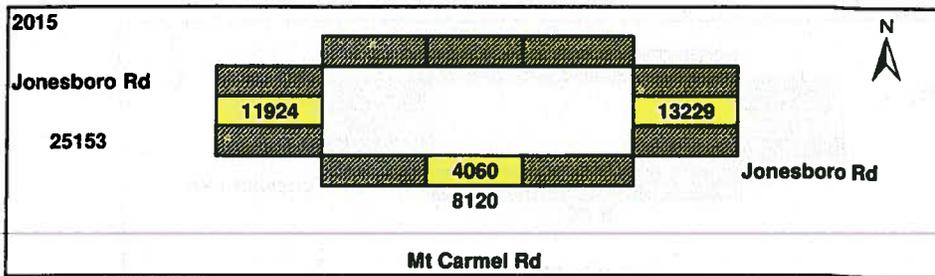
MT CARMEL ROAD EXISTING INTERSECTIONS SIGNAL WARRANT ANALYSIS

 ADT values



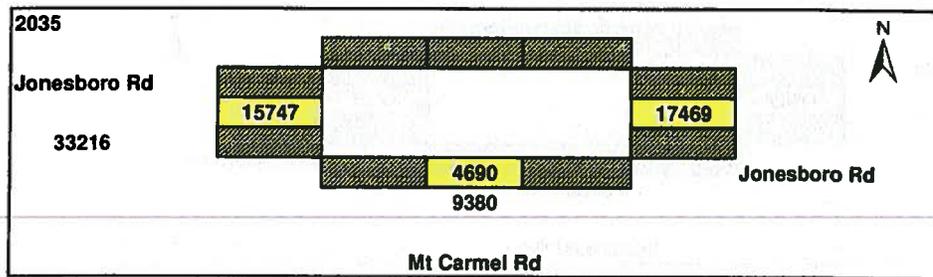
MT CARMEL ROAD EXISTING INTERSECTIONS SIGNAL WARRANT ANALYSIS

 ADT values



MT CARMEL ROAD EXISTING INTERSECTIONS SIGNAL WARRANT ANALYSIS

 ADT values



Appendix D- Roundabout Analysis

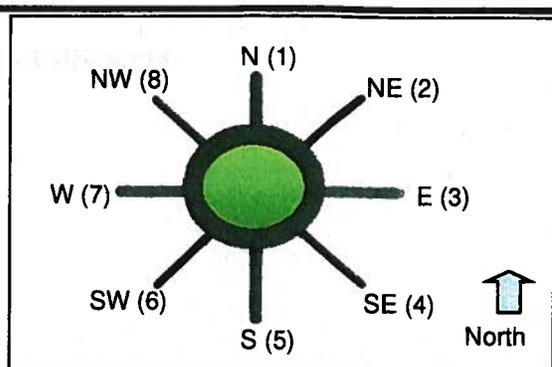


Approach	Volume (V)	Capacity (C)	Level of Service (LOS)	Delay (s)	Queue Length (ft)	Other
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2						
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88						
89						
90						
91						
92						
93						
94						
95						
96						
97						
98						
99						
100						

Roundabout Analysis Tool
Multi-Lane

8/2/2011
Version 1.3

General & Site Information	
Analyst:	YOC
Agency/Company:	Parsons
Date:	7/28/2011
Project Name or PI#:	PI 0009156 & 0009157
Year, Peak Hour:	2035 Build AM
County/District:	Henry
Intersection:	Mt. Carmel Road at Jonesboro Road



Volumes	Entry Legs (FROM)							
	N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)

N (1), vph								
Exit NE (2), vph								
Legs E (3), vph								
(TO) SE (4), vph								
S (5), vph					600			
SW (6), vph								
W (7), vph					710	1420		
NW (8), vph								
Entry Volume, vph	0	0	0	0	1310	1420	0	0
	S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
N (1), vph								
NE (2), vph								
E (3), vph		240			565	565		
SE (4), vph								
S (5), vph						120		
SW (6), vph								
W (7), vph	40							
NW (8), vph								
Entry Volume, vph	40	240	0	0	565	685	0	0

Critical Lane Volumes	N	NE	E	SE	S	SW	W	NW
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N (1), vph	0	0	0	0	0	0	0	0
NE (2), vph	0	0	0	0	0	0	0	0
E (3), vph	0	0	0	0	240	0	565	0
SE (4), vph	0	0	0	0	0	0	0	0
S (5), vph	0	0	0	0	0	0	120	0
SW (6), vph	0	0	0	0	0	0	0	0
W (7), vph	0	0	1420	0	0	0	0	0
NW (8), vph	0	0	0	0	0	0	0	0
Entry Volume, vph	0	0	1420	0	240	0	685	0

No. of Conflict Flow Lanes to	2	2	2	2	2	2	2	2
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Roundabout Analysis Tool
Multi-Lane

8/2/2011
Version 1.3

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	100%	100%	94%	100%	94%	100%	94%	100%
% S.U./ Bus	0%	0%	0%	0%	0%	0%	0%	0%
% Trucks/ Combin.	0%	0%	6%	0%	6%	0%	6%	0%
% Bicycles	0%	0%	0%	0%	0%	0%	0%	0%
PHF	0.92	0.92	0.90	0.92	0.90	0.92	0.90	0.92
F _{hv}	1.000	1.000	0.943	1.000	0.943	1.000	0.943	1.000

Entry/Conflicting Flows	N	NE	E	SE	S	SW	W	NW
Flow to N (1), pcu/h	0	0	0	0	0	0	0	0
Leg # NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	0	0	0	0	283	0	1331	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	0	0	707	0	0	0	141	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	0	0	2509	0	47	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Conflicting flow, pcu/h	0	0	47	0	1331	0	707	0

Results: Approach Measures of Effectiveness

NCHRP-572 Model	N	NE	E	SE	S	SW	W	NW
Crit. Entry Capacity pcu/h	NA	NA	1093	NA	445	NA	689	NA
Crit. Lane Entry Flow pcu/h	0	0	1672	0	283	0	807	0
V/C ratio			1.53		0.64		1.17	
Control Delay, sec/pcu			250.8		21.1		108.7	
LOS			F		C		F	
95th % Queue (ft)			2125		114		695	

UK Model**	N	NE	E	SE	S	SW	W	NW
Crit. Entry Capacity pcu/h	NA	NA	2390	NA	1471	NA	1918	NA
Entry Flow pcu/h	0	0	3215	0	330	0	1472	0
V/C ratio			1.35		0.22		0.77	
Control Delay, sec/pcu			162.5		3.2		7.7	
LOS			F		A		A	
95th % Queue (ft)			3014		23		227	

Notes:

Unit Legend:

vph = vehicles per hour

PHF = peak hour factor

F_{HV} = heavy vehicle factor

pcu = passenger car unit

Roundabout Analysis Tool
Multi-Lane

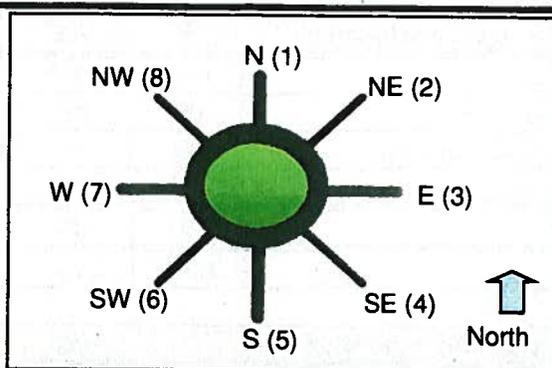
8/2/2011
Version 1.3

Bypass Lane Merge Point Analysis (if applicable)						
Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
<i>Volumes</i>						
Entry Leg: Insert Right Turn Volume						
Exit Leg: <i>(Select Input Method)</i>						
<i>Critical Lane Flow (Default) in Exit Leg***</i>						
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)						
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)						
<i>Critical Lane Flow (Manual) in Exit Leg***</i>						
<i>Volume Characteristics</i>						
PHF (Entry Leg)						
F _{HV} (Entry Leg)						
PHF (Exit Leg)***						
F _{HV} (Exit Leg)***						
<i>***Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.</i>						
<i>Entry/Conflicting Flows</i>						
Entry Flow						
Conflicting Critical Flow						
Bypass Lane Results (NCHRP-572 Method)						
Entry Capacity-at-bypass-merge-point, pcu/hr						
V/C ratio						
Control Delay, sec/pcu						
LOS						
95th % Queue (ft)						

Roundabout Analysis Tool
Multi-Lane

8/2/2011
Version 1.3

General & Site Information	
Analyst:	YOC
Agency/Company:	Parsons
Date:	7/28/2011
Project Name or PI#:	PI 0009156 & 0009157
Year, Peak Hour:	2015 Build PM
County/District:	Henry
Intersection:	Mt. Carmel Road at Jonesboro Road



		Entry Legs (FROM)							
		N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)

Exit	N (1), vph								
Legs	NE (2), vph								
(TO)	E (3), vph								
	SE (4), vph								
	S (5), vph					192			
	SW (6), vph								
	W (7), vph					557	1115		
	NW (8), vph								
	Entry Volume, vph	0	0	0	0	749	1115	0	0

	S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
--	--------	--------	---------	---------	--------	--------	---------	---------

	N (1), vph							
	NE (2), vph							
	E (3), vph		480			812	812	
	SE (4), vph							
	S (5), vph						32	
	SW (6), vph							
	W (7), vph	96						
	NW (8), vph							
	Entry Volume, vph	96	480	0	0	812	844	0

Critical Lane Volumes	N	NE	E	SE	S	SW	W	NW
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	N (1), vph	0	0	0	0	0	0	0
	NE (2), vph	0	0	0	0	0	0	0
	E (3), vph	0	0	0	0	480	812	0
	SE (4), vph	0	0	0	0	0	0	0
	S (5), vph	0	0	0	0	0	32	0
	SW (6), vph	0	0	0	0	0	0	0
	W (7), vph	0	0	1115	0	0	0	0
	NW (8), vph	0	0	0	0	0	0	0
	Entry Volume, vph	0	0	1115	0	480	844	0

No. of Conflict Flow Lanes to	2	2	2	2	2	2	2	2
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Roundabout Analysis Tool
Multi-Lane

8/2/2011
Version 1.3

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	100%	100%	94%	100%	94%	100%	94%	100%
% S.U./ Bus	0%	0%	0%	0%	0%	0%	0%	0%
% Trucks/ Combin.	0%	0%	6%	0%	6%	0%	6%	0%
% Bicycles	0%	0%	0%	0%	0%	0%	0%	0%
PHF	0.92	0.92	0.90	0.92	0.90	0.92	0.90	0.92
F _{hv}	1.000	1.000	0.943	1.000	0.943	1.000	0.943	1.000

Entry/Conflicting Flows	N	NE	E	SE	S	SW	W	NW
Flow to N (1), pcu/h	0	0	0	0	0	0	0	0
Leg # NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	0	0	0	0	565	0	1913	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	0	0	226	0	0	0	38	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	0	0	1969	0	113	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Conflicting flow, pcu/h	0	0	113	0	1913	0	226	0

Results: Approach Measures of Effectiveness

NCHRP-572 Model	N	NE	E	SE	S	SW	W	NW
Crit. Entry Capacity pcu/h	NA	NA	1044	NA	296	NA	965	NA
Crit. Lane Entry Flow pcu/h	0	0	1313	0	565	0	994	0
V/C ratio			1.26		1.91		1.03	
Control Delay, sec/pcu			134.4		445.1		52.8	
LOS			F		F		F	
95th % Queue (ft)			1184		1035		563	

UK Model**	N	NE	E	SE	S	SW	W	NW
Crit. Entry Capacity pcu/h	NA	NA	2343	NA	1055	NA	2262	NA
Entry Flow pcu/h	0	0	2195	0	678	0	1950	0
V/C ratio			0.94		0.64		0.86	
Control Delay, sec/pcu			16.5		9.3		10.3	
LOS			C		A		B	
95th % Queue (ft)			554		130		367	

Notes:

Unit Legend:

vph = vehicles per hour

PHF = peak hour factor

F_{HV} = heavy vehicle factor

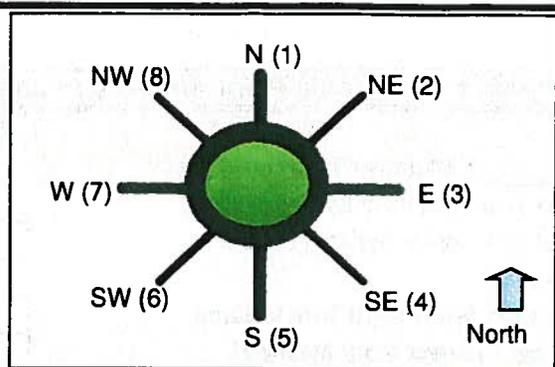
pcu = passenger car unit

Bypass Lane Merge Point Analysis (if applicable)						
Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
<i>Volumes</i>						
Entry Leg: Insert Right Turn Volume						
Exit Leg: <i>(Select Input Method)</i>						
<i>Critical Lane Flow (Default) in Exit Leg***</i>						
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)						
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)						
<i>Critical Lane Flow (Manual) in Exit Leg***</i>						
<i>Volume Characteristics</i>						
PHF (Entry Leg)						
F _{HV} (Entry Leg)						
PHF (Exit Leg)***						
F _{HV} (Exit Leg)***						
<i>***Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.</i>						
<i>Entry/Conflicting Flows</i>						
Entry Flow						
Conflicting Critical Flow						
Bypass Lane Results (NCHRP-572 Method)						
Entry Capacity at bypass merge point, pcu/hr						
V/C ratio						
Control Delay, sec/pcu						
LOS						
95th % Queue (ft)						

Roundabout Analysis Tool
Multi-Lane

8/2/2011
Version 1.3

General & Site Information	
Analyst:	YOC
Agency/Company:	Parsons
Date:	7/28/2011
Project Name or PI#:	PI 0009156 & 0009157
Year, Peak Hour:	2015 Build AM
County/District:	Henry
Intersection:	Mt. Carmel Road at Jonesboro Road



	Entry Legs (FROM)							
	N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)

N (1), vph								
Exit NE (2), vph								
Legs E (3), vph								
(TO) SE (4), vph								
S (5), vph					480			
SW (6), vph								
W (7), vph					568	1136		
NW (8), vph								
Entry Volume, vph	0	0	0	0	1048	1136	0	0
	S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
N (1), vph								
NE (2), vph								
E (3), vph		192			452	452		
SE (4), vph								
S (5), vph						96		
SW (6), vph								
W (7), vph	32							
NW (8), vph								
Entry Volume, vph	32	192	0	0	452	548	0	0

Critical Lane Volumes	N	NE	E	SE	S	SW	W	NW
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N (1), vph	0	0	0	0	0	0	0	0
NE (2), vph	0	0	0	0	0	0	0	0
E (3), vph	0	0	0	0	192	0	452	0
SE (4), vph	0	0	0	0	0	0	0	0
S (5), vph	0	0	0	0	0	0	96	0
SW (6), vph	0	0	0	0	0	0	0	0
W (7), vph	0	0	1136	0	0	0	0	0
NW (8), vph	0	0	0	0	0	0	0	0
Entry Volume, vph	0	0	1136	0	192	0	548	0

No. of Conflict Flow Lanes to	2	2	2	2	2	2	2	2
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Roundabout Analysis Tool
Multi-Lane

8/2/2011
Version 1.3

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	100%	100%	94%	100%	94%	100%	94%	100%
% S.U./ Bus	0%	0%	0%	0%	0%	0%	0%	0%
% Trucks/ Combin.	0%	0%	6%	0%	6%	0%	6%	0%
% Bicycles	0%	0%	0%	0%	0%	0%	0%	0%
PHF	0.92	0.92	0.90	0.92	0.90	0.92	0.90	0.92
F _{hv}	1.000	1.000	0.943	1.000	0.943	1.000	0.943	1.000

Entry/Conflicting Flows	N	NE	E	SE	S	SW	W	NW
Flow to N (1), pcu/h	0	0	0	0	0	0	0	0
Leg # NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	0	0	0	0	226	0	1065	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	0	0	565	0	0	0	113	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	0	0	2007	0	38	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Conflicting flow, pcu/h	0	0	38	0	1065	0	565	0

Results: Approach Measures of Effectiveness

NCHRP-572 Model	N	NE	E	SE	S	SW	W	NW
Crit. Entry Capacity pcu/h	NA	NA	1101	NA	536	NA	761	NA
Crit. Lane Entry Flow pcu/h	0	0	1338	0	226	0	645	0
V/C ratio			1.22		0.42		0.85	
Control Delay, sec/pcu			116.2		11.5		25.1	
LOS			F		B		D	
95th % Queue (ft)			1105		55		263	

UK Model**	N	NE	E	SE	S	SW	W	NW
Crit. Entry Capacity pcu/h	NA	NA	2397	NA	1662	NA	2019	NA
Entry Flow pcu/h	0	0	2572	0	264	0	1178	0
V/C ratio			1.07		0.16		0.58	
Control Delay, sec/pcu			49.5		2.6		4.2	
LOS			E		A		A	
95th % Queue (ft)			1163		15		107	

Notes:

Unit Legend:

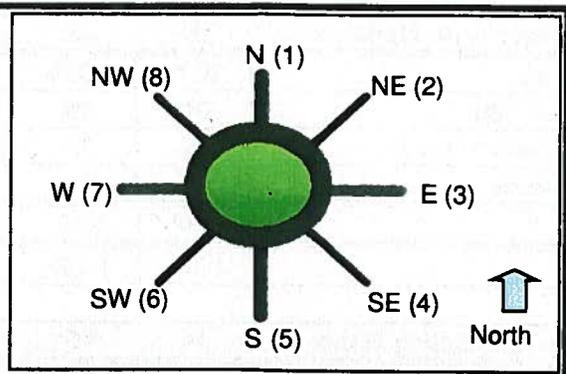
- vph = vehicles per hour
- PHF = peak hour factor
- F_{HV} = heavy vehicle factor
- pcu = passenger car unit

Bypass Lane Merge Point Analysis (if applicable)						
Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
<i>Volumes</i>						
Entry Leg: Insert Right Turn Volume						
Exit Leg: (Select Input Method)						
Critical Lane Flow (Default) in Exit Leg***						
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)						
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)						
Critical Lane Flow (Manual) in Exit Leg***						
<i>Volume Characteristics</i>						
PHF (Entry Leg)						
F _{HV} (Entry Leg)						
PHF (Exit Leg)***						
F _{HV} (Exit Leg)***						
***Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.						
<i>Entry/Conflicting Flows</i>						
Entry Flow						
Conflicting Critical Flow						
Bypass Lane Results (NCHRP-572 Method)						
Entry Capacity at bypass merge point, pcu/hr						
V/C ratio						
Control Delay, sec/pcu						
LOS						
95th % Queue (ft)						

Roundabout Analysis Tool
Multi-Lane

8/2/2011
Version 1.3

General & Site Information	
Analyst:	YOC
Agency/Company:	Parsons
Date:	7/28/2011
Project Name or PI#:	PI 0009156 & 0009157
Year, Peak Hour:	2035 Build PM
County/District:	Henry
Intersection:	Mt. Carmel Road at Jonesboro Road



Volumes		Entry Legs (FROM)							
		N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Exit	N (1), vph								
Legs	NE (2), vph								
(TO)	E (3), vph								
	SE (4), vph								
	S (5), vph					240			
	SW (6), vph								
	W (7), vph					697	1393		
	NW (8), vph								
	Entry Volume, vph	0	0	0	0	937	1393	0	0
		S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
	N (1), vph								
	NE (2), vph								
	E (3), vph		600			1015	1015		
	SE (4), vph								
	S (5), vph						40		
	SW (6), vph								
	W (7), vph	120							
	NW (8), vph								
	Entry Volume, vph	120	600	0	0	1015	1055	0	0

Critical Lane Volumes		N	NE	E	SE	S	SW	W	NW
	N (1), vph	0	0	0	0	0	0	0	0
	NE (2), vph	0	0	0	0	0	0	0	0
	E (3), vph	0	0	0	0	600	0	1015	0
	SE (4), vph	0	0	0	0	0	0	0	0
	S (5), vph	0	0	0	0	0	0	40	0
	SW (6), vph	0	0	0	0	0	0	0	0
	W (7), vph	0	0	1393	0	0	0	0	0
	NW (8), vph	0	0	0	0	0	0	0	0
	Entry Volume, vph	0	0	1393	0	600	0	1055	0

No. of Conflict Flow Lanes to	2	2	2	2	2	2	2	2	2
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Roundabout Analysis Tool
Multi-Lane

8/2/2011
Version 1.3

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	100%	100%	94%	100%	94%	100%	94%	100%
% S.U./ Bus	0%	0%	0%	0%	0%	0%	0%	0%
% Trucks/ Combin.	0%	0%	6%	0%	6%	0%	6%	0%
% Bicycles	0%	0%	0%	0%	0%	0%	0%	0%
PHF	0.92	0.92	0.90	0.92	0.90	0.92	0.90	0.92
F _{HV}	1.000	1.000	0.943	1.000	0.943	1.000	0.943	1.000

Entry/Conflicting Flows	N	NE	E	SE	S	SW	W	NW
Flow to N (1), pcu/h	0	0	0	0	0	0	0	0
Leg # NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	0	0	0	0	707	0	2391	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	0	0	283	0	0	0	47	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	0	0	2462	0	141	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Conflicting flow, pcu/h	0	0	141	0	2391	0	283	0

Results: Approach Measures of Effectiveness

NCHRP-572 Model	N	NE	E	SE	S	SW	W	NW
Crit. Entry Capacity pcu/h	NA	NA	1024	NA	212	NA	927	NA
Crit. Lane Entry Flow pcu/h	0	0	1641	0	707	0	1243	0
V/C ratio			1.60		3.33		1.34	
Control Delay, sec/pcu			283.9		1091.1		171.0	
LOS			F		F		F	
95th % Queue (ft)			2237		1745		1297	

UK Model**	N	NE	E	SE	S	SW	W	NW
Crit. Entry Capacity pcu/h	NA	NA	2323	NA	712	NA	2222	NA
Entry Flow pcu/h	0	0	2744	0	848	0	2438	0
V/C ratio			1.18		1.19		1.10	
Control Delay, sec/pcu			92.3		115.3		59.3	
LOS			F		F		F	
95th % Queue (ft)			1798		748		1236	

Notes:

Unit Legend:

- vph = vehicles per hour
- PHF = peak hour factor
- F_{HV} = heavy vehicle factor
- pcu = passenger car unit

Bypass Lane Merge Point Analysis (if applicable)						
Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
<i>Volumes</i>						
Entry Leg: Insert Right Turn Volume						
Exit Leg: <i>(Select Input Method)</i>						
<i>Critical Lane Flow (Default) in Exit Leg***</i>						
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)						
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)						
<i>Critical Lane Flow (Manual) in Exit Leg***</i>						
<i>Volume Characteristics</i>						
PHF (Entry Leg)						
F _{HV} (Entry Leg)						
PHF (Exit Leg)***						
F _{HV} (Exit Leg)***						
<i>***Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.</i>						
<i>Entry/Conflicting Flows</i>						
Entry Flow						
Conflicting Critical Flow						
Bypass Lane Results (NCHRP-572 Method)						
Entry Capacity at bypass merge point, pcu/hr						
V/C ratio						
Control Delay, sec/pcu						
LOS						
95th % Queue (ft)						

HCM Unsignalized Intersection Capacity Analysis 2035 BUILD AM_ALT 3A UNSIGNALIZED
 1: Jonesboro Road (2035 Build AM Unsig) & Mt Carmel Rd 11/9/2011



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↘	↙	↑↑	↙	↘
Volume (veh/h)	1130	47	246	2130	43	253
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1256	52	273	2367	48	281
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1308		2986	628
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1308		2986	628
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.4
p0 queue free %			46		0	32
cM capacity (veh/h)			504		5	416

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	628	628	52	273	1183	1183	48	281
Volume Left	0	0	0	273	0	0	48	0
Volume Right	0	0	52	0	0	0	0	281
cSH	1700	1700	1700	504	1700	1700	5	416
Volume to Capacity	0.37	0.37	0.03	0.54	0.70	0.70	10.29	0.68
Queue Length 95th (ft)	0	0	0	80	0	0	Err	121
Control Delay (s)	0.0	0.0	0.0	20.3	0.0	0.0	Err	29.8
Lane LOS				C			F	D
Approach Delay (s)	0.0			2.1			1478.1	
Approach LOS							F	

Intersection Summary		
Average Delay		115.0
Intersection Capacity Utilization	68.9%	ICU Level of Service C
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis

2035 Build PM_ALT 3A_Unsignalized

1: Jonesboro Road (2035 Build PM UnSig) & Mt Carmel Rd

11/9/2011



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Volume (veh/h)	2030	40	240	2090	53	276
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	2256	44	267	2322	59	307
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			2300		3950	1128
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			2300		3950	1128
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.4
p0 queue free %			0		0	0
cM capacity (veh/h)			203		0	192

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	1128	1128	44	267	1161	1161	59	307
Volume Left	0	0	0	267	0	0	59	0
Volume Right	0	0	44	0	0	0	0	307
cSH	1700	1700	1700	203	1700	1700	0	192
Volume to Capacity	0.66	0.66	0.03	1.31	0.68	0.68	Err	1.60
Queue Length 95th (ft)	0	0	0	368	0	0	Err	501
Control Delay (s)	0.0	0.0	0.0	217.3	0.0	0.0	Err	335.2
Lane LOS				F			F	F
Approach Delay (s)	0.0			22.4			Err	
Approach LOS							F	

Intersection Summary								
Average Delay				Err				
Intersection Capacity Utilization			82.7%		ICU Level of Service		E	
Analysis Period (min)			15					

HCM Signalized Intersection Capacity Analysis
 1: Jonesboro Rd (2035 Build AM signalized) & Mt. Carmel Rd

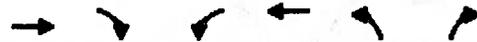
2035 Build AM_Alt 3A_Signal Minimal
 11/10/2011

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Volume (vph)	1130	47	246	2130	43	253
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3406	1524	1703	3406	1703	1524
Flt Permitted	1.00	1.00	0.12	1.00	0.95	1.00
Satd. Flow (perm)	3406	1524	223	3406	1703	1524
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1256	52	273	2367	48	281
RTOR Reduction (vph)	0	24	0	0	0	248
Lane Group Flow (vph)	1256	28	273	2367	48	33
Turn Type		Perm	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8
Actuated Green, G (s)	44.6	44.6	62.1	62.1	8.7	8.7
Effective Green, g (s)	44.6	44.6	62.1	62.1	8.7	8.7
Actuated g/C Ratio	0.54	0.54	0.75	0.75	0.11	0.11
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1835	821	373	2555	179	160
v/s Ratio Prot	0.37		0.10	c0.70	c0.03	
v/s Ratio Perm		0.02	0.45			0.02
v/c Ratio	0.68	0.03	0.73	0.93	0.27	0.21
Uniform Delay, d1	14.0	9.0	14.3	8.5	34.1	33.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	0.0	7.2	6.5	0.8	0.6
Delay (s)	15.0	9.0	21.5	14.9	34.9	34.5
Level of Service	B	A	C	B	C	C
Approach Delay (s)	14.8			15.6	34.6	
Approach LOS	B			B	C	

Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	82.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 1: Jonesboro Rd (2035 Build PM Signalized) & Mt. Carmel Rd

11/11/2011



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↗
Volume (vph)	2030	40	240	2090	53	276
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	0.88
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3406	1524	1703	3406	1703	2682
Flt Permitted	1.00	1.00	0.04	1.00	0.95	1.00
Satd. Flow (perm)	3406	1524	63	3406	1703	2682
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2256	44	267	2322	59	307
RTOR Reduction (vph)	0	11	0	0	0	0
Lane Group Flow (vph)	2256	33	267	2322	59	307
Turn Type		Perm	pm+pt			pt+ov
Protected Phases	2		1	6	8	8 1
Permitted Phases		2	6			
Actuated Green, G (s)	107.0	107.0	132.0	132.0	15.8	40.8
Effective Green, g (s)	107.0	107.0	132.0	132.0	15.8	40.8
Actuated g/C Ratio	0.67	0.67	0.83	0.83	0.10	0.26
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	2281	1020	247	2813	168	685
v/s Ratio Prot	0.66		c0.13	0.68	0.03	c0.11
v/s Ratio Perm		0.02	c0.76			
v/c Ratio	0.99	0.03	1.08	0.83	0.35	0.45
Uniform Delay, d1	25.8	8.9	62.6	7.6	67.2	50.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	16.1	0.0	80.5	2.1	1.3	0.5
Delay (s)	42.0	8.9	143.1	9.7	68.5	50.5
Level of Service	D	A	F	A	E	D
Approach Delay (s)	41.3			23.5	53.4	
Approach LOS	D			C	D	

Intersection Summary			
HCM Average Control Delay	33.4	HCM Level of Service	C
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	159.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

ATTACHMENT 7

Bridge Inventory

(The following table content is extremely faint and largely illegible. It appears to be a multi-column table with headers such as 'County', 'Route', 'Name', 'Type', 'Year', 'Status', and 'Notes'. The data rows contain various entries, likely representing different bridges in a specific region.)



