

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

**FILE** P. I. No. 0005448, Fulton County **OFFICE** Preconstruction  
HPP-0005-00(448)  
SR 372/Birmingham Hwy at CR 27/Providence Road  
Intersection Improvements **DATE** July 26, 2006

**FROM**  Margaret B. Pirkle, P.E., Assistant Director of Preconstruction

**TO**  SEE DISTRIBUTION

**SUBJECT** APPROVED PROJECT CONCEPT REPORT

Attached for your files is the approval for subject project.

Attachment

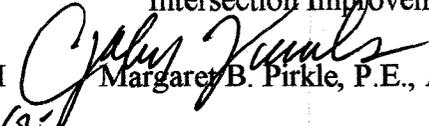
**DISTRIBUTION:**

Brian Summers  
Harvey Keepler  
Ken Thompson  
Michael Henry  
Keith Golden  
Joe Palladi  
Paul Liles  
Ben Buchan  
Bryant Poole  
BOARD MEMBER

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

**FILE:** P. I. No. 0005448, Fulton County **OFFICE** Preconstruction  
 HPP-0005-00(448)  
 SR 372/Birmingham Highway at CR 27/Providence Road  
 Intersection Improvements **DATE** July 19, 2006

**FROM**  Margaret B. Pirkle, P.E., Assistant Director of Preconstruction

**TO**  David E. Studstill, Jr., P.E., Chief Engineer

**SUBJECT** PROJECT CONCEPT REPORT

This project is the intersection improvement on SR 372/Birmingham Highway and CR 27/ Providence/New Providence Road in Fulton County. Currently the existing intersection is non-signalized with intersecting skew angles of approximately 25 degrees. The existing crest vertical curve located 250'± south of the existing intersection does not meet the 45 MPH posted speed which requires 360' of stopping sight distance. Both SR 372 and CR 27/Providence Road are two lane roads. The lack of turning lanes and increasing traffic volumes contribute to the congestion along the SR 372 corridor. The existing (2007) traffic volumes on SR 372 is 10,900 VPD and on CR 27 is 4,700 VPD. The projected volumes on SR 372 and CR 27 increase to 18,200 VPD and 7,850 VPD respectively by the year 2027.

The project consists of realigning the intersection of SR 372 and CR 27 approximately 500' north, such that intersecting skew angle with SR 372 is 70 degrees, improving the vertical sight distance along SR 372. The existing four way stop condition intersection will be replaced with a four leg signalized intersection with dedicated turning for each leg. Further improvements include curb and gutter, sidewalk, and pedestrian crossings. Traffic will be maintained during construction.

Environmental concerns include requiring a Categorical Exclusion be prepared; a public hearing open house is required; time saving procedures are appropriate.

The estimated costs for this project are:

	<u>PROPOSED</u>	<u>APPROVED</u>	<u>FUNDING</u>	<u>PROG DATE</u>
Construction (includes E&C and inflation)	\$1,708,000	\$2,051,000	Q92	2008
Right-of-Way & Utilities*	Local	Local	Q92	2007

David Studstill

Page 2

P. I. No. 0005448, Fulton

July 19, 2006

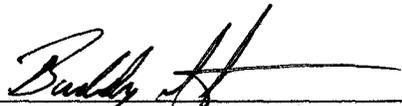
\*Fulton County signed PMA on 2-25-04 for PE, right-of-way and utilities; DOT to reimburse 80% of PE.

I recommend this project concept be approved.

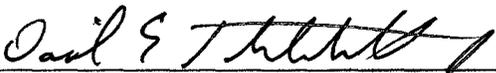
MBP:JDQ/cj

Attachment

CONCUR

  
\_\_\_\_\_  
Buddy Gratton, P.E., Director of Preconstruction

APPROVE

  
\_\_\_\_\_  
David E. Studstill, Jr., P.E., Chief Engineer

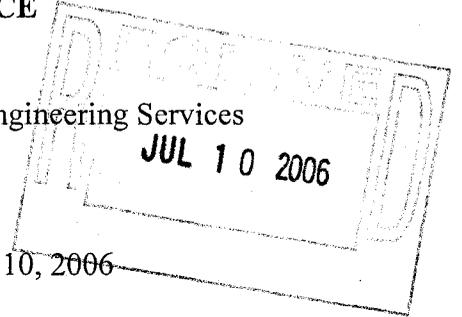
**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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**INTERDEPARTMENTAL CORRESPONDENCE**

**FILE:** HPP-0005-00(448) Fulton  
P.I. No. 0005448  
Intersection Improvements

**OFFICE:** Engineering Services

**DATE:** July 10, 2006



**FROM:** Brian K. Summers, P.E., Project Review Engineer *REW*

**TO:** Meg Pirkle, P.E., Assistant Director of Preconstruction

**SUBJECT: CONCEPT REPORT**

We have reviewed the Concept Report submitted July 6, 2006, and have no comments.

The costs for this project are:

Construction	\$1,341,000
Inflation	\$211,375
E & C	\$155,238
Reimbursable Utilities	\$100,000
Right of Way	\$1,248,000

REW

c: Ben Buchan, Attn: Albert Shelby

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

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PROJECT CONCEPT REPORT

Project Number: HPP-0005-00(448)  
County: Fulton  
P.I. Number: 0005448

Federal Route Number: N/A  
State Route Number: 372  
County Road Number: 27

Intersection Improvements at SR 372 Birmingham Highway  
and  
CR 27 Providence / New Providence Road

Recommendation for approval:

DATE 6/26/06

Albert Shelby  
Project Manager

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)

DATE \_\_\_\_\_

\_\_\_\_\_  
District Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Planning Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Financial Management Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Environment / Location Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Traffic Safety & Design Engineer

DATE 7/10/06

Brian K. Summers *REV*  
Project Review Engineer

DATE 6-26-06

James B. Bush  
State Urban Design Engineer

## SCORING RESULTS AS PER MOG 2440-2

<b>Project Number:</b> HPP-0005-00(448)		<b>County:</b> Fulton		<b>PI No.:</b> 0005448	
<b>Report Date:</b> June 26, 2006		<b>Concept By:</b> DOT Office: Urban Design			
<input checked="" type="checkbox"/> Concept Stage		Consultant: Heath and Lineback			
<b>Project Type:</b> Choose One From Each Column		<input type="checkbox"/> Major <input checked="" type="checkbox"/> Minor	<input checked="" type="checkbox"/> Urban <input type="checkbox"/> Rural	<input type="checkbox"/> ATMS <input type="checkbox"/> Bridge Replacement <input type="checkbox"/> Building <input type="checkbox"/> Interchange Reconstruction <input checked="" type="checkbox"/> Intersection Improvement <input type="checkbox"/> Interstate <input type="checkbox"/> New Location <input type="checkbox"/> Widening & Reconstruction <input type="checkbox"/> Miscellaneous	
<b>FOCUS AREAS</b>	<b>SCORE</b>	<b>RESULTS</b>			
Presentation	100				
Judgement	100				
Environmental	100				
Right of Way	100				
Utility	100				
Constructability	100				
Schedule	100				

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**PROJECT CONCEPT REPORT**

**Project Number: HPP-0005-00(448)**

**County: Fulton**

**P.I. Number: 0005448**

**Federal Route Number: N/A**

**State Route Number: 372**

**County Road Number: 27**

**Intersection Improvements at SR 372 Birmingham Highway  
and  
CR 27 Providence / New Providence Road**

Recommendation for approval:

DATE 6/26/06

Albert Shelby  
Project Manager

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)

DATE \_\_\_\_\_

\_\_\_\_\_  
District Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Planning Administrator

DATE 7/10/06

James T. Simpson  
State Transportation Financial Management Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Environment / Location Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Traffic Safety & Design Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
Project Review Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Urban Design Engineer

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

PROJECT CONCEPT REPORT

Project Number: HPP-0005-00(448)  
County: Fulton  
P.I. Number: 0005448

Federal Route Number: N/A  
State Route Number: 372  
County Road Number: 27

Intersection Improvements at SR 372 Birmingham Highway  
and  
CR 27 Providence / New Providence Road

Recommendation for approval:

DATE 6/26/06

Albert Shelly  
Project Manager

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)

DATE \_\_\_\_\_

District Engineer  
Joseph P. Alford  
State Transportation Planning Administrator

DATE \_\_\_\_\_

State Transportation Financial Management Administrator

DATE \_\_\_\_\_

State Environment / Location Engineer

DATE \_\_\_\_\_

State Traffic Safety & Design Engineer

DATE \_\_\_\_\_

Project Review Engineer  
James B. Bunk  
State Urban Design Engineer

DATE 6-26-06

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

PROJECT CONCEPT REPORT

Project Number: HPP-0005-00(448)

County: Fulton

P.I. Number: 0005448

Federal Route Number: N/A

State Route Number: 372

County Road Number: 27

Intersection Improvements at SR 372 Birmingham Highway  
and  
CR 27 Providence / New Providence Road

Recommendation for approval:

DATE 6/26/06

Albert Shelby  
Project Manager

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)

DATE \_\_\_\_\_

\_\_\_\_\_  
District Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Planning Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Financial Management Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Environment / Location Engineer

DATE 7-7-06

Heath Gold  
State Traffic Safety & Design Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
Project Review Engineer

DATE 6-26-06

James B. Baul  
State Urban Design Engineer

8092 2 0 700

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**PROJECT CONCEPT REPORT**

**Project Number: HPP-0005-00(448)**

**County: Fulton**

**P.I. Number: 0005448**

**Federal Route Number: N/A**

**State Route Number: 372**

**County Road Number: 27**

**Intersection Improvements at SR 372 Birmingham Highway  
and  
CR 27 Providence / New Providence Road**

Recommendation for approval:

DATE 6/26/06

Albert Shelby  
Project Manager

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)

DATE \_\_\_\_\_

\_\_\_\_\_  
District Engineer

DATE 7/6/06

Joseph P. Pelt  
State Transportation Planning Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Financial Management Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Environment / Location Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Traffic Safety & Design Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
Project Review Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Urban Design Engineer

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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**INTERDEPARTMENT CORRESPONDENCE**

FILE: **P.I. No. 0005448**

OFFICE: Environment/Location

DATE: August 4, 2006



FROM: Harvey D. Keeper, State Environmental/Location Engineer

TO: Meg Pirkle, Assistant Director of Preconstruction

SUBJECT: **PROJECT CONCEPT REPORT  
HPP-0005-00(448) / Fulton County  
Intersection Improvements @ SR 372 Birmingham Highway and CR 27  
Providence Rd./New Providence Rd.**

The above subject concept report has been reviewed. Several potentially eligible historic structures are located within the area of potential effect. Need to be careful regarding potential historic impacts.

