

# DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

---

## OFFICE OF DESIGN POLICY & SUPPORT INTERDEPARTMENTAL CORRESPONDENCE

**FILE** P.I. # 0012629 **OFFICE** Design Policy & Support  
Fulton County  
GDOT District 7 - Metro Atlanta **DATE** 10/24/2014  
ITS: SR 9 from Atlanta City Limits to  
CS 7000/Abernathy Road

**FROM**  for Brent Story, State Design Policy Engineer

**TO** SEE DISTRIBUTION

**SUBJECT** APPROVED CONCEPT REPORT

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

Attachment

**DISTRIBUTION:**

Glenn Bowman, Director of Engineering  
Joe Carpenter, Director of P3/Program Delivery  
Genetha Rice-Singleton, Assistant Director of P3/Program Delivery  
Bobby Hilliard, Program Control Administrator  
Albert Shelby, State Program Delivery Engineer  
Cindy VanDyke, State Transportation Planning Administrator  
Hiral Patel, State Environmental Administrator  
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  
Katelyn Digioia, State Pedestrian and Bicycle Coordinator  
Rachel Brown, District Engineer  
Scott Lee, District Preconstruction Engineer  
Patrick Allen, District Utilities Engineer  
Xavier James, Project Manager  
BOARD MEMBER - 6th and 11th Congressional District

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

Project Type:	ITS (Reconstruction/ Rehabilitation)	P.I. Number:	0012629
GDOT District:	District 7	County:	Fulton
Federal Route Number:	N/A	State Route Number:	9
Project Number:			

**SR 9 from Atlanta City Limits to CS 7000/Abernathy Road**

**Submitted for approval:**

<u><i>Kaitlin Potnick</i></u> Kaitlin Potnick, EIT, Atkins	<u>08/29/2014</u> DATE
<u><i>Albert Shelby</i></u> State Program Delivery Engineer	<u>9/10/14</u> DATE
<u><i>Xavier James</i></u> GDOT Project Manager	<u>9/4/2014</u> DATE

**Recommendation for approval:**

* <u><i>HIRAL PATEL</i></u> State Environmental Administrator	<u>9/15/2014</u> DATE
* <u><i>KATHY ZAHUL</i></u> State Traffic Engineer	<u>10/2/2014</u> DATE
* <u><i>CYNTHIA L VANDYKE</i></u> State Transportation Planning Administrator	<u>9/17/2014</u> 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).

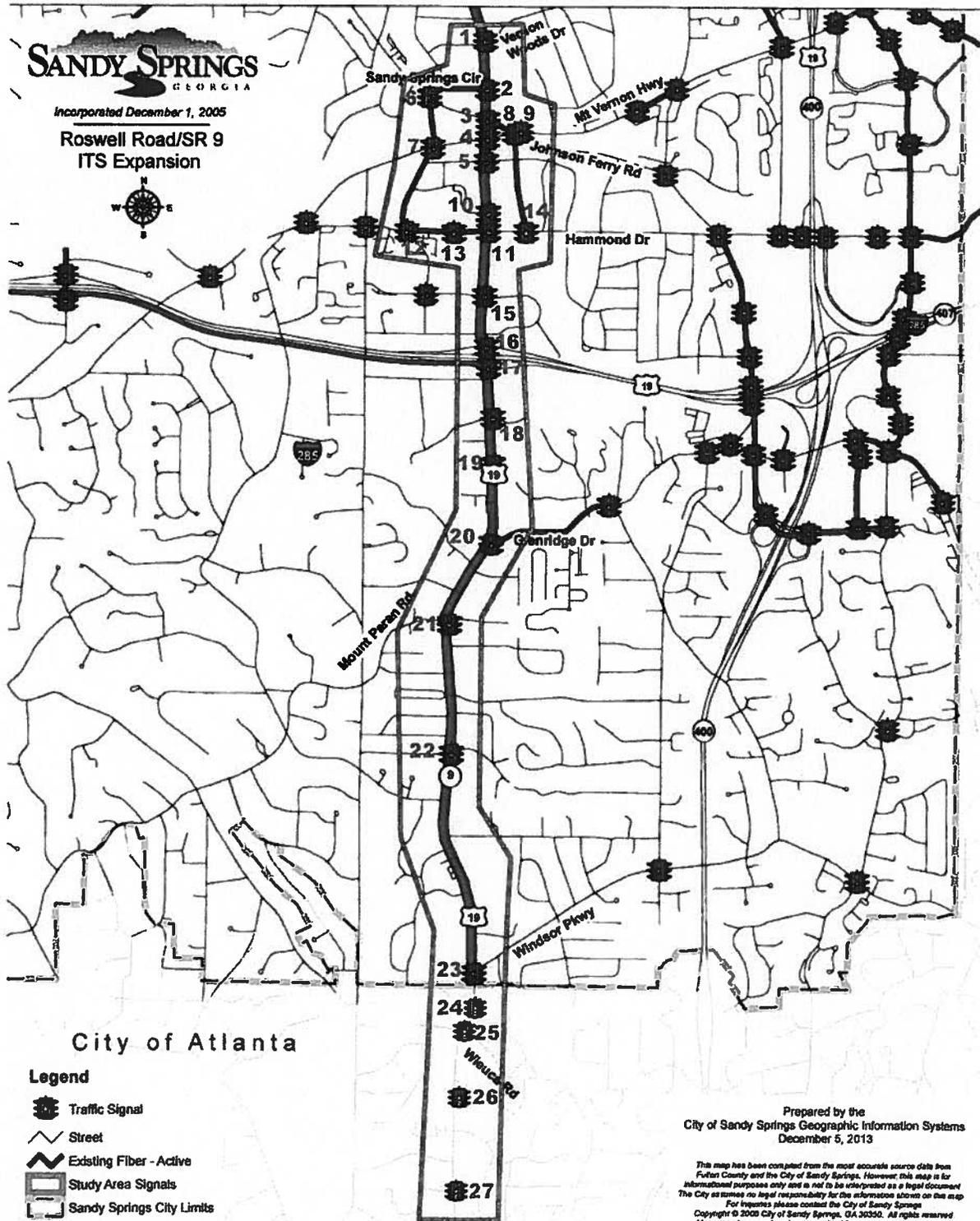
**Approval:**

Concur: <u><i>Alan Borman</i></u> GDOT Director of Engineering	<u>10/15/14</u> DATE
Approve: <u><i>Bill R. Williams</i></u> GDOT Chief Engineer	<u>10/20/14</u> DATE

\* RECOMMENDATION ON FILE / *[Signature]*

# PROJECT LOCATION

## SR 9 (Map Not to Scale)



**SR 9 Map Intersection Legend:**

#	Primary Route	Secondary Route
1	SR 9 / Roswell Rd	Vernon Woods Dr
2	SR 9 / Roswell Rd	Sandy Springs Circle
3	SR 9 / Roswell Rd	Johnson Ferry Rd
4	SR 9 / Roswell Rd	Mt Vernon Hwy
5	SR 9 / Roswell Rd	Hilderbrand Dr
6	Johnson Ferry Rd	Sandy Springs Cir
7	Mt Vernon Hwy	Sandy Springs Cir
8	Mt Vernon Hwy	Boylston Dr
9	Mt Vernon Hwy	Johnson Ferry Rd
10	SR 9 / Roswell Rd	Sandy Springs Pl
11	SR 9 / Roswell Rd	Hammond Dr
12	Hammond Dr	Sandy Springs Cir
13	Hammond Dr	City Walk / The Exchange at Hammond
14	Hammond Dr	Boylston Dr
15	SR 9 / Roswell Rd	Cliftwood Dr / Carpenter Dr
16	SR 9 / Roswell Rd	I-285 WB
17	SR 9 / Roswell Rd	I-285 EB
18	SR 9 / Roswell Rd	Lake Placid Dr
19	SR 9 / Roswell Rd	The Prado Shopping Center
20	SR 9 / Roswell Rd	Glenridge Dr
21	SR 9 / Roswell Rd	Mt Paran Rd / Beachland Dr
22	SR 9 / Roswell Rd	Belle Isle Rd
23	SR 9 / Roswell Rd	Windsor Pkwy
24	SR 9 / Roswell Rd	W Wieuca Rd
25	SR 9 / Roswell Rd	Wieuca Rd
26	SR 9 / Roswell Rd	Chastain Square Shopping Center
27	SR 9 / Roswell Rd	Chastain Dr

## PLANNING & BACKGROUND DATA

### Project Justification Statement:

This project will install intelligent transportation system (ITS) elements along SR 9 from Chastain Drive within the City of Atlanta to Vernon Woods Drive in Sandy Springs. SR 9, as a multi-lane facility, not only links the cities of Sandy Springs, Roswell, Alpharetta, and Milton, it also provides access from Forsyth and north Fulton County to the Perimeter and downtown Atlanta. State Route 9 is also the major arterial that runs parallel to GA 400; hence, when congestion occurs on GA 400, SR 9 becomes the primary alternate route. Additionally, there is a demand for north-south connectivity across the Chattahoochee River, and SR 9 provides such access. With the growth in population over the years and increasing traffic demand, there is a need for improving the operations and throughput on SR 9. The goal of this project is to provide for optimized signal operations along SR 9 to minimize daily vehicular delay and congestion.