Processed Date: 3/10/2011

Bridge Inventory Data Listing

Parameters: Bridge Serial Num

I-75 over SR 155

SUFF. RATING: 85.96

Henry

Structure ID: 151-0033-0

Location & Geography

Structure ID:	151-0033-0	*104 Highway System:	1
200 Bridge Information:	04	*26 Functional Classification:	01
*6A Feature Int:	SR 155- NRELK STRRN RR.	*204 Federal Route Type:	F No: 00752
*6B Critical Bridge:	0	105 Federal Lands Highway:	0
*7A Route No Carried:	SR00401	*110 Trunk Route:	0
*7B Facility Carried:	I-75	2006 School Bus Route:	0000.00
9 Location:	3 MI S OF MCDONOUGH	217 Benchmark Elevation:	0
2 Dot District:	3	218 Datum:	01
207 Year Photo:	2009	*19 Bypass Length:	3
*91 Inspection Frequency:	24 Date: 01/23/2009	*20 Toll:	01
92A Fract Crit Insp Freq:	0 Date: 02/01/1901	*21 Maintenance:	01
92B Underwater Insp Freq:	0 Date: 02/01/1901	*22 Owner:	01
92C Other Spc. Insp Freq:	0 Date: 02/01/1901	*31 Design Load:	6
*4 Place Code:	00000	37 Historical Significance:	5
*5 Inventory Route(O/U):	1	205 Congressional District:	03
Type:	1	27 Year Constructed:	1967
Designation:	1	106 Year Reconstructed:	2001
Number:	00075	33 Bridge Median:	3
Direction:	0	34 Skew:	12
*16 Latitude:	33 24.6710 HMMS Prefix:SR	35 Structure Flared:	0
*17 Longitude:	84 -.09.6440 HMMS Suffix:00 MP-216.36	38 Navigation Control:	N
98 Border Bridge:	000% Shared:00	213 Special Steel Design:	0
99 ID Number:	0000000000000000	267 Type of Paint:	1
*100 STRAFNET:	1	*42 Type of Service On:	1
12 Base Highway Network:	1	Type of Service Under:	4
13A LRS Inventory Route:	1511040100	214 Movable Bridge:	0
13B Sub Inventory Route:	1	203 Type Bridge:	0
101 Parallel Structure:	N	259 Pile Encasement:	3
*102 Direction of Traffic:	2	*43 Structure Type Main:	3 02
*264 Road Inventory Mile Post:	008.35	45 No. Spans Main:	004
*208 Inspection Act:	3	44 Structure Type Appr:	0 00
Engineer's Initials:	WSS	46 No Spans Appr:	0000
* Location ID No:	151-00401D-216.36N	228 Bridge Curve Horiz:	0 Vert: 1
		111 Plier Protection:	0
		107 Deck Structure Type:	1
		108 Wearing Structure Type:	1
		Membrane Type:	8
		Deck Protection:	8

Signs & Attachments

225 Expansion Joint Type:	02
242 Deck Drains:	0
243 Parapet Location:	0
Height:	0
Width:	0
238 Curb Height:	0
Curb Material:	0
239 Handrail:	99
*240 Medium Barrier Rail:	1
241 Bridge Median Height:	3
* Bridge Median Width:	3
230 Guardrail Loc. Dir. Rear:	6
Fwrd:	6
Oppo. Dir. Rear:	6
Oppo. Fwrd:	6
244 Approach Slab:	3
224 Retaining Wall:	0
233 Posted Speed Limit:	70
236 Warning Sign:	0.00
234 Delineator:	1.00
235 Hazard Boards:	0
237 Utilities Gas:	00
Water:	00
Electric:	00
Telephone:	00
Sewer:	00
247 Lighting Street:	0
Navigation:	0
Aerial:	0
*248 County Continuity No.:	00



Bridge Inventory Data Listing

Processed Date: 3/10/2011
 Parameters: Bridge Serial Num

Structure ID: 151-0033-0	109930	Year: 2007
Programming Data		
201 Project No:	109930	Year: 2007
202 Plans Available:	0	
249 Prop Proj No:	08	Under: 04
250 Approval Status:	00	Under: 01
251 PI Number:	0070	
252 Contract Date:	240	
260 Seismic No:	147.60	
75 Type Work:	153.40	
94 Bridge Imp. Cost:	78	
95 Roadway Imp. Cost:	0.00	0.00
96 Total Imp. Cost:	116	
76 Imp. Length:	10.00	Type: 2 RI: 12.00
97 Imp. Year:	10.00	Type: 2 RI: 12.00
114 Future ADT:		
Hydraulic Data		
215 Waterway Data:		
High Water Elev:	36.00	Type: 2
Flood Elev:	36.00	Type: 2
Avg Streambed Elev:	0	Fwd: 1
Drainage Area:	1	
Area of Opening:	1	
113 Scour Critical	2	
216 Water Depth:	1	
222 Slope Protection:	99'	99"
221 Slope Protection	0	Fwd: 0
219 Fender System	0	
220 Dolphin:	000	
223 Current Cover:	0	
Type:	0	
No. Barrels:	0.00	Height: 0.00
* Width:	0	Apron: 0
* Length:	0	Diver: ZZZ
265 U/W Insp. Area	151-00401D-216.36N	
Location ID No:		
Measurements:		
* 29 ADT		
109% Tracks:		
* 28 Lanes On:		
210 No. Tracks On:		
* 48 Max. Span Length		
* 49 Structure Length:		
51 Br. Rwy. Width		
52 Deck Width:		
* 47 Tot. Horiz. Cl:		
50 Curb / Sidewalk Width		
32 Approach Rwy. Width		
* 229 Shoulder Width:		
Rear Lt.:		
Fwd. Lt.:		
Permanent Width:		
Rear:		
Intersection Rear:		
36 Safety Features Br. Rail:		
Transition:		
App. G. Rail:		
App. Rail End:		
53 Minimum Cl. Over:		
Under:		
* 228 Minimum Vertical Cl		
Act. Oqtm Dir.:		
Oppo. Dir.:		
Posted Oqtm. Dir.:		
Oppo. Dir.:		
55 Lateral Undercl. Rt:		
56 Lateral Undercl. Lt.:		
* 10 Max Min Vert Cl:		
39 Nav Vert Cl:		
116 Nav Vert Cl Closed:		
245 Deck Thickness Main Deck Thick Approach:		
246 Overlay Thickness:		
212 Year Last Painted:		
Sup: 1986 Sub: 0000		
65 Inventory Rating Method:	1	
63 Operating Rating Method:	1	
66 Inventory Type:	2	Rating: 33
64 Operating Type:	2	Rating: 33
231 Calculated Loads:		
H-Modified:	20	0
HS-Modified:	25	0
Type 3:	28	0
Type 3s2:	40	0
Timber:	36	0
Piggyback:	40	0
261 H Inventory Rating:	20	
262 H Operating Rating	33	
67 Structural Evaluation:	7	
58 Deck Condition:	6	
59 Superstructure Condition:	7	
* 227 Collision Damage:	0	
60A Substructure Condition:	7	
60B Scour Condition:	N	
60C Underwater Condition	N	
71 Waterway Adequacy:	N	
61 Channel Protection Cond.:	N	
68 Deck Geometry:	9	
69 UnderCl. Horz/Vert:	4	
72 Appr. Alignment:	8	
62 Culvert:	N	
Posting Data		
70 Bridge Posting Required	5	
41 Struct Open, Posted, CL:	A	
* 103 Temporary Structure:	0	
232 Posted Loads		
H-Modified:	00	
HS-Modified:	00	
Type 3:	00	
Type 3s2:	00	
Timber:	00	
Piggyback	00	
253 Notification Date:	02/01/1901	
258 Fed Notify Date:	2/1/1901 12:00:00AM	

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Processed Date: 3/10/2011

Bridge Inventory Data Listing

Parameters: Bridge Serial Num

5120 over I-75

SUFF. RATING: 92.01

Henry

Structure ID: 151-5063-0

Location & Geography

Structure ID:	151-5063-0	*104 Highway System:	1
200 Bridge Information:	06	*26 Functional Classification:	18
*8A Feature Int:	I-75	*204 Federal Route Type:	S No: 01070
*8B Critical Bridge:	0	105 Federal Lands Highway:	0
*7A Route No Carried:	SR00020	*110 Truck Route:	0
*7B Facility Carried:	SR 20	2006 School Bus Route:	1
9 Location:	2 MI SW OF MCDONOUGH	217 Benchmark Elevation:	0000.00
2 Det District:	3	218 Datum:	0
207 Year Photo:	2009	*19 Bypass Length:	4
*91 Inspection Frequency:	24 Date: 01/07/2009	*20 Toll:	3
92A Fract Crft Insp Freq:	0 Date: 02/01/1901	*21 Maintenance:	01
92B Underwater Insp Freq:	0 Date: 02/01/1901	*22 Owner:	01
92C Other Spc. Insp Freq:	0 Date: 02/01/1901	*31 Design Load:	6
*4 Place Code:	00000	37 Historical Significance:	5
*5 Inventory Route(O/U):	1	205 Congressional District:	03
Type:	3	27 Year Constructed:	1999
Designation:	1	186 Year Reconstructed:	0000
Number:	00020	33 Bridge Medium:	0
Direction:	0	34 Skew:	08
*16 Latitude:	33 25.6170 HMMS Prefix:SR	35 Structure Flared:	0
*17 Longitude:	84 -10.9040 HMMS Suffix:00 MP:11.10	38 Navigation Control:	N
98 Border Bridge:	000%Share:00	213 Special Steel Design:	0
99 ID Number:	000000000000000000	267 Type of Paint:	0
*100 STRAHNET:	0	*42 Type of Service On:	5
12 Bias Highway Network:	1	Type of Service Under:	1
13A LRS Inventory Route:	1511002000	214 Movable Bridge:	0
13B Sub Inventory Route:	0	203 Type Bridge:	0
101 parallel Structure:	N	*43 Structure Type Main:	5 02
*102 Direction of Traffic:	2	45 No.Spans Main:	004
*264 Road Inventory Mile Post:	011.10	44 Structure Type Appr:	0 00
*208 Inspection Area:	3	46 No Spans Appr:	0000
Engineer's Initials:	sgm	226 Bridge Curve Horz	0 Vert: 1
* Location ID No:	151-00020D-011.10W	111 pier Protection	0
		107 Deck Structure Type:	1
		108 Wearing Structure Type:	1
		Membrane Type:	8
		Deck Protection:	8

Signs & Attachments

225 Expansion Joint Type:	02
242 Deck Drains:	0
243 Parapet Location:	0
Height:	0
Width:	0
238 Curb Height:	1
Curb Material:	1
239 Handrail	1 1
*240 Medium Barrier Rail:	0
241 Bridge Median Height:	0
* Bridge Median Width:	0
230 Guardrail Loc. Dir. Rear:	6
Fwd:	6
Oppo. Dir. Rear:	0
Oppo. Fwd:	0
244 Approach Slab	3
224 Retaining Wall:	0
233 Posted Speed Limit:	45
236 Warning Sign:	0 00
234 Delineator:	1 00
235 Hazard Boards:	0
237 Utilities Gas:	22
Water:	00
Electric:	00
Telephone:	21
Sewer:	00
247 Lighting Street:	1
Navigation:	0
Aerial:	0
*248 County Continuity No.:	00



Bridge Inventory Data Listing

Processed Date: 3/10/2011
 Parameters: Bridge Serial Num

Structure ID: 151-5063-0	IM-75-2 (157)	023020	Year: 2007
Programming Data	4	0	
201 Project No:	00000000000000000000000000000000	07	Under: 06
202 Plans Available:	00000000	00	Under: 00
249 Prop Proj No:	02/01/1901	0107	
250 Approval Status:	000000	308	
251 PI Number:	000000	88.50	
252 Contract Date:	00 0	102.50	
260 Seismic No:	\$ 0	89	
75 Type Work:	0	6.00 / 6.00	
94 Bridge Imp. Cost:	0	88	
95 Roadway Imp. Cost:	000000		
96 Total Imp Cost:	0000		
76 Imp Length:	034530		
97 Imp Year:	Year: 2027		
114 Future ADT:			
Hydraulic Data			
215 Waterway Data:			
High Water Elev:	0000.0	Year: 0000	
Flood Elev:	0000.0	Freq: 00	
Avg Streambed Elev:	0000.0		
Drainage Area:	00000		
Area of Opening:	000000		
113 Scour Critical	N		
216 Water Depth:	00.0	Br. Height: 00.0	
222 Slope Protection:	4		
221 Slope Protection	0	Fwd: 0	
219 Fender System	0		
220 Dolphin:	0		
223 Current Cover:	000		
Type:	0		
No. Barrels:	0.00	Height: 0.00	
* Width:	0	Apron: 0	
* Length:	0	Diver: ZZZ	
265 U/W Insp. Area	0		
Location ID No:	151-00020D-011.10W		
Measurements:			
*29 ADT	023020	Year: 2007	
109% Trucks:	0		
*28 Lanes On:	07	Under: 06	
210 No. Tracks On:	00	Under: 00	
*48 Max. Span Length:	0107		
*49 Structure Length:	308		
51 Br. Rwdy. Width:	88.50		
52 Deck Width:	102.50		
*47 Tot. Horiz. Cl:	89		
50 Curb / Sidewalk Width:	6.00 / 6.00		
32 Approach Rdwy. Width:	88		
*229 Shoulder Width:	2.00	Types: 1 Rt: 2.00	
Rear Lt:	2.00	Types: 1 Rt: 2.00	
Fwd. Lt:			
Permanent Width:			
Rear:	84.00	Types: 1	
Intersection Rear:	84.00	Types: 2	
36 Safety Features Br. Rail:	1	Fwd: 1	
Transition:	1		
App. G. Rail:	1		
App. Rail End:	1		
53 Minimum Cl. Over:	99' 99"		
Under:			
*228 Minimum Vertical Cl			
Act. Odm Dir:	99' 99"		
Oppo. Dir:	99' 99"		
Posted Odm. Dir:	00' 00"		
Oppo. Dir:	00' 00"		
55 Lateral Undercl. Rt:	H 49 49		
56 Lateral Undercl. Lt:	18.80		
*10 Max Min Vert Cl:	99' 99" Dir: 0		
39 Nav Vert Cl:	000 Horiz: 0000		
116 Nav Vert Cl Closed:	000		
245 Deck Thickness Main Deck Thick Approach:	8.50		
246 Overlay Thickness:	0.00		
212 Year Last Painted:	Sup: 0000 Sub: 0000		
65 Inventory Rating Method:	1		
63 Operating Rating Method:	1		
66 Inventory Type:	2	Rating: 40	
64 Operating Type:	2	Rating: 40	
231 Calculated Loads:			
H-Modified:	21	0	
HS-Modified:	30	0	
Type 3:	33	0	
Type 3s2:	40	0	
Timber:	37	0	
Piggyback:	40	0	
261 H Inventory Rating:	31		
262 H Operating Rating:	53		
67 Structural Evaluation:	7		
58 Deck Condition:	7		
59 Superstructure Condition:	8		
*227 Collision Damage:	0		
60A Substructure Condition:	7		
60B Scour Condition:	N		
60C Underwater Condition:	N		
71 Waterway Adequacy:	N		
61 Channel Protection Cond.:	N		
68 Deck Geometry:	5		
69 Undercl. Horiz/Vert:	9		
72 Appr. Alignment:	6		
62 Culvert:	N		
Posting Data			
70 Bridge Posting Required	5		
41 Struct Open, Posted, CL:	A		
*103 Temporary Structure:	0		
232 Posted Loads			
H-Modified:	00		
HS-Modified:	00		
Type 3:	00		
Type 3s2:	00		
Timber:	00		
Piggyback	00		
263 Notification Date:	02/01/1901		
258 Fed Notify Date:	2/1/1901 12:00:00AM		



Bridge Inventory Data Listing

Processed Date: 3/10/2011
 Parameters: Bridge Serial Num

Structure ID: 151-0024-0

Programming Data

201 Project No: 1-75-2 (37) 218 CT.2
 202 Plans Available: 4
 249 Prop Proj No: 00000000000000000000000000000000
 250 Approval Status: 0000
 251 PI Number: 00000000
 252 Contract Date: 02/01/1901
 260 Seismic No: 000000
 75 Type Work: 00 0
 94 Bridge Imp. Cost: \$ 0
 95 Roadway Imp. Cost: 0
 96 Total Imp. Cost: 0
 76 Imp Length: 000000
 97 Imp Year: 0000
 114 Future ADT: 004050 Year: 2027

Measurements:

*29 ADT 002700 Year: 2007
 109% Trucks: 0
 *28 Lanes On: 02 Under: 06
 210 No. Tracks On: 00 Under: 00
 *48 Max. Span Length: 0071
 *49 Structure Length: 218
 51 Br. Rwdy. Width: 30.50
 52 Deck Width: 34.70
 *47 Tot. Horiz. Cl: 31
 50 Curb / Sidewalk Width: 0.50 / 0.50
 32 Approach Rdwy. Width: 21
 *229 Shoulder Width:
 Rear Lt: 8.00 Type: 8 Rt: 8.00
 Fwd. Lt: 8.00 Type: 8 Rt: 8.00

Hydraulic Data

215 Waterway Data:
 High Water Elev: 0000.0 Year: 1900
 Flood Elev: 0000.0 Freq: 00
 Avg Streambed Elev: 0000.0
 Drainage Area: 000000
 Area of Opening: 000000
 113 Scour Critical: N
 216 Water Depth: 00.0 Br. Height: 00.0
 222 Slope Protection: 4
 221 Slope Protection: 0 Fwd: 0
 219 Fender System: 0
 220 Dolphin: 0
 223 Current Cover: 000
 Type: 0
 No. Barrels: 0
 * Width: 0.00 Height: 0.00
 * Length: 0 Apron: 0
 265 U/W Insp. Area: 0 Diver: ZZZ
 Location ID No: 151-00189X-003.25W

65 Inventory Rating Method: 1
 63 Operating Rating Method: 1
 66 Inventory Type: 2 Rating: 26
 64 Operating Type: 2 Rating: 26
 231 Calculated Loads:
 H-Modified: 21 0
 HS-Modified: 27 0
 Type 3: 25 0
 Type 3s2: 37 0
 Timber: 33 0
 Piggyback: 00 0
 261 H Inventory Rating: 24
 262 H Operating Rating: 40
 67 Structural Evaluation: 6
 58 Deck Condition: 7
 59 Superstructure Condition: 7
 *227 Collision Damage: 1
 60A Substructure Condition: 7
 60B Scour Condition: N
 60C Underwater Condition: N
 71 Waterway Adequacy: N
 61 Channel Protection Cond.: N
 68 Deck Geometry: 4
 69 UnderClr. HorizVert: 6
 72 Appr. Alignment: 5
 62 Culvert: N
 Posting Data
 70 Bridge Posting Required: 5
 41 Struct Open, Posted, CL: A
 *103 Temporary Structure: 0
 232 Posted Loads
 H-Modified: 00
 HS-Modified: 00
 Type 3: 00
 Type 3s2: 00
 Timber: 00
 Piggyback: 00
 253 Notification Date: 02/01/1901
 258 Fed Notify Date: 2/1/1901 12:00:00AM

Permanent Width:
 Rear: 21.00 Type: 8
 21.00 Type: 2
 Inersection Rear: 0 Fwd: 1
 36 Safety Features Br. Rail: 2
 Transition: 2
 App. G. Rail: 2
 App. Rail End: 2
 53 Minimum Cl. Over: 99' 99"
 Under:
 *228 Minimum Vertical Cl
 Act. Odm Dir: 99' 99"
 Oppo. Dir: 99' 99"
 Posted Odm. Dir: 00' 00"
 Oppo. Dir: 00' 00"
 55 Lateral Undercl. Rt: H 11 11
 56 Lateral Undercl. Lt: 18.80
 *10 Max Min Vert Cl: 99' 99" Dir: 0
 39 Nav Vert Cl: 000 Horiz: 0000
 116 Nav Vert Cl Closed: 000
 245 Deck Thickness Main Deck Thick Approach: 7.50
 246 Overlay Thickness: 0.00
 212 Year Last Painted: Sup: 1997 Sub: 0000

File Location: CF Conversions\BIMS
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Bridge Inventory Data Listing

Parameters: Bridge Serial Num

Jonesboro Road over I-75



Structure ID: 151-5066-0

Henry

SUFF. RATING: 93.40

Location & Geography

Structure ID:	151-5066-0	*104 Highway System:	0
200 Bridge Information:	07	*26 Functional Classification:	14
*6A Feature Int:	I-75	*204 Federal Route Type:	S No: 01583
*6B Critical Bridge:	0	105 Federal Lands Highway:	0
*7A Route No Carried:	SR00920	*110 Truck Route:	0
*7B Facility Carried:	JONESBORO ROAD	2006 School Bus Route:	1
9 Location:	4 MI W OF MCDONOUGH	217 Benchmark Elevation:	0000.00
2 Dot District:	3	218 Datum:	0
207 Year Photo:	2009	*19 Bypass Length:	04
*91 Inspection Frequency:	24 Date: 01/12/2009	*20 Toll:	3
92A Fract Chit Insp Freq:	0 Date: 02/01/1901	*21 Maintenance:	01
92B Underwater Insp Freq:	0 Date: 02/01/1901	*22 Owner:	01
92C Other Spc. Insp Freq:	0 Date: 02/01/1901	*31 Design Load:	6
* 4 Place Code:	00000	37 Historical Significance:	4
*5 Inventory Route(O/U):	1	205 Congressional District:	03
Type:	3	27 Year Constructed:	2002
Designation:	1	106 Year Reconstructed:	0000
Number:	00920	33 Bridge Median:	0
Direction:	0	34 Skew:	30
*16 Latitude:	33 27.7620 HMMS Prefix:	35 Structure Flared:	0
*17 Longitude:	84 -12.6460 HMMS Suffix: MP:0.00	38 Navigation Control:	N
98 Border Bridge:	000% Shared: 00	213 Special Steel Design:	0
99 ID Number:	0000000000000000	267 Type of Paint:	0
*100 STRAIGHT:	0	*42 Type of Service On:	1
12 Base Highway Network:	1	Type of Service Under:	1
13A LRS Inventory Route:	1511092000	214 Movable Bridge:	0
13B Sub Inventory Route:	0	203 Type Bridge:	0
101 parallel Structure:	N	269 Pile Encasement:	3
*102 Direction of Traffic:	2	*43 Structure Type Main:	5 02
*264 Road Inventory Mile Post:	005.36	45 No. Spans Main:	0 00
*208 Inspection Accn:	3	44 Structure Type Appr:	0 000
Engineer's Initials:	sgm	46 No Spans Appr:	0 0000
* Location ID No:	151-00920D-005.36E	226 Bridge Curve Horiz	1 Vert: 1
		111 pier Protection	0
		107 Deck Structure Type:	1
		108 Wearing Structure Type:	1
		Membrane Type:	8
		Deck Protection:	8