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

HDK/lc

Attachment

cc: Brian Summers  
Keith Golden  
Ben Buchan  
Jamie Simpson  
Joe Palladi

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

PROJECT CONCEPT REPORT

Project Number: HPP-0005-00(448)

County: Fulton

P.I. Number: 0005448

Federal Route Number: N/A

State Route Number: 372

County Road Number: 27

Intersection Improvements at SR 372 Birmingham Highway  
and  
CR 27 Providence / New Providence Road

Recommendation for approval:

DATE 6/26/06

Albert Shelby  
Project Manager

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)

DATE \_\_\_\_\_

\_\_\_\_\_  
District Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Planning Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Financial Management Administrator

DATE 8/1/06

Vanuzo R. Ruppel  
State Environment / Location Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Traffic Safety & Design Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
Project Review Engineer

DATE 6-26-06

James B. Baul  
State Urban Design Engineer

**NOTICE OF LOCATION AND DESIGN APPROVAL**

**Project No. HPP-0005-00(448)**

**P.I. No. 0005448**

Notice is hereby given in compliance with Georgia code 22-2-109 that the Georgia Department of Transportation has approved the Location and Design of the above project.

This project consists of intersection improvements to SR 372 Birmingham Hwy @ CR 27 Providence / New Providence Rd in North Fulton County, G.M.D. 121. The improvement project includes realigning CR 27 to intersect SR 372 at a location 500' to the north of the current intersection.

Date of Location Approval: July 26, 2006

Drawings and/or maps, and/or plats of the proposed project as approved are on file and are available for inspection at the Georgia Department of Transportation.

**Albert Shelby**  
Design Group Manager, Urban Design  
*Email: [albert.shelby@dot.state.ga.us](mailto:albert.shelby@dot.state.ga.us)*  
Georgia Department of Transportation  
No. 2 Capitol Square, S.W.  
Atlanta, Georgia 30334  
Tel: (404) 656-5440

Any interested party may obtain a copy of the drawings or maps or plats or portions thereof by paying a nominal fee and requesting in writing to:

**Albert Shelby**  
Design Group Manager, Urban Design  
*Email: [albert.shelby@dot.state.ga.us](mailto:albert.shelby@dot.state.ga.us)*  
Georgia Department of Transportation  
No. 2 Capitol Square, S.W.  
Atlanta, Georgia 30334  
Tel: (404) 656-5440

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Any written request or communication in reference to this project or notice SHOULD include the  
**PROJECT and P.I. NUMBERS** as noted at the top of this notice.

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**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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**INTERDEPARTMENTAL CORRESPONDENCE**

**FILE:** HPP-0005-00(448), Fulton County  
Intersection Improvements @ SR 372  
Birmingham Highway and CR 27 Providence Rd/  
New Providence Road  
P.I. No. 0005448

**OFFICE:** Urban Design

**DATE:** June 26, 2006

*James B Buchan*

**FROM:** James B. Buchan, P.E., State Urban Design Engineer

**TO:** Meg Pirkle, P.E., Assistant Director of Preconstruction

**SUBJECT:** Project Concept Report

Attached is the original copy of the Concept Report for your further handling for approval in accordance with the Plan Development Process (PDP).

JBB:MER *AVS* *DMW*

Attachment

**Distribution:**

Brian Summers, Project Review Engineer, w/ attachment  
Harvey Keepler, State Environmental/Location Engineer, w/ attachment  
Keith Golden, State Traffic Safety and Design Engineer, w/ attachment  
Joe Palladi, State Transportation Planning Administrator, w/ attachment  
Jamie Simpson, State Financial Management Administrator, w/ attachment  
Bryant Poole, District 7 Engineer, w/ attachment

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

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PROJECT CONCEPT REPORT

Project Number: HPP-0005-00(448)

County: Fulton

P.I. Number: 0005448

Federal Route Number: N/A

State Route Number: 372

County Road Number: 27

Intersection Improvements at SR 372 Birmingham Highway  
and  
CR 27 Providence / New Providence Road

Recommendation for approval:

DATE 6/26/06

Albert Shelly  
Project Manager

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)

DATE \_\_\_\_\_

\_\_\_\_\_  
District Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Planning Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Financial Management Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Environment / Location Engineer

DATE \_\_\_\_\_

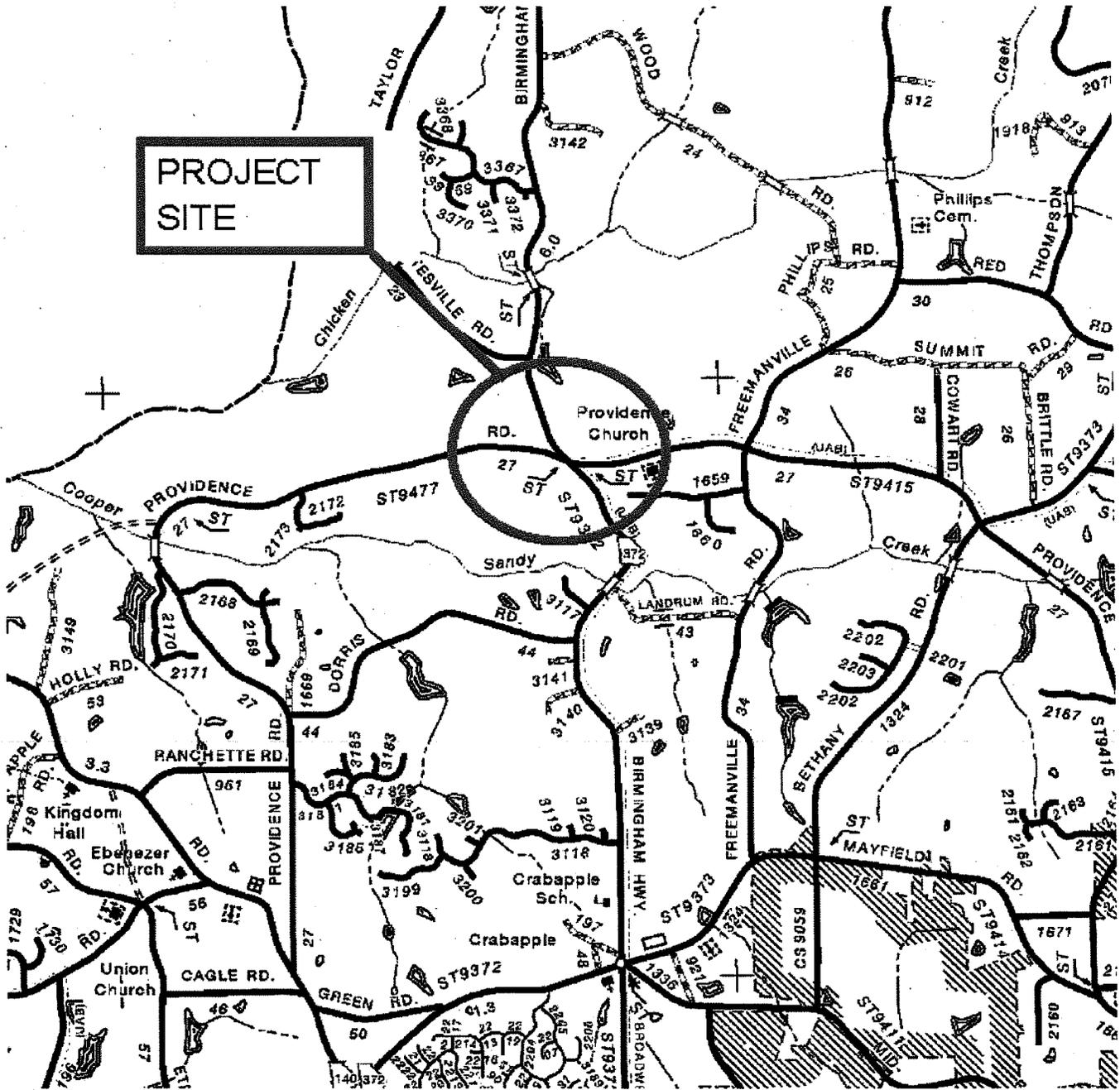
\_\_\_\_\_  
State Traffic Safety & Design Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
Project Review Engineer

DATE 6-26-06

Jam B Baul  
State Urban Design Engineer



Location Map

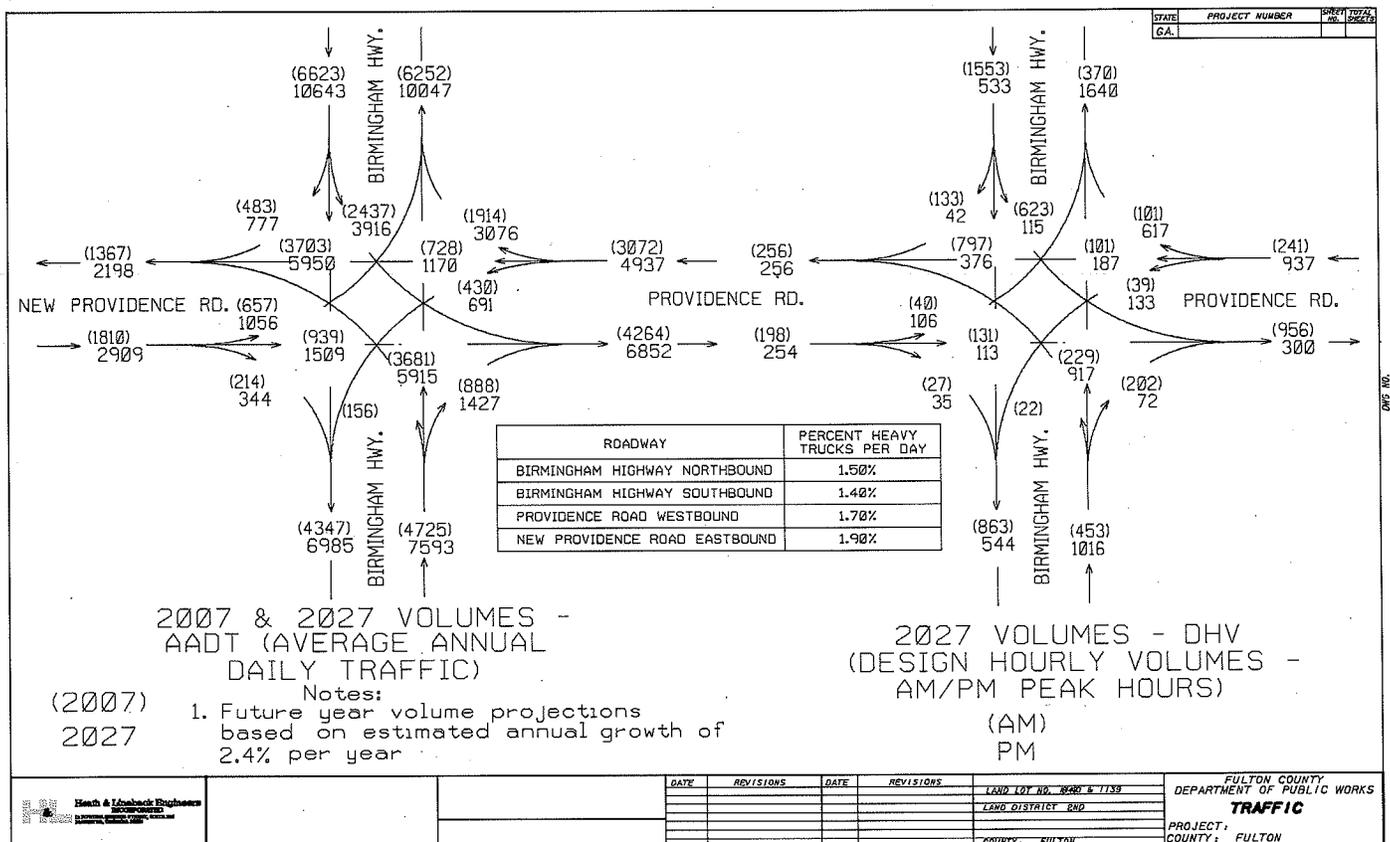
HPP-0005-00(448), Fulton County, Ga.  
P.I. 0005448

Intersection Improvements at SR 372 Birmingham Hwy and CR 27 Providence / New  
Providence Rd  
Fulton County Project T119

The purpose of an HPP (High Priority Project) project is to permit State to construct the project under section 117(e) of the Transportation Equity Act of the 21<sup>st</sup> Century (TEA-21) without the aid of Federal funds, and receive reimbursements as the Federal funds become available in accordance with the distribution schedule in section 1601(a) of the Act.