### Existing conditions:

- SR 9/Roswell Rd at Vernon Woods Dr, Sandy Springs Cir, Mt Vernon Hwy, Hilderbrand Dr, Sandy Springs Pl, Hammond Dr, Cliftwood Dr/Carpenter Dr, I-285 WB, I-285 EB, Lake Placid Dr, The Prado Shopping Center, Glenridge Dr, Windsor Pkwy, and W Wieuca Rd is a four-lane roadway with 11-foot lanes and left turn lanes.
- SR 9/Roswell Rd at Mt Paran Rd/Beachland Dr is a four-lane roadway with 11-foot lanes, left turn lanes, and a SB right turn lane onto WB Mt Paran Rd.
- SR 9/Roswell Rd at Belle Isle Rd is a four-lane roadway with 11-foot lanes, left turn lanes, and a NB right turn lane onto EB Belle Isle Rd.
- SR 9/Roswell Rd at Wieuca Rd is a four-lane roadway with 11-foot lanes, left turn lanes, and a NB channelized right turn onto EB Wieuca Rd.
- SR 9/Roswell Rd at Chastain Square Shopping Center is a four-lane roadway with 11-foot lanes, left turn lanes, and a NB right turn lane into EB Chastain Square Shopping Center.
- SR 9/Roswell Rd at Chastain Dr is a four-lane roadway with 11-foot lanes, left turn lane, and a SB right turn lane onto WB Chastain Dr.
- Johnson Ferry Rd at Sandy Springs Cir is a two-lane roadway with left turn lanes and an EB right turn lane onto SB Sandy Springs Circle.
- Mt Vernon Hwy at Sandy Springs Cir is a two-lane roadway with left turn lanes.
- Mt Vernon Hwy at Boylston Dr is a three-lane roadway with only a left turn lane in the WB direction.
- Mt Vernon Hwy at Johnson Ferry Rd is a two-lane roadway.
- Hammond Dr at Sandy Spring Cir is a four-lane roadway with left turn lanes.
- Hammond Dr at City Walk/The Exchange at Hammond is a four-lane roadway with left turn lanes and a WB right turn lane onto NB City Walk entrance.
- Hammond Dr at Boylston Dr is a two-lane roadway with left turn lanes.

### Other projects in the area:

- 0009981 – CR 262/Hammond Dr FM DeKalb County Line to CR 1318/Mt Vernon Hwy – This was a project widening; however, the City of Sandy Springs is rescoping the project. The scope change is anticipated to be significant. The description will be updated when the Department is provided with the description.
- 0010385 – CS 243/Sandy Springs FM CS 262/Hammond Dr to SR 9 – PH II - LCI
- 0013194 – SR 9/US 19 @ CS 351/Glenridge Drive – The purpose of the project is to realign Glenridge Drive so that it will line up with a nearby condominium complex's driveway. This will change the intersections from two closely spaced 3-legged intersections into one four-legged intersection and provide a more appropriate intersection angle as well as adequate left turn lanes in both the NB and SB directions.

- 751420 – Johnson Ferry FM Ferry Dr to Hunting Creek Rd; Inc Roundabouts – The purpose of this project is to improve traffic congestion (including vehicular and pedestrian operations) within the corridor along Johnson Ferry Rd and Glenridge Dr within the City of Sandy Springs. Total length of the corridor improvements is 2.19 miles. Two roundabouts are proposed.
- M004250 – SR 9 from I-285 to CR 1426/Abernathy Road
- M004269 – SR 9 from SR 120 to CS 9049/Church St
- M004913 – SR 9 from CS 9049/Church St to Forsyth County Line - Maintenance

**Description of the proposed project:** The project begins on SR 9/Roswell Road at Chastain Drive within the City of Atlanta limits and continues north to the intersection of SR 9/Roswell Road and Vernon Woods Drive in Sandy Springs. Adjacent signals on Hammond Drive, Johnson Ferry Road, and Mt. Vernon Highway are also included. The goal of the project is to provide for optimized signal operations along SR 9/Roswell Road to minimize daily vehicular delay and congestion. The scope of work includes adding the adaptive signal management system Split Cycle Offset Optimization Technique (SCOOT), enhanced vehicle counting stations and additional system vehicle detection as required for 27 intersections. Intersection upgrades will be limited to components necessary to operate the SCOOT system. It is anticipated that all work will be constructed within the state or city Right of Way.

**MPO:** Atlanta TMA

**TIP #:** FN-282

**TIA Regional Commission:** Not a TIA Project

**Congressional District(s):** 6 and 11

**Federal Oversight:**  Exempt  State Funded  Other

**Projected Traffic:** N/A

Current Year (20WW): N/A Open Year (20XX): N/A Design Year (20YY): N/A

Traffic Projections Performed by: N/A

**Functional Classification (Mainline):** Urban Principal Arterial

**Complete Streets - Bicycle, Pedestrian, and/or Transit Warrants:**

Warrants met:  None  Bicycle  Pedestrian  Transit

## **DESIGN AND STRUCTURAL**

**Description of Proposed Project:**

**Major Structures:** N/A

**Mainline Design Features:**

**SR 9 – Urban Principal Arterial**

Feature	Existing	Standard*	Proposed
<b>Typical Section</b>			
- Number of Lanes	4	N/A	N/A
- Lane Width(s)	11 ft	N/A	N/A
- Median Width & Type	N/A	N/A	N/A
- Outside Shoulder or Border Area Width	N/A	N/A	N/A
- Outside Shoulder Slope	N/A	N/A	N/A
- Inside Shoulder Width	N/A	N/A	N/A
- Sidewalks	Yes	N/A	N/A
- Auxiliary Lanes	N/A	N/A	N/A
- Bike Lanes	N/A	N/A	N/A
Posted Speed	35 mph		N/A
Design Speed	N/A	N/A	N/A
Min Horizontal Curve Radius	N/A	N/A	N/A
Maximum Superelevation Rate	N/A	N/A	N/A
Maximum Grade	N/A	N/A	N/A
Access Control	N/A	N/A	N/A
Design Vehicle	N/A	N/A	N/A

**Major Interchanges/Intersections:**

- SR 9/Roswell Rd @ Vernon Woods Drive
- SR 9/Roswell Rd @ Sandy Springs Circle
- SR 9/Roswell Rd @ Johnson Ferry Road
- SR 9/Roswell Rd @ Mt Vernon Highway
- SR 9/Roswell Rd @ Hilderbrand Drive
- SR 9/Roswell Rd @ Sandy Springs Place
- SR 9/Roswell Rd @ Hammond Drive
- SR 9/Roswell Rd @ Cliftwood Drive/Carpenter Drive
- SR 9/Roswell Rd @ I-285 WB
- SR 9/Roswell Rd @ I-285 EB
- SR 9/Roswell Rd @ Lake Placid Drive
- SR 9/Roswell Rd @ The Prado Shopping Center
- SR 9/Roswell Rd @ Glenridge Drive
- SR 9/Roswell Rd @ Mt Paran Road/Beachland Drive
- SR 9/Roswell Rd @ Belle Isle Road
- SR 9/Roswell Rd @ Windsor Parkway
- SR 9/Roswell Rd @ W Wieuca Road
- SR 9/Roswell Rd @ Wieuca Road
- SR 9/Roswell Rd @ Chastain Square Shopping Center
- SR 9/Roswell Rd @ Chastain Drive

Lighting required:  No  Yes

Transportation Management Plan [TMP] Required:  No  Yes  
 If Yes: Project classified as:  Non-Significant  Significant  
 TMP Components Anticipated:  TTC  TO  PI

Will Context Sensitive Solutions procedures be utilized?  No  Yes

**Design Exceptions to FHWA/AASHTO controlling criteria anticipated: None**

**Design Variances to GDOT Standard Criteria anticipated: None**

**UTILITY AND PROPERTY**

**Temporary State Route Needed:**  No  Yes  Undetermined

**Railroad Involvement: None**

**Utility Involvements:** Utility companies are as follows:

- AT&T - Communications
- Atlanta Gas Light Resources - Gas
- City of Atlanta Bureau of Watershed Management - Water
- Comcast, Inc. - Communications
- Fulton County Public Works
- Georgia Power Company – Electric (Distribution)
- Georgia Power Transmission - Electric
- Sawnee EMC - Electric

**SUE Required:**  No  Yes

**Public Interest Determination Policy and Procedure recommended?**  No  Yes

**Right-of-Way:** Existing width: \_ft Proposed width: \_ft  
 Required Right-of-Way anticipated:  No  Yes  Undetermined  
 Easements anticipated:  None  Temporary  Permanent  Utility  Other

Anticipated number of impacted parcels:	N/A
Displacements anticipated:	Total: N/A
	Businesses: N/A
	Residences: N/A
	Other: N/A

**ENVIRONMENTAL AND PERMITS**

**Anticipated Environmental Document:**

GEPA:  NEPA:  CE  PCE

**MS4 Compliance – Is the project located in an MS4 area?**  No  Yes

**Environmental Permits, Variances, Commitments, and Coordination anticipated: None anticipated.**

**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  
 Is a Carbon Monoxide hotspot analysis required?  No  Yes

**NEPA/GEPA Comments & Information:** Based on the nature of the project, impacts to history, archaeology, ecology, air and noise are expected to be minimal to none.