Signs & Attachments

225 Expansion Joint Type:	02
242 Deck Drains:	0
243 Parapet Location:	0
Height:	0
Width:	0
238 Curb Height:	0
Curb Material:	0
239 Handrail:	1 1
*240 Medium Barrier Rail:	0
241 Bridge Median Height:	0
* Bridge Median Width:	0
230 Guardrail Loc. Dir. Rear:	3
Fwrd:	3
Oppo. Dir. Rear:	0
Oppo. Fwrd:	0
244 Approach Slab:	3
224 Retaining Wall:	0
233 Posted Speed Limit:	45
236 Warning Sign:	0.00
234 Delineator:	0.00
235 Hazard Boards:	0
237 Utilities Gas:	21
Water:	00
Electric:	00
Telephone:	22
Sewer:	00
247 Lighting Street:	0
Navigation:	0
Aerial:	0
*248 County Continuity No.:	00

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Bridge Inventory Data Listing

Processed Date: 3/10/2011

Parameters: Bridge Serial Num

Structure ID: 151-5066-0

Programming Data

NH-IM-75-2 (194)

201 Project No:

202 Plans Available:

249 Prop Proj No:

250 Approval Status:

251 PI Number:

252 Contract Date:

260 Seismic No:

75 Type Work:

94 Bridge Imp: Cost:

95 Roadway Imp: Cost:

96 Total Imp: Cost:

76 Imp Length:

97 Imp Year:

114 Future ADT:

Measurements:

*29 ADT

109% Trucks:

*28 Lanes On:

210 No. Tracks On:

*48 Max. Span Length

*49 Structure Length:

51 Br. Rwdy. Width

52 Deck Width:

*47 Tot. Horiz. Cl:

50 Curb / Sidewalk Width

52 Approach Rdwys. Width

*229 Shoulder Width:

Rear Lt:

Fwd. Lt:

Permanent Width:

Rear:

Intersection Rear:

36 Safety Features Br. Rail:

Transition:

App. G. Rail:

App. Rail End:

53 Minimum Cl. Over:

Under:

*228 Minimum Vertical Cl

Act. Odm Dir:

Oppo. Dir:

Posted Odm. Dir:

Oppo. Dir:

55 Lateral Undercl. Rt:

56 Lateral Undercl. Lt:

*10 Max Min Vert Cl:

39 Nav Vert Cl:

116 Nav Vert Cl Closed:

245 Deck Thickness Main

Deck Thick Approach:

246 Overlay Thickness:

212 Year Last Painted:

Sup: 0000 Sub: 0000

65 Inventory Rating Method:

63 Operating Rating Method:

66 Inventory Type:

64 Operating Type:

231 Calculated Loads:

H-Modified:

HS-Modified:

Type 3:

Type 3s2:

Timber:

Piggyback:

261 H Inventory Rating:

262 H Operating Rating

67 Structural Evaluation:

58 Deck Condition:

59 Superstructure Condition:

*227 Collision Damage:

60A Substructure Condition:

60B Scour Condition:

60C Underwater Condition

71 Waterway Adequacy:

61 Channel Protection Cond.:

68 Deck Geometry:

69 UnderCir. HorzVert:

72 Appr. Alignment:

62 Culvert:

Posting Data

70 Bridge Posting Required

41 Struct Open, Posted, CL:

*103 Temporary Structure:

232 Posted Loads

H-Modified:

HS-Modified:

Type 3:

Type 3s2:

Timber:

Piggyback

253 Notification Date:

258 Fed Notify Date:

Hydraulic Data

215 Waterway Data:

High Water Elev:

Flood Elev:

Avg Streambed Elev:

Drainage Area:

Area of Opening:

113 Scour Critical

216 Water Depth:

222 Slope Protection:

221 Slope Protection

219 Fender System

220 Dolphin:

223 Current Cover:

Type:

No. Barris:

* Width:

* Length:

265 U/W Insp. Area

Location ID No:

2

2

2 Ratings: 36

2 Rating: 36

20 0

25 0

28 0

40 0

36 0

40 0

22

39

7

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8

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02/01/1901

2/1/1901 12:00:00AM

Bridge Inventory Data Listing

Parameters: Bridge Serial Num

Jodero Road over I-75



SUFF. RATING: 71.98

Henry

Structure ID: 151-0028-0

Location & Geography

Structure ID:	151-0028-0	*104 Highway System:	0
200 Bridge Information:	07	*26 Functional Classification:	16
*6A Feature Int:	I-75	*204 Federal Route Type:	S No: 01415
*6B Critical Bridge:	0	105 Federal Lanes Highway:	0
*7A Route Nb Carried:	CR00824	*110 Truck Route:	0
*7B Facility Carried:	JOBECO ROAD	2006 School Bus Route:	1
9 Location:	5 MI NW OF MCDONOUGH	217 Benchmark Elevation:	0000.00
2 Dot District:	3	218 Datum:	0
207 Year Photo:	2008	*19 Bypass Length:	07
*91 Inspection Frequency:	24	*20 Toll:	3
92A Fract Cnt Insp Freq:	0	*21 Maintenance:	01
92B Underwater Insp Freq:	0	*22 Owner:	01
92C Other Spc. Insp Freq:	0	*31 Design Load:	5
*4 Place Code:	00000	37 Historical Significance:	5
*5 Inventory Route(O/U):	1	205 Congressional District:	03
Type:	4	27 Year Constructed:	1988
Designation:	1	106 Year Reconstructed:	0000
Number:	01415	33 Bridge Medium:	0
Direction:	0	34 Skew:	05
*16 Latitude:	33 28.9050	35 Structure Flared:	0
*17 Longitude:	84 -13.0650	38 Navigation Control:	N
98 Border Bridge:	000%Shared:00	213 Special Steel Design:	0
99 ID Number:	0000000000000000	267 Type of Paint:	2
*100 STRAHNET:	1	*42 Type of Service Ov:	1
12 Base Highway Network:	1	Type of Service Under:	1
13A LRS Inventory Route:	1512082400	214 Movable Bridge:	0
101 parallel Structure:	0	203 Type Bridge:	Z
*102 Direction of Traffic:	N	259 Pile Encasement	3
*264 Road Inventory Mile Post:	004.55	*43 Structure Type Main:	3 02
*208 Inspection Area:	3	45 No. Spans Main:	0 00
Engineer's Initials:	sgm	44 Structure Type Appr:	0000
* Location ID No:	151-01415F-004.56E	46 No. Spans Appr:	0000
		226 Bridge Curve Horz	0 Vert: 0
		111 pier Protection	0
		107 Deck Structure Type:	1
		108 Wearing Structure Type:	1
		Membrane Type:	8
		Deck Protection:	8

Signs & Attachments

225 Expansion Joint Type:	02
242 Deck Drains:	0
243 Parapet Location:	0
Height:	0
Width:	0
238 Curb Height:	1
Curb Material:	1
239 Handrail	11
*240 Medium Barrier Rail:	0
241 Bridge Median Height:	0
* Bridge Median Width:	0
230 Guardrail Loc. Dir. Rear:	3
Fwd:	3
Oppo. Dir. Rear:	0
Oppo. Fwd:	0
244 Approach Slab	3
224 Retaining Wall:	0
233 Posted Speed Limit:	45
236 Warning Sign:	0 00
234 Delineator:	1 00
235 Hazard Boards:	0
237 Utilities Gas:	22
Water:	21
Electric:	00
Telephone:	22
Sewer:	00
247 Lighting Street:	0
Navigation:	0
Aerial:	0
*248 County Continuity No.:	00



Bridge Inventory Data Listing

Processed Date: 3/10/2011

Parameters: Bridge Serial Num

Structure ID: 151-0028-0

Programming Data I-75-2 (37) 218 CT.2

201 Project No: 1
 202 Plans Available: 00000000000000000000000000000000
 249 Prop Proj No: 00000000000000000000000000000000
 250 Approval Status: 0000
 251 PI Number: 00000000
 252 Contract Date: 02/01/1901
 260 Seismic No: 000000
 75 Type Work: 00 0
 \$ 0
 94 Bridge Imp. Cost: 0
 95 Roadway Imp. Cost: 0
 96 Total Imp Cost: 000000
 76 Imp Length: 0000
 97 Imp Year: 022905 Year: 2027
 114 Future ADT:

Measurements:

*29 ADT 018270 Year: 2007
 109% Trucks: 0
 *28 Lanes On: 02 Under: 06
 210 No. Tracks On: 00 Under: 00
 *48 Max. Span Length: 0071
 *49 Structure Length: 262
 51 Br. Rwdy. Width: 30.50
 52 Deck Width: 34.70
 *47 Tot. Horiz. Cl: 31
 50 Curb / Sidewalk Width: 0.80 / 0.80
 32 Approach Rdwy. Width: 024
 *229 Shoulder Width: 6.00 Type: 8 Rt: 6.00
 Rear Lt: 6.00 Type: 8 Rt: 6.00
 Fwd. Lt:

Hydraulic Data

215 Waterway Data:
 High Water Elev: 0000.0 Year: 1900
 Flood Elev: 0000.0 Freq: 00
 Avg Streambed Elev: 0000.0
 Drainage Area: 00000
 Area of Opening: 000000
 113 Scour Critical: N
 216 Water Depth: 00.0 Br. Height: 00.0
 222 Slope Protection: 4
 221 Slope Protection: 0 Fwd: 0
 219 Ender System: 0
 220 Dolphs: 0
 223 Current Cover: 000
 Type: 0
 No. Barrels: 0.00 Height: 0.00
 * Width: 0 Apron: 0
 * Length: 0 Diver: ZZZ
 265 U/W Insp. Area: 151-01415F-004.66E
 Location ID No:

65 Inventory Rating Method: 2
 63 Operating Rating Method: 2
 66 Inventory Type: 2 Rating: 36
 64 Operating Type: 2 Rating: 36
 231 Calculated Loads:
 H-Modified: 20 0
 HS-Modified: 25 0
 Type 3: 28 0
 Type 3s2: 40 0
 Timber: 36 0
 Piggyback: 00 0
 261 H Inventory Rating: 23
 262 H Operating Rating: 39
 67 Structural Evaluation: 7
 58 Deck Condition: 7
 59 Superstructure Condition: 7
 *227 Collision Damage: 0
 60A Substructure Condition: 7
 60B Scour Condition: N
 60C Underwater Condition: N
 71 Waterway Adequacy: N
 61 Channel Protection Cond.: N
 68 Deck Geometry: 4
 69 Under-Cl. Horiz/Vert: 5
 72 Appr. Alignment: 5
 62 Culvert: N
Posting Data
 70 Bridge Posting Required: 5
 41 Struct Open, Posted, CL: A
 *103 Temporary Structure: 0
 232 Posted Loads
 H-Modified: 00
 HS-Modified: 00
 Type 3: 00
 Type 3s2: 00
 Timber: 00
 Piggyback: 00
 253 Notification Date: 02/01/1901
 258 Fed Notify Date: 2/4/1901 12:00:00AM

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Processed Date: 3/10/2011

Bridge Inventory Data Listing

Parameters: Bridge Serial Num

Henry
Hudson Bridge Road/Eagles Landing Pleny Over I-75

Structure ID: 151-5070-0

Henry

SUFF. RATING: 94.83

Location & Geography

Structure ID:	151-5070-0	*104 Highway System:	0
200 Bridge Information:	02	*26 Functional Classification:	16
*6A Feature Int:	I-75	*204 Federal Route Type:	S No: 02673
*6B Critical Bridge:	0	105 Federal Lands Highway:	0
*7A Route No Carried:	CR00659	*110 Truck Route:	0
*7B Facility Carried:	HUDSON BRIDGE RD	2006 School Bus Route:	1
8 Location:	2.5 MI S OF STOCKBRIDGE	217 Benchmark Elevation:	0000.00
2 Dot District:	3	218 Datum:	0
207 Year Photo:	2009	*19 Bypass Length:	05
*91 Inspection Frequency:	24 Date: 01/12/2009	*20 Toll:	3
92A Fract Crit Insp Freq:	0 Date: 02/01/1901	*21 Maintenance:	01
92B Underwater Insp Freq:	0 Date: 02/01/1901	*22 Owner:	01
92C Other Spc. Insp Freq:	0 Date: 02/01/1901	*31 Design Load:	6
*4 Place Code:	00000	37 Historical Significance:	5
*5 Inventory Route(O/U):	1	205 Congressional District:	03
Type:	4	27 Year Constructed:	2004
Designation:	1	106 Year Reconstructed:	0000
Number:	02673	33 Bridge Median:	2
Direction:	0	34 Skew:	14
*16 Latitude:	33 -30.3320 HMMS Prefix:00	35 Structure Flared:	0
*17 Longitude:	84 -13.8930 HMMS Suffix:00 MP:0.00	38 Navigation Control:	0
98 Border Bridge:	000%Shared:00	213 Special Steel Design:	0
99 ID Number:	000000000000000000	267 Type of Paint:	0
*100 STRAENET:	0	*42 Type of Service On:	5
12 Base Highway Network:	1	Type of Service Under:	1
13A LRS Inventory Route:	1512065900	214 Movable Bridge:	0
13B Sub Inventory Route:	0	205 Type Bridge:	0
101 parcel Structure:	N	259 Pile Encasement	3
*102 Direction of Traffic:	2	*43 Structure Type Main:	5 02
*264 Road Inventory Mile Post:	001.05	45 No. Spans Main:	005
*208 Inspection Area:	sgm	44 Structure Type Appr:	0 00
Engineer's Initials:	151-02673F-001.07E	46 No Spans Appr:	0000
* Location ID No:		226 Bridge Curve Horz	0 Vert: 0
		111 pier Protection	0
		107 Deck Structure Type:	1
		108 Wearing Structure Type:	1
		Membrane Type:	8
		Deck Protection:	8

Signs & Attachments

225 Expansion Joint Type:	15
242 Deck Drains:	2
243 Parapet Location:	3
Height:	2
Width:	1
238 Curb Height:	1
Curb Material:	1
239 Handrail	99
*240 Medium Barrier Rail:	0
241 Bridge Median Height:	1
Bridge Median Width:	4
230 Guardrail Loc. Dir. Rear:	2
Fwd:	2
Oppo. Dir. Rear:	2
Oppo. Fwd:	2
244 Approach Slab	3
224 Retaining Wall:	0
233 Posted Speed Limit:	45
236 Warning Sign:	0.00
234 Delimeter:	0.00
235 Hazard Boards:	0
237 Utilities Gas:	00
Water:	00
Electric:	00
Telephone:	00
Sewer:	00
247 Lighting Street:	0
Navigation:	0
Aerial:	0
*248 County Continuity No.:	00



Bridge Inventory Data Listing

Processed Date: 3/10/2011
 Parameters: Bridge Serial Num

Structure ID: 151-5070-0	011000	Year: 2007
Programming Data	0	
201 Project No:	03	Under: 06
202 Plans Available:	00	Under: 00
249 Prop Proj No:	0117	
250 Approval Status:	468	
251 PI Number:	152.00	
252 Contract Date:	186.40	
260 Seismic No:	100	
75 Type Work:	6.00 / 6.00	
94 Bridge Imp. Cost:	088	
95 Roadway Imp. Cost:	2.00	Type: 3 Rt: 6.00
96 Total Imp Cost:	2.00	Type: 3 Rt: 6.00
76 Imp Length:	36.00	Type: 3
97 Imp Year:	36.00	Type: 2
114 Future ADT:	1	Fwd: 1
Hydraulic Data		
215 Waterway Data:		
High Water Elev:		
Flood Elev:		
Avg Streambed Elev:		
Drainage Area:		
Area of Opening:		
113 Scour Critical:		
216 Water Depth:		
222 Slope Protection:		
221 Slope Protection		
219 Fender System		
220 Dolphs:		
223 Current Cover:		
Type:		
No. Barrels:		
* Width:		
* Length:		
265 U/W Insp. Area		
Location ID No:		
Measurements:		
*29 ADT		
109% Trucks:		
*28 Lanes On:		
210 No. Tracks On:		
*48 Max. Span Length		
*49 Structure Length:		
51 Br. Rwdy. Width		
52 Deck Width:		
*47 Tol. Horiz. Cl:		
50 Curb / Sidewalk Width		
32 Approach Rdwy. Width		
*29 Shoulder Width:		
Rear Lt:		
Fwd. Lt:		
Permanent Width:		
Rear:		
Intersection Rear:		
36 Safety Features Br. Rail:		
Transition:		
App. G. Rail:		
App. Rail End:		
53 Minimum Cl. Over:		
Under:		
*228 Minimum Vertical Cl		
Act. Odm Dir:		
Oppo. Dir:		
Posted Odm. Dir:		
Oppo. Dir:		
55 Lateral Undercl. Rt:		
56 Lateral Undercl. Lt:		
*10 Max Min Vert Cl:		
39 Nav Vert Cl:		
116 Nav Vert Cl Closed:		
245 Deck Thickness Main Deck Thick Approach:		
246 Overlay Thickness:		
212 Year Last Painted:		
Sup: 0000 Sub: 0000		
65 Inventory Rating Method:	2	
63 Operating Rating Method:	2	
66 Inventory Type:	2	Rating: 36
64 Operating Type:	2	Rating: 36
231 Calculated Loads:		
H-Modified:	00	0
HS-Modified:	00	0
Type 3:	00	0
Type 3s2:	00	0
Timber:	00	0
Piggyback:	00	0
261 H Inventory Rating:	28	
262 H Operating Rating:	45	
67 Structural Evaluation:	7	
58 Deck Condition:	8	
59 Superstructure Condition:	8	
*227 Collision Damage:	0	
60A Substructure Condition:	7	
60B Scour Condition:	N	
60C Underwater Condition:	N	
71 Waterway Adequacy:	N	
61 Channel Protection Cond.:	N	
68 Deck Geometry:	9	
69 UnderClr. Horiz/Vert:	5	
72 Appr. Alignment:	9	
62 Culvert:	N	
Posting Data		
70 Bridge Posting Required	5	
41 Struct Open, Posted, CL:	A	
*103 Temporary Structure:	0	
232 Posted Loads		
H-Modified:	00	
HS-Modified:	00	
Type 3:	00	
Type 3s2:	00	
Timber:	00	
Piggyback	00	
263 Notification Date:	02/01/1901	
268 Fed Notify Date:	2/1/1901 12:00:00AM	

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Processed Date: 4/19/2012

Bridge Inventory Data Listing

Parameters: Bridge Serial Num

Structure ID: 161-0035-0

Henry

SUFF. RATING: 85.00

Location & Geography

Structure ID: 161-0035-0
 200 Bridge Information: 07
 *6A Feature Int: BIRCH CREEK
 *6B Critical Bridge: 0
 *7A Route No Carried: SR00401
 *7B Facility Carried: I-75
 9 Location: 3 MI W OF MCDONOUGH
 2 Dot District: 3

207 Year Photo: 2011
 *91 Inspection Frequency: 24 Date: 01/18/2011
 92A Fract Crk Insp Freq: 0 Date: 02/01/1901
 92B Underwater Insp Freq: 0 Date: 02/01/1901
 92C Other Spc. Insp Freq: 0 Date: 02/01/1901
 *4 Plus Code: 00000
 *5 Inventory Zones(OU): 1

Type: 1
 Designation: 1
 Number: 00075
 Direction: 0
 *16 Latitude: 33 26.7370 HMMMS Prefix: SR
 *17 Longitude: 84 -11.8680 HMMMS Suffix: 00
 98 Border Bridge: 000% Shared: 00
 99 ID Number: 0000000000000000
 *100 STRAHNET: 1

12 Basic Highway Network: 1
 13A LRS Inventory Route: 1511040100
 13B Sub Inventory Route: 1
 101 parallel Structure: N
 *102 Direction of Traffic: 2

*264 Road Inventory Mile Post: 011.56
 *208 Inspection Area: 3 Initials: EFP
 Engineer's Initials: kww
 * Location ID No: 151-00401D-219.46N

Signs & Attachments

*104 Highway System: 1
 *26 Functional Classification: 11
 *204 Federal Route Type: I No: 00752
 105 Federal Lands Highway: 0
 *110 Truck Route: 0
 2006 School Bus Route: 1
 217 Benchmark Elevation: 0000.00
 218 Datum: 0
 *19 Bypass Length: 06
 *20 Toll: 3
 *21 Maintenance: 01
 *22 Owear: 01
 *31 Design Load: 6
 37 Historical Significance: 5
 205 Congressional District: 03
 27 Year Constructed: 1988
 106 Year Reconstructed: 0000
 33 Bridge Medium: 1
 34 Skew: 30
 35 Structure Flared: 0
 38 Navigation Control: 0
 213 Special Steel Design: 0
 267 Type of Paint: 0
 *42 Type of Service On: 1
 Type of Service Under: 5
 214 Movable Bridge: 0
 203 Type Bridge: Q
 269 Pile Encasement: 3
 *43 Structure Type Maint: 1 19
 45 No. Spans Main: 004
 44 Structure Type Appr: 0 00
 46 No Spans Appr: 0000
 228 Bridge Curve Horiz: 0 Vert: 0
 111 pier Protection: 0
 107 Deck Structure Type: N
 108 Wearing Structure Type: N
 Membrane Type: N
 Deck Protection: N

215 Expansion Joint Type: 00
 242 Deck Drains: 0
 243 Parapet Location: 0
 Height: 0
 Width: 0
 238 Curb Height: 0
 Curb Material: 0
 239 Handrail: 0 0
 *240 Medium Barrier Rail: 2
 241 Bridge Median Height: 0
 * Bridge Median Width: 0
 230 Guardrail Loc. Dir. Rear: 6
 Fwnt: 4
 Oppo. Dir. Rear: 5
 Oppo. Fwnt: 5
 244 Approach Slab: 0
 224 Retaining Wall: 0
 233 Posted Speed Limit: 70
 235 Warning Sign: 0 00
 234 Delineator: 1 00
 235 Hazard Boards: 0
 237 Utilities Gas: 00
 Water: 00
 Electric: 00
 Telephone: 00
 Sewer: 00
 247 Lighting Street: 0
 Navigation: 0
 Aerial: 0
 *248 County Continuity No.: 00



Bridge Inventory Data Listing

Processed Date: 4/19/2012
 Parameters: Bridge Serial Num

Structure ID: 151-0035-0

Programmer's Data

201 Project No: 1-75-2 (S) 218
 202 Plans Available: 1
 249 Prop Proj No: 00000000000000000000000000000000
 250 Approval Status: 0000
 251 PI Number: 00000000
 252 Contract Date: 02/01/1901
 260 Seismic No: 00000
 75 Type Work: 00 0
 94 Bridge Imp. Cost: \$0
 95 Roadway Imp. Cost: 0
 96 Total Imp Cost: 0
 76 Imp Length: 000000
 97 Imp Year: 0000
 114 Future ADT: 192750 Year: 2030

Measurements:

128500 Year: 2007
 109% Tractor: 0
 * 28 Lanes On: 06 Under 00
 210 No. Tracks On: 00 Under 00
 * 48 Max. Span Length: 0008
 * 49 Structure Length: 36
 51 Br. Rwy. Width: 0.00
 52 Deck Width: 0.00
 * 47 Tot. Horiz. Ct: 63
 50 Curb / Sidewalk Width: 0.00 / 0.00
 32 Approach Rwy. Width: 116
 * 28 Shoulder Width: 10.00 Type: 2 Rt: 12.00
 Rear Lt: 10.00 Type: 2 Rt: 12.00
 Fwd. Lt:

Permanent Width:

Rear: 36.00 Type: 2
 36.00 Type: 2
 0 Fwd: 0

Intersection Rear:

36 Safety Features Br. Rail: 1
 Transition: 1
 App. G. Rail: 1
 App. Rail End: 1
 53 Minimum Ct. Over: 99' 99"
 Under:

*** 228 Minimum Vertical C:**

Act. Odm Dir: 99' 99"
 Oppo. Dir: 99' 99"
 Postd Odm. Dir: 00' 00"
 Oppo. Dir: 00' 00"
 65 Lateral Undercl. Rt: N D 0
 66 Lateral Undercl. Lt: 0.00
 * 10 Max Min Vert Ct: 99' 99" Dir: 0
 98 Nav Vert Ct: 000 Horiz: 0000
 116 Nav Vert Ct Closed: 000
 245 Deck Thickness Main Deck Thick. Approach: 0.00
 246 Overlay Thickness: 0.00
 212 Year Last Painted: Sup: 1900 Sub: 1900