Currently the existing intersection of SR 372 Birmingham Hwy. and CR 27 Providence / New Providence Rd is non-signalized with intersecting skew angles of approximately 25 degrees. The existing intersection does not have separate left or right turn lanes. The lack of controlled turning movements and increasing traffic volumes contribute to congestion along the SR 372 corridor. The Fulton County Department of Public Works has determined that improving the capacity and alleviating congestion at this intersection requires immediate attention and therefore, has given this project high priority status.

Current two-way AADT volume on SR 372 is approximately 10,900 vehicles per day, and CR27 AADT is approximately 4,700 vehicles per day. Using a growth rate of 2.4% two-way AADT volume will increase to 18,200 for SR 372 and 7,850 for CR 27 by the year 2027. Diagram 1 shows existing and future AADT & DHV volumes for the intersection.



**Diagram 1 – Traffic Data**

Fulton County Project T119

Accident data collected between 2002 and 2004 show 57 incidents at the intersection, with 6 injuries and 0 fatalities. Table 1 provides a total number of accidents during this period.

Date	Inj.	Fat.	Collision	Light	Wet/Dry	DirVeh1	DirVeh2	MnvrVeh1	MnvrVeh2
1/25/2002	0	0	Rear End	Dusk	Dry	W	W	Straight	Stopped
4/26/2002	0	0	Sideswipe - Same Direction	Daylight	Dry	S	S	Turning Left	Straight
3/22/2002	0	0	Rear End	Daylight	Dry	W	W	Straight	Stopped
2/11/2002	0	0	Rear End	Daylight	Dry	W	W	Straight	Stopped
6/13/2002	0	0	Angle	Daylight	Dry	E	S	Turning Left	Straight
3/1/2002	0	0	Rear End	Daylight	Dry	W	W	Straight	Stopped
3/22/2002	0	0	Rear End	Daylight	Dry	W	W	Straight	Stopped
7/9/2002	0	0	Rear End	Daylight	Dry	W	W	Straight	Stopped
8/11/2002	0	0	Angle	Daylight	Dry	W	N	Straight	Straight
12/10/2002	0	0	Rear End	Daylight	Dry	W	W	Straight	Backing
12/9/2002	1	0	Rear End	Dusk	Dry	W	W	Straight	Stopped
9/17/2002	0	0	Rear End	Daylight	Dry	W	W	Straight	Stopped
10/6/2002	0	0	Angle	Daylight	Dry	E	S	Turning Left	Straight
10/4/2002	0	0	Angle	Daylight	Wet	W	N	Straight	Straight
10/17/2002	0	0	Rear End	Daylight	Dry	W	W	Turning Right	Stopped
10/16/2002	0	0	Angle	Dusk	Dry	E	N	Straight	Straight
11/18/2002	0	0	Rear End	Daylight	Dry	N	N	Straight	Stopped
7/17/2002	0	0	Rear End	Daylight	Dry	W	W	Straight	Stopped
7/5/2002	0	0	Rear End	Daylight	Dry	E	E	Straight	Stopped
3/5/2002	0	0	Rear End	Daylight	Dry	W	W	Straight	Stopped
6/21/2002	0	0	Rear End	Daylight	Dry	W	W	Straight	Stopped
5/8/2003	0	0	Rear End	Daylight	Dry	W	W	Straight	Stopped
4/3/2003	0	0	Rear End	Daylight	Dry	W	W	Straight	Stopped
4/24/2003	0	0	Angle	Daylight	Dry	E	W	Changing Lanes	Straight
4/7/2003	0	0	Rear End	Dark-Not Lighted	Wet	N	N	Straight	Stopped
3/10/2003	0	0	Rear End	Daylight	Dry	W	W	Straight	Stopped
10/29/2003	0	0	Angle	Dark-Not Lighted	Dry	S	E	Turning Left	Straight

Table 1 – Accident Data

Date	Inj.	Fat.	Collision	Light	Wet/Dry	DirVeh1	DirVeh2	MnvrVeh1	MnvrVeh2
8/19/2003	0	0	Rear End	Daylight	Dry	W	W	Straight	Stopped
6/23/2003	0	0	Rear End	Daylight	Dry	W	W	Straight	Stopped
9/8/2003	0	0	Sideswipe - Same Direction	Daylight	Dry	N	N	Straight	Stopped
9/7/2003	0	0	Angle	Daylight	Dry	S	N	Turning Left	Straight
9/6/2003	0	0	Rear End	Daylight	Dry	W	W	Straight	Straight
9/18/2003	0	0	Rear End	Daylight	Dry	W	N	Turning Left	Straight
12/5/2003	0	0	Rear End	Dark-Not Lighted	Wet	W	W	Straight	Stopped
12/21/2003	0	0	Sideswipe - Same Direction	Daylight	Dry	S	W	Turning Right	Straight
8/19/2003	0	0	Rear End	Daylight	Dry	W	W	Straight	Stopped
8/5/2003	2	0	Rear End	Daylight	Dry	S	S	Straight	Stopped
8/15/2003	0	0	Rear End	Daylight	Dry	W	W	Straight	Stopped
3/11/2004	0	0	Rear End	Daylight	Dry	W	W	Straight	Stopped
1/12/2004	0	0	Angle	Daylight	Dry	W	N	Turning Right	Straight
9/20/2004	0	0	Rear End	Daylight	Dry	S	S	Straight	Stopped
11/21/2004	0	0	Rear End	Dark-Not Lighted	Wet	W	W	Straight	Stopped
12/8/2004	0	0	Angle	Dark-Not Lighted	Dry	E	W	Turning Left	Straight
11/11/2004	0	0	Rear End	Dusk	Wet	W	W	Straight	Stopped
6/24/2004	1	0	Angle	Daylight	Wet	S	N	Turning Left	Straight
8/5/2004	0	0	Head On	Daylight	Wet	W	S	Straight	Straight
4/8/2004	0	0	Angle	Dark-Lighted	Dry	W	N	Straight	Straight
6/2/2004	1	0	Rear End	Daylight	Dry	W	W	Straight	Stopped
6/10/2004	0	0	Rear End	Daylight	Dry	W	W	Straight	Stopped
6/15/2004	0	0	Rear End	Daylight	Dry	W	W	Straight	Stopped
7/4/2004	0	0	Angle	Dark-Not Lighted	Dry	W	N	Straight	Straight
7/6/2004	0	0	Rear End	Daylight	Wet	W	N	Stopped	Straight
6/18/2004	0	0	Rear End	Daylight	Dry	W	W	Straight	Stopped
6/9/2004	0	0	Rear End	Daylight	Wet	W	W	Turning Right	Stopped
4/28/2004	0	0	Rear End	Daylight	Dry	W	W	Straight	Stopped
1/14/2004	0	0	Rear End	Daylight	Dry	E	E	Straight	Straight
1/21/2004	1	0	Rear End	Daylight	Dry	W	W	Straight	Negotiating a Curve

Table 1- Accident Data (continued)

Project Description:

The existing intersection of SR 372 Birmingham Hwy and CR 27 Providence / New Providence Road is a non-signalized 4-way intersection with an approximate skew angle of 25 degrees. Both SR 372 and CR 27 are two-lane roads. There is minor residential development in the southeast quadrant of the intersection. This intersection is located in North Fulton County just north of the community of Crabapple.

The project consists of realigning the intersection of SR372 and CR 27 approximately 500' to the north such that intersecting skew angle with SR 372 is 70 degrees, and improving the vertical site distance along SR 372. The existing 4-way stop condition intersection will be replaced with a four leg signalized intersection with dedicated turning lanes for each leg.

Refer to the signal warranting analysis for this intersection under the Attachments section.

The project will be stage construction to maintain traffic on site.

**Project Length:** 0.40 miles along SR 372, 0.45 miles along CR 27

**Is the project in the non-attainment area?** Yes X No     

This project is included in the Mobility 2030 Regional Transportation Plan list by the ARC as project FN-209.

**PDP Classification:** Major      Minor X

**Federal Oversight:** Full Oversight ( ), Exempt (X), State Funded ( ), or Other ( )

**Functional Classification:** SR 372 (Urban Minor Arterial), CR 27 (Urban Collector St.)

**US Route Number(s):** N/A

**State Route Number(s):** SR 372

**Existing Roadway Features:**

- SR 372 Birmingham Hwy is a paved two lane rural roadway section. The pavement width is approximately 28' with travel lanes each being 12' wide.
- CR 27 Providence / New Providence Rd is a paved two lane rural roadway section. The pavement width is approximately 24'.
- Posted speed limit: SR 372 – 45 mph., CR 27 – 45 mph.
- Maximum Grades: SR 372 - 3%, CR 27 – 2%
- Minimum Radius: SR 372 - 1100', CR 27 – 1500'
- Major Structures: none
- Major Interchanges and Intersections along project: none
- Existing Right of Way: SR 372 – 45'-70', CR 27 – 60'

**Proposed Design Features:**

- The intersection will be signalized with dedicated turning lanes for each leg
- The proposed roadway for SR372 will be a two lane urban section with 12' travel lanes. Shoulder widths will be 16' with 5' wide sidewalks.
- The proposed roadway for CR 27 will be a two lane urban section with 12' travel lanes. Shoulder widths will be 16' with 5' wide sidewalks.