## COORDINATION, ACTIVITIES, RESPONSIBILITIES, AND COSTS

Project Meetings: N/A

Project Activity	Party Responsible for Performing Task(s)
Concept Development	Atkins
Design	Atkins
Right-of-Way Acquisition	N/A
Utility Relocation	N/A
Letting to Contract	Sandy Springs
Construction Supervision	Sandy Springs
Providing Material Pits	N/A
Providing Detours	N/A
Environmental Studies, Documents, & Permits	Atkins
Environmental Mitigation	N/A
Construction Inspection & Materials Testing	GDOT/Sandy Springs

Other coordination to date: Concept Team Meeting held on 8/29/2014

### Project Cost Estimate and Funding Responsibilities:

	Breakdown of PE	ROW	Reimbursable Utility	CST*	Environmental Mitigation	Total Cost
Funded By	80% Federal 20% Sandy Springs			80% Federal 20% Sandy Springs		
\$ Amount	\$150,000.00	N/A	N/A	\$1,841,202.56		\$1,991,202.56
Date of Estimate	2/1/2013	N/A	N/A	8/26/2014		

\*CST Cost includes: Construction, Engineering and Inspection, and Risk Contingency for Low Risk Projects. Maximum federal participation is \$1,200,000.

## ALTERNATIVES DISCUSSION

No-Build Alternative:			
Estimated Property Impacts:	N/A	Estimated Total Cost:	N/A
Estimated ROW Cost:	N/A	Estimated CST Time:	N/A
Rationale: Does not fulfill the objectives of the Project Justification Statement.			

Comments/Additional Information: None

## LIST OF ATTACHMENTS/SUPPORTING DATA

1. Revisions to Programmed Cost
2. Construction cost estimate
3. Concept Team Meeting Minutes
4. Systems Engineering Report
5. PFA

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

**FILE** P.I. No.  **OFFICE**

**PROJECT DESCRIPTION**

**DATE**

**From:**

**To:** Lisa L. Myers, State Project Review Engineer

**Subject:** REVISIONS TO PROGRAMMED COSTS

**PROJECT MANAGER**

**MGMT LET DATE**

**MGMT ROW DATE**

**PROGRAMMED COSTS (TPro W/OUT INFLATION)**

**LAST ESTIMATE UPDATE**

**CONSTRUCTION** \$

**DATE**

**RIGHT OF WAY** \$

**DATE**

**UTILITIES** \$

**DATE**

**REVISED COST ESTIMATES**

**CONSTRUCTION\*** \$

**RIGHT OF WAY** \$

**UTILITIES** \$

\*Cost Contains  % Contingency

**REASONS FOR COST INCREASE AND CONTINGENCY JUSTIFICATION:**

Project Type: Reconstruction/Rehabilitation Risk: Low Project Phase: Concept  
Construction cost estimate determined based on kickoff meeting and prior project information. Cost also increased because of 5% contingency required for Low Risk projects at Concept Phase.

# CONTINGENCY SUMMARY

<b>A. CONSTRUCTION COST ESTIMATE:</b>	\$	1,670,025.00	Base Estimate From CES	
<b>B. ENGINEERING AND INSPECTION (E &amp; I):</b>	\$	83,501.25	Base Estimate (A) x	5 %
<b>C. CONTINGENCY:</b>	\$	87,676.31	Base Estimate (A) + E & I (B) x	5 %
			<u>See % Table in "Risk Based Cost Estimation" Memo</u>	
<b>D. TOTAL LIQUID AC ADJUSTMENT:</b>	\$		Total From Liquid AC Spreadsheet	
<b>E. CONSTRUCTION TOTAL:</b>	\$	1,841,202.56	(A + B + C + D = E)	

## REIMBURSABLE UTILITY COSTS

UTILITY OWNER	REIMBURSABLE COST
<b>TOTAL</b>	\$ -

**ATTACHMENTS:**

Detailed cost estimate

0012629 - Roswell Road/SR 9 ITS Expansion

Pay Item	Description	Unit	Price	Quantity	Total
150-1000	Traffic Control - 0012629	LS	\$ 78,975.00	1	\$ 79,525.00
682-6233	Conduit, Nonmetal, TP 3, 2 in	LF	\$ 5.00	2700	\$ 13,500.00
978-0010	SCOOT System Base (20 Intersections)	EA	\$ 360,000.00	1	\$ 360,000.00
978-0020	SCOOT System Add-On Base (10 Intersections)	EA	\$ 110,000.00	1	\$ 110,000.00
978-0030	SCOOT Field Tuning and Validation	EA	\$ 5,000.00	27	\$ 135,000.00
978-0040	SCOOT Intersection Detection	EA	\$ 36,000.00	27	\$ 972,000.00
				Base Estimate	\$ 1,670,025.00
				5% Contingency	\$ 83,501.25
				<b>Total Construction</b>	<b>\$ 1,753,526.25</b>

# Meeting notes

<b>Project:</b>	0012629		
<b>Subject:</b>	Concept Team Meeting		
<b>Date and time:</b>	29 August 2014 – 9:00am	<b>Meeting no:</b>	1
<b>Meeting place:</b>	Sandy Springs	<b>Minutes by:</b>	Kaitlin Potnick
<b>Present:</b>	Brad Edwards Samuel Sim Cynthia Burney Xavier James Ashlyn Morgan Kaitlin Potnick	<b>Representing:</b>	Sandy Springs Sandy Springs GDOT GDOT Atkins Atkins

## MINUTES

*Action Items are bold, italicized, and in gray*

Reviewed Concept Report

Revised cost estimate to use pay items from 0006727

Concept report project description needs to be revised to include SCOOT

***Ashlyn to revise Concept Report and return to GDOT today***

Environmental Update:

- Land Use assessment has been completed
- NEPA and Ecology early coordination has been sent out
- Air and Noise assessment is in QA/QC
- PCE will begin when more information is available
- History and Archaeology studies/surveys will begin October

Base files have been started

Detection survey, to be completed by Temple, Inc., scheduled for September

PFPR plans should be ready by end of October; PFPR tentatively scheduled for 12/2

Sandy Springs plan review and walk through will be 10/6

GDOT Traffic Operations plan review tentatively scheduled for 10/8

Revised plans to be submitted to GDOT/Xavier on 10/20

Meeting with State Program Control Engineer on 9/4 to discuss schedule

***Ashlyn to update schedule after meeting with State Program Control Engineer on 9/4***

***Ashlyn to send updated schedule with deliverables to Brad today***

***Ashlyn to send PIF to GDOT/Xavier for review today***

### NOTE TO RECIPIENTS:

These meeting notes record Atkins understanding of the meeting and intended actions arising therefrom. Your agreement that the notes form a true record of the discussion will be assumed unless adverse comments are received in writing within five days of receipt.

**SR 9 ATMS Project**

---

**Systems Engineering Report  
for SR 9 Adaptive Traffic Signal System**

---

Version 1.0

Prepared for:

**Federal Highway Administration  
Cities of Sandy Springs, Roswell, and Alpharetta  
Georgia Department of Transportation**

Prepared by:

**URS Corporation**

March 22, 2011



## Document Control

Date	Version	Description
10/4/10	0.1	Initial Outline Review Document
11/12/10	0.2	Outline revisions as result of FHWA comments
12/30/10	0.3	Minor edits/revisions for Final Outline Review Document
1/31/11	0.4	Draft 1 of SE Report (Distributed to Cities)
2/21/11	0.5	Draft 2 of SE Report (Distributed to FHWA)
3/18/11	0.6	Final Draft of SE Report (includes revisions from 3/17/11 workshop with FHWA)
3/22/11	1.0	Final Document, Release 1.0



## Table of Contents

List of Acronyms and Terms.....	ii
<b>1 Introduction .....</b>	<b>1</b>
1.1 Purpose.....	1
1.2 Description of Existing Traffic Signal and Communications System.....	1
1.3 Audience .....	2
1.4 Reference Materials .....	2
<b>2 Signal Timing System Goals and Objectives .....</b>	<b>2</b>
<b>3 Signal Timing System Processes and Constraints.....</b>	<b>3</b>
3.1 Peak (AM/Lunch/PM) Signal Timing Process.....	3
3.2 Off-Peak Signal Timing Process .....	5
3.3 Incidents Signal Timing Process.....	6
3.4 Construction/Special Events Signal Timing Process .....	8
3.5 Constraints to Signal Timing Processes .....	8
<b>4 Signal Timing System Needs.....</b>	<b>10</b>
<b>5 High-Level Signal Timing System Requirements .....</b>	<b>11</b>
<b>6 Evaluate Signal Timing System Strategies .....</b>	<b>14</b>
6.1 Level 1 – Time Base Coordination (TBC).....	14
6.2 Level 2 – Interconnected Control .....	14
6.3 Level 3 – Traffic Responsive Control.....	14
6.4 Level 4 – Adaptive Control.....	15
<b>7 Recommendations and Conclusion .....</b>	<b>23</b>

## List of Figures

Figure 1. Peak (AM/Lunch/PM) Timing Process.....	4
Figure 2. Off-Peak Timing Process .....	5
Figure 3. Incidents Signal Timing Process .....	7
Figure 4. Construction/Special Events Signal Timing Process.....	9

## List of Tables

Table 1. Identified Signal System Needs from Concept of Operations.....	10
Table 2. Adaptive Control Products Comparison.....	16