Hydraulic Data

215 Waterway Date: 0000.0 Year: 1900
 High Water Elev: 0000.0 Freq: 00
 Flood Elev: 0000.0
 Avg Streambed Elev: 0000.0
 Drainage Area: 00000
 Area of Opening: 000140
 113 Scour Critical: 6
 216 Water Depth: 01.7 Br: Height: 04.9
 222 Slope Protection: 0
 221 Slope Protection: 0 Fwd: 0
 219 Reader System: 0
 220 Dolphin: 0
 223 Current Cover: 3
 Type: 1
 No. Barrels: 4
 * Width: 7.00 Height: 5.00
 * Length: 200 Apron: 0
 265 U/W Insp. Area: 0 Diver: ZZZ
 Location ID No: 151-00401D-219.49N

65 Inventory Rating Method: 0
 63 Operating Rating Method: 0
 68 Inventory Type: 2 Rating: 36
 64 Operating Type: 2 Rating: 36
 231 Calculated Loads:
 H-Modified: 00 0
 HS-Modified: 00 0
 Type S: 00 0
 Type 3: 00 0
 Type 3a: 00 0
 Timber: 00 0
 Pile/buck: 00 0
 261 H Inventory Rating: 20
 262 H Operating Rating: 34
 67 Structural Evaluation: 7
 58 Deck Condition: N
 59 Superstructure Condition: N
 * 227 Collision Damage: 0
 60A Substructure Condition: N
 60B Scour Condition: 6
 60C Underwater Condition: N
 71 Waterway Adequacy: 8
 61 Channel Protection Cond.: 6
 68 Deck Geometry: N
 69 UnderCl. Horiz/Vert: N
 72 Appr. Alignment: 8
 62 Culvert: 7
 Posting Data
 70 Bridge Posting Required: 5
 41 Struct Open, Posted, Cl.: A
 * 103 Temporary Structure: 0
 232 Posted Loads
 H-Modified: 00
 HS-Modified: 00
 Type S: 00
 Type 3a: 00
 Timber: 00
 Pile/buck: 00
 263 Notification Date: 02/01/1901
 268 Fed Notify Date: 2/1/1901 12:00:00AM



Processed Date: 4/19/2012

Bridge Inventory Data Listing

Parameters: Bridge Serial Num

Structure ID: 151-0036-0

Henry

SUFF. RATING: 85.00

Location & Geography

Structure ID:	151-0036-0	*104 Highway System:	1
200 Bridge Information:	07	*26 Functional Classification:	11
*8A Feature Id:	BIRCH CREEK TRIB	*24 Federal Route Type:	I No: 00752
*8B Critical Bridge:	0	104 Federal Lands Highway:	
*7A Route No Carried:	SR00401	*110 Truck Route:	0
*7B Facility Carried:	1-75	2006 School Bus Route:	0
9 Location:	3 MI W OF MCDONOUGH	217 Benchmark Elevation:	0000.00
2 Dot District:	3	218 Datum:	0
207 Year Photo:	2011	*19 Bypass Length:	08
*91 Inspection Frequency:	24	*20 Toll:	3
92A Fract Crk Insp Freq:	0	*21 Maintenance:	01
92B Underwater Insp Freq:	0	*22 Owner:	01
92C Other Spc. Insp Freq:	0	*31 Design Load:	6
*4 File Code:	00000	37 Historical Significance:	5
*5 Inventory Route (OU):	1	205 Congressional District:	03
Type:	1	27 Year Constructed:	1988
Designation:	1	106 Year Reconstructed:	0000
Number:	00075	33 Bridge Medium:	1
Direction:	0	34 Skew:	00
*16 Latitude:	33 26.8000	35 Structure Flared:	0
*17 Longitude:	84 -11.8310	38 Navigation Control:	0
98 Border Bridge:	000% Shared: 00	213 Special Steel Design:	0
99 ID Number:	000000000000000000	267 Type of Paint:	0
*100 STRAINNET:	1	*42 Type of Service On:	1
12 Base Highway Network:	1	Type of Service Under:	5
13A LRS Inventory Route:	1511040100	214 Movable Bridge:	0
13B Sub Inventory Route:	1	203 Type Bridge:	Q
101 partial Structure:	N	259 Pile Encasement:	3
*102 Direction of Traffic:	2	*43 Structure Type Main:	1 19
*264 Road Inventory Mile Post:	011.65	45 No. Spans Main:	005
*208 Inspection Area:	3	44 Structure Type Appr:	0 00
Engineer's Initials:	kwv	48 No Spans Appr:	0000
* Location ID No:	151-00401D-219.59N	228 Bridge Curve Horiz:	0 Vert 0
		111 pier Protection:	0
		107 Deck Structure Type:	N
		108 Wearing Structure Type:	N
		Membrane Type:	N
		Deck Protection:	N

Signs & Attachments

223 Expansion Joint Type:	00
242 Deck Drains:	0
243 Parapet Location:	0
Height:	0
Width:	0
238 Curb Height:	0
Curb Material:	0
239 Handrail:	0 0
*240 Medium Barrier Rail:	2
241 Bridge Median Height:	0
* Bridge Median Width:	0
230 Guardrail Loc. Dir. Rear:	6
Fwd:	4
Oppo. Dir. Rear:	5
Oppo. Fwd:	5
244 Approach Slab:	0
224 Retaining Wall:	0
233 Posted Speed Limit:	70
238 Warning Sign:	0,00
234 Delinicator:	0,00
235 Hazard Boards:	0
237 Utilities Gas:	00
Water:	00
Electric:	00
Telephone:	00
Sewar:	00
247 Lighting Street:	0
Navigation:	0
Aerial:	0
*248 County Continuity No.:	00



Bridge Inventory Data Listing

Processed Date: 4/19/2012
 Parameters: Bridge Serial Num

Structure ID: 151-0036-0		Measurements	
201 Project No:	1-75-2 (37) 218	128500	Year: 2007
202 Plans Available:	1	0	
249 Prop Proj No:	00000000000000000000000000000000	06	Under: 00
240 Approval Status:	0000	00	Under: 00
251 FT Number:	0000000	0007	
232 Contract Date:	02/01/1901	39	
240 Seismic No:	00000	0.00	
75 Type Work:	00 0	0.00	
94 Bridge Imp. Cost:	\$0	63	
95 Roadway Imp. Cost:	0	0.00 / 0.00	
96 Total Imp Cost:	0	116	
76 Imp Length:	000000	10.00' Type: 2	Rt: 12.00
97 Imp Year:	0000	10.00' Type: 2	Rt: 12.00
114 Future ADT:	192750		
Hydraulic Data			
215 Waterway Data:			
High Water Elev:	0000.0	Year: 1900	
Flood Elev:	0000.0	Freq: 00	
Avg Streambed Elev:	0000.0		
Drainage Area:	00000		
Area of Opening:	000175		
113 Scour Critical:	8		
216 Water Depth:	03.1	Er. Height: 04.9	
222 Slope Protection:	0		
221 Slope Protection:	0	Fwd: 0	
219 Fender System:	0		
220 Do/John:	0		
223 Current Cover:	3		
Type:	1		
No. Baffles:	5		
* Width:	7.00	Height: 5.00	
* Length:	194	Apron: 0	
265 U/W Insp. Area:	1	Driver: RMO	
Location ID No:	151-00401D-218.59N		
65 Inventory Rating Method:	0		
66 Operating Rating Method:	0		
66 Inventory Type:	2	Rating: 36	
64 Operating Type:	2	Rating: 36	
231 Calculated Loads:			
H-Modified:	00 0		
HS-Modified:	00 0		
Type 3:	00 0		
Type 3a2:	00 0		
Timber:	00 0		
Pigsback:	00 0		
261 H Inventory Rating:	20		
262 H Operating Rating:	34		
67 Structural Evaluation:	7		
58 Deck Condition:	N		
59 Superstructure Condition:	N		
* 227 Collision Damage:	0		
60A Substructure Condition:	N		
60B Scour Condition:	6		
60C Underwater Condition:	7		
71 Waterway Adequacy:	8		
61 Channel Protection Cond.:	8		
68 Deck Geometry:	N		
69 Under/Cl. Horiz/Vert:	N		
72 Appr. Alignment:	8		
62 Culvert:	7		
Posting Data			
70 Bridge Posting Required:	5		
41 Struct Open, Posted, Cl.:	A		
* 103 Temporary Structure:	0		
232 Posted Loads:			
H-Modified:	00		
HS-Modified:	00		
Type 3:	00		
Type 3a2:	00		
Timber:	00		
Pigsback:	00		
263 Notification Date:	02/01/1901		
268 Fed Notify Date:	2/1/1901	12:00:00AA	
212 Year Last Painted:	Sup: 1900	Sub: 1900	

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Structure ID: 161-0037-0

Henry

SUFF. RATING: 98.00

Location & Geography

Structure ID: 161-0037-0
 200 Bridge Information: 07
 *6A Feature Int: CRITTLE CREEK
 *6B Critical Bridge: 0
 *7A Route No Carried: SR000401
 *7B Facility Carried: I-75
 9 Location: 3.5 MI W OF MCDONOUGH
 2 Dot District: 3

207 Year Photo: 2011
 *81 Inspection Frequency: 24 Date: 01/18/2011
 92A Fract Crk Insp Freq: 0 Date: 02/01/1901
 92B Underwater Insp Freq: 0 Date: 02/01/1901
 92C Other Spc Insp Freq: 0 Date: 02/01/1901
 *4 Phase Code: 00000
 *5 Inventory Route(O/U): 1

Type: 1
 Designation: 1
 Number: 00076
 Direction: 0
 *16 Latitude: 33 27.3640 HMMS Prefix:SR
 *17 Longitude: 84 -12.3830 HMMS Suffix:00
 98 Border Bridge: 000%Shared:00
 99 ID Number: 000000000000000000
 *100 STRAHNET: 1

12 Base Highway Network: 1
 13A I&S Inventory Route: 1511040100
 13B Sub Inventory Route: 1
 101 parallel Structure: N
 *102 Direction of Traffic: 2
 *264 Road Inventory Mile Post: 012.45
 *208 Inspection Area: 3 Initial: EBP
 Engineer's Initial: kww
 * Location ID No: 161-00401D-220.37N

*104 Highway System: 1
 *26 Functional Classification: 11
 *204 Federal Route Type: I No: 00782
 105 Federal Lands Highway: 0
 *110 Truck Route: 0
 2006 School Bus Route: 0
 217 Benchmark Elevation: 0000.00
 218 Datum: 0
 *19 Bypass Length: 00
 *20 Toli: 3
 *21 Maintenance: 01
 *22 Owner: 01
 *31 Design Load: 6
 37 Historical Significance: 5
 205 Congressional District: 03
 27 Year Constructed: 1968
 106 Year Reconstructed: 0000
 33 Bridge Medium: 1
 34 Skew: 30
 35 Structure Placed: 0
 38 Navigation Control: 0
 213 Special Steel Design: 0
 267 Type of Paint: 0
 *42 Type of Service On: 1
 Type of Service Under: 5
 214 Movable Bridge: 0
 203 Type Bridge: Q
 259 Pile Encasement: 3
 *43 Structure Type Main: 1 19
 45 No Spans Main: 003
 44 Structure Type Appr: 0 00
 46 No Spans Appr: 0000
 226 Bridge Curve Horiz: 0 Vert: 0
 111 pier Protection: 0
 107 Deck Structure Type: N
 108 Wearing Structure Type: N
 Membrane Type: N
 Deck Protection: N

Signs & Attachments

221 Expansion Joint Type: 00
 242 Deck Drains: 0
 243 Parapet Location: 0
 Height: 0
 Width: 0
 238 Curb Height: 0
 Curb Material: 0
 239 Handrail: 0 0
 *240 Medium Barrier Rail: 2
 241 Bridge Median Height: 0
 * Bridge Median Width: 0
 230 Guardrail Loc. Dir. Rear: 6
 Fwrd: 4
 Oppo. Dir. Rear: 5
 Oppo. Fwrd: 5
 244 Approach Slab: 0
 224 Retaining Wall: 0
 233 Posted Speed Limit: 65
 236 Warning Sign: 0.00
 234 Delineator: 0.00
 235 Hazard Boards: 0
 237 Utilities Gas: 00
 Water: 00
 Electric: 00
 Telephone: 00
 Sewer: 00
 247 Lighting Street: 0
 Navigation: 0
 Aerial: 0
 *248 County Continuity No.: 00



Bridge Inventory Data Listing

Processed Date: 4/19/2012
Parameters: Bridge Serial Num

Structure ID: 151-0037-0		128500	Year: 2007
Programming Data			
201 Project No:	1-75-2 (97) 218		
202 Plans Available:	1		
249 Prop Proj No:	00000000000000000000000000000000		
250 Approval Status:	0000		
251 FT Number:	00000000		
252 Contract Date:	02/01/1901		
260 Seismic No:	00000		
73 Type Work:	00 0		
94 Bridge Imp. Cost:	\$0		
95 Roadway Imp. Cost:	0		
96 Total Imp Cost:	0		
76 Imp Length:	000000		
97 Imp Year:	0000		
114 Future ADT:	192750	Year: 2030	
Hydraulic Data			
215 Waterway Data:			
High Water Elev:	0000.0	Year: 1900	
Flood Elev:	0000.0	Freq: 00	
Avg Streambed Elev:	0000.0		
Drainage Area:	00000		
Area of Opening:	105		
113 Scour Critical:	8		
216 Water Depth:	03.0	Br. Height: 04.4	
222 Slope Protection:	0		
221 Slope Protection:	0	Fwd: 0	
219 Fender System:	0		
220 Dolphin:	0		
223 Current Cover:	4		
Type:	1		
No. Barrels:	3		
* Width:	7.00	Height: 5.00	
* Length:	208	Apron: 1	
265 U/W Insp. Area:	0	Diver: ZZZ	
Location ID No:	151-00401D-220.37N		
Measurement			
* 29 ADT:	128500	Year: 2007	
100% Trucks:	0		
* 28 Lanes On:	06	Under: 00	
210 No. Tracks On:	00	Under: 00	
* 48 Max. Span Length:	0008		
* 49 Structure Length:	27		
51 Br. Rwy. Width:	0.00		
52 Deck Width:	0.00		
* 47 Tot. Horiz. Cl:	63		
50 Curb / Sidewalk Width:	0.00 / 0.00		
32 Approach Rwy. Width:	116		
* 228 Shoulder Width:	10.00	Type: 2 Rt: 12.00	
Rear Lt:	10.00	Type: 2 Rt: 12.00	
Fwd. Lt:	10.00	Type: 2 Rt: 12.00	
Permanent Width:			
Rear:	36.00	Type: 2	
Fwd:	36.00	Type: 2	
Intersection Rear:	0	Fwd: 0	
368 Safety Features Br. Rail:	1		
Transition:	1		
App. G. Rail:	1		
App. Rail End:	1		
53 Minimum Cl. Over:	99' 99"		
Under:			
* 228 Minimum Vertical Cl:			
Act. Odun Dir:	99' 99"		
Oppo. Dir:	99' 99"		
Posted Odun Dir:	00' 00"		
Oppo. Dir:	00' 00"		
55 Lateral Undercl. Rt:	N D O		
56 Lateral Undercl. Lt:	0.00		
* 10 Max Min Vert Cl:	99' 99" Dir: 0		
58 New Vert Cl:	000	Horiz: 0000	
116 New Vert Cl Closed:	000		
245 Deck Thickness Main:	0.00		
Deck Thick Approach:	0.00		
248 Overlay Thickness:	0.00		
212 Year Last Painted:	Sup: 1900	Sub: 1900	
Inventory Rating Method:			
65 Inventory Rating Method:	0		
63 Operating Rating Method:	0		
66 Inventory Type:	2	Rating: 38	
64 Operating Type:	2	Rating: 38	
231 Calculated Loads:			
H-Modified:	00 0		
HS-Modified:	00 0		
Type 3:	00 0		
Type 3a:	00 0		
Timber:	00 0		
Pile/bank:	00 0		
261 H Inventory Rating:	20		
262 H Operating Rating:	34		
67 Structural Evaluation:	7		
58 Deck Condition:	N		
59 Superstructure Condition:	N		
* 227 Collision Damage:	0		
60A Substructure Condition:	N		
60B Scour Condition:	6		
60C Underwater Condition:	N		
71 Waterway Adequacy:	8		
61 Channel Protection Cond.:	7		
68 Deck Geometry:	N		
69 UnderCl. Horz/Vert:	N		
72 Appr. Alignment:	8		
62 Culvert:	7		
Rating Data			
70 Bridge Posting Required:	5		
41 Struct Open, Posted, CL:	A		
* 103 Temporary Structure:	0		
232 Posted Leads:			
H-Modified:	00		
HS-Modified:	00		
Type 3:	00		
Type 3a:	00		
Timber:	00		
Pile/bank:	00		
253 Notification Date:	02/01/1901		
258 Fed Notify Date:	2/1/1901	12:00:00AM	

File Location: CF Conversions/BIMS
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Processed Date: 4/19/2012

Bridge Inventory Data Listing



Parameters: Bridge Serial Num

Structure ID: 151-0038-0

Henry

SUFF. RATING: 85.00

Location & Geography

Structure ID: 151-0038-0
 200 Bridge Information: 07
 *6A Feature Int: WALNUT CREEK
 *6B Critical Bridge: 0
 *7A Route No Carried: SR00401
 *7B Facility Carried: I-76
 9 Location: 4 MI NW OF MCCOONOUGH
 2 Dot District: 3

207 Year Photo: 2011
 *91 Inspection Frequency: 24 Date: 01/18/2011
 92A Fract Crit Insp Freq: 0 Date: 02/01/1901
 92B Underwater Insp Freq: 0 Date: 02/01/1901
 92C Other Spc. Insp Freq: 0 Date: 02/01/1901
 *4 Place Code: 00000
 *5 Inventory Routes(OU): 1

Type: 1
 Designation: 1
 Number: 00076
 Direction: 0
 *16 Latitude: 88 28.1910 HMMS Prefix: SR
 *17 Longitude: 84 -12.7890 HMMS Suffix: 00
 98 Border Bridge: 0004 Shared: 00
 99 ID Number: 0000000000000000

*10 STRAENET: 1
 12 Base Highway Network: 1
 13A LRS Inventory Route: 1511040100
 13B Sub Inventory Route: 1
 101 parallel Structure: N
 *102 Direction of Traffic: 2
 *264 Road Inventory Mile Post: 013.45
 *208 Inspection Area: 3 Initials: ERK
 Engineer's Initials: Low
 * Location ID No: 151-00401D-221.97N

Signs & Attachments

215 Expansion Joint Type: 00
 242 Deck Drains: 0
 243 Parapet Location: 0
 Height: 0
 Width: 0
 238 Curb Height: 0
 Curb Material: 0
 239 Handrail: 0 0
 *240 Medium Barrier Rail: 2
 241 Bridge Median Height: 0
 * Bridge Median Width: 0
 280 Guardrail Loc. Dir. Rear: 6
 Fwrd: 6
 Oppo. Dir. Rear: 5
 Oppo. Fwrd: 5
 244 Approach Slab: 0
 224 Retaining Wall: 0
 233 Posted Speed Limit: 65
 236 Warning Sign: 0 0 0
 234 Delineator: 0 0 0
 235 Hazard Boards: 0
 237 Utilities Gas: 00
 Water: 00
 Electric: 00
 Telephone: 00
 Sewer: 00
 247 Lighting Street: 0
 Navigation: 0
 Aerial: 0
 *248 County Continuity No.: 00

Bridge Inventory Data Listing

Parameters: Bridge Serial Num



Structure ID: 151-0039-4

Henry

SUFF. RATING: 74.82

Location & Geography

Structure ID: 151-0039-4
 200 Bridge Information:
 *6A Feature Int: PATES CREEK
 *6B Critical Bridge: 0
 *7A Route No Carried: SR00401
 *7B Facility Carried: I-75 NBL
 8 Location: 3 MI S OF STOCKBRIDGE
 2 Det District: 3

*104 Highway System: 1
 *26 Functional Classification: 11
 *204 Federal Route Type: I No: 00782
 105 Federal Lands Highway:
 *110 Trunk Route: 0
 2006 School Bus Router: 1
 217 Benchmark Elevation: 0000.00
 218 Datum: 0

225 Expansion Joint Type: 00
 242 Deck Drains: 0
 243 Parapet Location: 0
 Height: 0
 Width: 0
 238 Curb Height: 0
 Curb Material: 0
 239 Handrail: 0 0
 *240 Medium Barrier Rail: 0
 241 Bridge Median Height: 0
 * Bridge Median Width: 0
 230 Guardrail Loc. Dir. Rear: 6
 Fwrd: 6
 Oppo. Dir. Rear: 0
 Oppo. Fwrd: 0
 244 Approach Slab: 0
 224 Retaining Wall: 0
 233 Posted Speed Limit: 66
 239 Warning Sign: 0 0 0
 234 Delineator: 1 0 0
 235 Hazard Boards: 0
 237 Utilities Gas: 0 0
 Water: 0
 Electric: 0
 Telephone: 0
 Sewer: 0
 247 Lighting Street: 0
 Navigation: 0
 Aerial: 0
 *248 County Continuity No.: 00

Signs & Attachments

*19 Bypass Length: 01
 *20 Toll: 3
 *21 Maintazance: 01
 *22 Owner: 01
 *31 Design Load: 6
 37 Historical Significance: 5
 205 Congressional District: 03
 27 Year Constructed: 1988
 106 Year Reconstructed: 0000
 33 Bridge Medium: 1
 34 Slew: 15
 35 Structure Flared: 0
 38 Navigation Control: 0
 213 Special Steel Design: 0
 267 Type of Paint: 0
 *43 Type of Service On: 1
 Type of Service Under: 6
 214 Movable Bridge: 0
 203 Type Bridge: Q
 269 Pile Encasement: 3
 *43 Structure Type Main: 1 19
 45 No Spans Main: 0 0 3
 44 Structure Type Appr: 0 0 0
 46 No Spans Appr: 0 0 0
 228 Bridge Curve Horz: 0 Vert: 0
 111 pier Protection: 0
 107 Deck Structure Type: N
 108 Wearing Structure Type: N
 Membrane Type: N
 Deck Protection: N

207 Year Photo: 2011
 *81 Inspection Frequency: 24 Date: 01/18/2011
 92A Fract Crit Insp Freq: 0 Date: 02/01/1901
 92B Underwater Insp Freq: 1 Date: 02/24/2009
 92C Other Spc. Insp Freq: 0 Date: 02/01/1901
 *4 Pile Code: 00000
 *5 Inventory Route(00): 1
 Type: 1
 Designation: 1
 Number: 00078
 Direction: 0

*16 Latitude: 33 30.0790 HMMS Pref:SR
 *17 Longitude: 84 -13.5630 HMMS Suffix:00
 98 Border Bridge: 0096Shared:00
 99 ID Number: 0000000000000000
 *100 STRAENET: 1
 12 Base Highway Network: 1
 13A LMS Inventory Route: 1511040100
 13B Sub Inventory Route: 1
 101 parallel Structure: R
 *102 Direction of Traffic: 1
 *264 Road Inventory Mile Post: 018.77
 *208 Inspection Area: 3 Initial: BTP
 Engineer's Initial: low
 * Location ID No: 151-00401D-233.64N



Bridge Inventory Data Listing

Processed Date: 4/19/2012

Parameters: Bridge Serial Num

Structure ID: 151-0039-0

Programming Data

201 Project No: 1-75-2 (37) 218
 202 Plans Available: 1
 249 Prop Proj No: 00000000000000000000000000000000
 250 Approval Status: 0000
 251 FT Number: 00000000
 252 Contract Date: 02/01/1901
 260 Seismic No: 00000
 75 Type Work: 00 0
 94 Bridge Imp. Cost: \$0
 95 Roadway Imp. Cost: 0
 96 Total Imp Cost: 0
 76 Imp Length: 000000
 97 Imp Year: 0000
 114 Future ADT: 215585 Year: 2030

Measurements

143710 Year: 2007
 *29ADT: 0
 109% Trucks: 03 Under: 00
 * 28 Lanes On: 00 Under: 00
 210 No. Tracks On: 0010
 * 48 Max Span Length: 33
 * 48 Structure Length: 0.00
 51 Br. Rwy. Width: 0.00
 62 Deck Width: 62
 * 47 Tot. Horiz. Cl: 0.00 / 0.00
 50 Curb / Sidewalk Width: 58
 32 Approach Rwy. Width: 10.00 Type: 2 Rt: 12.00
 *228 Shoulder Width: 10.00 Type: 2 Rt: 12.00
 Rear Lt.
 Fwd. Lt.