Fulton County Project T119

- Design Speed: SR372 – 45 mph., CR 27 – 45 mph.
- Proposed Maximum Grade: SR 372 – 4%, CR 27 – 3% Maximum allowable – 6%
- Proposed Maximum grade driveway: 11%
- Proposed Minimum Radius: SR 372 – 1100’, CR 27 – 650’ Maximum allowable – 587’
- Major Structures: none
- Right of Way:

Proposed Right of Way: SR 372 - 80’ to 120’, CR 27 - 80’ to 120’  
 Easements: Temporary 13, Permanent 0, Utility 0, Other 0  
 Type of access control: Full ( ), Partial ( ), By Permit (X), Other ( )  
 Number of Parcels: 14 Number of Displacements: 0

- Structures: none
- Major Interchanges or Intersections: None
- Intersection Level of Service for year 2027: A.M. (B), P.M. (E)
- Traffic Control during construction: Traffic will be maintained on the existing roadway.
- Design exceptions to controlling criteria anticipated:

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

- Design Variances: none anticipated
- Environmental Concerns: none anticipated
- Level of Environmental Analysis: Categorical Exclusion
  - Are time saving procedures appropriate? Yes (X) No ( )
  - Categorical Exclusion (X),
  - Environmental Assessment / Finding of Significant Impact ( )
  - Environmental Impact Statement ( )
- Utility Involvements:
  - Gas – None
  - Water – Fulton County
  - Electric – Georgia Power
  - Telephone – Bell South
  - Cable - Comcast
  - Other – Colonial Pipeline

**Project Responsibilities:**

- Design - Heath-Linebeck Engineers, Inc.
- Right of Way Acquisition – Fulton County
- Relocation of Utilities – Fulton County
- Letting Contract – Georgia Department of Transportation
- Supervision of Construction – Georgia Department of Transportation
- Providing materials – Contractor
- Providing Detours – Contractor (if required)

**Coordination:**

- Concept Team meeting date: January 25, 2006; March 25, 2006, via e-mail
- PAR meetings, dates and results: None
- FEMA, USCG, and / or TVA: None
- Public Involvement: Public Information Open House – November 20, 2005
- Local Government comments:
- Other Projects: none
- Railroads: none

**Scheduling:**

Time to complete the environmental process: 9 months  
Time to complete the Section 404 permits: N/A  
Time to complete preliminary construction plans: 4 months  
Time to complete right of way plans: 2 months  
Time to complete final construction plans: 3 months  
Time to purchase right of way: 12 months  
List other major items that will affect the project schedule: None

**Alternates Considered:**

Alternate 1 – Realign the intersection of SR 372 and CR 27 approximately 500' to the north and construct a 4-leg signalized intersection with dedicated turning lanes for each leg.  
Alternate 2 – Realign the intersection of SR 372 and CR 27 approximately 500' to the north and construct a single lane roundabout  
Alternate 3 – Realign CR 27 as in alternate 1 and at a 35 speed design.  
Alternate 4 – No-Build.

**Comparison Summary:**

Alternate 1 is selected for this concept.  
Alternate 2 was eliminated due to the roundabout intersection exceeding maximum of 1800 vph capacity by the year 2012. This exceeds the Georgia Department of Transportation TOPPS policy 4A-2 on roundabouts.  
Alternate 3 was eliminated because it would require a design variance.  
Alternate 4 was eliminated due to the need to improve the intersection.

**Attachments:**

- Preliminary Cost Estimate
- Signal Warranting Analysis
- Intersection Capacity Analysis
- Typical Sections
- Plan View
- Concept Team meeting minutes
- Notice of Location and Design Approval

**PRELIMINARY COST ESTIMATE**

DATE: July 6, 2006

PREPARED BY: Heath & Lineback Engineers, Inc.

PROJECT NO.: HPP-0005-00(448)

P.I. NO.: 0005448

LENGTH: 0.40 miles

PROJECT DESCRIPTION: Intersection Improvement of SR 372 Birmingham Hwy @ CR 27 Providence / New Providence Rd.

PROPOSED CONCEPT: The proposed typical section consist of two 12'-0" travel lanes with 16'-0" urban shoulders. Traffic will maintained on the existing alignment until the new permanent offset alignment is constructed.

EXISTING ROADWAY: State Route 372, CR27

TRAFFIC: Existing: 15,600. ADT (2007)

Design: 26,050 ADT (2027)

( ) PROGRAMMING PROCESS (X) CONCEPT DEVEL. ( ) DURING PROJ DEVEL.

**Estimate Report for file "T119200511151054\_2005-12-16\_2006-05-10"**

<b>Section Miscellaneous</b>					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
150-1010	1	LS	30000.00	TRAFFIC CONTROL -	30000.00
210-0100	1	LS	386725.00	GRADING COMPLETE -	386725.00
441-0104	4800	SY	26.97	CONC SIDEWALK, 4 IN	129456.00
441-6022	8500	LF	16.45	CONC CURB & GUTTER, 6 IN X 30 IN, TP 2	139825.00
641-1200	500	LF	14.33	GUARDRAIL, TP W	7165.00
641-5012	1	EA	1591.33	GUARDRAIL ANCHORAGE, TP 12	1591.33
<b>Section Sub Total:</b>					<b>\$694,762.33</b>

<b>Section Pavement</b>					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
310-1101	3400	TN	15.66	GR AGGR BASE CRS, INCL MATL	53244.00
402-1812	420	TN	71.50	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	30030.00
402-3110	1000	TN	74.60	RECYCLED ASPH CONC 9.5 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	74600.00
402-3111	650	TN	71.45	RECYCLED ASPH CONC 19 MM MIX, GP 1 OR 2, INCL BITUM MATL & H LIME	46442.50
402-3121	1900	TN	70.40	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	133760.00
413-1000	900	GL	1.11	BITUM TACK COAT	999.00
<b>Section Sub Total:</b>					<b>\$339,075.50</b>

<b>Section Drainage</b>					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
441-0303	2	EA	1727.27	CONC SPILLWAY, TP 3	3454.54
550-1180	3000	LF	33.93	STORM DRAIN PIPE, 18 IN, H 1-10	101790.00
550-4118	6	EA	288.53	FLARED END SECTION 18 IN, SIDE DRAIN	1731.18
668-1100	14	EA	1835.21	CATCH BASIN, GP 1	25692.94
668-4300	2	EA	1834.61	STORM SEWER MANHOLE, TP 1	3669.22
<b>Section Sub Total:</b>					<b>\$136,337.88</b>

<b>Section Erosion Control</b>					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
163-0232	4	AC	476.99	TEMPORARY GRASSING	1907.96
163-0240	55	TN	196.76	MULCH	10821.80
163-0300	2	EA	1763.95	CONSTRUCTION EXIT	3527.90
163-0503	3	EA	496.57	CONSTRUCT AND REMOVE SILT CONTROL GATE, TP 3	1489.71
163-0521	30	EA	169.91	CONSTRUCT AND REMOVE TEMPORARY DITCH CHECKS	5097.30
165-0010	1000	LF	1.05	MAINTENANCE OF TEMPORARY SILT FENCE, TP A	1050.00
165-0030	1500	LF	1.22	MAINTENANCE OF TEMPORARY SILT FENCE, TP C	1830.00
165-0040	30	EA	72.51	MAINTENANCE OF EROSION CONTROL CHECKDAMS/DITCH CHECKS	2175.30
165-0087	3	EA	179.46	MAINTENANCE OF SILT CONTROL GATE, TP 3	538.38
165-0101	2	EA	444.09	MAINTENANCE OF CONSTRUCTION EXIT	888.18
167-1000	1	EA	1709.42	WATER QUALITY MONITORING AND SAMPLING	1709.42
167-1500	18	MO	877.59	WATER QUALITY INSPECTIONS	15796.62
171-0010	2000	LF	1.88	TEMPORARY SILT FENCE, TYPE A	3760.00
171-0030	3000	LF	3.23	TEMPORARY SILT FENCE, TYPE C	9690.00
603-2180	15	SY	33.72	STN DUMPED RIP RAP, TP 3, 12 IN	505.80
603-7000	15	SY	4.06	PLASTIC FILTER FABRIC	60.90
700-6910	6	AC	798.39	PERMANENT GRASSING	4790.34
700-7000	20	TN	59.02	AGRICULTURAL LIME	1180.40
700-7010	18	GL	18.84	LIQUID LIME	339.12
700-8000	7	TN	270.73	FERTILIZER MIXED GRADE	1895.11
700-8100	350	LB	1.60	FERTILIZER NITROGEN CONTENT	560.00
716-2000	6000	SY	1.07	EROSION CONTROL MATS, SLOPES	6420.00
<b>Section Sub Total:</b>					<b>\$76,034.24</b>

<b>Section Signing &amp; Marking</b>					
<b>Item Number</b>	<b>Quantity</b>	<b>Units</b>	<b>Unit Price</b>	<b>Item Description</b>	<b>Cost</b>
636-1020	45	SF	13.82	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 3	621.90
636-1031	45	SF	20.85	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING TP 6	938.25
636-2070	110	LF	7.09	GALV STEEL POSTS, TP 7	779.90
636-2090	110	LF	6.91	GALV STEEL POSTS, TP 9	760.10
647-1000	1	LS	90000.00	TRAFFIC SIGNAL INSTALLATION NO - (mast arm)	90000.00
652-0120	16	EA	43.80	PAVEMENT MARKING, ARROW, TP 2	700.80
652-2501	1	LM	278.33	SOLID TRAFFIC STRIPE, 5 IN, WHITE	278.33
652-2502	1	LM	278.19	SOLID TRAFFIC STRIPE, 5 IN, YELLOW	278.19
652-5701	60	LF	2.54	SOLID TRAF STRIPE, 24 IN, WHITE	152.40
653-1804	70	LF	1.70	THERMOPLASTIC SOLID TRAF STRIPE, 8 IN, WHITE	119.00
<b>Section Sub Total:</b>					<b>\$94,628.87</b>

**Total Estimated Cost: \$1,340,838.82**

<b>Subtotal Construction Cost</b>	<b>\$1,340,838.82</b>
E&C Rate 10.0 %	\$134,083.88
Inflation Rate 5.0 % @ 3.0 Years	\$232,484.69
<b>Total Construction Cost</b>	<b>\$1,707,407.39</b>
Right Of Way	\$1,248,000.00
Relmb. Utilities	\$100,000.00
<b>Grand Total Project Cost</b>	<b>\$3,055,407.39</b>

**A&R ENGINEERING, INC.**

**SIGNAL WARRANT ANALYSIS SUMMARY REPORT - SR 372 @ Providence Rd**

Project Number :	05-075	Report Date :	September 8, 2005
		Counts Date :	June 22, 2005
Major Street :	SR 372		
Minor Street :	Providence Rd		
Speed on Major Street :	45 mph		
Lanes @ Intersection :	Major Street - 1 Minor Street - 1		
Analyst :	BMS		

**WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME**

WARRANT 1 SATISFIED

STANDARD 1	SATISFIED	CONDITION A	9	HOURS
		CONDITION B	12	HOURS

STANDARD 2	NOT SATISFIED	CONDITION A	4	HOURS
		CONDITION B	10	HOURS

**WARRANT 2, FOUR-HOUR VEHICULAR VOLUME**

WARRANT 2 SATISFIED 12 HOURS

**WARRANT 3, PEAK HOUR**

WARRANT 3 SATISFIED 5 HOURS

**WARRANT 4, PEDESTRIAN VOLUME**

WARRANT 4 NOT SATISFIED

**WARRANT 5, SCHOOL CROSSING**

WARRANT 5 NOT APPLICABLE

**WARRANT 6, COORDINATED SIGNAL SYSTEM**

WARRANT 6 NOT SATISFIED

**WARRANT 7, CRASH EXPERIENCE**

WARRANT 7 NOT SATISFIED 0 CRASHES

**WARRANT 8, ROADWAY NETWORK**

WARRANT 8 NOT APPLICABLE

**A&R ENGINEERING, INC.**

**SIGNAL WARRANT ANALYSIS REPORT - SR 372 @ Providence Rd**

Project Number : 05-075  
Major Street : SR 372  
Minor Street : Providence Rd  
Speed on Major Street : 45 mph  
Lanes @ Intersection : Major Street - 1  
Minor Street - 1  
Analyst : BMS

Report Date : September 8, 2005  
Counts Date : June 22, 2005

24-HOUR TRAFFIC VOLUME  
TABLE 1

Time	SR 372 Northbound				SR 372 Southbound			
	Total Tube Count	Right Turn	% Right Turn	With 0% RT Turn Reduction	Total Tube Count	Right Turn	% Right Turn	With 0% RT Turn Reduction
12:00 AM	23	0	0	23	22	0	0	22
1:00 AM	7	0	0	7	12	0	0	12
2:00 AM	5	0	0	5	6	0	0	6
3:00 AM	2	0	0	2	9	0	0	9
4:00 AM	8	0	0	8	33	0	0	33
5:00 AM	32	0	0	32	148	0	0	148
6:00 AM	100	0	0	100	701	0	0	701
7:00 AM	214	0	0	214	964	0	0	964
8:00 AM	287	0	0	287	856	0	0	856
9:00 AM	226	0	0	226	501	0	0	501
10:00 AM	224	0	0	224	446	0	0	446
11:00 AM	247	0	0	247	394	0	0	394
12:00 PM	278	0	0	278	315	0	0	315
1:00 PM	314	0	0	314	316	0	0	316
2:00 PM	295	0	0	295	292	0	0	292
3:00 PM	343	0	0	343	265	0	0	265
4:00 PM	441	0	0	441	318	0	0	318
5:00 PM	614	0	0	614	305	0	0	305
6:00 PM	409	0	0	409	265	0	0	265
7:00 PM	269	0	0	269	224	0	0	224
8:00 PM	170	0	0	170	160	0	0	160
9:00 PM	124	0	0	124	98	0	0	98
10:00 PM	111	0	0	111	50	0	0	50
11:00 PM	51	0	0	51	20	0	0	20
Total				4794				6720

**A&R ENGINEERING, INC.**

24-HOUR TRAFFIC VOLUME  
TABLE 2

Time	Providence Rd				Providence Rd			
	Eastbound				Westbound			
24 Hours	Total Tube Count	Right Turn	% Right Turn	With 100% RT Turn Reduction	Total Tube Count	Right Turn	% Right Turn	With 100% RT Turn Reduction
12:00 AM	17	3	15	14	17	9	52	8
1:00 AM	12	2	15	10	14	7	52	7
2:00 AM	4	1	15	3	3	2	52	1
3:00 AM	0	0	0	0	1	1	52	0
4:00 AM	1	0	15	1	5	3	52	2
5:00 AM	9	1	15	8	8	4	52	4
6:00 AM	27	4	15	23	35	18	52	17
7:00 AM	95	14	15	81	106	42	40	64
8:00 AM	122	18	15	104	157	63	40	94
9:00 AM	150	22	15	128	122	57	46	65
10:00 AM	126	19	15	107	127	59	46	68
11:00 AM	105	16	15	89	137	72	53	65
12:00 PM	113	17	15	96	150	79	53	71
1:00 PM	125	19	15	106	175	103	59	72
2:00 PM	138	21	15	117	157	92	59	65
3:00 PM	133	20	15	113	236	139	59	97
4:00 PM	155	23	15	132	443	288	65	155
5:00 PM	142	21	15	121	541	352	65	189
6:00 PM	127	19	15	108	417	218	52	199
7:00 PM	131	19	15	112	200	105	52	95
8:00 PM	91	13	15	78	110	58	52	52
9:00 PM	85	13	15	72	110	58	52	52
10:00 PM	44	6	15	38	63	33	52	30
11:00 PM	32	5	15	27	32	17	52	15
<b>Total</b>				1689				1489

**A&R ENGINEERING, INC.**

**WARRANT ANALYSIS RESULTS - SR 372 @ Providence Rd**

**WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME**

**WARRANT 1\* SATISFIED**

STANDARD 1	SATISFIED	CONDITION A	9	HOURS
		CONDITION B	12	HOURS
STANDARD 2	NOT SATISFIED	CONDITION A	4	HOURS
		CONDITION B	10	HOURS

24-HOUR TRAFFIC VOLUME EVALUATION  
TABLE 3

HOUR OF DAY	MAJOR ST TOTAL OF BOTH APPROACHES	MINOR ST HIGH VOLUME APPROACH	WARRANT 1			
			STANDARD 1		STANDARD 2	
			CONDITION A	CONDITION B	CONDITION A	CONDITION B
12:00 AM	45	14				
1:00 AM	19	10				
2:00 AM	11	3				
3:00 AM	11	0				
4:00 AM	41	2				
5:00 AM	180	8				
6:00 AM	801	23	MAJOR	MAJOR	MAJOR	MAJOR
7:00 AM	1178	81	MAJOR	BOTH	MAJOR	BOTH
8:00 AM	1143	104	MAJOR	BOTH	MAJOR	BOTH
9:00 AM	727	128	BOTH	BOTH	BOTH	BOTH
10:00 AM	670	107	BOTH	BOTH	MAJOR	BOTH
11:00 AM	641	89	MAJOR	BOTH	MAJOR	BOTH
12:00 PM	593	96	MAJOR	BOTH	MAJOR	MINOR
1:00 PM	630	106	BOTH	BOTH	MAJOR	BOTH
2:00 PM	587	117	BOTH	BOTH	MAJOR	MINOR
3:00 PM	608	113	BOTH	BOTH	MAJOR	BOTH
4:00 PM	759	155	BOTH	BOTH	BOTH	BOTH
5:00 PM	919	189	BOTH	BOTH	BOTH	BOTH
6:00 PM	674	199	BOTH	BOTH	BOTH	BOTH
7:00 PM	493	112	BOTH	MINOR	MAJOR	MINOR
8:00 PM	330	78		MINOR		MINOR
9:00 PM	222	72		MINOR		MINOR
10:00 PM	161	38				
11:00 PM	71	27				
TOTAL	11514	1872				

CRITERIA**	MAJOR ST	WITH 70% REDUCTION OPTION		STANDARD		
		MINOR ST				
			350	525	400	600
			105	53	120	60
NO. OF HOURS MET			9	12	4	10

\*Note: Standard 1 is SATISFIED if either CONDITION A or B is satisfied for any eight hours. STANDARD 2 is SATISFIED if CONDITION A and B are satisfied. WARRANT 1 is SATISFIED if either STANDARD 1 or STANDARD 2 is satisfied.

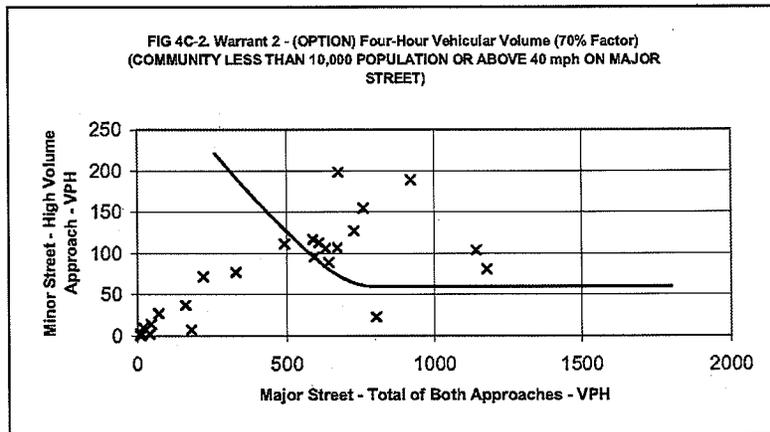
\*\*Note: Criteria for minimum volumes for WARRANT 1 are based on the figures from TABLE 4C-1, Page 4C-5 in section C of the MUTCD 2003 edition.

**A&R ENGINEERING, INC.**

**WARRANT 2. FOUR-HOUR VEHICULAR VOLUME**

WARRANT 2\* SATISFIED

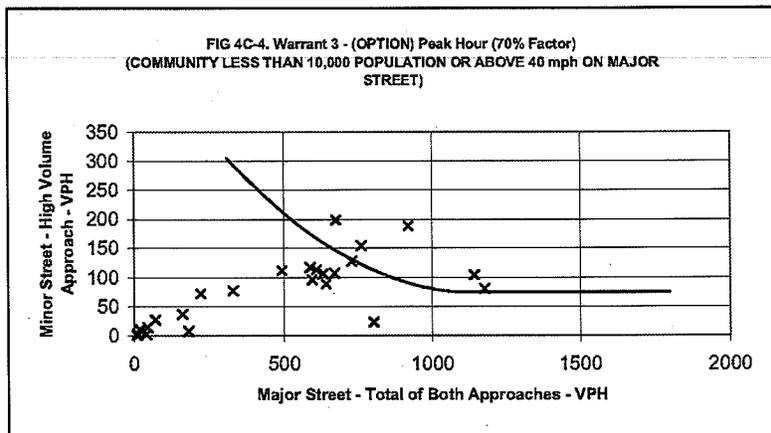
12 HOURS



**WARRANT 3. PEAK HOUR**

WARRANT 3\* SATISFIED

5 HOURS



\*Note: Curves for minimum volumes are based on the curves from FIGURES 4C-1 & 4C-2, Page 4C-7 for WARRANT 2, and FIGURES 4C-3 & 4C-4, Page 4C-9 in section C of the MUTCD 2003 edition for WARRANT 3.