## **List of Acronyms and Terms**

**ACSLite – Adaptive Control Software Lite (Adaptive Signal System)**  
**ACTRA – Assembly Contingency Transmitter Receiver/Amplifier (GDOT’s Statewide Signal System)**  
**ATCS – Adaptive Traffic Control System (Adaptive Signal System)**  
**ATMS – Advanced Transportation Management Systems**  
**CCTV – Closed Circuit Television**  
**FHWA – Federal Highway Administration**  
**GDOT– Georgia Department of Transportation**  
**InSync – In Synchronization (Adaptive Signal System)**  
**ITS – Intelligent Transportation System**  
**NCHRP – National Cooperative Highway Research Program**  
**OPAC – Optimization Policies for Adaptive Control**  
**RTOP – Regional Traffic Operations Program**  
**SCATS – Sydney Coordinated Adaptive Traffic System (Adaptive Signal System)**  
**SCOOT – Split Cycle Offset Optimization Technique (Adaptive Signal System)**  
**SE – Systems Engineering**  
**SOP – Standard Operating Procedure**  
**SR – State Route**  
**TACTICS – GDOT’s New Statewide Signal System (Next generation upgrade to ACTRA)**  
**TBC – Time Base Coordination**  
**TCC – Traffic Control Center**  
**TMC – Traffic Management Center**  
**VPN – Virtual Private Network**



## 1 Introduction

The SR 9 Advanced Transportation Management System (ATMS) project covers 18 miles of State Route 9 (SR 9) from Abernathy Road to Windward Parkway. The intention of SR 9 ATMS is to provide a cross-jurisdictional ATMS that improves safety, enhances traffic flow, and reduces congestion.

This *Systems Engineering Report*, which specifically addresses the SR 9 Traffic Signal System, is a supplement to the *SR 9 ATMS Concept of Operations* document released in September 2008. The content of this report was developed in coordination with the Federal Highway Administration (FHWA), Georgia Department of Transportation (GDOT), and the Cities of Sandy Springs, Roswell, and Alpharetta.

### 1.1 Purpose

The purpose of the *Systems Engineering Report (SE Report)* is to provide the following:

- Signal Timing System Goals and Objectives
- Signal Timing System Processes
- Signal Timing System Needs
- High Level Signal Timing System Requirements
- Signal Timing System Strategies Identification and Evaluation
- System Recommendations and Conclusions

### 1.2 Description of Existing Traffic Signal and Communications System

The Cities of Sandy Springs, Roswell, and Alpharetta have the following existing systems and general responsibilities along the SR 9 corridor from Abernathy Road to Windward Parkway.

1. Central Signal System: Sandy Springs and Roswell: Siemens ACTRA (in process of being upgraded by GDOT to TACTICS version 1.2)  
Alpharetta: TACTICS version 1.2
2. Controller Type: 2070L controllers with 1B, 2A and 7A modules
3. Cabinet: 332 cabinets
4. Controller Firmware: Siemens SEPAC version 3.32g in ECOM EPAC configuration
5. Signal Communications: Sandy Springs and Alpharetta: Ethernet network using fiber cabling  
Roswell: Fiber cabling exists, but not communicating to server yet
6. TMC Operations: Sandy Springs and Alpharetta: Existing Traffic Management Center (TMC) with timing engineer remotely monitoring signals during multiple peak periods each week  
Roswell: TMC space identified and new signals/Intelligent Transportation System (ITS) engineer recently hired
7. Maintenance: Through a permit from GDOT, the Cities' maintenance crews are responsible for preventive and unscheduled maintenance of signal equipment.
8. Training: Utilize GDOT-provided training on signal timing and maintenance
9. Standards: Follow GDOT standards for signal equipment



### 1.3 Audience

The audience for the *SE Report* includes:

- FHWA
- GDOT Office of Traffic Safety and Design personnel responsible for the design of the SR 9 ATMS project
- GDOT Office of Traffic Operations personnel responsible for management and administration of the Regional Traffic Operations Program (RTP)
- The Cities of Sandy Springs, Roswell, and Alpharetta, which operate the SR 9 traffic signals under permit to the Department

### 1.4 Reference Materials

The *SE Report* for the SR 9 Traffic Signal System is based upon other documents including but not limited to:

- *SR 9 ATMS Concept of Operations*, September 2008
- *Atlanta Regional ITS Architecture*, July 2004
- *NaviGator Concept of Operations*, August 2007
- *NCHRP SYNTHESIS 307, Systems Engineering Processes for Developing Traffic Signal Systems*, 2003
- *NCHRP SYNTHESIS 403, Adaptive Traffic Control Systems: Domestic and Foreign State of Practice*, 2010

## 2 Signal Timing System Goals and Objectives

The specific goals and objectives for the adaptive portion of the traffic signal system on the SR 9 corridor include:

1. Minimize congestion and promote smooth flow on SR 9 and provide reasonable service to the cross street traffic
2. Quickly respond and adjust to traffic fluctuations including special events, incidents, seasonal variations (schools out, holidays, etc.), and long-term trends
3. Recognize when oversaturated conditions exist, and then utilize pre-defined user preferences
4. Provide seamless signal timing/synchronization across jurisdictional boundaries
5. Provide equitable land use access
6. Monitor and record system-measured traffic conditions and automated responses
7. Enable continuous multi-jurisdictional coordinated response to incidents and special events along corridor
8. Provide the next most effective control mode in the case of failure

### **3 Signal Timing System Processes and Constraints**

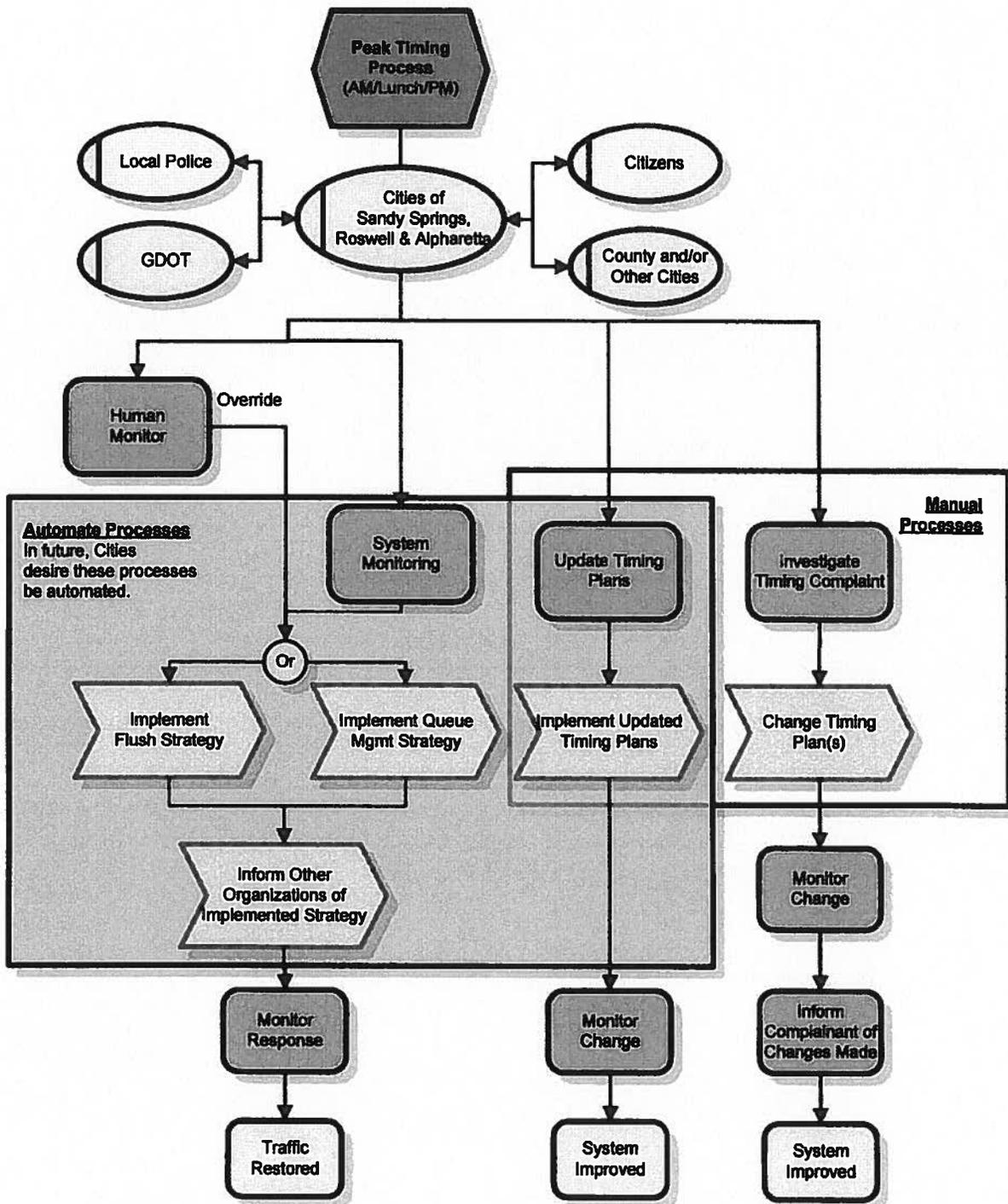
Subsections 3.1 through 3.4 describe typical signal timing processes employed by the three cities. The current constraints experienced by the cities are described in Section 3.5.