Permanent Width:

Rear: 36.00 Type: 2
 36.00 Type: 2
 0 Fwd: 0
 Intersection Rear: 1
 368 Safety Features Br. Rail: 1
 Transition: 1
 App. G. Rail: 1
 App. Rail End: 1
 53 Minimum Cl. Over: 99' 99"
 Under:
 *228 Minimum Vertical Cl
 Act. Cdnr Dir: 89' 99"
 Oppo. Dir: 89' 99"
 Posted Odm. Dir: 00' 00"
 Oppo. Dir: 00' 00"
 55 Lateral Undercl. Rt: N 0 0
 56 Lateral Undercl. Lt: 0.00
 *10 Max Min Vert Cl: 89' 99" Dir: 0
 98 New Vert Cl: 000 Horiz: 0000
 116 New Vert Cl Closed: 000
 245 Deck Thickness Main: 0.00
 Deck Thick Approach: 0.00
 246 Overlay Thickness: 0.00
 212 Year Last Painted: Sup: 1900 Sub: 1900

Hydraulic Data

215 Waterway Data
 High Water Elev: 0000.0 Year: 1900
 Flood Elev: 0000.0 Freq: 00
 Avg Streambed Elev: 0000.0
 Drainage Area: 00000
 Area of Opening: 000270
 113 Scour Critical: 8
 216 Water Depth: 04.5 Br. Height: 10.5
 222 Slope Protection: 0
 221 Slope Protection: 0 Fwd: 0
 219 Radar System: 0
 220 Dolphin: 0
 223 Current Cover: 15
 Type: 1
 No. Bats: 3
 * Width: 10.00 Height: 9.00
 * Length: 180 Aprnt: 2
 265 U/W Insp. Area: 1 Dir: WSR
 Location ID No: 151-00401D-223.64N

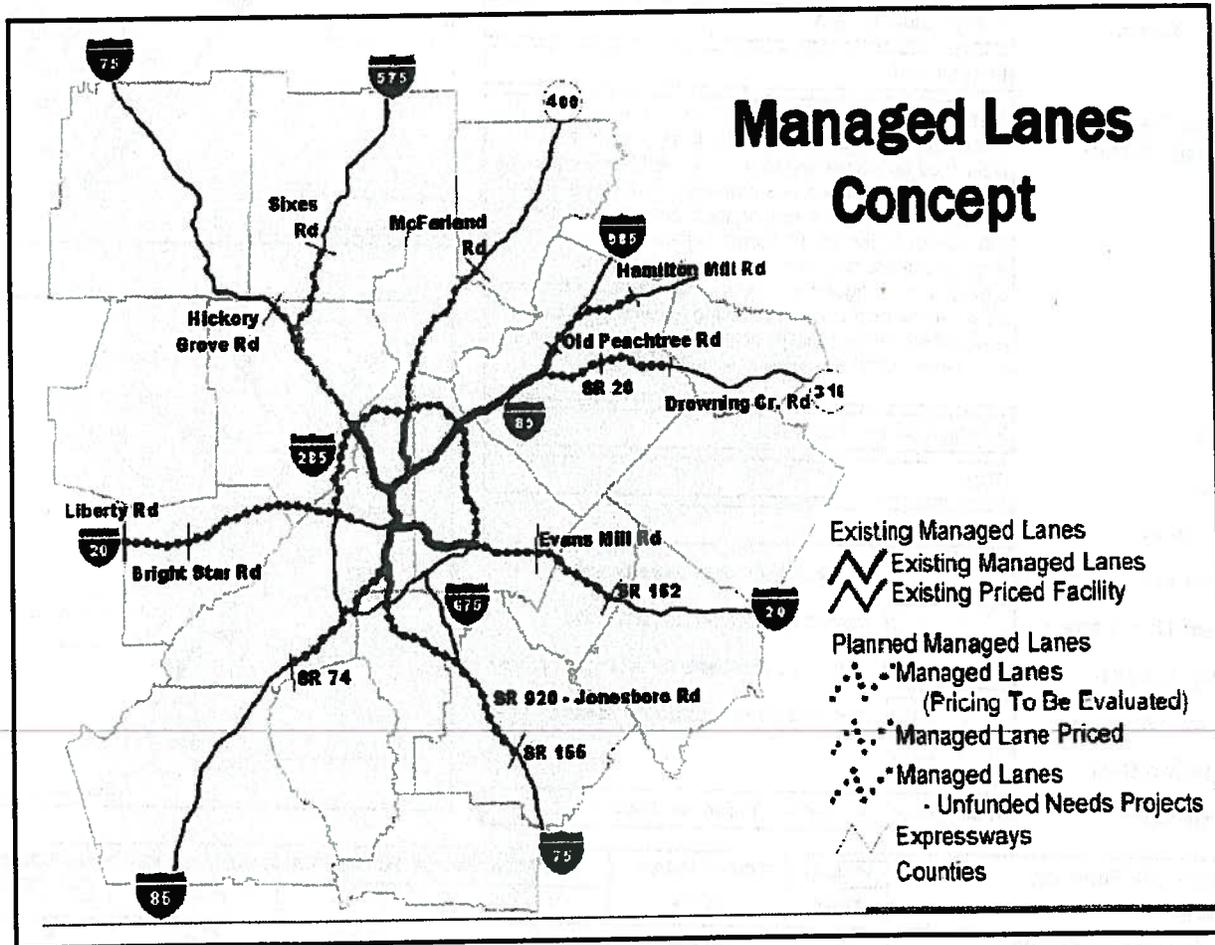
65 Inventory Rating Method: 0
 68 Operating Rating Method: 0
 66 Inventory Type: 2 Rating: 99
 64 Operating Type: 2 Rating: 99
 231 Calculated Loads:
 H-Modified: 00 0
 HS-Modified: 00 0
 Type 3: 00 0
 Type 3a2: 00 0
 Timber: 00 0
 Flagback: 00 0
 261 H Inventory Rating: 20
 262 H Operating Rating: 34
 67 Structural Evaluation: 5
 58 Deck Condition: N
 59 Superstructure Condition: N
 * 227 Collision Damage: 0
 60A Substructure Condition: N
 60B Scour Condition: 5
 60C Underwater Condition: 5
 71 Waterway Adequacy: 6
 61 Channel Protection Contd.: 7
 68 Deck Geometry: N
 69 Undercl. Horiz/Vert: N
 72 Appr. Alignment: 8
 62 Culvert: 5
 Posting Data
 70 Bridge Posting Required: 5
 41 Struct Open, Posted, Cl.: A
 * 103 Temporary Structure: 0
 232 Posted Loads
 H-Modified: 00
 HS-Modified: 00
 Type 3: 00
 Type 3a2: 00
 Timber: 00
 Flagback: 00
 263 Notification Date: 02/01/1901
 268 Fed Notify Date: 2/1/1901 12:00:00AM

ATTACHMENT 8

Conforming Plan's Network Schematics



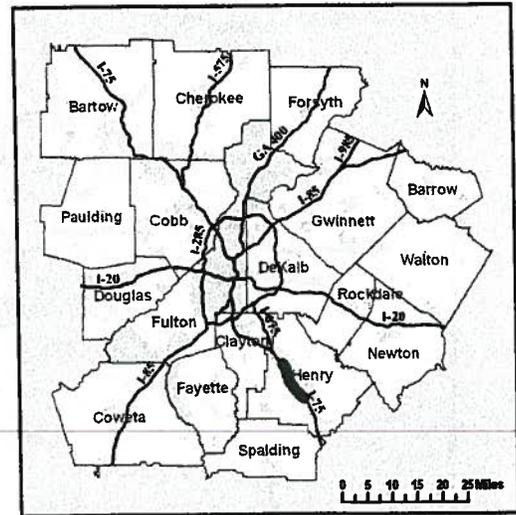
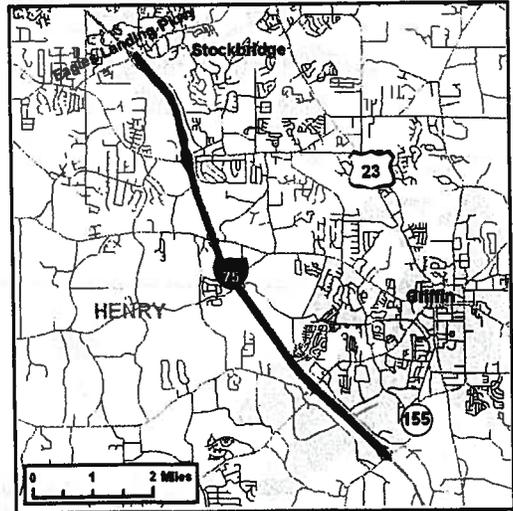
Managed Lanes Concept



Source:

http://www.atlantaregional.com/File%20Library/Transportation/Transportation%20Plans/tp_e6_managed_lanes_2007.pdf

Short Title	I-75 SOUTH MANAGED LANES FROM EAGLES LANDING PARKWAY TO SR 155
GDOT Project No.	0009156
Federal ID No.	CSNHS-0009-00(156)
Status	Programmed
Detailed Description and Justification	Addition of one managed lanes in both directions for 7.8 miles between Eagles Landing Parkway and SR 155. Dedicated ramps serving these lanes will be provided but locations have not been determined at this time. It is anticipated that all future managed lanes constructed in the Atlanta region will be barrier separated, but engineering and design will determine the most appropriate configuration. Operating characteristics such as occupancy restrictions and tolling levels will also be established during concept development in accordance with regional and state managed lane policies.
Service Type	Managed Lanes - Auto / Bus
Sponsor	GDOT
Jurisdiction	Multi-County
Existing Thru Lane	0 (applicable for road projects only)
Planned Thru Lane	2 (applicable for road projects only)
Corridor Length	7.8 miles (not applicable for all project types)
Network Year	2020 (required if modeled for conformity)
Completion Date	2014
Analysis Level	In the Region's Air Quality Conformity Analysis



Phase Status & Funding Information	FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
			FEDERAL	STATE	BONDS	LOCAL/OTHER
PE STP - Statewide Flexible (GDOT)	2011	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000
CST GO BONDS (General Obligation)	2012	\$46,708,896	\$0,000	\$0,000	\$46,708,896	\$0,000
			\$0,000	\$0,000	\$46,708,896	\$0,000

PE: Preliminary Engineering / Design / Study

ROW: Right-of-way Acquisition

CST: Construction / Implementation



For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.



ATTACHMENT 9

Minutes of Concept Team meetings

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December 15, 2010

TO: Meeting Attendees (see attached list)

FROM: Kevin McKeen, P.E. Parsons

**SUBJECT: Coordination Meeting With FHWA
I-75 South Managed Lane Project, Clayton & Henry Counties
P.I Numbers 0009156 & 0009157 and 0010126**

A coordination meeting with FHWA was held on November 23, 2010 at the Georgia Department of Transportation (GDOT), General Office at One Georgia Center, Atlanta, Georgia. Purpose of the meeting was to provide FHWA an update for P.I Numbers 0009156, 0009157 and 0010126. A list of meeting attendees is attached to these meeting minutes.

Notes below summarize the discussion and decisions that took place at the meeting.

1. Mike Dover opened the meeting giving an overview of the projects. He explained that at the meeting with FHWA in August 2010, the managed lane concept presented was one concurrent lane in each direction. Since then, as per Gerald Ross's direction, Parsons has been investigating a two-lane reversible option with asymmetrical widening along I-75. Mike indicated that the northbound side was decided as the preferred option. Also, under the reversible option, a connection for the proposed managed lanes to I-675 and Mt. Carmel Road will be provided. The dedicated managed lane access will require the Mt. Carmel Road Bridge to be reconstructed, and some right-of-way impact anticipated as a result.
2. Mike explained that since the managed lanes will be constructed along the northbound lanes, GDOT would like to add the additional pavement widening and the widening for I-75 bridge over Flippen Road to accommodate the reversible option under the auxiliary lane project, PI 0010126.
3. Chetna Dixon inquired about the one-lane in each direction is still being considered. The December TIP Amendment will update the project to reflect a two-lane reversible facility.
4. Katy Allen inquired about the funding for P.I. 0010126. It was clarified that the auxiliary lane project will be funded solely by the State via the General Obligation Bonds.
5. Katy stated from FHWA's opinion that this additional widening being constructed under the auxiliary lane project would raise independent utility and logical termini issues. She stated that FHWA has concerns with building one project under another project and predetermining the outcome of the reversible lane project. She also raised concerns about the public's perception of this additional pavement that would not be used.
6. Mike indicated that there is a cost benefit associated with widening the I-75 bridge over Flippen Road bridge just once, as well as the negative- public perception of widening the same bridge and portion of roadway twice in a span of approximately 2 years. The cost savings of widening the bridge now for the reversible option would save approximately \$250,000.

7. Katy indicated that FHWA's upper management will have the same concerns with this additional widening. She suggested that a memo be prepared by GDOT stating the case for doing the additional widening now and summarizing the cost and construction benefits and she would present this to her upper management.
8. Chetna stated that the Indirect Cumulative Impacts (ICI) be addressed in the EA for the reversible lanes project, 0009156 and 0009157. In particular the impacts of the Managed Lane System Plan on the region and the effects of the two-lane reversible facility on the various managed lane projects in the region.
9. Chetna requested a copy of the Public Involvement Plan.
10. An IMR for existing ramps and an IJR for the new ramps at Mt. Carmel Road and I-675 would be prepared. After discussing the impacts to the existing ramps, Christy Poon-Atkins stated that since the lengths of the ramps will be unchanged and the operation of the interchanges will not be affected, an IMR should not be required. Christy also stated that an IJR would not be required for the proposed slip ramp south of Mt. Carmel Road.
11. The concept team meeting for PI 0010126 will be held December 7th at GDOT. Mike brought up Walt Stephens Road Bridge closure during construction of the proposed bridge. Currently the concept shows staged construction to eliminate right-of-way impact, as well as to allow the existing bridge to remain open to traffic during construction. Christy requested that the impacts of the detour be analyzed if GDOT decides on the closure of the Walt Stephens Bridge and usage of Walt Stephens Road be provided.
12. Josh Earhart gave an update on the special studies for the auxiliary lane project. The Letter of Determination (LOD) would have to be resubmitted after the TIP Amendment, revising PI 0009156/0009157 to a two-lane reversible facility.

Next Steps

-
- Determine Walt Stephens Road detour length.
 - Determine impacts of detour.
 - Determine the usage of Walt Stephens Road.
 - Prepare summary of adding reversible managed lanes widening to the auxiliary lane project.

Meeting Attendees:

Name	Organization	Phone	Email
Ashley Chan	HNTB	404-946-5716	aschan@hntb.com
Mike Dover	GDOT – Innovative Program Delivery	404-631-1733	mdover@dot.ga.gov
Bobby Dollar	GDOT-OES	404-631-1758	rdollar@ga.dot.gov
Gail D'Avino	GDOT-OES	404-631-1075	gdavino@ga.dot.gov
Mike Murdoch	GDOT-OES	404-631-1758	mmurdoch@dot.ga.gov
Christy Poon-Atkins	FHWA	404-562-3638	Christy.Poon-Atkins@dot.gov
Chetna P. Dixon	FHWA	404-562-3655	Chetna.Dixon@dot.gov
Katy Allen	FHWA	404-562-3652	Katy.Allen@dot.gov
Margaret Moore	Parsons	757-374-5760	Margaret.moore@parsons.com
Stuart Tyler	Parsons	202-469-6481	Stuart.tyler@parsons.com
Xuejun Fan	Parsons	678-969-2322	Xuejun.fan@parsons.com
Kevin McKeen	Parsons	678-969-23	Kevin.McKeen@parson.com
Shawn Reese	Parsons	678-969-2457	Shawn.Reese@parsons.com
Josh Earhart	Edwards-Pitman	770-333-9484	jearhart@edwards-pitman.com

May 6, 2011

TO: Meeting Attendees (see attached list)

FROM: Kevin McKeen, P.E.
Parsons

SUBJECT: Concept Team Meeting
I-75 South Managed Lane Project, Clayton & Henry Counties

P.I Numbers 0009156 & 0009157

A Concept Team meeting was held on May 4, 2011 at the Georgia Department of Transportation (GDOT), General Office at One Georgia Center, Atlanta, Georgia.

The Purpose of the meeting was to review the need and purpose statement and project concept report, obtain feedback, identify any issues to be addressed and determine the next steps to move the project forward. A list of meeting attendees is attached to these meeting minutes.

Notes below summarize the discussion and decisions at the meeting.

1. Mike Dover opened the meeting by giving an overview of the projects and the intent of the meeting.
 - An Environmental Assessment (EA) level NEPA documentation is being prepared and FONSI approval is anticipated in May/June 2012.
 - Only one Environmental document will be required although there are two projects.
 - The projects will be delivered via design-build (letting in May 2012).
 - The project is anticipated to be funded by the GO bonds and is the second priority of the Governor's Bond Program. Other potential funding source will be the toll revenue.
 - Mike Dover turned the meeting over to Parsons.
2. Shawn Reese gave a brief overview of the project describing the need, location, scope of work to be performed, illustrating with a concept layout roll plot. The proposed I-75 Express Lanes project proposes the construction of a reversible barrier separated managed lane system along I-75 in Henry and Clayton Counties from SR 155 to SR 138 for 12.24 miles. The two reversible lanes will continue to I-675. A slip ramp is proposed just south of Mt. Carmel Road for direct merges between the managed lanes and the general purpose lanes, a dedicated managed lane ramp is proposed at the Mt. Carmel Road Bridge for northbound entrance and southbound exit access, and a managed lane connection ramp is proposed at I-675.
3. Mike Dover further explained the need to replace the existing Mt. Carmel Road Bridge.
4. Kevin McKeen stated that:
 - Mt. Carmel Road will be closed during construction for approximately 9 months.
 - A total detour length of 2.4 miles will be provided during the reconstruction of the Mt. Carmel Road Bridge.

- Jonesboro Road has four lanes and Mill Road has two lanes. This was a response to a question by Christy Poon-Atkins of FHWA in relation to the proposed detour for Mt. Carmel Road.
- Right-of-way impacts are anticipated due to intersection improvements at Mt. Carmel Road/Mill Road and Mt. Carmel Road/Jonesboro Road. Additional right-of-way is required on the project are 5 parcels (with no displacements) due to the reconstruction of the Mt. Carmel Road Bridge.
- One historical property was identified within the project corridor along the southbound I-75 mainline near Flippen Road but is not affected by this project.
- A design exception is required for the proposed 8-foot shoulder on the general purpose lanes.
- A design exception is required for the proposed 11-foot lanes for the reversible system.

Structure Improvements:

- Mt. Carmel Road Bridge over I-75.
- I-75 Southbound bridge over Flippen Road will be widened to the west to accommodate the managed lanes.
- I-675 Managed Lane Ramp over I-75.
- There will also be several Sound walls along the corridor.

Design Speed:

I-75: GP and ML

- 70 mph (SR 155 to Mt. Carmel Road)
- 65 mph (Mt. Carmel Road to SR 138)

I-675 Dedicated ML Ramp

- 45 mph

Mt. Carmel Road

- 45 mph

IMR:

- Required for I-675 Managed Lane Ramp Bridge over I-75.

IJR:

- Required for Mt. Carmel Road Bridge over I-75.

Intersection Improvements:

From traffic analysis, to mitigate the impacts caused by the new managed lane interchange at I-75/Mt. Carmel Road, two intersection improvements have been identified:

- Jonesboro Road/Mt. Carmel Road – Proposed signalized intersection.
- Mill Road/Mt. Carmel Road – Proposed signalized intersection.

5. Susan Thomas with Edwards-Pitman provided an Environmental Status updated as follows:

- Environmental Assessment (EA) required
- Special Studies and Public involvement underway

- Draft EA is scheduled for August 2011
 - Working on Air and Noise Quality Analysis
 - Will provide Barrier Analysis later
 - Approximately 400 Lin. Ft. of streams will be impacted.
 - Approximately 0.3 Ac. of wetlands will be impacted.
6. Leah Vaughan with Sycamore reported that 166 people attended the PIOH which was held April 26 and 28, 2011 in McDonough, Henry County. She stated that comments received were mostly favorable and will be complied when the comment period ends.
7. SUE: Jun Birnkammer stated the following:
- SUE interim submittal to cover PI 0010126 corridor is in review
 - There are four more Utility Owners to be added to the original list.
 - SUE will be needed for the proposed intersection improvements at Jonesboro Road/Mt. Carmel Road and Mill Road/Mt. Carmel Road.
 - The SUE delivery date will be provided later, this was in response to Mike Dover's question.
 - Additional SUE will be required to cover the intersection improvements along Mt. Carmel Road.
8. District 3 wanted to know the Construction schedule for the Aux Lane PI 0010126 project; Mike Dover and Ashley Chan (HNTB) stated that the Costing Plan Review will be held in July, 2011. The project is scheduled to be let in November, 2011. Darryl VanMeter also stated that there will be a full NEPA impact analysis performed and there are no lighting issues that impact the project PI Nos. 0009156 and 0009157.
-
9. Mike England of District 3 asked about the project limits for the inclusion of ITS. Both Mike Dover and Darryl VanMeter stated that the limits would extend 2 miles south of SR 155 and 2 miles north of SR 138. Mike Dover also stated that ITS will be a part of the environmental document.
10. Jeff Dailey (HNTB) and Mike Dover commented on Tolling, stating that:
- Three toll points have been identified.
 - Express Toll Lane (ETL) and High Occupancy Toll (HOT) 3+ are under consideration
 - Free for public transit; emergency vehicles; military vehicles and school buses.
 - There will be interoperability with transponders on other facilities (I-85, I-75N). State Road and Tollway Authority (SRTA) is exploring interoperability with other states.
 - Tolling authority is issued by FHWA, and that the tolling application for ETL will be submitted shortly. Also, the final authority will be issued following the approval of the final EA.
 - More toll zones studies will be conducted within the I-75 and I-675 transition.
 - All ITS and signing items will be coordinated to avoid any conflicts.

11. Mike Dover and Darryl VanMeter commented on the reversible managed lane operation as follows:

- It would require 1 to 1-1/2 hours to reverse direction.
- There will be safety devices installed to prevent traffic in the opposite direction from accessing the facility, such as gates, in addition to concrete barriers.
- The managed lanes will be closed twice a day to allow for maintenance and reversing traffic direction.
- Based on preliminary analysis the facility is expected to switch from northbound direction to southbound direction between 10:00 a.m. and 11:00 a.m., and from southbound direction to northbound direction in the nighttime.

12. Mike Dover gave a brief breakdown of the Construction Cost Estimate as follows:

- \$48,612,147 for PI No. 0009156
- \$148,000 for PI No. 0009156 Right-of-Way.
- \$67,593,343 for PI No. 0009157

13. Additional comments and questions which were asked by District 3 and the ensuing answers are indicated below:

- The District wanted to know how tolling will be signed. Mike Dover and Darryl VanMeter explained that there will advance overhead signs, managed lanes are barrier separated so that commuters have to make a conscious decision to enter the managed lanes.
- The District wanted to know if PI 0007858, roadway capacity improvements for I-75 South from Jonesboro Rd. to I-675 (6 lanes to 10 lanes) is being taken in consideration. Mike Dover said it was and mentioned that consideration is being giving to PI No. 0010126; I-75 Auxiliary Lane from Flippen Road to Walt Stephens Road and PI 312160, Interchange capacity improvements for I-75 at Jodeco Rd as well.
- Bill Rountree asked if Mt. Carmel will be able to handle the additional traffic due to the new managed lane interchange. Mike Dover answered saying, it will handle the traffic and the level-of-service (LOS) from LOS C to LOS D.
- District 3 requested that an intersection analysis be conducted at SR 81/Mill Road.
- District 3 suggested new overhead signs at I-675/SR 138 and Eagles Landing Parkway/Hudson Bridge Road.
- The Right-of-Way (R/W) representative wanted to know how the required R/W at Mt. Carmel Road would be handled during the letting. Mike Dover stated that it will be funded during the 2012 letting using State funds or by agreement with the Design Build funds. The construction schedule will look at the various options. Bill Rountree said he would prefer that the R/W acquisition be a part of the design build contract.
- Utilities will follow the MOU process for design build.
- Darryl VanMeter stressed that the R/W being a part of the design build did not imply that it will be managed by the by the design build team.

- District 3 asked if the slip ramp south of Mt. Carmel Road could be moved slightly to the north. Shawn Reese stated the location was determined to minimize impact to existing culvert crossings. The location of the ramp meets weaving criteria to SR 20.

Christy Poon-Atkins with FHWA asked GDOT to clarify how the letting and construction of adjacent projects such as Auxiliary Lane PI No. 0010126, Jodeco Road will not affect the managed lane project.

- The District expressed the same concern and stressed that there has to be a major coordinating effort with the adjacent projects to ensure that the managed lane project is not delayed.
- Mike Dover and Darryl VanMeter said that steps will be taken to ensure that all projects in the managed lane corridor are coordinated. A coordination meeting will be set up within 30 days from the Concept Team Meeting.
- FHWA reminded GDOT to include ITS and sign impacts 2 miles south of SR 155 and 2 miles North of SR 138 in the Environmental Analysis.
- FHWA expressed safety concerns which may arise within the concurrent buffer separated area at I-75/I-675 transition. Mike Dover explained how it will work for commuters who want to exit at SR 138. The 2-foot buffer will be properly stripped to preclude drivers from entering the managed lanes from general purpose lanes.
- Design exceptions will be provided for the 8-foot general purpose lane inside shoulder and 11-foot managed lanes.