**SR 372 at Providence Road/New Providence Road:**

TABLE 1 2027 INTERSECTION OPERATIONS - NO SIGNAL				
Intersection	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (Sec)	LOS	Delay (Sec)
SR 372 at Providence Road/New Providence Road				
- Eastbound Approach	F	9999	F	9999
- Westbound Approach	F	9999	F	9999
- Northbound Left	A	0.9	A	0.8
- Southbound Left	B	12.3	A	4.6

TABLE 2 2027 INTERSECTION OPERATIONS - WITH SIGNAL				
Intersection	A.M. Peak Hour		P.M. Peak Hour	
	LOS	v/c	LOS	v/c
SR 372 at Providence Road/New Providence Road	B (16.6)	0.74	E (64.8)	0.95

Synchro sheets for the 2027 analysis for the intersection of SR 372 at Providence Road/New Providence Road are attached in the Appendix. The capacity analysis for both intersections assumed that the existing volumes will increase by 2.4% per year to estimate the 2027 future volumes. The 2.4% growth factor was calculated based on GDOT volumes from 1998 to 2002 for three roadways in the vicinity of the two study intersections.

**APPENDIX**

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**SR 372 at Providence Road/New Providence Road**

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HCM Unsignalized Intersection Capacity Analysis  
1: New Providence Road & SR 372

2027 AM - No Signal  
5/31/2006

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	40	131	27	39	101	101	22	229	202	623	797	133
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	43	142	29	42	110	110	24	249	220	677	866	145
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	2864	2590	939	2800	2627	359	866			249		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2864	2590	939	2800	2627	359	866			249		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
iF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	0	91	0	0	84	97			49		
cM capacity (veh/h)	0	12	320	0	11	686	777			1317		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>								
Volume Total	215	262	492	1688								
Volume Left	43	42	24	677								
Volume Right	29	110	220	145								
cSH	0	0	777	1317								
Volume to Capacity	Err	Err	0.03	0.51								
Queue Length 95th (ft)	Err	Err	2	76								
Control Delay (s)	Err	Err	0.9	12.3								
Lane LOS	F	F	A	B								
Approach Delay (s)	Err	Err	0.9	12.3								
Approach LOS	F	F										

**Intersection Summary**

Average Delay		Err		
Intersection Capacity Utilization		137.2%	ICU Level of Service	H
Analysis Period (min)		15		

HCM Unsignalized Intersection Capacity Analysis  
1: New Providence Road & SR 372

2027 PM - No Signal  
5/31/2006

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	106	113	35	133	187	617	27	917	72	115	376	42
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	115	123	38	145	203	671	29	997	78	125	409	46
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	2548	1737	432	1876	1753	1036	409			997		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2548	1737	432	1876	1753	1036	409			997		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	0	94	0	0	0	97			82		
cM capacity (veh/h)	0	70	624	0	68	281	1150			694		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>								
Volume Total	276	1018	1104	579								
Volume Left	115	145	29	125								
Volume Right	38	671	78	46								
cSH	0	0	1150	694								
Volume to Capacity	Err	Err	0.03	0.18								
Queue Length 95th (ft)	Err	Err	2	16								
Control Delay (s)	Err	Err	0.8	4.6								
Lane LOS	F	F	A	A								
Approach Delay (s)	Err	Err	0.8	4.6								
Approach LOS	F	F										
<b>Intersection Summary</b>												
Average Delay			Err									
Intersection Capacity Utilization			147.7%	ICU Level of Service	H							
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis  
1: New Providence Road & SR 372

2027 AM - With Signal  
5/31/2006

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↗	↖	↗	↗	↖	↗	↖
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Frt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1815		1770	1863	1583	1770	1863	1583	1770	1823	
Frt Permitted	0.59	1.00		0.41	1.00	1.00	0.21	1.00	1.00	0.60	1.00	
Satd. Flow (perm)	1091	1815		759	1863	1583	382	1863	1583	1124	1823	
Volume (vph)	40	131	27	39	101	101	22	229	202	623	797	133
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	142	29	42	110	110	24	249	220	677	866	145
RTOR Reduction (vph)	0	6	0	0	0	94	0	0	48	0	5	0
Lane Group Flow (vph)	43	165	0	42	110	17	24	249	172	677	1006	0
Turn Type	Perm			Perm		Perm	Perm		Perm	Perm		
Protected Phases		8			4			6				2
Permitted Phases	8			4		4	6		6	2		
Actuated Green, G (s)	18.0	18.0		18.0	18.0	18.0	94.0	94.0	94.0	94.0	94.0	
Effective Green, g (s)	18.0	18.0		18.0	18.0	18.0	94.0	94.0	94.0	94.0	94.0	
Actuated g/C Ratio	0.15	0.15		0.15	0.15	0.15	0.78	0.78	0.78	0.78	0.78	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	164	272		114	279	237	299	1459	1240	880	1428	
v/s Ratio Prot		c0.09			0.06			0.13			0.55	
v/s Ratio Perm	0.04			0.06		0.01	0.06		0.11	c0.60		
v/c Ratio	0.26	0.61		0.37	0.39	0.07	0.08	0.17	0.14	0.77	0.70	
Uniform Delay, d1	45.1	47.7		45.9	46.1	43.8	3.0	3.3	3.2	7.1	6.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.9	9.7		2.0	0.9	0.1	0.5	0.3	0.2	6.4	2.9	
Delay (s)	49.0	57.4		47.9	47.0	43.9	3.5	3.5	3.4	13.5	9.2	
Level of Service	D	E		D	D	D	A	A	A	B	A	
Approach Delay (s)		55.7			45.9			3.5			10.9	
Approach LOS		E			D			A			B	

Intersection Summary

HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

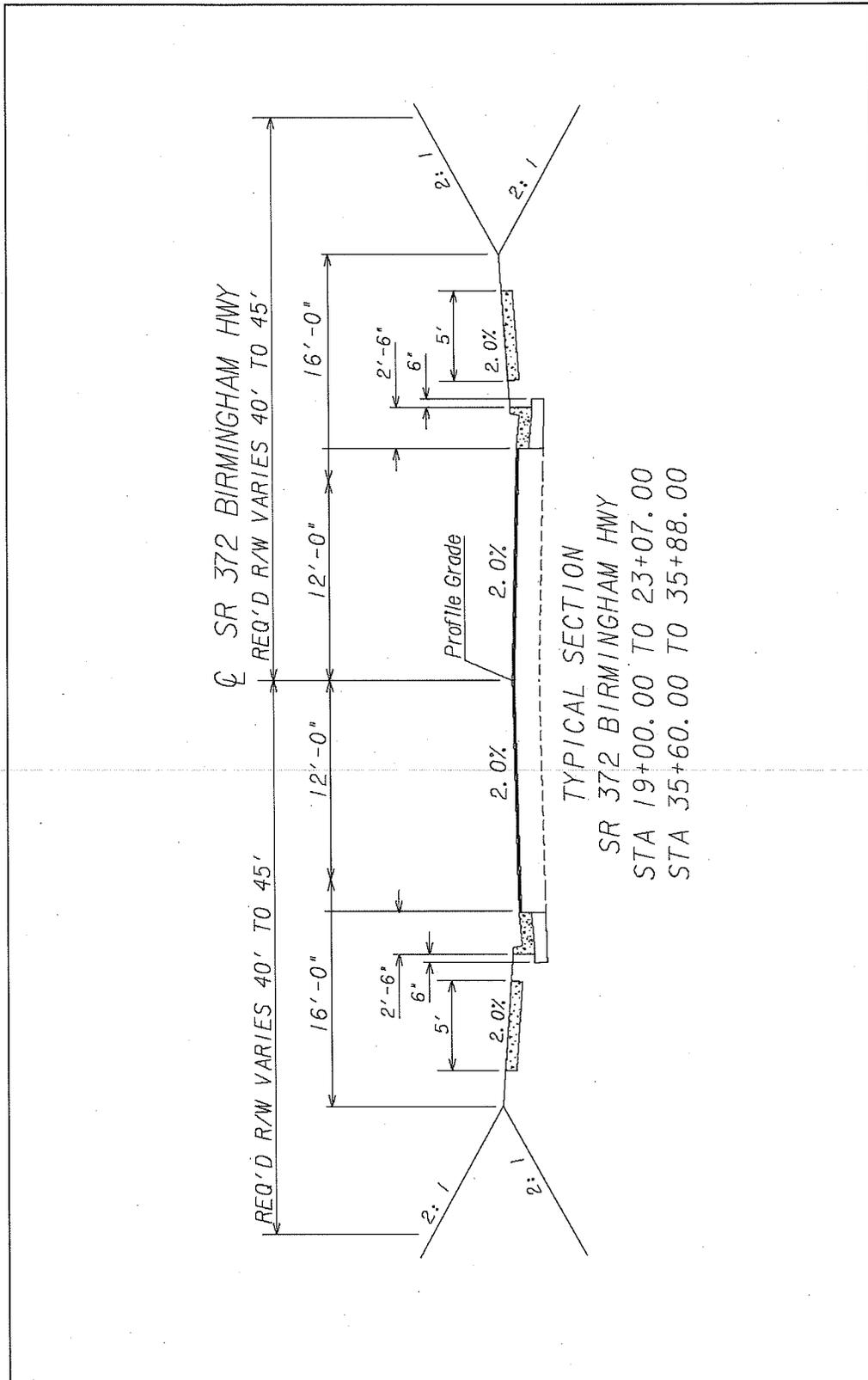
HCM Signalized Intersection Capacity Analysis  
1: New Providence Road & SR 372