#### **3.1 Peak (AM/Lunch/PM) Signal Timing Process**

The majority of the SR 9 corridor traverses through retail/commercial centers with shopping and restaurants and many driveway connections that cause friction on the corridor. During a typical weekday peak period, the traffic flow on SR 9 is congested approaching major cross streets where the intersections are oversaturated. The directional traffic flow slightly favors the southbound direction in the AM peak and the northbound in the PM peak, and is balanced during the lunch peak. The traffic volumes in the lunch peak sometimes exceed the AM and PM peaks in the commercial areas with many restaurants, such as near Abernathy Road, Northridge Road, Historic Roswell, Holcomb Bridge Road, Mansell Road, Hembree Road, Haynes Bridge Road, and Windward Parkway. Traffic conditions, particularly demand for the various movements at congested intersections, change unpredictably, particularly during the lunch peak conditions.

The local agencies typically retime the SR 9 signals every two to three years, and then they do their best to maintain the timings at the highest level possible with their current systems. Most interim timing updates are made when staff become aware of issues that are impacting the corridor. Signal maintenance is also conducted when staff become aware of issues. Each local agency has a strong maintenance staff that can make signal repairs, communications repairs, and install new loops.

Figure 1 illustrates the timing process the cities follow for the AM, Lunch, and PM peak periods. Each of the cities desires to monitor their SR 9 signals during all peak periods; however, at the present time, they typically do not have enough signal timing staff available to monitor all peak periods each day. With 31 intersections along the 18-mile SR 9 corridor and many more within their respective cities, there are simply too many intersections to monitor closely each peak period. If a problem is found, it would currently be difficult to quickly implement an effective alternative timing plan.



**Figure 1. Peak (AM/Lunch/PM) Timing Process**

## 3.2 Off-Peak Signal Timing Process

Figure 2 illustrates the timing process followed for the off-peak period. Typically the off-peak signal timing plans are developed, implemented, and fine-tuned at the same time the peak period plans are done as described in Section 3.1. Once the off peak plans are implemented, they are not revisited until a complaint is registered. The cities desire to automate the off-peak timing plans to improve the level of service motorists experience during off-peak periods.

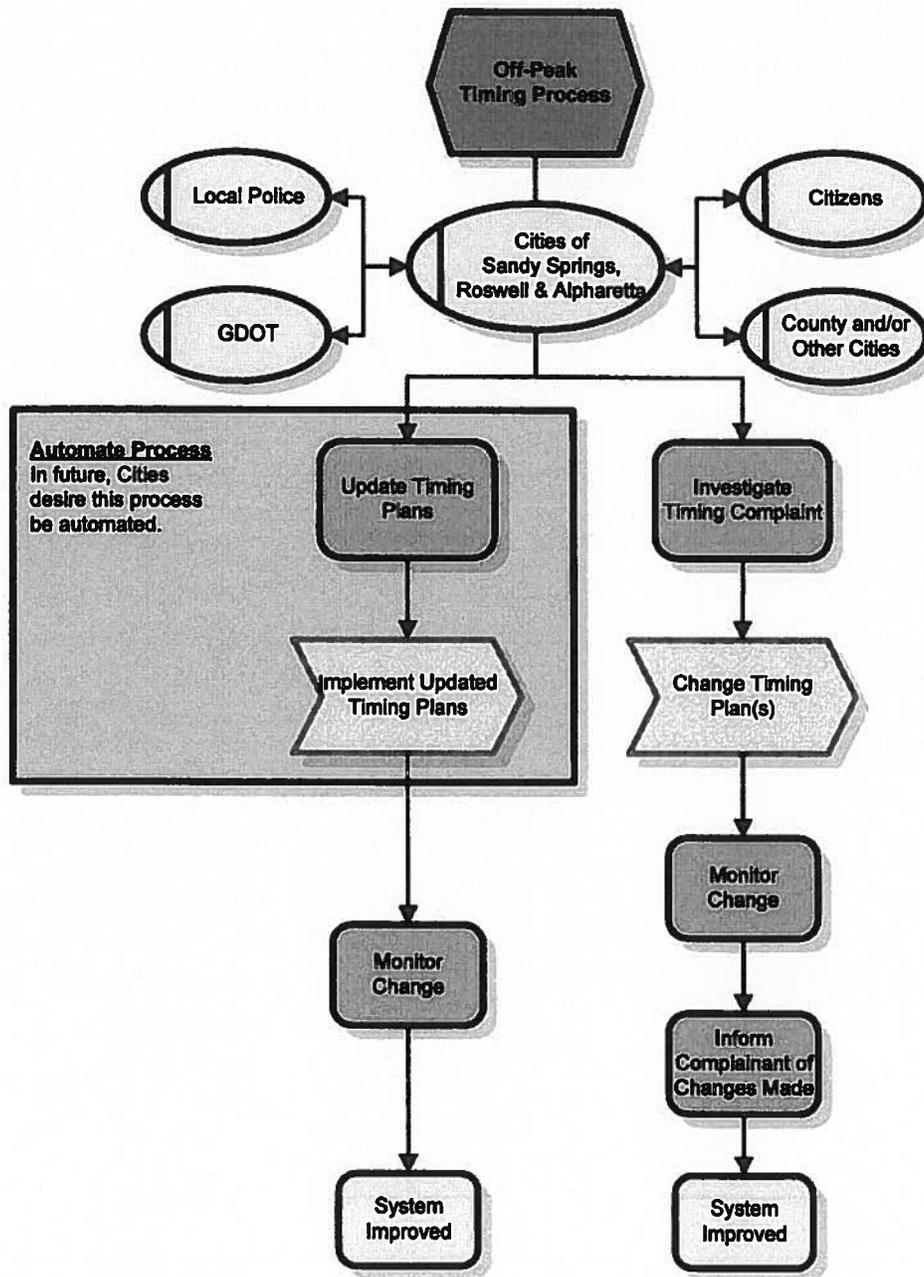


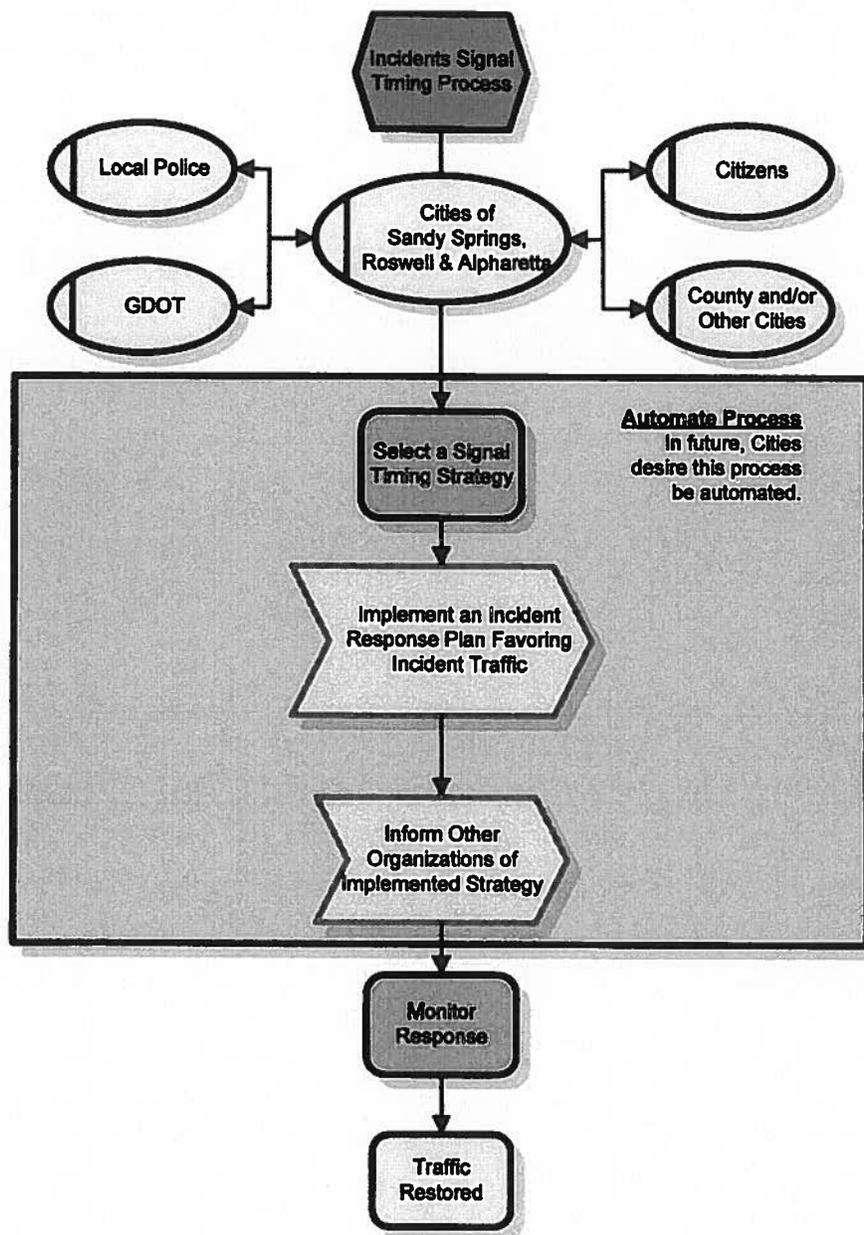
Figure 2. Off-Peak Timing Process



### **3.3 Incidents Signal Timing Process**

In Figure 3, the process for implementing timing plans in response to incidents is illustrated. Developing a signal timing strategy in response to an incident when it occurs is difficult. Flush strategies will need to be developed in advance to respond quickly to incidents on GA 400. At off-peak times, a queue management strategy will be effective at key bottle neck intersections. The cities desire to automate this process to significantly reduce the time it takes to implement a plan, thereby reducing the delay experienced by motorists stuck in the incident traffic.