Design Policy and Support:

- Requested that more detailed sketches for the managed lanes project be provided.
 - Stated that a design exception maybe required if a design speed of 45 mph is used for managed lane ramp at I-675 when I-675 is posted at 65 mph. After further discussion, a design exception would not be required because all ramps provide more than the required distances for signing the ramp speed at 45 MPH and more than the required deceleration length before the proposed 45 MPH curve.
-
- SRTA: No comment provided
 - Engineering Services: No comment provided
 - Planning: No comment provided
 - Traffic Operations: Not in attendance
 - OES: No comment provided
 - Right-of-Way: More detailed R/W schedule required for PI 0009156, using District 3 staff for R/W acquisition could be considered
 - Utilities: No comment provided
 - Materials and Research: Not in attendance
 - District 3: District 3 prefers R/W acquisition to be included in the design build contract
 - Road Design: No comment provided
 - Design Policy and Support: Comments already provided via email

Meeting Attendees:

Name	Organization	Phone	Email
Mike Dover	GDOT – Innovative Program Delivery	404-631-1733	mdover@dot.ga.gov
Kelvin Mullins	GDOT – Innovative Program Delivery	404-631-1675	kemullins@dot.ga.gov
Susan Thomas	Edwards-Pitman	770-333-9484	sthomas@edwards-pitman.com
Bobby Dollar	GDOT-OES	404-631-1758	rdollar@ga.dot.gov
Ashley Chan	HNTB	404-946-5716	aschan@hntb.com
Jun Birnkammer	GDOT/Utilities	404-631-1360	jbirnkammer@dot.ga.gov
Richard Crowley	GDOT/Utilities	404-631-1372	rcrowley@dot.ga.gov
Ronald Wishon	GDOT/Engineering Services	404-631-1753	rwishon@dot.ga.gov
Gail A. Davino	GDOT/Engineering Services	404-631-1075	gdavino@dot.ga.gov
Jeff Dailey	HNTB	404-423-0568	jedailey@hntb.com
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Jared Ogonor	Parsons	678-969-2337	Jared.ogonor@parsons.com
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Kim Phillips	GDOT/DPS/Conceptual Design	404-631-1775	kiphillips@dot.ga.gov
Kris Phillips	GDOT/D1 A1 Construction		kriphillips@dot.ga.gov
Jeremiah Kimbell	GDOT- Traffic OPS	404-635-8006	jkimbell@dot.ga.gov
Steve Sander	GDOT/D1 A1 Construction		ssander@dot.ga.gov
Leah Vaughan	Sycamore	404-377-9147	
Christy Poon-Atkins	FHWA	404-562-3638	Christy.Poon-Atkins@dot.gov
Olin McGraw	Clayton County	770-473-5455	Olin.mcgraw@co.clayton.ga.us

David Rutledge	Clayton County	770-473-3672	david.rutledge@co.clayton.ga.us
Karlene Barron	GDOT	404-631-1824	kbarron@ga.dot.gov
Troy Byers	GDOT-ROW	404-347-0176	tbyers@dot.ga.gov

ATTACHMENT 10

VE Implementation Letter



B-3	Reduce shoulder pavement width from 12 ft paved/ 2 ft grass to 8 ft paved/6 ft grass	\$168,000	No	I-75 is a major north-south corridor with proposed open year one way ADT of 83,370 and truck ADT of 13,339. A 12-foot shoulder is needed to handle trucks utilizing this shoulder for emergency breakdowns. Additionally, a 12 foot shoulder would help facilitate incident management by shifting traffic to the shoulder, thereby reducing delays.
PI Nos. 0009156 & 0009157 I-75 Auxiliary Managed Lanes from SR 155 to SR 138				
A-1	Reduce shoulder Pavement thickness	\$7,992,000	No	I-75 is a major north-south corridor with proposed open year one way ADT of 83,370 and truck ADT of 13,339. Full depth pavement is necessary to prevent shoulder pavement failures due to trucks utilizing the shoulders for emergencies. Additionally, full depth pavement allows for the shoulder to be utilized as a travel lane during required maintenance of future widening projects.
A-2	Reduce shoulder pavement width from 12 ft paved/ 2 ft grass to 8 ft paved/6 ft grass	\$4,968,000	No	I-75 is a major north-south corridor with proposed open year one way ADT of 83,370 and truck ADT of 13,339. A 12-foot shoulder is needed to handle trucks utilizing this shoulder for emergency breakdowns. Additionally, a 12 foot shoulder would help facilitate incident management by shifting traffic to the shoulder, thereby reducing delays.
A-4	Construct only one managed lane in each direction	\$43,000	No	Based on HCS analysis, for one concurrent lane in each direction, the General Purpose lanes will operate at LOS E in several locations as opposed to LOS D or better for the reversible managed lane option.
A-5	Construct only one managed lane south of Mt. Carmel Road	\$1,820,000	Yes	This will be done.

A-6	Shorten the project by beginning the project just short of Mt. Carmel Road at Sta. 615+00	\$9,537,000	No	A single managed lane is recommended based on the traffic forecast for the 2035 design year. If managed lanes are terminated south of Mt. Carmel, segments of I-75 SB and NB would operate at LOS F or worse.
A-7	Reduce the number of ramps at the Mt. Carmel Road access	\$1,358,000	No	Maintaining the ramp configuration as proposed will eliminate future rebuilding of the Mt. Carmel Rd. managed lane interchange. The current design will accommodate the Managed Lanes Systems Plan's ultimate build-out of a non reversible lane system.
A-8	Combine the I-675 ramp bridges	Proposed = \$1,875,000 Actual = \$202,230	Yes, partially	A reversible ramp will be implemented from the proposed I-675 bridge over NB I-75 to the required diverge connectors to I-675 NB/SB GP Lanes. However, based on the environmental constraints of Streams 15 and 16, the geometrics of the NB ramp cannot be reduced to a single lane before the bridge.
E-5	Use two span bridge at I-675 ramp	\$2,067,000	No	The proposed widening is concurrent to the existing GP lanes at this location to allow for the reduction of one of the managed lanes and to provide an adequate weaving segment for the managed lane traffic to the GP lanes. Currently there is not enough distance for the lane reduction and weave segments to occur between the proposed I-765 ramp bridge and SR 138 Interchange.

E-7	Eliminate access ramps to I-675	\$11,159,000	No	<p>Allowing the managed lane traffic to access the existing I-675 NB ramp would not be desirable. The volume of traffic desiring to weave from the managed lanes through the GP lanes to the I-675 NB ramp would negatively impact the LOS of the GP lanes. An additional slip ramp would be required between Eagles Landing/Hudson Bridge interchange and Flippen Road to allow for the existing I-675 NB ramp to be utilized. The projected 2035 design year traffic requires a managed lane interchange with I-675. Current design is based on the design year traffic instead of opening year. Without the access ramps to I-675, multiple I-75 segments would operate at LOS E in the design year.</p>
E-8	Use single span "Trellis" bridge using Bulb-T PSC beams at I-675 ramp	\$1,238,000	No	<p>The bridge length as proposed by the VE Team is not adequate to provide for flexibility on I-75 to the degree that is being provided by the recently designed and constructed bridges. The actual length and width of the bridge would be both longer and wider than what was proposed by the VE Team. This would cost substantially more than what was proposed by the VE Team. The originally proposed simple plate girder is the more cost effective alternative.</p>

The Office of Engineering Services and the Office of Bridge Design concur with the Project Manager's responses.

Approved:  Date: 3/22/11
Gerald M. Ross, PE, Chief Engineer

Approved:  Date: 8/16/2011
Per. Rodney Barry, PE, FHWA Division Administrator

REW/LLM
Attachments

c: Angel Correa/Kendra Bunker/Christy Poon-Atkins - FHWA
Ben Buchan
Daryl Van Meter/Mike Dover/Kelvin Mullins
Paul Liles/Ben Rabun/Bill Duvall/Bill Ingalsbe
Bobby Dollar
Lamar Pruitt/Bill Rountree/Mike England
Ken Werho
Nabil Raad
Lisa Myers
Matt Sanders

100

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENTAL CORRESPONDENCE

FILE PI Nos. 0010126, 0009156, 0009157 **OFFICE** Innovative Program Delivery
Henry County
I-75 NB Auxiliary Lane and
I-75 Managed Lanes from SR 155 to SR 138 **DATE** March 21, 2011

FROM Darryl D. VanMeter, P.E., State Innovative Program Delivery Engineer

TO Ronald E. Wishon, State Project Review Engineer
ATTN: Lisa Myers

SUBJECT Value Engineering Study - Responses

Reference is made to the recommendations that were contained in the Value Engineering Study Report dated February 17, 2011 for the above referenced projects. Attached are the responses to the recommendations as prepared by Parsons Transportation Group.

This Office has reviewed the responses and concurs.

Should you need additional information, please contact Mike Dover at 404-631-1733 or Kelvin Mullins at 404-631-1675.

Cc: Ben Buchan, Director of Engineering

March 21, 2011

Project No. 646601

Mr. Mike Dover, P.E.
Assistant Innovative Program Delivery Engineer
Georgia Department of Transportation
One Georgia Center, Suite 1900
Atlanta, GA 30308

Subject:
Value Engineering (VE) Study Responses
I-75 NB Auxilliary Lane and I-75 Managed Lanes from SR 155 to SR 138
P.L. Nos. 0010126, 0009156 and 0009157; Henry County

Dear Mr. Dover:

A Value Engineering Study was held from January 31 to February 3, 2011, for the I-75 Auxiliary Lane, PI 0010126 and the I-75 Reversible Managed Lanes from SR 155 to SR 138, PI 0009156 and 0009157. The following contains the responses to the VE findings.

I-75 Auxilliary Lane Project: 0010126

A-2 Close Walt Stephens Road over I-75 and detour traffic during construction

VE Team Savings: \$448,000

No, will not implement. Closing Walt Stephens Road bridge over I-75 has been discussed and vetted with both the Office of Environmental Services (OES) and the Federal Highway Administration (FHWA). Both feel there will be substantial public concern over closing the bridge. This would require additional public involvement which could affect the current Categorical Exclusion (CE) and in turn delay the proposed let date for the project.

B-1 Reduce shoulder pavement thickness

VE Team Savings: \$270,000

No, will not implement. I-75 is a major north-south corridor. The open year one-way Average Daily Traffic (ADT) for this segment of I-75 will be 83,370 with a one-way truck ADT of 13,339. Full depth pavement is necessary to prevent shoulder pavement failures due to commercial trucks utilizing the shoulder for emergencies. Additionally, full depth pavement allows for the shoulders to be utilized as a travel lane during required maintenance on the General Purpose (GP) lanes or future widening projects.

B-3 Reduce shoulder pavement width

VE Team Savings: \$168,000

No, will not implement. I-75 is a major north-south corridor. The open year one-way ADT for this segment of I-75 will be 83,370 with a one-way truck ADT of 13,339. A 12-foot wide shoulder is needed to handle commercial trucks utilizing this shoulder for emergency breakdowns. Additionally, a 12-foot shoulder would help facilitate incident management by shifting traffic on to the shoulder, thereby, reducing delays and queues, especially during the peak hours. Any reduction in the number of lanes during the peak hour due to an incident would cause extensive delays and queues. A full width shoulder

can be used as a lane during breakdowns as well as for incident management and to accommodate future widening projects.

I-75 Managed Lanes from SR 155 to SR 138; P.L. No. 0009156 & 0009157

A-1 Reduce shoulder pavement thickness

VE Team Savings: \$7,992,000

No, will not implement. I-75 is a major north-south corridor. The open year one-way Average Daily Traffic (ADT) for this segment of I-75 will be 83,370 with a one-way truck ADT of 13,339. Full depth pavement is necessary to prevent shoulder pavement failures due to commercial trucks utilizing the shoulder for emergencies. Additionally, full depth pavement allows for the shoulders to be utilized as a travel lane during required maintenance on the General Purpose (GP) lanes or future widening projects.

A-2 Reduce shoulder pavement width

VE Team Savings: \$4,968,000

No, will not implement. I-75 is a major north-south corridor. The open year one-way ADT for this segment of I-75 will be 83,370 with a one-way truck ADT of 13,339. A 12-foot wide shoulder is needed to handle commercial trucks utilizing this shoulder for emergency breakdowns. Additionally, a 12-foot shoulder would help facilitate incident management by shifting traffic on to the shoulder, thereby, reducing delays and queues, especially during the peak hours. Any reduction in the number of lanes during the peak hour due to an incident would cause extensive delays and queues. A full width shoulder can be used as a lane during breakdowns as well as for incident management and to accommodate future widening projects.

A-4 Construct only one managed lane in each direction.

VE Team Savings: \$43,000

No, will not implement. Based on Highway Capacity Software (HCS) analysis, for one concurrent lane in each direction option, the GP lanes will operate at Level of Service (LOS) E at the locations listed below, which is not desirable. For the reversible lanes option, the GP lanes will operate at LOS D and better.

HCS analysis for one concurrent managed lane in each direction:

I-75 SB critical locations

1. I-75 SB GP/ML Weaving_I-675 - Eagles Landing	2035 PM	LOS=D
2. I-75 SB GP Segment_Eagles Landing - Jodeco:	2035 PM	LOS=E
3. I-75 SB GP Segment_Jodeco - Jonesboro:	2035 PM	LOS=E

I-75 NB critical locations

1. I-75 NB GP Segment_Jodeco - Eagles Landing:	2035 AM	LOS=E
2. I-75 NB GP/ML Weaving_Eagles Landing - I-675	2035 AM	LOS=D

HCS analysis for reversible Managed Lane:

1. LOS is D and above throughout I-75 within the project area. No LOS E.

A-5 Construct only one reversible lane south of Mt. Carmel Rd

VE Team Savings: \$1,820,000

Yes, will implement.

A-6 Shorten the project south of Mt. Carmel Rd

VE Team Savings: \$9,537,000

No, will not implement. A single Managed Lane is recommended based on the traffic forecast for the 2035 design year. If managed lanes are terminated south of Mt. Carmel, segments of I-75 SB and NB would operate at LOS of F or worse. See below.

I-75 SB critical locations

1. I-75 SB GP Segment _Mt Carmel – SR 20:	2035 PM	LOS=F
2. I-75 SB GP Segment _SR 20 – SR 155:	2035 PM	LOS=D

I-75 NB critical locations

1. I-75 NB GP Segment _SR 20 – Mt. Carmel:	2035 AM	LOS=E
2. I-75 NB GP Segment _SR 155 – SR 20:	2035 AM	LOS=D

A-7 Reduce the number of ramp lanes at the Mt. Carmel access

VE Team Savings: \$1,358,000

No, will not implement. Maintaining the ramp configuration as proposed will eliminate future rebuilding of the Mt. Carmel Road Managed Lane interchange. The current design will accommodate the Managed Lanes Systems Plan's ultimate build-out of a non reversible lane system. Also, based on current PM traffic projections, the Mt. Carmel Rd interchange requires exclusive right and left turning lanes

A-8 Combine the I-675 lane bridges

VE Team Savings: \$1,875,000

Yes, will partially implement. A reversible ramp will be implemented from the proposed I-675 bridge over Northbound I-75 to the required diverge connectors to I-675 north/south bound GP Lanes. However, based on environmental constraints, Streams 15 and 16, the geometrics of the northbound ramp cannot be reduced to a single lane before the bridge.

Revised Savings: \$202,230

E-5 Use a two span concrete PSC bridge at I-675 ramp

VE Team Savings: \$2,067,000

No, will not implement. The proposed widening is concurrent to the existing GP Lanes at this location to allow for the reduction of one of the Managed Lanes and to provide an adequate weaving segment for the managed lane traffic to the GP lanes. Currently there is not enough distance for the lane reduction and weave segments to occur between the proposed I-675 ramp bridge and SR 138 Interchange. For the Managed Lane entrance to the GP Lanes to begin at the north side of the proposed I-675 ramp bridge additional work would be required to construct the entrance gore, lane reduction and weave segments. The additional construction will include widening of the I-75 northbound bridge over SR 138 and reconstructing the existing I-75 Northbound exit/entrance ramps, resulting in increased cost rather than any saving.

E-7 Eliminate access ramps to I-675

VE Team Savings: \$11,159,000

No, will not implement. Allowing the Managed Lane traffic to access the existing I-675 Northbound ramp would not be desirable. First, the volume of traffic desiring to weave from the Managed Lanes through the GP Lanes to the I-675 Northbound ramp would negatively impact the LOS of the GP Lanes (I-75 GP Lane 2035 LOS E). Second, an additional slip ramp would be required between Eagles Landing/Hudson Bridge interchange and Flippen Road, to allow for the existing I-675 Northbound ramp to be utilized. Most importantly, the projected 2035 design year traffic requires a Managed Lane

interchange with I-675. Current design is based on the design year traffic instead of opening year. Without the access ramps to I-675, multiple I-75 segments would operate at LOS E in the design year, which is not desirable. Furthermore, the non-commuter usage of the managed lanes system on weekends leads to increased usage and flexibility to improve congestion.

HCS analysis for eliminating the access ramps to I-675

I-75 SB critical locations

- | | | |
|--|---------|----------------------|
| 1. I-75 SB GP Segment_I-675 - Eagles Landing: | 2035 PM | LOS=D |
| 2. I-75 SB GP Segment_Eagles Landing - Jodeco: | 2035 PM | LOS=E (density=44.5) |
| LOS is approaching F (the density boundary is 45 pc/mi/ln between E and F. | | |
| 3. I-75 SB GP Segment_Jodeco - Jonesboro: | 2035 PM | LOS=E (density=41.6) |
| 4. I-75 SB GP Segment_Jonesboro - Mt. Carmel: | 2035 PM | LOS=D (density=34.3) |
| LOS is approaching E (the density boundary is 35 pc/mi/ln between D and E. | | |

I-75 NB critical locations

- | | | |
|--|---------|----------------------|
| 1. I-75 NB GP Segment_Eagles Landing - I-675: | 2035 AM | LOS=D |
| 2. I-75 NB GP Segment_Jodeco - Eagles Landing: | 2035 AM | LOS=E (density=39.6) |
| 3. I-75 NB GP Segment_Jodeco - Eagles Landing: | 2035 AM | LOS=E (density=39.6) |

E-8 Use a single span "Trellis" bridge using bulb-tee PSC beams at I-675 ramp

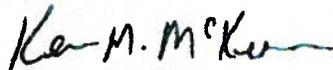
VE Team Savings: \$1,238,000

No, will not implement. The bridge length as proposed by the VE study is not adequate to provide for flexibility on I-75 to the degree that is being provided by recently designed and constructed bridges. Therefore, the actual length and width of the bridge would be 137.88 feet x 301.44 feet, respectively and not 115 feet x 225 feet as stated in the VE study. The 137.88 feet span will require 72 inch deep bulb tee's in place of the 63 inch bulb tee's specified by the VE team. Instead of an 8-beam 67.75 feet x wide by 246 feet long pleasing structure, the VE alternative will require a 38-beam, 301.44 feet wide by 138.88 feet long massive structure that is aesthetically displeasing for a heavily travelled interstate segment. The cost of the VE recommended bridge at \$90/S.F would be \$3,741,000. Even with using the unit plate girder price of \$200/S.F. used by the VE team (\$3,128,000), which may be much higher than actual market value, the simple plate girder is still amore cost effective alternative.

A meeting was held on February 25, 2011 with Bill Duvall of the Bridge Design Office. He concurs with not implementing the VE team's recommendation.

If you have any questions or comments, please feel free to contact me.

Sincerely yours,



Kevin M. McKeen, P.E.
Project Manager

PRECONSTRUCTION STATUS REPORT FOR PI:0009158,0009157,0010126

PROJ ID: 0009156
COUNTY: Henry
LENGTH (MI): 7.84
PROJ NO.: CSNHS-0009-00(156)
PROJ MGR: Dover, Mike
AORD Initials: MD
OFFICE: Innovative Prog. Delivery
CONSULTANT: Design-Build Approved
SPONSOR: GDOT
DESIGN FIRM: Parsons Transportation Group, Inc.

WFO: Atlanta TMA
TIP #: AR-H-052A
MODEL YR: 2020
TYPE WORK: Managed Lanes
CONCEPT: Reconstruction/Rehabilitation
PROG TYPE: Y
Prov. for ITS:
BOND PROJ.:

BASE START	BASE FINISH	LATE START	LATE FINISH	ACTUAL START	ACTUAL FINISH	%
9/15/2011	10/24/2011	9/15/2011	10/24/2011	9/1/2010		4
9/12/2011	9/12/2011	9/12/2011	9/12/2011			0
9/13/2011	10/24/2011	9/13/2011	10/24/2011			0
10/24/2011	10/24/2011	10/24/2011	10/24/2011			0
10/25/2011	9/26/2013	10/25/2011	9/26/2013	9/7/2010		67
11/15/2013	3/1/2013	11/15/2013	3/1/2013			0

YRKS:
 Concept Development
 Concept Modeling
 PM Submit Concept Report
 Concept Report Review and Comments
 Management Concept Approved Complete
 Value Engineering Study
 Environmental Approval
 Pub Hear Held/Comm Resp (BA/FONSI, GEPA)

BRIDGE REQUIRED
 Project approved to be design build. Adding reversible lane
 CE (Not approved) No Schedule | Dollar 8.4.10
NOTIFICATION LETTER SENT TO HENRY & STOCKBRIDGE 1-23-09.
 Re Work Zone Safety, significant Transportation Management Plan (TMP) required. Split from PI# 0003436
CHANGED TO EXEMPT - NOT ON FHWA LIST 12-20-2011 CHANGED BACK TO FOS PER FHWA
 1-26-2011

SUB:
 ID: Proposed Design Build
RECONSTRUCTION & REHABILITATION - TBD
Permitted Comments:
 Approved design build project to be funded with GO bonds. Also coordinating with SRTA on tolling.
 Add 2 reversible managed lanes.

Activity	Approved	Proposed	Cost	Fund	Status	Dist. Auth
PE	2011	2011	2,000,000.00	LHIP	AUTHORIZED	10/25/2010
CST	2012	2012	43,185,000.00	GOR11	PRELST	

Activity	Amount	Cost	Activity	Cost	Fund
PE	\$2,000,000.00	6/10/2010	PE	2,000,000.00	LHIP
CST	\$43,185,000.00	7/1/2008	CST	46,709,996.00	GOR11

Activity	Approved by:	Acquisition MGR:	B/W Curt Date

PRECONSTRUCTION STATUS REPORT FOR PI-0009156,0009157,0010126

PROJ ID: 0009157
 COUNTY: Henry
 LENGTH (MD): 3.97
 PROJ NO.: CSNHS-0009-00(157)
 PROJ MGR: Dover, Mike
 AORD Facility: MD
 OFFICE: Innovative Prog. Delivery
 CONSULTANT: Design-Build Approved
 SPONSOR: GOOT
 DESIGN FIRM: Parsons Transportation Group, Inc.

1-75 FM SR 138 TO EAGLES LANDING PKWY - MANAGED LANES - PH I
 WFO: Atlanta TMA
 TIP #: AR-H-081A
 MODEL YR: 2020
 TYPE WORK: Managed Lanes
 CONCEPT: WIDEN & RECONST
 PROG TYPE: Reconstruction/Rehabilitation
 Prev. for ITS: Y
 BOND PROJ: Y

PRIORITY CODE: 3
 DOT DIST: 3.13
 CONG. DIST: N
 BIKE: E
 MEASURE: E
 NEEDS SCORE:
 BRIDGE SUFF:

RIGHT LET DATE: 05/15/2012
 RIGHT ROW DATE:
 BASELINE LET DATE:
 SCHED LET DATE: 4/24/2014
 WHO LETS?: GOOT Let
 LET WITH: 0009156

Activity	Approved	Proposed	Cost	Fund	Status	Date Avail
PE	2011	2011	60,000.00	L240	AUTHORIZED	10/25/2010
PE	2011	2011	1,500,000.00	LHIP	AUTHORIZED	10/25/2010
CST	2011	2012	20,395,700.00	GOB11	PRECST	

Activity	Amount	Date	Cost Estimate Amount	Activity	Cost	Fund
PE	\$60,000.00	6/10/2010		PE	1,500,000.00	LHIP
PE	\$1,500,000.00	6/10/2010		PE	0.00	L240
CST	\$20,395,700.00	6/10/2010		CST	20,395,700.00	GOB11

ACTUAL START	ACTUAL FINISH	%
9/1/2010		4
		0
		0
		0
		0
9/7/2010		67
		0
		0

PROGRAMMED FUNDS

Bridge: NO BRIDGE REQUIRED
 Approved to be Design Build for managed lanes
Design: NOTIFICATION LETTER SENT TO HENRY & STOCKBRIDGE 1-23-09.
GPA: Rework Zone Safety: significant; Transportation Management Plan (TMP) required. Split from PI# 0003167
Planning: #111-2010 CHANGED TO EXEMPT - NOT ON FHWA LIST 12-20-2010 (CHANGED BACK TO FOS PER FHWA 1-26-2011)
Programming: SUE
Jobby: Conceptual Design
DD: Proposed Design Build
RECONSTRUCTION & REHABILITATION - TBD
Design Services: VE Study held Jan. 31-Feb. 2011, waiting on responses
Prelet Parcel CT: Total Parcel in ROW Systems
Under Review: Options - Pending
Released: Conditions- Pending

Acquired By: N/R
Acquisition MCR:
R/W Cert Date:

DEEDS CT:

Target Completion:
 Twinned with 0009156. Coordinating with SRTA on tolling aspects. (8-9-10)
 Adds 2 Reversible managed Lanes.

I75 Express

PIOH

Public Information Open Houses were held on April 26th and April 28th of 2011. These events were publicized through a variety of means including:

- Paid advertisements in the
 - Griffin Daily News
 - Jackson Progress-Argus
 - Clayton News Daily
 - Henry Daily Herald
- Press release distribution
- Newsletter distribution to project database
- Roadway signs placed at the entrance and exit ramps on all interchanges in the corridor
- Communication with local governments and chambers of commerce
- Coordination with neighborhood associations

Each open house presented identical information, including a project video and the project layout with the proposed detour at Mt. Carmel Road. Additionally there was a table for individuals to speak with project staff related to the tolling aspects of the project.