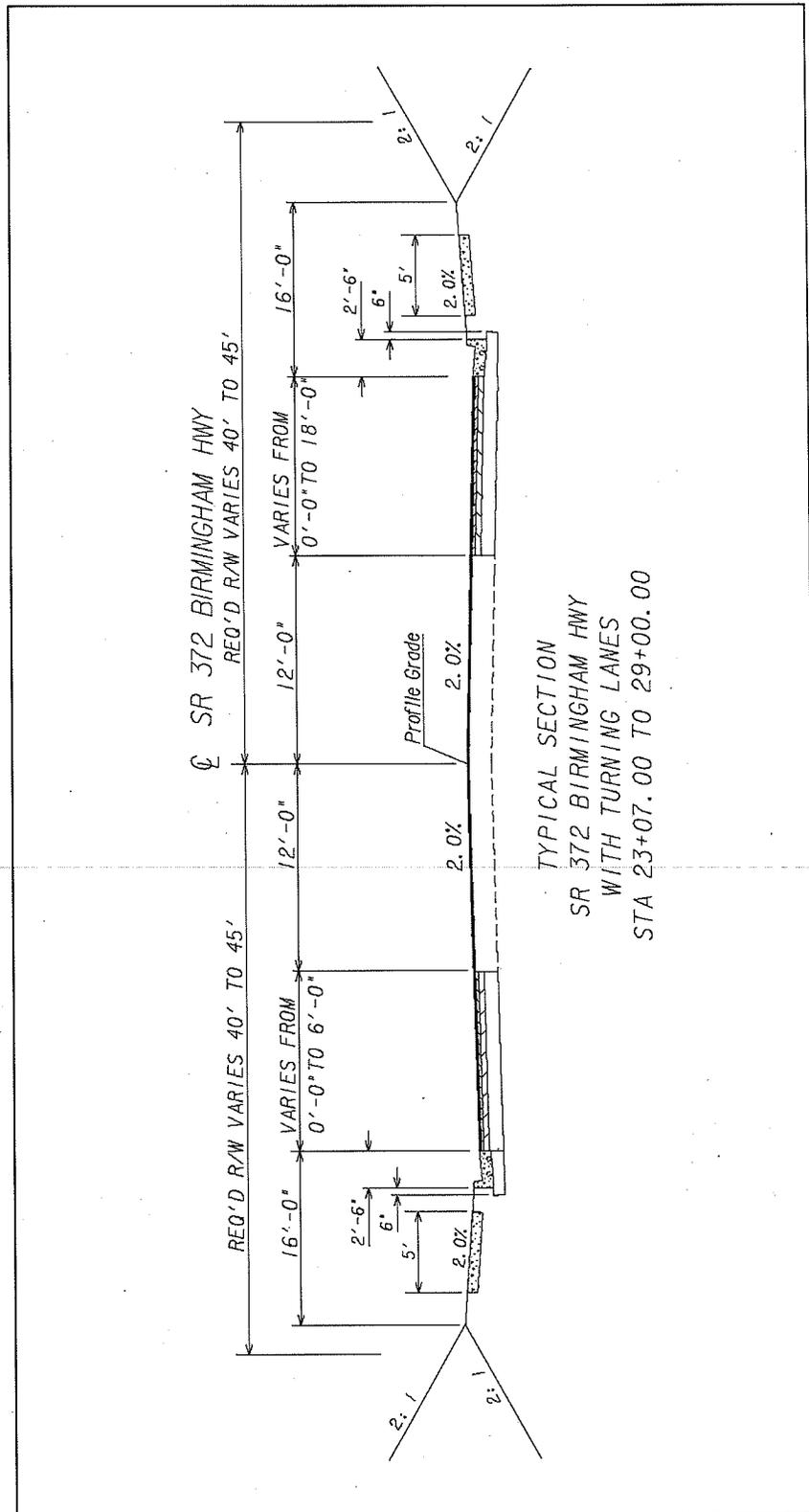
2027 PM - With Signal  
5/31/2006

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖	↖	↗	↖	↖	↗	↖
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Fl <sub>t</sub> Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1797		1770	1863	1583	1770	1863	1583	1770	1834	
Fl <sub>t</sub> Permitted	0.49	1.00		0.56	1.00	1.00	0.44	1.00	1.00	0.13	1.00	
Satd. Flow (perm)	911	1797		1043	1863	1583	821	1863	1583	241	1834	
Volume (vph)	106	113	35	133	187	617	27	917	72	115	376	42
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	115	123	38	145	203	671	29	997	78	125	409	46
RTOR Reduction (vph)	0	10	0	0	0	111	0	0	26	0	3	0
Lane Group Flow (vph)	115	151	0	145	203	560	29	997	52	125	452	0
Turn Type	Perm			Perm		Perm	Perm		Perm	Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4		4	6		6	2		
Actuated Green, G (s)	32.0	32.0		32.0	32.0	32.0	80.0	80.0	80.0	80.0	80.0	
Effective Green, g (s)	32.0	32.0		32.0	32.0	32.0	80.0	80.0	80.0	80.0	80.0	
Actuated g/C Ratio	0.27	0.27		0.27	0.27	0.27	0.67	0.67	0.67	0.67	0.67	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	243	479		278	497	422	547	1242	1055	161	1223	
v/s Ratio Prot		0.08			0.11			0.54			0.25	
v/s Ratio Perm	0.13			0.14		0.35	0.04		0.03	0.52		
v/c Ratio	0.47	0.32		0.52	0.41	1.33	0.05	0.80	0.05	0.78	0.37	
Uniform Delay, d1	36.9	35.2		37.5	36.2	44.0	6.9	14.3	6.9	13.8	8.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	6.5	1.7		1.8	0.5	162.3	0.2	5.6	0.1	29.9	0.9	
Delay (s)	43.4	37.0		39.2	36.8	206.3	7.1	19.9	7.0	43.7	9.7	
Level of Service	D	D		D	D	F	A	B	A	D	A	
Approach Delay (s)		39.6			148.8			18.6			17.0	
Approach LOS		D			F			B			B	

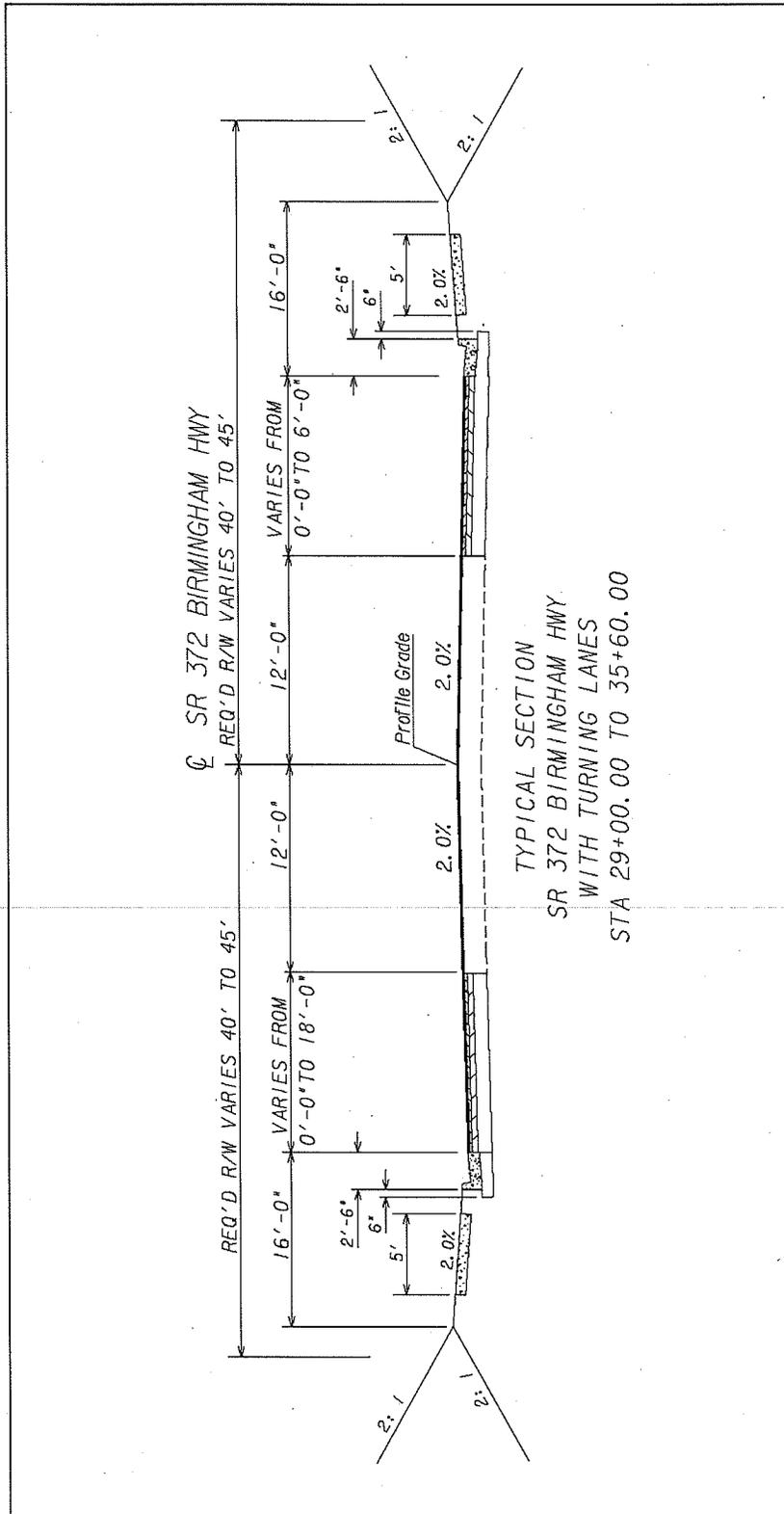
Intersection Summary

HCM Average Control Delay	64.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