Georgia State Route 400 (GA 400) is a north-south freeway that parallels SR 9 to its east. If an incident occurs on GA 400, it heavily impacts the operation of SR 9. For instance, if an accident occurs on northbound GA 400 at the Chattahoochee River during the PM peak, the northbound traffic will back up for miles. Once this occurs, traffic will exit GA 400 at Abernathy Road and Northridge Road to travel west and connect with SR 9. The typical timing plans running on SR 9 will no longer be able to accommodate the increase in traffic, and therefore congestion will occur quickly and soon becomes irrecoverable until the incident is cleared. The City of Sandy Springs has developed flush plans for SR 9 to manage incident traffic; however, they have had limited success implementing their flush plans quickly enough to offset the impact of the increased volume of traffic. Because of the cities desire to maintain optimal traffic flow on SR 9, they want a system that can quickly and automatically adapt to changing conditions.



**Figure 3. Incidents Signal Timing Process**

### 3.4 Construction/Special Events Signal Timing Process

Figure 4 illustrates the signal timing process for construction and special events. Typically each City's Community Development department is responsible for permitting and planning for special events. The Community Development staff work closely with Police and Traffic Department staff on major events where traffic control is required. GDOT is also engaged if any state routes are being impacted. The Traffic Department is typically responsible for pre-planning assistance. If the event is anticipated to significantly impact the roads, the Traffic Department will prepare special timing plans. Additionally, the Traffic Department will work in the TMC on the day of the event to monitor the effectiveness of timing plans.

### 3.5 Constraints to Signal Timing Processes

The following are constraints to the cities' signal timing processes.

- With 31 intersections within the project limits, in addition to hundreds of other signals within the three cities, the cities cannot manually monitor all the signals in the network. It is not practical, nor do they have the manpower to actively monitor all the signals in the network during all peak periods each day of the week.
- Implementing real-time timing-plan changes across a number of adjacent intersections is difficult to do manually and is often not effective. Significant, unpredictable traffic fluctuations on SR 9 are common, but currently the cities lack the means to identify the changes and rapidly adjust timing plans.
- Over the past 10 years, GDOT has implemented an advanced traffic controller program with the goal of creating statewide uniformity and interoperability of traffic signal controllers.
  - GDOT purchased a statewide ACTRA central system license, and now GDOT has purchased the upgrade to ACTRA which is TACTICS central system version 1.2. ACTRA and TACTICS are free to local agencies.
  - GDOT purchased a statewide license for 2070 controller firmware – Siemens SEPAC version 3.32g in ECOM EPAC configuration. SEPAC is free to local agencies.
  - GDOT provides free training programs on ACTRA and SEPAC.
- The system needs dual coordination between SR 9 and major cross streets. This can only be achieved if the SR 9 system and cross street system are controlled by the same central signal system (ACTRA/TACTICS).
- The system is oversaturated at most major intersections in peak periods.

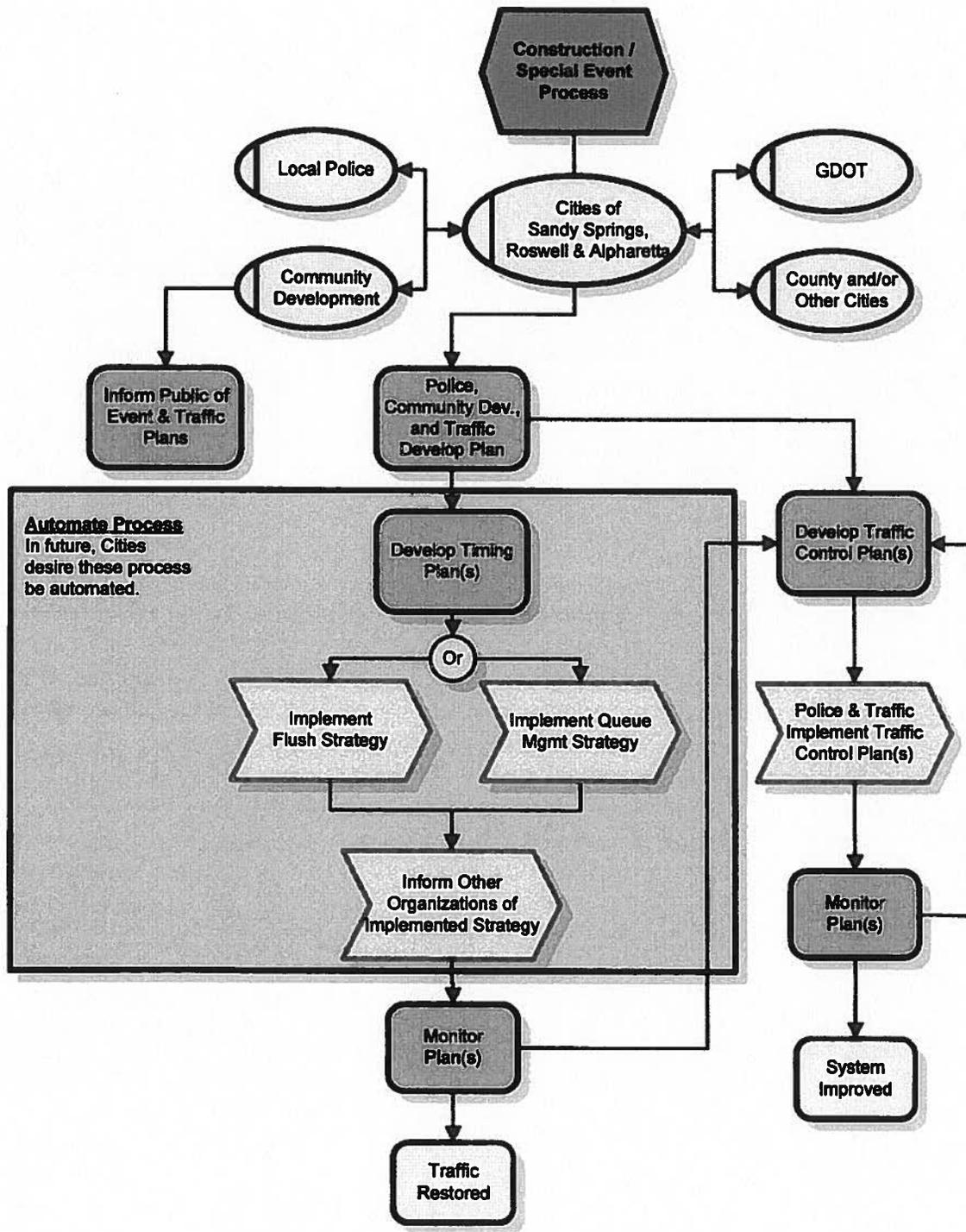


Figure 4. Construction/Special Events Signal Timing Process

## 4 Signal Timing System Needs

The central focus of the *Concept of Operations* document was the need for multi-jurisdictional coordination and cooperation, particularly as it related to the signal system operating along the SR 9 corridor. Multi-jurisdictional coordination will help achieve smoother, more balanced traffic operations along the SR 9 corridor. In addition, assistance through federal grant programs is often more readily available for projects that meet regional needs rather than the needs of just one community.

Table 1 provides a list of prioritized signal system needs that were identified by one or more of the jurisdictions along the SR 9 corridor. The table also shows the relevant user service category from the *ITS Architecture* and the proposed measures that could be employed to address each need. The check boxes listed under each city indicate whether the listed need applies to them.

**Table 1. Identified Signal System Needs from Concept of Operations**

ID	User Services	Needs	Roswell	Alpharetta	Sandy Springs	Proposed Measures or Strategies
1.	Traffic Management	Reduce delay and improve throughput on SR 9 and cross streets	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>• Implement cross-jurisdictional signal timing</li> <li>• Re-time signals every 2 to 3 years</li> <li>• Regularly measure the effectiveness of existing signal timing plans</li> <li>• Implement adaptive control system</li> </ul>
2.	Traffic Management	Minimize delays due to non-recurring congestion and changes in travel patterns	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>• Develop traffic responsive plans</li> <li>• Implement adaptive control system</li> </ul>
3.	Traffic Management	Reduce duration of oversaturated conditions on SR 9 and major cross streets	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>• Develop traffic responsive plans</li> <li>• Implement adaptive control system</li> </ul>
4.	Traffic Management	Provide effective management of maintenance and construction activities	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>• Implement electronic tracking of all maintenance activities</li> <li>• Automate fault reporting, such as reporting of loop failures</li> <li>• Develop an inventory tracking system</li> </ul>
5.	Incident / Emergency Management	Develop queue and progression management for SR 9 during GA 400 incidents	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>• Develop diversion timing plans in coordination with the other cities</li> <li>• Develop traffic responsive plans</li> <li>• Implement adaptive control system</li> </ul>

ID	User Services	Needs	Roswell	Alpharetta	Sandy Springs	Proposed Measures or Strategies
6.	Incident / Emergency Management	Implement response to incidents after normal work hours	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>• Share after-hours access to signal system</li> <li>• Share control of predetermined signal timing plans for after-hours</li> <li>• Develop Standard Operating Procedure (SOP) for after-hours access</li> <li>• Implement adaptive control system</li> </ul>
7.	Special Events Management	Enhance Special Events Management	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>• Enhance coordination between the agencies for special events</li> <li>• Provide CMS, CCTV, and pre-event traveler information</li> <li>• Develop SOP between the local cities and their Police Departments regarding the ability to manually override traffic signals during special events.</li> </ul>

## 5 High-Level Signal Timing System Requirements

The high-level signal system requirements are defined in this section. Requirements 1 through 7 below map directly to the needs identified in Table 1. Requirements 8 and higher are additional requirements that are based on the signal timing objectives, processes, and other parameters typical to a signal system. "System" refers to the adaptive control portion of the traffic signal system.