The Open Houses were attended by 166 individuals. Major comment categories were related to:

- Limited access for Henry County residents
- Questions about operations during non commuting hours
- Questions relating to tolling
- General opposition to the managed lane concept
- General support for any improvement along this corridor

31 Comments were received

Mt. Carmel Outreach

The I75 Express Lanes project originally proposed an express lane only interchange at Mt. Carmel Road. In an effort to seek input from residents likely impacted by this access point, a community open house was held on July 12, 2011 at Southside Christian Fellowship.

In order to publicize the open house, project staff developed a database of neighborhood residents along Mt. Carmel Road and Mill Road. The database included 350+ residences, and flyers announcing the open house were mailed to the database. Additionally, yard signs announcing the open house were placed at the entrance and exits of each subdivision along Mt. Carmel Road and Mill Road.

The information presented at the Open house included the project video and the project layout developed for the Public Information Open House, as well as information specific to the proposed Mt. Carmel Road interchange, including:

- Proposed improvements to the intersection of Mt. Carmel Road and Jonesboro Road
- Proposed improvements to the intersection of Mt. Carmel Road and Mill Road
- An artist rendering of the proposed interchange
- A layout of the proposed interchange

The Open House was attended by 78 individuals. Twenty five comment forms were completed at the open house. 8% of the respondents were in favor of the Mt. Carmel Interchange, 80% were opposed, 8% offered conditional support, and 4% were uncommitted.

The main concerns voiced were:

- Traffic impacts on entering and exiting neighborhoods
- Negative impacts on quality of life
- Negative impacts of property values
- Safety - specifically related to accessing the community clubhouse
- Potential for increased crime

EJ Outreach:

Communities with low income populations, as well as racial minorities are recognized as key stakeholders for the I75 Express Lanes project. Initial analysis of ARC demographic data and an origin and destination survey, supplemented with 2000 census data and windshield surveys, have identified the presence of minority and low income populations who are likely to use the system within the study area. Special outreach efforts must be made to disseminate project material to increase awareness and solicit input. As the project progresses a targeted outreach plan is necessary to ensure the perspective of potentially affected Environmental Justice populations is captured.

Sizeable communities of low Income workers who could potentially use the I75 Express Lanes are found in Clayton County, in the City of McDonough, and in the City of Griffin. Our focused EJ outreach efforts were concentrated in these areas.

Coordination with Community and Social Services Groups

Communicating and coordinating with groups who work directly with Environmental Justice populations is key in the successful dissemination of information and coordination of public events. Project staff worked directly with governmental agencies and social services organization to get the word out about the I75 Express Lanes project and to gather input on travel patterns and willingness for low income and minority populations to pay tolls.

Unstaffed kiosks, which involved a project board with a map and brief explanation of the project, were placed at government agencies and social service providers throughout the study area. The board included a place to distribute and collect surveys. Unstaffed kiosks were placed in the following locations the week of July 11th-18th :

- Heritage Senior Center, 1050 Florence McGarity Blvd, McDonough, GA 30252
- Hidden Valley Senior Center, 600 Spraggins Memorial Parkway, Stockbridge, GA 30281
- The United Way, 107 Westbridge Industrial Boulevard, McDonough, GA 30253
- McDonough Public Library, 1001 Florence McGarity Blvd, McDonough, GA 30252
- Clayton County Community Service Center, 1000 Main Street, Forest Park, GA 30297
- Shiloh Education and Community Service Center, 261 Macon Street, McDonough, GA

26 Surveys were collected through this effort.

Staffed Outreach Events

In an effort to reach low income populations in their communities, several outreach events were planned in areas with significant low income populations. The following events were staffed for the duration of the effort to encourage engagement in the process and solicit public input.

Friday, July 1, 2011	Howell Sunshine Laundromat, Griffin, GA	9 am – 11:00 am
Friday, July 8, 2011	Soap & Suds Laundromat, Stockbridge, GA	9 am – 11:00 am
Saturday, July 16, 2011	SouthLake Mall, Morrow, GA	12:00 noon – 4 pm

29 Surveys were collected through this effort.

Door to Door Surveys

In the areas identified through the ARC demographic analysis as low income populations, project staff went door to door to solicit input on the project in general and the tolling aspect in particular. Neighborhoods selected for this effort had residential properties listed on the market for \$50,000 or less. According to various lending calculators and anecdotal information from a local mortgage broker, a person can qualify for a mortgage of up to 2 and ½ times of their annual income. As such, these neighborhoods can be generalized as low income.

Staff assigned to this task worked in pairs, briefly introduced the project and asked residents to fill out a short project survey. Additionally, a project information sheet was left at the residences where no one answered the door. Door to door surveys were conducted:

Friday, July 15 th	McDonough, Georgia	5-7pm
Saturday, July 16 th	McDonough, Georgia	12-7 pm
Sunday, July 17 th	McDonough, Georgia	2-6 pm

50 surveys were collected during this effort. An additional 55 information sheets were distributed.

PIOH

A second round of Public Information Open Houses were held on December 13th and 15th of 2011. These events were publicized through a variety of means including:

- Paid advertisements in the
 - Griffin Daily News
 - Jackson Progress-Argus

- Clayton News Daily
- Henry Daily Herald
- Press release distribution
- Flyer distribution to project database
- Roadway signs placed at the entrance and exit ramps on all interchanges in the corridor
- Coordination with neighborhood associations

Each open house presented identical information, including a project video and the project layout with access point alternatives shown at Mt. Carmel and at Jonesboro Road. There were also boards depicting how each access point alternative would look.

The Open Houses were attended by 118 individuals. Major comment categories were related to:

- Support for the Jonesboro Road access point.
- Concern for community impacts if the Mt. Carmel Road access point was chosen

50 Comments were received

ATTACHMENT 12

Approved Design Exception

DESIGNATION OF THE PROPERTY AS A
LOCAL HISTORIC LANDMARK

PROPOSED BY: [Faint text]

DATE OF DECISION: [Faint text]

APPROVED BY: [Faint text]

REASON FOR APPROVAL: [Faint text]

COMMENTS: [Faint text]

APPROVED BY: [Faint text]

DATE OF DECISION: [Faint text]

APPROVED BY: [Faint text]

DATE

APPROVED BY

DATE

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

FILE CSNHS-0009-00(156) & CSNHS-0009-00(157) **OFFICE** Innovative Program Delivery
I-75 Managed Lanes, Henry County
PI Nos. 0009156 & 0009157 **DATE** July 15, 2011

FROM 
Darryl D. VanMeter, P.E., State Innovative Program Delivery Engineer

TO Brent Story, P.E., State Design Policy Engineer

SUBJECT Request for Design Exceptions (REVISED)

Please find the attached Revised Design Exception request for the above referenced project. The Design Exceptions requested are:

1. Sub-Standard inside shoulder width
2. 11-foot Managed Lanes on the Interstate

This Office concurs with the request, and is submitting for your review and approval, the attached documentation provided by Parson's Transportation Group.

If additional information is needed, please contact Mike Dover at (404) 631-1733 or Kelvin Mullins at (404) 631-1675.

DVM: KHM

Attachments

cc: File

July 15, 2011

Mr. Mike Dover, PE
Assistant Innovative Program Delivery Engineer
Georgia Department of Transportation
One Georgia Center, Suite 1900
Atlanta, GA 30308

Subject:
Request for Design Exceptions
Project: CSNHS-0009-00(156) and CSNHS-0009-00(157)
P.I. Nos. 0009156 and 0009157; Henry and Clayton Counties
I-75 SB Managed Lanes from SR 155 to SR 138

Dear Mr. Dover:

Approval of Design Exceptions are requested for substandard inside shoulder width (lateral clearance) along I-75 between the general purpose lanes and the barrier separated managed lanes system and for 11 foot travel lanes in the two lane reversible managed lane system. Please see supporting documentation enclosed within this request.

The proposed project consists of asymmetrical widening along I-75 southbound for the implementation of a barrier-separated reversible managed lane facility from SR 155/McDonough Road, milepost (MP) 216.26 to SR 138/Stockbridge Highway, MP 228.50 for a total length of 12.24 miles. A slip ramp is proposed just south of Mt. Carmel Road to provide access to SR 20 and SR 155 and allow for direct merges between the managed lanes and the general purpose lanes. A dedicated managed lane ramp is proposed at the Mt. Carmel Road Bridge for northbound entrance and southbound exit access, and a managed lane connection ramp is proposed at I-675. Existing travel lanes have a posted speed limit of 65 miles per hour (mph) from SR 155 to Mt. Carmel Road and 70 mph from Mt. Carmel Road to SR 138. The design speed for the managed lanes and general purpose lanes will be 70 mph.

Approval of the following design exceptions is requested for the project.

Design Exception Request: Inside Shoulder Width.

A design exception is requested to provide an 8-foot inside (left) shoulder between the managed lane outside barrier and the general purpose lanes at various locations throughout the project. A 10-foot inside (left) shoulder will be provided between the managed lane outside barrier and the general purpose lanes in areas where the existing median is wider than 44 feet for a total of 2.3 miles from MP 222.90 to MP 225.20. An 8-foot inside shoulder will be provided from MP 216.26 to MP 222.90 and from MP 225.20 to MP 227.00 for a total of 8.44 miles.

American Association of State Highway and Transportation Officials (AASHTO's) "A policy on Design Standards Interstate System" states that:

"On sections with six or more lanes, a 3.0m (10ft.) paved width for the left shoulder should be provided. Where truck traffic exceeds 250 DDHV, a paved width of 3.6m (12 ft) should be considered"

The intent of this project is to construct the proposed managed lanes within existing I-75 right of way. The proposed 8-foot inside shoulder helps to achieve this as well as providing adequate refuge for vehicles. Additionally, as previously mentioned, a 10-foot inside shoulder will be provided in the sections where there is sufficient right of way. For this exception, providing a 10-foot inside shoulder throughout the entire project would require additional retaining walls and the increase in the height of approximately 16 walls already proposed to eliminate additional right of way requirements, additional pavement and stream impacts. Consideration was given to reducing two of the three general purpose lanes to 11 feet and maintaining the 10 foot inside shoulder, but due to the high percentage of truck traffic along the corridor, this was dismissed. The estimated construction cost to provide a 10-foot inside shoulder including additional paving, additional wall height and clearing and grading has an estimated cost of \$2,500,000.

Crash data for 2006, 2007, and 2008 was analyzed for I-75 southbound between SR 155/McDonough Road and SR 138, see table 1. The overall crash rate and injury rate for this segment of I-75 were higher than the statewide average rates for urban interstates for all three years while the injury rate was higher than the statewide average rate for 2006. Among all types of crashes, rear end crashes accounted for more than 50% in all three years. This can be attributed to congestion during morning and evening commute peak periods with fewer gaps for maneuvering. The construction of the reversible managed lanes system will improve traffic flow in the general purpose lanes by reducing the travel demand in the general purpose lanes, thus improving the Level of Service (LOS) along several sections of the corridor from a LOS E to LOS C and D in the open year and from LOS E and F to LOS C and D in the design year. Additionally, there will be a travel time reduction in the general purpose lanes of 3 minutes in the open year and 6 minutes in the design year. Studies have shown that rear end collisions are more likely to be reduced with improved LOS. Rear end collisions are generally not affected by reduced shoulder width.

The inside shoulder width will be mitigated by providing additional signage and a 10 inch yellow edge line striping along the general purpose lanes; providing the minimum required inside shoulder along the general purpose lanes in areas where the existing median is wider than 44 feet; as well as additional monitoring along the corridor. Existing GDOT Highway Emergency Response Operators (HERO) units currently patrol from Hudson Bridge Road/Eagles Landing Parkway north along I-75. The addition of the managed lanes and tolling operations will increase ITS/Monitoring along the corridor and upon project opening, the existing HERO units patrol area will be extended south of Hudson Bridge Road/Eagles Landing Parkway to SR 155 encompassing the entire length of the project limits.

P.I. No. 0009156 & 0009157
Request for Design Exceptions

Design Exception for Inside Shoulder width:

Recommend: Bill R. M. M.
Director of Engineering

Date 8/5/11

Approved: Q. Q. M. R.
Chief Engineer

Date 9/28/11

Approved: [Signature]
FHWA Division Administrator

Date 9/15/2011

Design Exception Request: 11- foot travel lanes for the two lane reversible managed lane section.

A design exception is requested to provide 11-foot travel lanes in the two-lane barrier separated reversible managed lane system. The proposed typical section for the managed lanes will be two 11-foot travel lanes; 4-foot paved inside shoulder and 10-foot paved outside shoulder for a total width of 36 feet.

American Association of State Highway and Transportation Officials (AASHTO's) "A policy on Design Standards Interstate System" January 2005; states that:
"All traffic lanes shall be at least 3.6m (12 ft) wide"

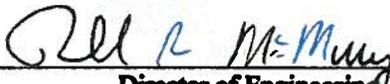
The proposed managed lanes system will be restricted to cars, public transit, school buses, and emergency and military vehicles. Vehicles with more than two axles will not be permitted. The overall percentage of daily buses that will be utilizing the facility will be negligible. Per AASHTO's "Guide for High Occupancy Vehicle Facilities, November 2004", the minimum typical section for a 2 lane barrier separated reversible facility is two 12-foot lanes; 2-foot paved inside shoulder and 10-foot paved outside shoulder for a total width of 36 feet. The High Occupancy Vehicle manual does provide a provision to reduce cost and right of way to allow for the managed lanes to be reduced to 11-foot. To improve stopping sight distance, drainage within the barrier separated facility, and provide a better driver perception along the barrier, the proposed typical section will be two 11-foot travel lanes; 4-foot inside shoulder and 10-foot outside shoulder.

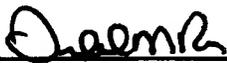
For this exception, providing 12-foot travel lanes in the two lane reversible section would increase the section footprint which would require the increase in the height of approximately 16 walls, additional pavement and stream impacts. The estimated construction cost to provide the 12-foot travel lanes including additional paving, additional wall height and clearing and grading has an estimated cost of \$2,500,000.

P.I. No. 0009156 & 0009157
Request for Design Exceptions

The 11-foot lanes within the managed lane system will be mitigated by provision of a 4-foot inside shoulder as well as additional monitoring along the corridor. Existing GDOT Highway Emergency Response Operators (HERO) units currently patrol from Hudson Bridge Road/Eagles Landing Parkway north along I-75. The addition of the managed lanes and tolling operations will increase ITS/Monitoring along the corridor and the existing HERO units patrol area will be extended south of Hudson Bridge Road/Eagles Landing Parkway to SR 155 encompassing the entire length of the project limits.

Design Exception for 11- foot travel lanes for reversible managed lane section.

Recommend:  Date 8-5-11
Director of Engineering

Approved:  Date 9/29/11
Chief Engineer

Approved:  Date 9/15/2011
FHWA Division Administrator

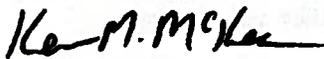
Conclusion:

The proposed project aims to improve mobility by reducing travel time, increasing reliability and expanding travel choices in the corridor. The proposed construction meets the projects goals while minimizing impacts to adjacent properties, thereby minimizing project cost.

There will be no change to the construction cost of the project by implementing this design exception. As previously mentioned, the construction cost however, will increase if current guidelines are to be met.

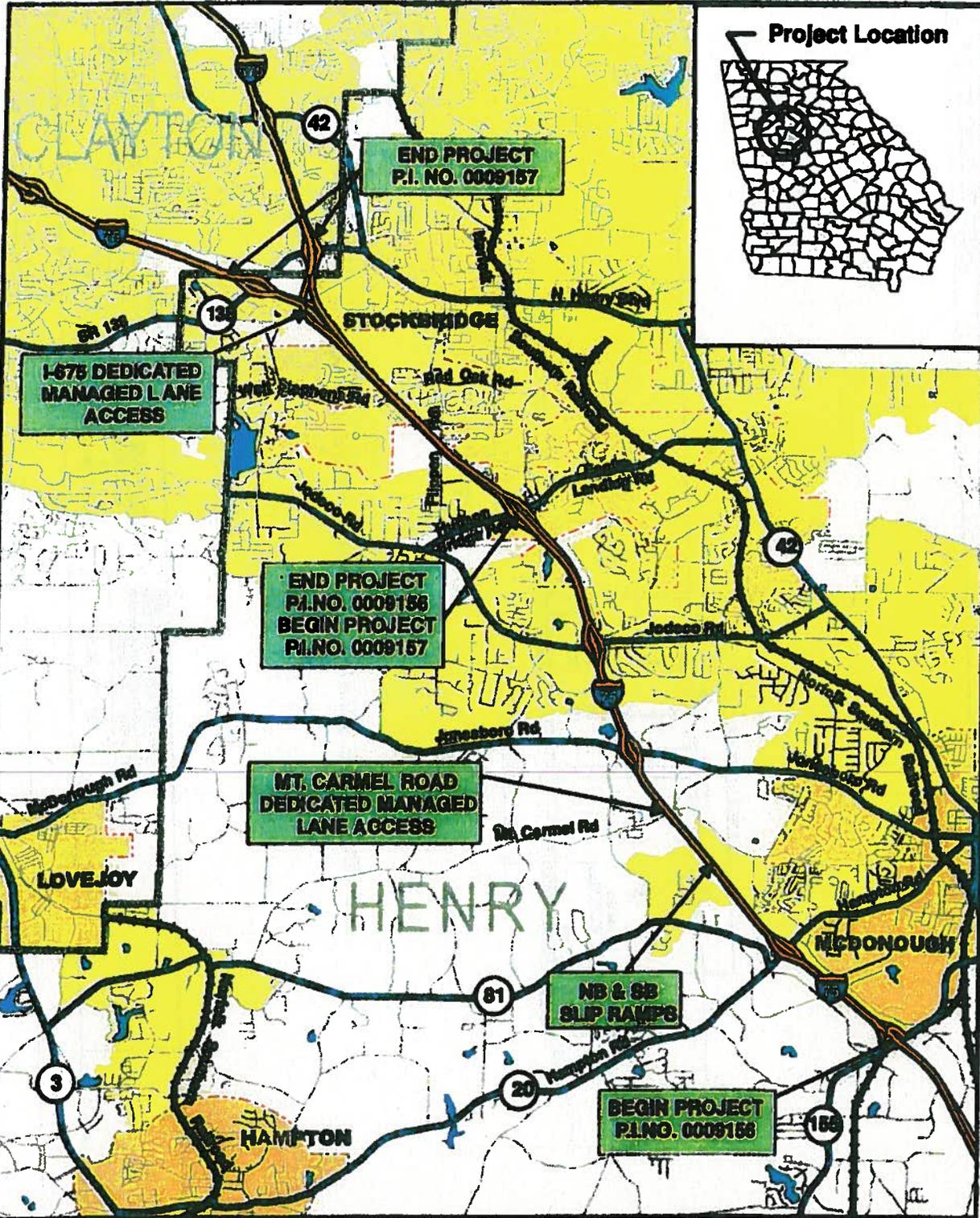
Parsons Transportation Group recommends approval of the design exceptions requested within this document. If you have any questions or comments, please feel free to contact me.

Sincerely yours,

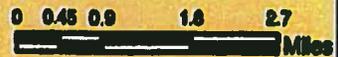


Kevin M. McKeen, P.E.
Project Manager

Attachments: Location Map
Typical Section
Traffic and Crash Data
AASHTO HOV pages 86 and 87

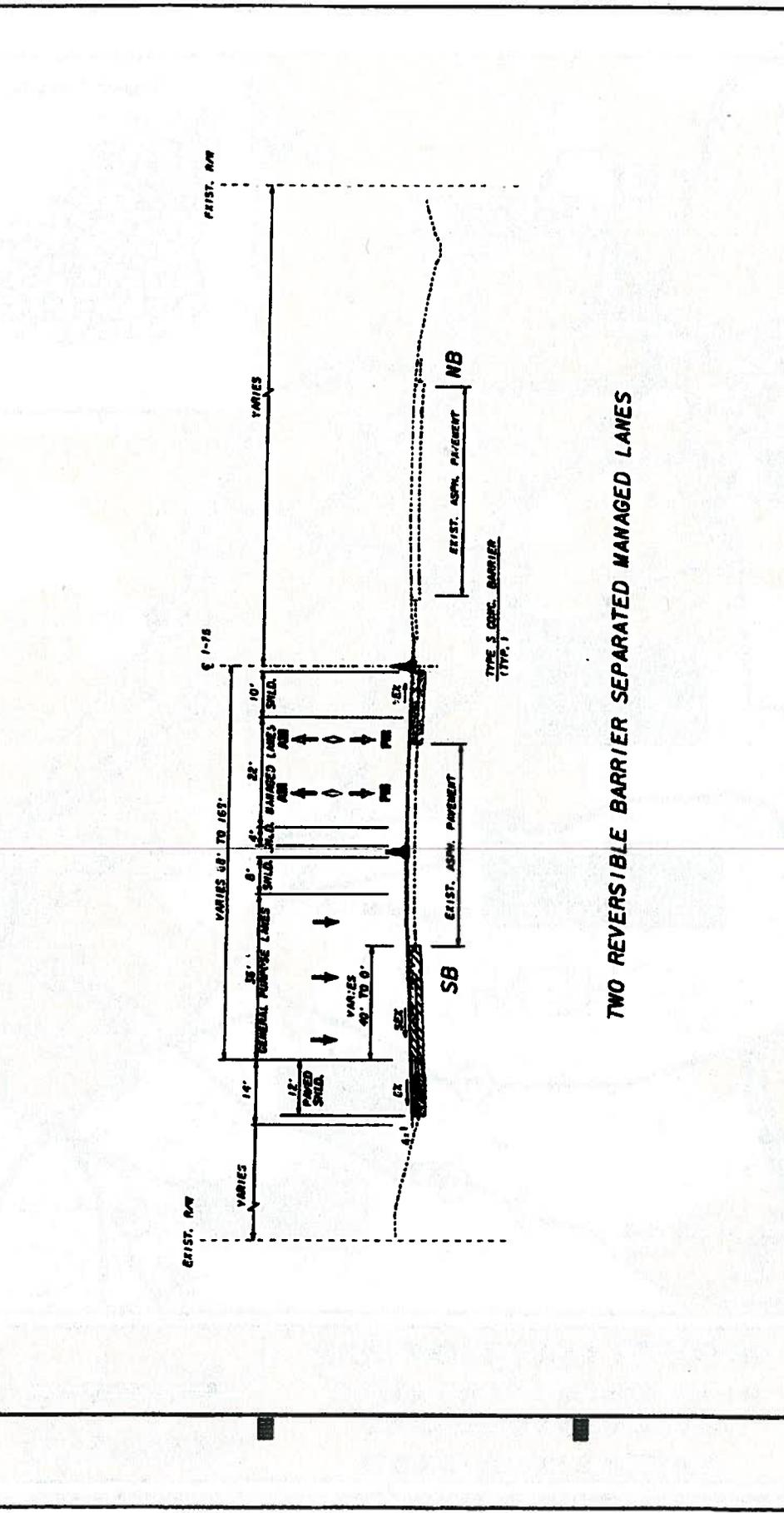


PROJECT LOCATION MAP
P.I. NO. 0009156 & P.I. NO. 0009157
REVERSIBLE MANAGED LANES
CLAYTON & HENRY COUNTY



PARSONS

DATE	NO.	BY	CHKD.	APP. OFF.



TWO REVERSIBLE BARRIER SEPARATED MANAGED LANES

 207 PARKWAY LANE, SUITE 500 BIRMINGHAM, AL 35202	NOT TO SCALE	 GEORGIA DEPARTMENT OF TRANSPORTATION	PROJECT NO.
			SHEET NO.
STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE OF OPERATIVE PROGRAM DELIVERY TYPICAL SECTIONS		1-75 WIDEN, NC	
		501	

CRASH ANALYSIS

The most recent three years (2006 – 2008) crash data available for I-75 between SR 138 and SR 155 was collected from Georgia Department of Transportation (GDOT) Office of Traffic Safety and Design and summarized in Table 1.