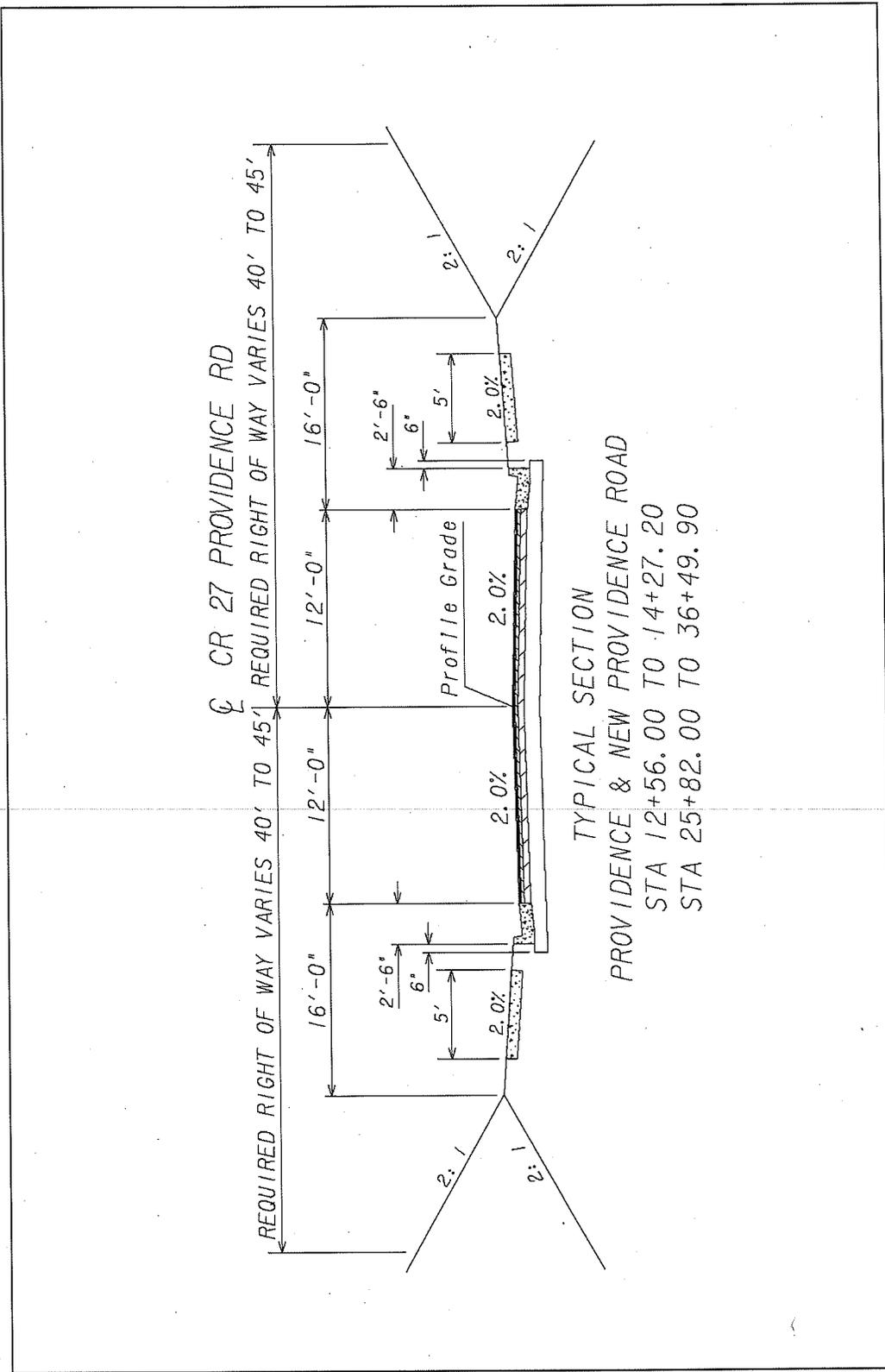




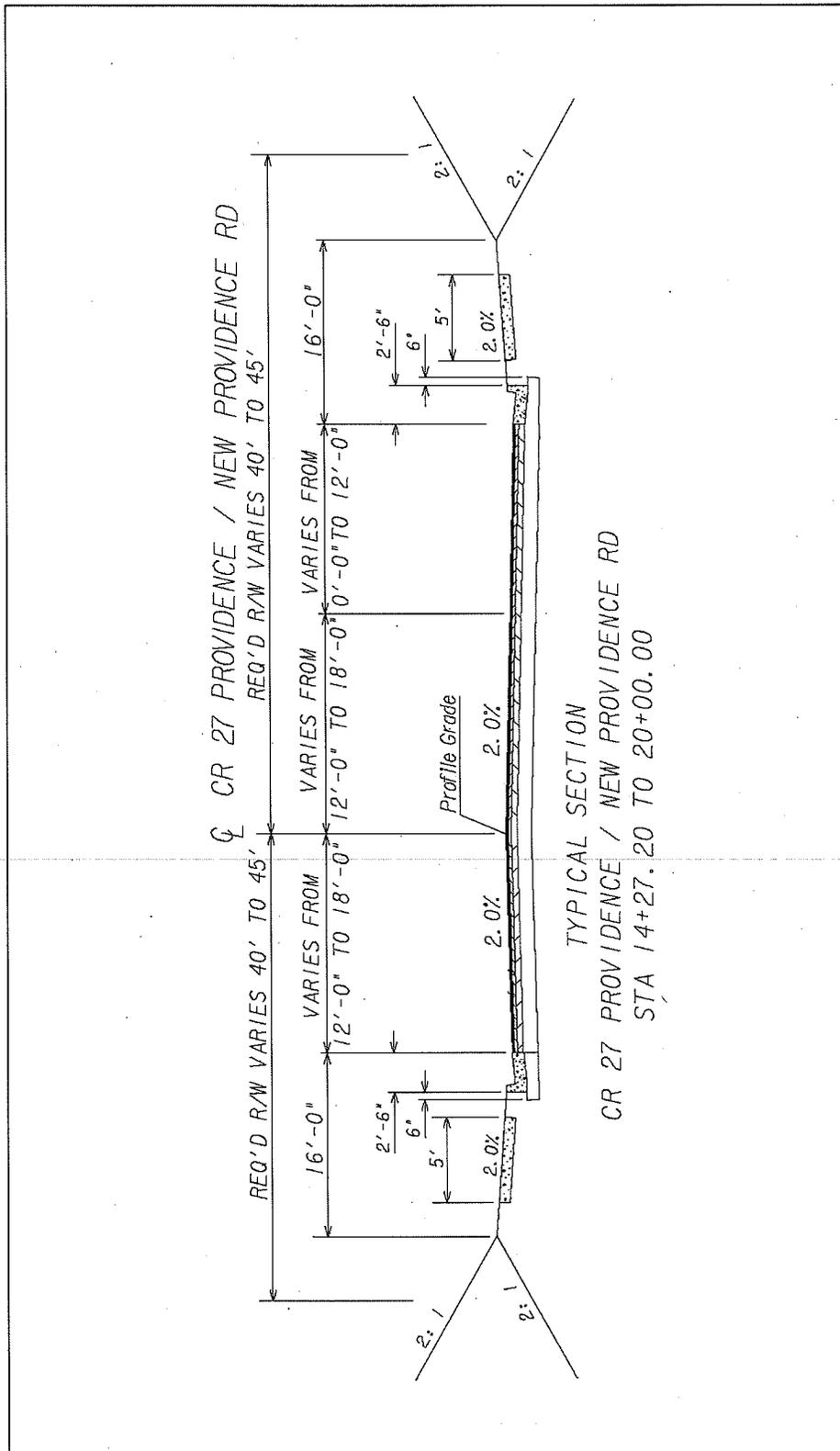
Typical Sections:



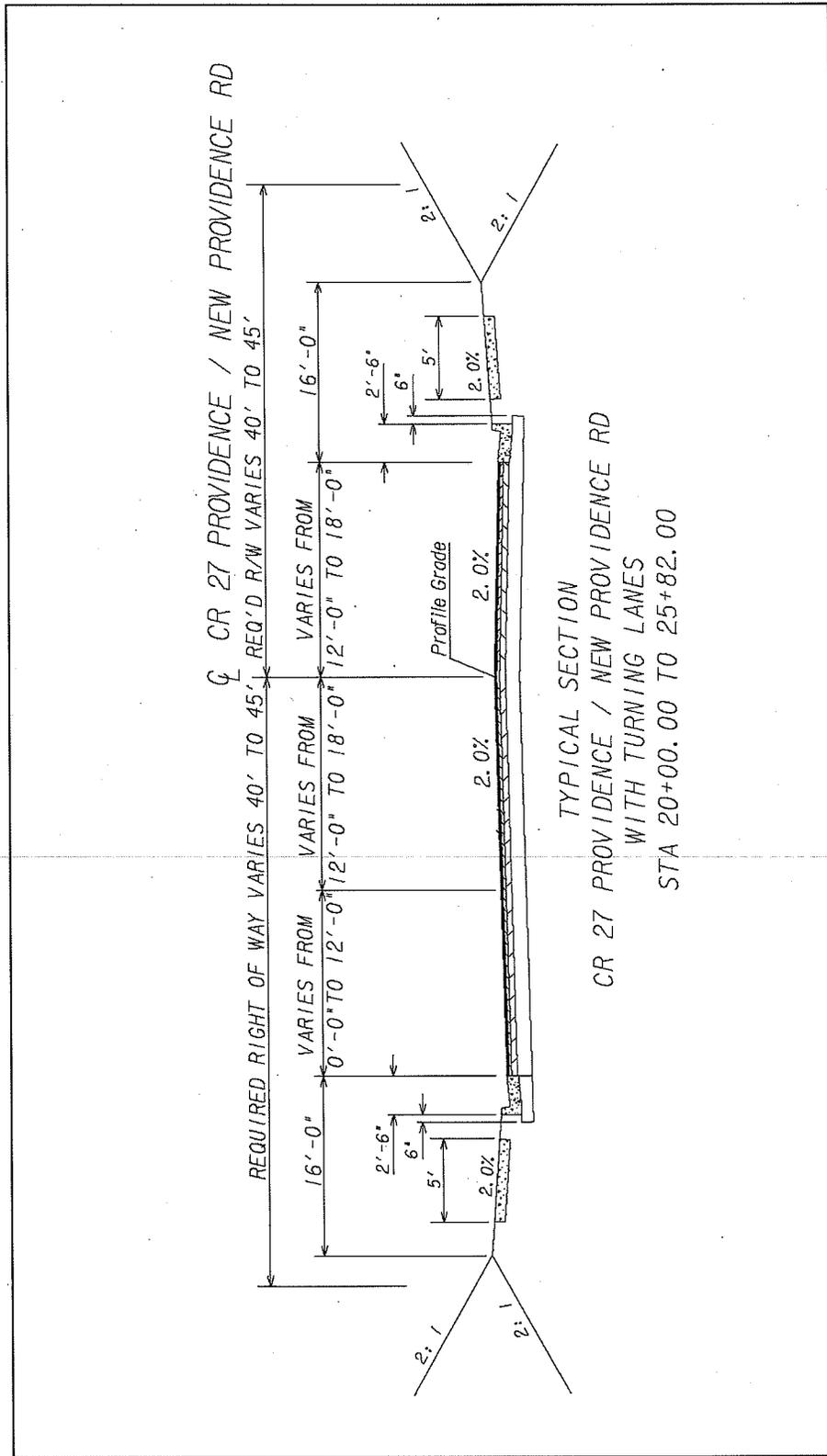
Typical Sections:



Typical Sections:



Typical Sections:





**CONCEPT MEETING MINUTES**

**January 25, 2006**

**Concept Team Meeting for Intersection Improvements at SR 372 Birmingham Highway  
and CR 27 Providence / New Providence Road**

**Project No.: HPP-0005-00(448), Fulton County**

PI No.: 0005448

**LOCATION:** GDOT Urban Design Office

**Attendees:** Albert Shelby – GDOT Urban Design  
Margaret Reitz – GDOT Urban Design  
Joseph Ford – GDOT Urban Design  
Antonio Valenzuela – Fulton County  
Mark Holmberg – Heath & Lineback Engineers  
Chris Edmondson – Heath & Lineback Engineers

Albert Shelby provided project milestones:

Concept Approval	June, 2006
Right-of-Way Authorization	April, 2007
Final Plan Approval	January 2008
Construction Letting	June, 2008

Albert Shelby asked about sight distance at the intersection and specifically about sight distance on the SR372 south leg of the intersection. Chris Edmondson explained the H&L has extended the project to address this area.

Albert Shelby asked about construction staging. Chris Edmondson explained H&L's staging concept and that preliminary plans will include complete construction staging plans.

H&L will turn on the construction limits on the concept plan.

H&L will extend the project to the east along Providence Road. Sidewalk will be extended to the west side of a side road intersection, curb and gutter will be extended in front of the church, and two driveways will be provided for the church property.

Albert Shelby asked about adding a cul-d-sac on Old CR 27 to allow for emergency vehicle turn around movements. Chris Edmondson replied that Heath & Lineback will design a culvert that will avoid impacting existing utility boxes.

Antonio Valenzuela asked if H&L would investigate moving the tie-in with Old CR 27 to provide for a larger turning radius and greater skew angle. Chris Edmondson replied that relocating the tie-in to the west on CR 27 may provide a adequate alternate.

Albert Shelby asked what the extent of the utility impacts was. Chris Edmondson replied that there were typical utility impacts along SR 372 and CR 27 and that there were multiple utility boxes located on the north side of CR 27 and H&L would take care to avoid impacting the boxes.

Antonio Valenzuela asked if H&L anticipated any drainage problems that might affect surrounding developments. Chris Edmondson replied that H&L did not anticipate any drainage problems.