1. **The system shall improve operation on SR 9 and cross streets**
  - 1.1. The system shall be able to apply a progression-based timing solution during uncongested periods
  - 1.2. The system shall be able to apply timings that are designed to maximize throughput during congested conditions
    - 1.2.1. The system shall be able to implement timing strategies that maximize throughput inbound and outbound during peak periods
    - 1.2.2. The system shall be able to implement timing strategies that balance throughput during noon and weekend peak periods.
  - 1.3. The system shall be able to apply timings that seek to avoid backing queues into adjacent intersections and facilities
  - 1.4. The system shall be able to automatically choose the appropriate timing strategy given the conditions
    - 1.4.1. The system shall monitor sensors to identify the conditions
    - 1.4.2. The system shall initiate response to identified conditions within one signal cycle

1.4.3. The system shall implement a response to changing conditions within three signal cycles

1.4.4. The system shall allow the operator to constrain the changes made by the system to a defined range

## 1.5. Override and failure operation

1.5.1. The system shall allow the operator to override the operation

1.5.2. The system shall allow the central system to override adaptive operation by time of day

1.5.3. The system override shall be implemented intersection by intersection or for the whole network

1.5.4. The system override operation shall allow local intersection control (according to the stored time-of-day schedule)

1.5.5. The system override operation shall allow central system control modes, including actuated free, coordinated, and traffic responsive modes

1.5.6. The system shall automatically operate a user-designated central system control mode in case of failure of the adaptive operation

1.5.7. The system shall monitor the integrity of adaptive-control sensors

1.5.7.1. The system shall monitor detectors for failure

1.5.7.2. The system shall provide alternative measurement values for failed detectors

1.5.7.3. The system shall determine that adaptive mode has failed if a user-specified number of detectors used for adaptive control have failed

1.5.8. The system shall automatically operate in local intersection control in case of failure of the central system control modes

## 2. Monitoring and Reporting

2.1. The system shall provide real-time display indicating which timing strategy is in effect

2.2. The system shall provide real-time report of failure mode conditions and overrides

2.3. The system shall make all reporting available on any workstation attached to the central signal system

### 2.4. System Log

2.4.1. The system shall maintain a log for the most recent 30 days.

2.4.2. The system log shall include when timing strategies were in effect

2.4.3. The system log shall include failure mode conditions and overrides

2.4.4. The system log shall be automatically archived at user-defined intervals

2.4.5. The system log shall be stored in a comma-delimited text file

## 3. Respond to network incidents affecting operation on SR9

3.1. The system shall be able to detect increased flows on westbound approaches and GA400 exit ramps in the affected direction.

3.1.1. The system shall allow the operator to set thresholds for increased flows that identify an incident condition



## **6 Evaluate Signal Timing System Strategies**

Currently there are four levels of signal timing system strategies to consider ranging from the most common, Level 1 – Time Base Coordination, to the most powerful but least common, Level 4 – Adaptive Control. In this section, all four levels are discussed in regards to how well each satisfies the goals, objectives, and requirements previously defined.

### **6.1 Level 1 – Time Base Coordination (TBC)**

Roswell currently operates its SR 9 signals using Level 1 – Time Base Coordination and is in the process of upgrading to Level 2 – Interconnected Control. The City has already installed fiber running to each cabinet and fiber modems and is working with GDOT to implement a new Ethernet communications network and to install an ACTRA server. Sandy Springs and Alpharetta currently operate their signals at Level 2 – Interconnected Control, and only use Level 1 – TBC when their central computer or communication fails.

The limitation of Level 1 – TBC is that equipment status is not provided. Therefore, equipment failure or failure to display the appropriate signal timing cannot be automatically identified at the TMC or in the maintenance facility. With the importance of SR 9 as a regional significant corridor, a Level 2 or higher approach is needed.

### **6.2 Level 2 – Interconnected Control**

As mentioned above, Sandy Springs and Alpharetta operate their SR 9 signals at Level 2 – Interconnected Control, and Roswell will be at Level 2 by the summer of 2011. Level 2 enables the agencies to monitor their signals from their TMCs and make real-time changes when desired.

Sandy Springs and Alpharetta also have CCTV cameras at key locations and are able to use their cameras for observations and to make remote adjustments using their ACTRA (Sandy Springs)/TACTICS (Alpharetta) systems. However, neither city can monitor and make dynamic changes on a continuous basis. This is because they have a large number of intersections on their system that would need to be monitored, and it is not cost-effective to spend each AM, noon, and PM peak period monitoring the system. Staff typically has other activities requiring their attention for much of the day. Consequently, the cities are proud they have achieved Level 2, but a higher level of performance is desired to meet their goal to minimize congestion and promote smooth flow on SR 9 while also providing reasonable service to the cross street traffic.

### **6.3 Level 3 – Traffic Responsive Control**

Level 3 – Traffic Responsive Control requires system detectors and it provides the capability to achieve the following:

- Traffic-responsive timing plan selection.
- Traffic data to establish timing plans specifically tailored to recurrent traffic variations. This requires additional systems and traffic engineering capability.
- Enables the system to monitor traffic conditions and automatically select an alternative pre-defined timing plan.



Disadvantages to Level 3 control are that it requires a lot of expertise to develop and requires considerable maintenance to keep it operating effectively. In particular, the following functions must be maintained:

- Updating of timing plan sequences. Traffic-responsive operations also require the development of signatures or detector thresholds.
- Partial or complete automation of timing plan development with particular attention to avoiding manual collection of turning movement counts.
- Migration of timing plans and detector signatures into the traffic control system database.

Because of the time commitment to implement and maintain Level 3 – Traffic Responsive Control, and the limited available time of staff, Level 3 control is not seen as feasible by the local agencies.

#### **6.4 Level 4 – Adaptive Control**

Level 4 – Adaptive Control consists of a family of techniques that collectively have been termed “adaptive systems.” Typically, adaptive systems apportion intersection green time based on prediction of platoon arrivals. Timing decisions are made within each traffic cycle or during each signal phase. Adaptive systems have the capability to respond to traffic variations by rapidly changing timing and do not require the same level of manual participation in database and signal timing revisions necessary in Level 3 systems.

The goals and objectives, existing/desired processes, existing constraints, and high-level requirements defined in this report support Level 4 – Adaptive Control as an appropriate strategy for the Cities of Sandy Springs, Roswell, and Alpharetta. Adaptive control works best in conditions with high levels of non-recurring congestion, such as incidents and special events, and in areas with fluctuating traffic demand. SR 9 is known for having these exact conditions. In addition, the cities desire a system that will reduce delay and improve throughput on SR 9 and its cross streets, and Level 4 will help them achieve these key goals within the framework of their current organizational structure.

The following Level 4 – Adaptive Control systems are available from suppliers in the United States and were considered for this project:

- InSync
- SCOOT
- SCATS
- ACSLite
- OPAC

In Table 2 on the following pages, these five adaptive systems are compared with how well they meet the high-level system requirements developed in Section 5. The table also provides traceability of the high-level requirements with the Section 2 - Goals and Objectives, Section 3 – Processes and Constraints, and Section 4 - Needs.



**Table 2. Adaptive Control Products Comparison**

Traceability			High-Level Requirements (Sect. 5)		Adaptive Control Products				
Goals (Sect. 2) <sup>1</sup>	Processes / Constraints (Sect. 3) <sup>2</sup>	Needs (Sect. 4) <sup>1</sup>			InSync	SCOOT	SCATS	ACSLite	OPAC
<b>1 The system shall improve operation on SR 9 and cross streets</b>									
<b>1</b>	<b>3.2</b>	<b>1</b>	<b>1.1.</b>	The system shall be able to apply a progression-based timing solution during uncongested periods	Yes	Yes	Yes	Yes	Yes
<b>1.2. The system shall be able to apply timings that are designed to maximize throughput during congested conditions</b>									
<b>1,4</b>	<b>3.1</b>	<b>1,2,3</b>	<b>1.2.1.</b>	The system shall be able to implement timing strategies that maximize throughput inbound and outbound during peak periods	Yes, but tested poorly	Yes	Yes	Yes	Yes
<b>1,4,5</b>	<b>3.2</b>	<b>1,2</b>	<b>1.2.2.</b>	The system shall be able to implement timing strategies that balance throughput during noon and weekend peak periods.	Yes	Yes	Yes	Yes	Yes
<b>1,5</b>	<b>3.1 - 3.4</b>	<b>3</b>	<b>1.3.</b>	The system shall be able to apply timings that seek to avoid backing queues into adjacent intersections and facilities	Yes, but tested poorly	Yes	Poor	Depends on coordination plan	Yes
<b>1,2,3,4,5,7</b>	<b>3.1 - 3.4</b>	<b>1-7</b>	<b>1.4.</b>	The system shall be able to automatically choose the appropriate timing strategy given the conditions	Yes	Yes	Yes	Yes	Yes
<b>6,7</b>	<b>3.1 - 3.4</b>	<b>1-7</b>	<b>1.4.1.</b>	The system shall monitor sensors to identify the conditions	Yes	Yes	Yes	Yes	Yes
<b>1,2,3,7</b>	<b>3.1 - 3.4</b>	<b>1-7</b>	<b>1.4.2.</b>	The system shall initiate response to identified conditions within one signal cycle	Yes	Yes	Yes	No	Yes