Table 1 Crash Data Summary

Year	Crash Type										
	Angle		Head On		Not a Collision w/ A Motor Vehicle		Rear End		Sideswipe		Total
2006	130	8.7%	13	0.9%	249	16.7%	873	58.8%	222	14.9%	1487
2007	94	6.6%	19	1.3%	246	17.3%	870	61.1%	195	13.7%	1424
2008	96	8.1%	15	1.3%	231	19.5%	679	57.2%	165	13.9%	1186

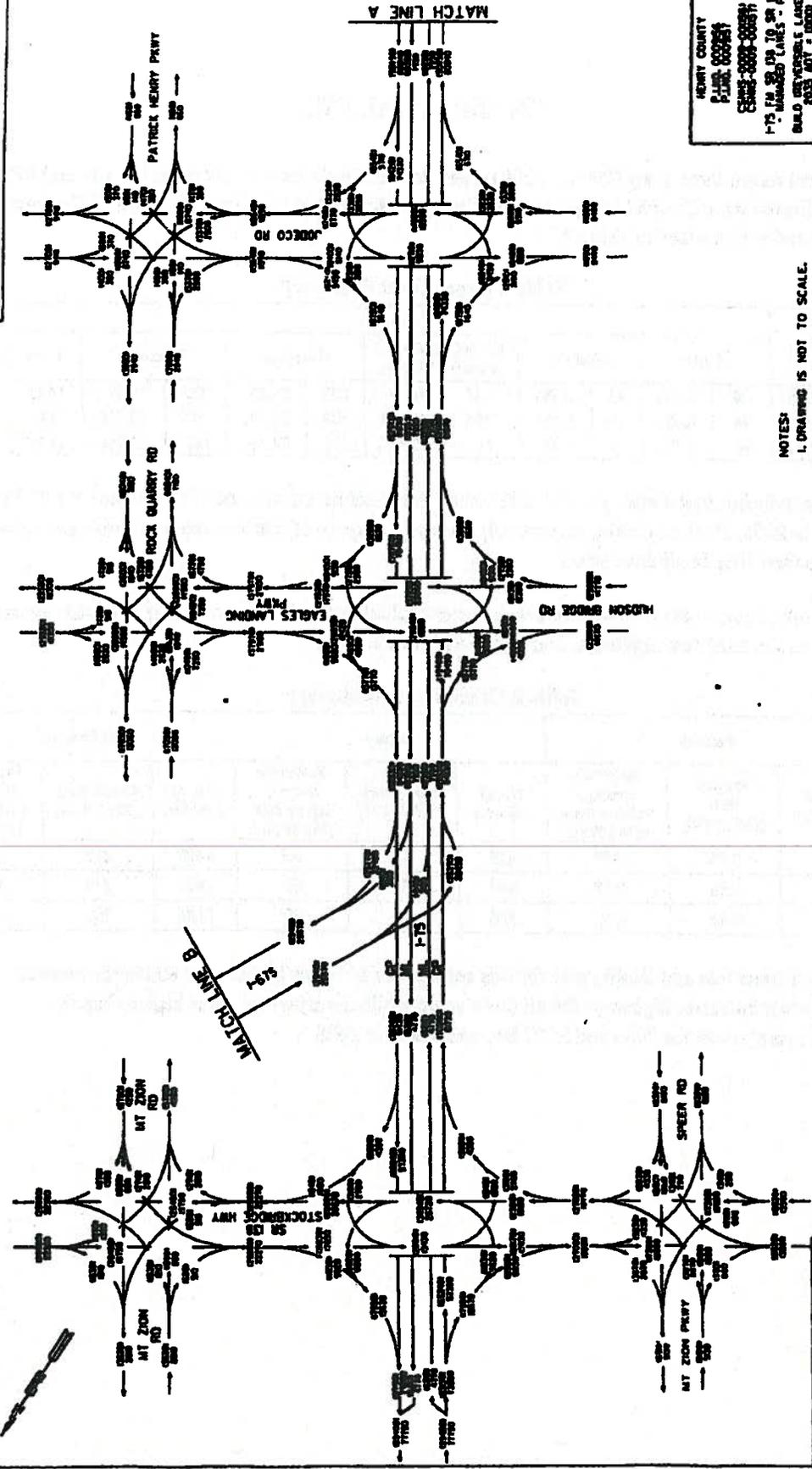
The data indicates that a total of 1487, 1424 and 1186 crashes occurred on I-75 between SR 138 and SR 155 in 2006, 2007 and 2008, respectively. Among all types of crashes, rear end crash accounted for more than 50% in all three years.

Fatality rate, injury rate and overall crash rate were calculated and compared with statewide average rates for urban interstate highways, and summarized in Table 2.

Table 2 Crash Rates Summary

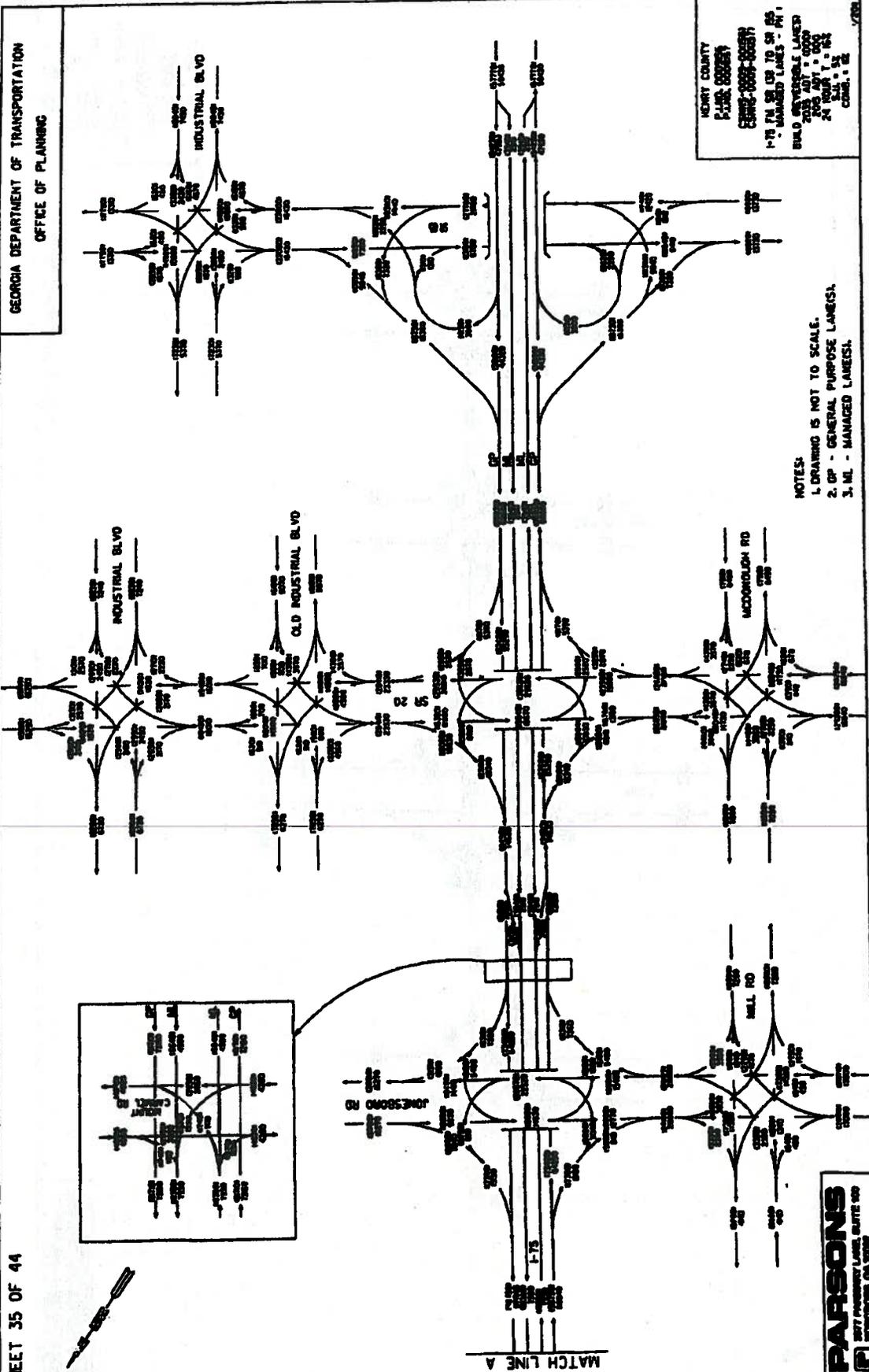
Year	Fatality			Injury			All Crashes		
	No. of Fatalities	Fatality Rate (100 MVM)	Statewide Average Fatality Rate (100 MVM)	No. of Injuries	Injury Rate (100 MVM)	Statewide Average Injury Rate (100 MVM)	No. of Crashes	Crash Rate (100 MVM)	Statewide Average Crash Rate (100 MVM)
2006	5	0.85	0.73	458	78	69	1487	252	200
2007	5	0.86	0.58	447	77	63	1424	246	186
2008	5	0.86	0.62	326	56	63	1186	205	187

The overall crash rate and fatality rate for this segment of I-75 was higher than statewide average rates for urban interstate highways for all three years while the injury rate was higher than the statewide average rate for 2006 and 2007 but was lower in 2008.

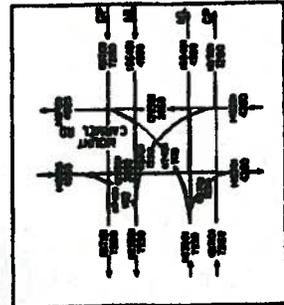


NOTES:
1. DRAWING IS NOT TO SCALE.
2. GP - GENERAL PURPOSE LANES.
3. ML - MANAGED LANES.

HENRY COUNTY
PLANNING DEPARTMENT
COUNTY ENGINEER
175 FM 99 DR TO SR 95
BULD. RESERVABLE LANES
2025 ADT = 1000
2030 ADT = 1000
24 HOUR T. = 80
CALL = 95
CONS. = 16
L/TRA



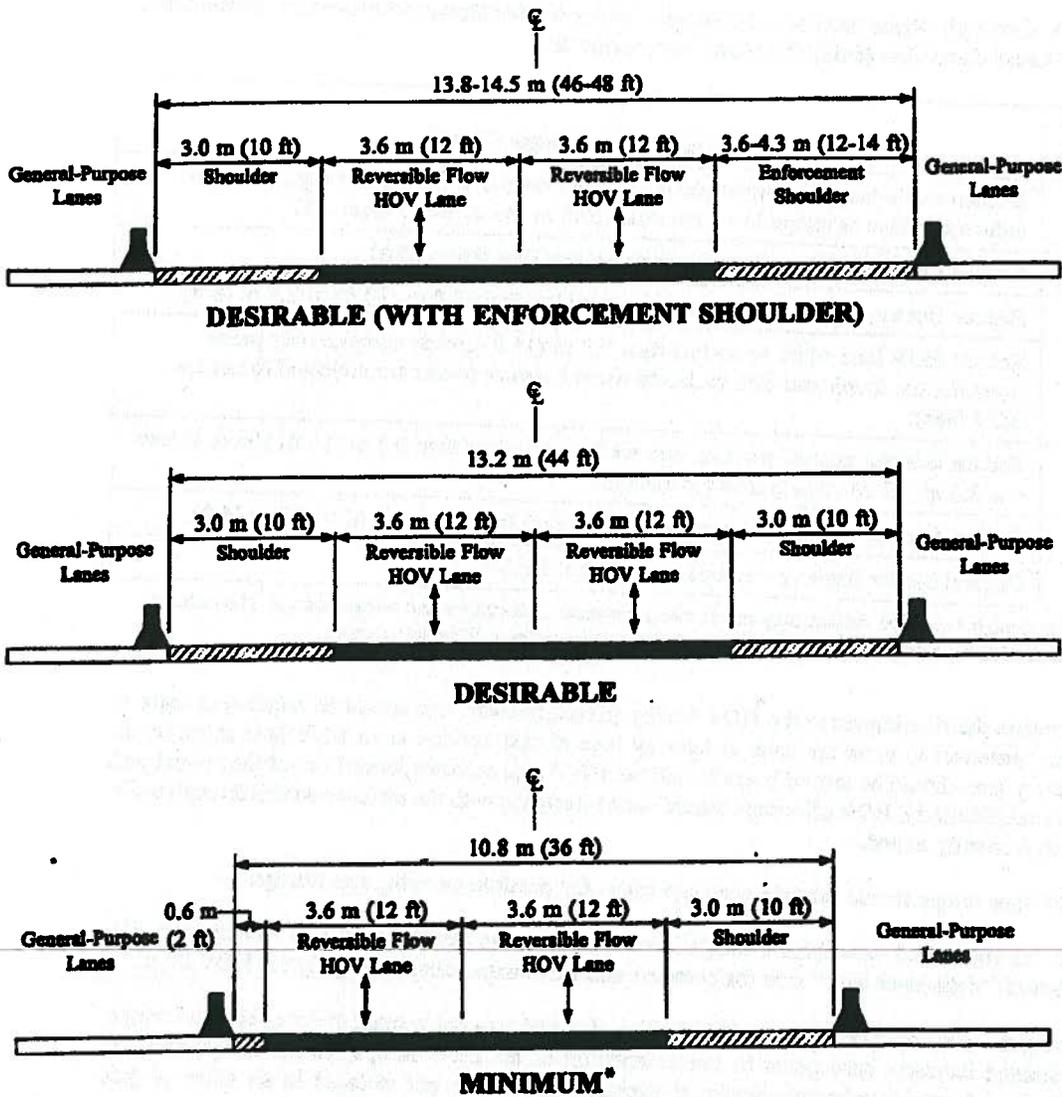
SHEET 35 OF 44



HENRY COUNTY
PLANO 00000074
CONG-0000-000074
I-75 74 SR CR TO SR 05
MANAGED LANES - PM,
BUILD REVERSIBLE LANES
2003 ADT - 0000
2008 ADT - 000
24 HOUR - 163
CONG. 1 02

- NOTES:
1. DRAWING IS NOT TO SCALE.
 2. GP - GENERAL PURPOSE LANES.
 3. ML - MANAGED LANES.

PARSONS
1877 PROGRESS LANE, SUITE 100
ROSELAND, GA 30080



* Operational treatments should be incorporated if the minimum design cross section is used. The minimum cross section should be used as an interim project or over short distances. Increased enforcement and incident management programs should be implemented to successfully operate the facility.

FIGURE 3-5. Examples of Cross Sections for Two-Lane, Barrier-Separated, Reversible HOV Lanes (Adapted from References 18, 56).

- Sight distance is particularly critical due to the proximity of barriers to ramp lane alignments. Lateral clearances are often no greater than 0.6 m (2 ft) from the edge of the travel lane to the barrier. Where practical, removal of barrier-mounted glare screens or slight adjustments in striping alignment may be necessary within the ramp envelope to accommodate the proper design speed.
- The location of ingress/egress facilities is influenced by a number of factors. For example, direct access ramps to/from local streets should be made with candidate streets that currently do not have freeway access, so as to better distribute demand and prevent overloading existing intersections. For at-grade access with the adjacent freeway lanes, designated outlets should be strategically positioned so as to provide adequate weaving to reach nearby freeway exits.

TABLE 3-4. Example Prioritization of Design Tradeoffs for Barrier-Separated, Reversible Flow HOV Lane Facilities (Adapted from Reference 21).

Ordered Sequence	Cross-Section Design Change
First	Reduce single-lane HOV envelope to no less than 6.0 m (20 ft) (see Figure 3-4) or reduce two-lane envelope to no less than 10.8 m (36 ft) (see Figure 3-5).
Second	Reduce freeway left lateral clearance to no less than 0.6 m (2 ft).
Third	Reduce freeway right lateral clearance (shoulder) from 3.0 m (10 ft) to 2.4 m (8 ft).
Fourth	Reduce HOV lane width to no less than 3.3 m (11 ft) (some agencies may prefer reversing the fourth and fifth tradeoffs when buses or trucks are projected to use the HOV lane).
Fifth	Reduce selected general-purpose lane widths to no less than 3.3 m (11 ft) [leave at least one 3.6 m (12 ft) outside lane for trucks].
Sixth	Reduce freeway right lateral clearance (shoulder) from 2.4 m (8 ft) to 1.2 m (4 ft).
Seventh	Convert barrier shape at columns to a vertical face.

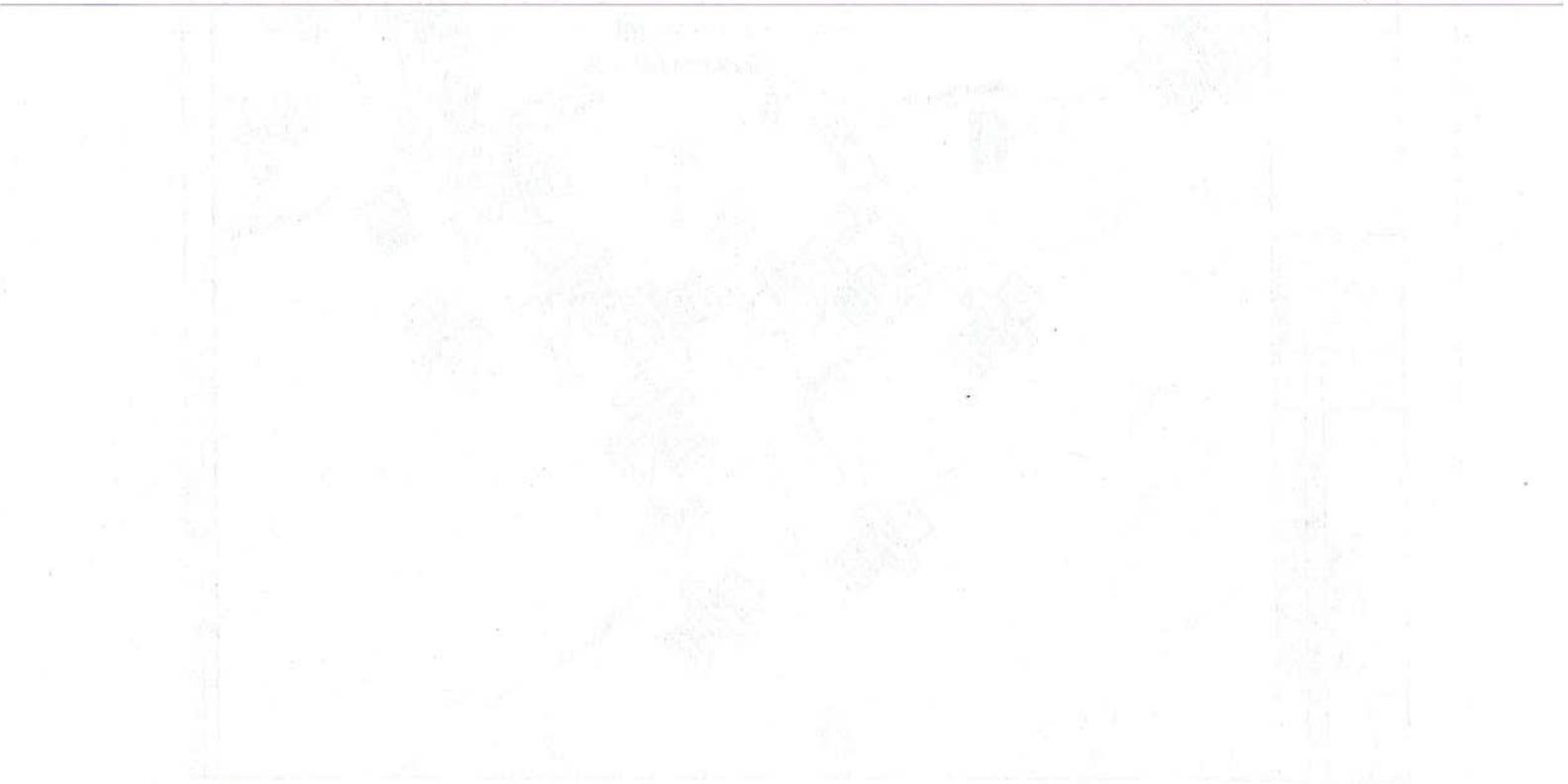
Note: A formal design exception request may need to be processed to document the design change. The ordered sequence presented here is only an example list. Some states may prefer a different sequence.

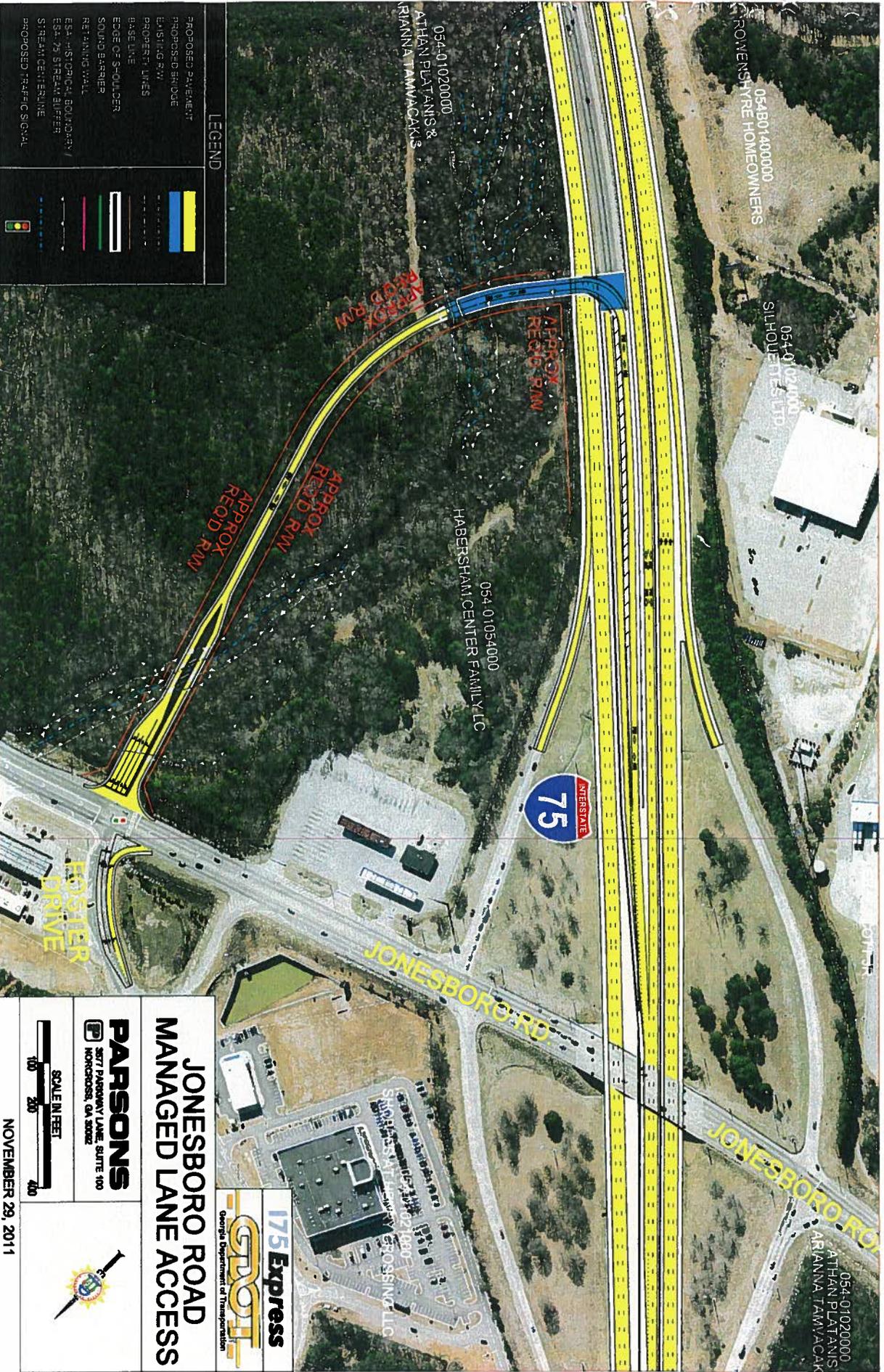
- Motorists desiring ingress to the HOV facility from a freeway lane should be required to make an overt maneuver to enter the lane. A freeway lane should not end at an HOV lane entrance; the freeway lane should be moved laterally and the HOV lane entrance located out of the normal path of travel. Similarly, HOV off-ramps should not be designed with the mainline so that through traffic is inadvertently exited.
- HOV lane ramps should provide adequate space for possible metering and storage.
- Left- or right-hand exits from a single-lane HOV lane are equally valid and equally safe. The standard "right-hand-only" rule for entrance and exit ramps should not apply for HOV lanes.
- During the early operations of an HOV facility, demand may not warrant direct or elevated ramps. If demand increases subsequent to implementation of the HOV lane, a retrofit design could be difficult and expensive; consequently, if exclusive ramps are not included in an initial project design, provisions should be made so that the ramps can be added later.
- Adequate advance signing should be provided, and pavement markings should emphasize the mainline (possibly through use of skip stripe markings across the diverging exit ramp). Signing and pavement markings for HOV facilities should be in accordance with the MUTCD and other state and local requirements.
- Safety lighting should be applied for all ingress/egress locations using the same warrants applied for urban freeway entrance and exit ramps.
- Where possible, provision for entrance ramp metering and/or enforcement should be considered (these are project-specific considerations based on local issues and input from enforcement agents).

If feasible, the connections from the freeway mainline to an HOV facility in the freeway median should be made with flyover ramps. This allows buses and other vehicles using the HOV facility to enter/exit the freeway mainline on the right without having to merge with the inner high-speed lanes. Also, depending on the interchange spacing, it could eliminate the need for HOVs to perform multilane weaves to access the HOV lane or exit the freeway. Where limited right-of-way and/or high costs prohibit the use of elevated flyover ramps, at-grade ramps can be used. At-grade ramps are also appropriate where the HOV facilities

ATTACHMENT 13

Jonesboro Road Managed Lanes Connection Layout





PROPOSED PAVEMENT
 PROPOSED BRIDGE
 EXISTING R/W
 PROPERTY LINES
 BASE LINE
 EDGE OF SHOULDER
 SOUND BARRIER
 RETAINING WALL
 EASEMENT BOUNDARY
 EGA 25 STREAM BUFFER
 STREAM CENTERLINE
 PROPOSED TRAFFIC SIGNAL

LEGEND



**JONESBORO ROAD
 MANAGED LANE ACCESS**
PARSONS
 3877 PARSONS LANE, SUITE 100
 NORCROSS, GA 30092
 SCALE IN FEET
 100 200 400
 NOVEMBER 29, 2011





ATTACHMENT 14

Mt. Carmel Road Detour Plan