Traceability			High-Level Requirements (Sect. 5)	Adaptive Control Products				
Goals (Sect. 2) <sup>1</sup>	Processes / Constraints (Sect. 3) <sup>2</sup>	Needs (Sect. 4) <sup>1</sup>		InSync	SCOOT	SCATS	ACSLite	OPAC
1,2,3,7	3.1-3.4	1-7	1.4.3. The system shall implement a response to changing conditions within three signal cycles	Yes	Yes	Yes	May require plan transition	Yes
1,5	3.1-3.4	1-7	1.4.4. The system shall allow the operator to constrain the changes made by the system to a defined range	Yes	Yes	Yes	Yes	Yes
1.5. Override and failure operation								
1,8	3.1	1,3,7	1.5.1. The system shall allow the operator to override the operation	Manual control only at the phase level	Yes	Yes	Yes	Yes
1,3,4	3.1	1-7	1.5.2. The system shall allow the central system to override adaptive operation by time of day	No	Yes	Yes	No	Yes
1,3	3.5	1-7	1.5.3. The system override shall be implemented intersection by intersection or for the whole network	No	Yes	Yes	No	Yes
1,2,7,8	3.1,3.5	1-7	1.5.4. The system override operation shall allow local intersection control (according to the stored time-of-day schedule)	No	Yes	Yes	Yes	Yes
1,4,7	3.1,3.3	1-7	1.5.5. The system override operation shall allow central system control modes, including actuated free, coordinated, and traffic responsive modes	No	Yes	Yes	No	Yes
1,8	3.1	1-7	1.5.6. The system shall automatically operate a user-designated central system control mode in case of failure of the adaptive operation	No	Yes	Yes	Yes	Yes



Traceability			High-Level Requirements (Sect. 5)	Adaptive Control Products				
Goals (Sect. 2) <sup>1</sup>	Processes / Constraints (Sect. 3) <sup>2</sup>	Needs (Sect. 4) <sup>3</sup>		InSync	SCOOT	SCATS	ACSLite	OPAC
<b>1.5.7. The system shall monitor the integrity of adaptive-control sensors</b>								
1,8	3.1	1-7	1.5.7.1. The system shall monitor detectors for failure	Yes	Yes	Yes	Yes	Yes
1,8	3.1	1-7	1.5.7.2. The system shall provide alternative measurement values for failed detectors	Yes	Yes	Yes	In Enhance d version only	
1,8	3.1,3.2	1-7	1.5.7.3. The system shall determine that adaptive mode has failed if a user-specified number of detectors used for adaptive control have failed	No	No- SCOOT will use historical or prede- fined Data	No	No	No
1,8	3.1,3.2	1-7	1.5.8. The system shall automatically operate in local intersection control in case of failure of the central system control modes	No	Yes	Yes	Yes	Yes
<b>2 Monitoring and Reporting</b>								
6	3.1, 3.3, 3.4	4,6,7	2.1. The system shall provide real-time display indicating which timing strategy is in effect	No	Yes	Yes	Yes	Yes
6,8	3.1, 3.3, 3.5	4,6,7	2.2. The system shall provide real-time report of failure mode conditions and overrides	Yes	Yes	Yes	Yes	Yes
6	3.1, 3.3, 3.6	4,6,7	2.3. The system shall make all reporting available on any workstation attached to the central signal system	No	Yes	Yes	Only when integrate d with central system	Yes



Traceability			High-Level Requirements (Sect. 5)	Adaptive Control Products				
Goals (Sect. 2) <sup>1</sup>	Processes / Constraints (Sect. 3) <sup>2</sup>	Needs (Sect. 4) <sup>3</sup>		InSync	SCOOT	SCATS	ACSLite	OPAC
<b>2.4. System Log</b>								
6	3.1-3.4	1-7	2.4.1. The system shall maintain a log for the most recent 30 days.	No	Yes	Yes	Yes	Yes
6	3.1-3.4	1-7	2.4.2. The system log shall include when timing strategies were in effect	No	Yes	Yes	Yes	Yes
6,8	3.1-3.4	1-7	2.4.3. The system log shall include failure mode conditions and overrides	No	Yes	Yes	Yes	Yes
6	3.1-3.4	1-7	2.4.4. The system log shall be automatically archived at user-defined intervals	No	Yes	Yes	Yes	Yes
6	3.1-3.4	1-7	2.4.5. The system log shall be stored in a comma-delimited text file	No	Yes	Yes	Yes	Yes
<b>3 Respond to network incidents affecting operation on SR 9</b>								
<b>3.1. The system shall be able to detect increased flows on westbound approaches and GA400 exit ramps in the affected direction.</b>								
2,7	3.3,3.4	5,6	3.1.1. The system shall allow the operator to set thresholds for increased flows that identify an incident condition	No	Yes	Yes	No	?
2,7	3.3,3.4	5,6	3.1.2. The system shall treat the incident condition identification as an alarm condition within the traffic signal system	No	Yes	Yes	No	?
1,2,7	3.3,3.4	5,6	3.2. The system shall implement timings that restrict eastbound flow to provide additional capacity for westbound and southbound/northbound flows on SR9.	No	Yes	Yes	No	Yes



Traceability			High-Level Requirements (Sect. 5)	Adaptive Control Products				
Goals (Sect. 2) <sup>1</sup>	Processes / Constraints (Sect. 3) <sup>2</sup>	Needs (Sect. 4) <sup>3</sup>		InSync	SCOOT	SCATS	ACSLite	OPAC
<b>4 External constraints</b>								
<b>4.1. System Size</b>								
1,4	3.5	1-7	4.1.1. The system shall accommodate a minimum of 31 intersections on installation	Yes	Yes	Yes	No	Yes
1,4	3.5	1-7	4.1.2. The system shall be expandable to a minimum of 250 intersections without additional software modification	No	Yes	Yes	No	No (220)
<b>4.2. Compatibility</b>								
1,4	3.5	1-7	4.2.1. The system shall fulfill all requirements using 2070 traffic signal controllers running the Siemens SEPAC in the version used by GDOT, in ECOM EPAC configuration	Yes, for the requirements INSYNC fulfills	Yes	No	No	No
1,4	3.5	1-7	4.2.2. The system shall fulfill all requirements when implemented in a Siemens TACTICS traffic signal system in the version used by GDOT	No	Yes	No	Anticipated	No
1,4	3.5	1-7	4.2.3. The system shall operate over a partially existing Ethernet network installed on a fiber-optic plant. (The plant will be extended to cover all of the project area.)	Yes	Yes	Yes	Yes	Yes



Traceability			High-Level Requirements (Sect. 5)	Adaptive Control Products					
Goals (Sect. 2) <sup>1</sup>	Processes / Constraints (Sect. 3) <sup>2</sup>	Needs (Sect. 4) <sup>1</sup>		InSync	SCOOT	SCATS	ACSlite	OPAC	
<b>5 System Contractor Requirements</b>									
1,2,3,6	3.1-3.4	1-7	5.1.	The system contractor shall provide new detection required for adaptive control of all signal phases at all intersections	Yes	Yes	Yes	Yes	Yes
1,2,3,4,6	3.1-3.4	1-7	5.2.	The system contractor shall recommend locations and technologies for adaptive control	Yes	Yes	Yes	Yes	Yes
1,2,3,4,6	3.1-3.4	1-7	5.3.	The system contractor shall design, install, test, and certify operation for all recommended and approved adaptive control detectors	Yes	Yes	Yes	Yes	Yes
<b>6 Provide proven system with maintenance support</b>									
1 - 8	3.1-3.4	1-7	6.1.	The system contractor shall demonstrate that the proposed system fulfill all requirements at time of bid	Yes	Yes	Yes	Yes	Yes
1 - 8	3.1-3.4	1-7	6.2.	The system contractor shall provide a submittal demonstrating fulfillment of all requirements.	Yes	Yes	Yes	Yes	Yes
1 - 8	3.1-3.4	1-7	6.3.	The system contractor shall submit a test plan that demonstrates and certifies that all requirements are fulfilled before acceptance	Yes	Yes	Yes	Yes	Yes
1 - 8	3.1-3.4	1-7	6.4.	The system contractor shall submit a validation plan demonstrating that the system supports the needs and processes before acceptance	Yes	Yes	Yes	Yes	Yes



Traceability			High-Level Requirements (Sect. 5)	Adaptive Control Products				
Goals (Sect. 2) <sup>1</sup>	Processes / Constraints (Sect. 3) <sup>2</sup>	Needs (Sect. 4) <sup>3</sup>		InSync	SCOOT	SCATS	ACSLite	OPAC
1-8	3.1-3.4	1-7	6.5. The system contractor shall provide a five years of on-call customer support and upgrades after installation is complete and accepted.	Yes	Yes	Yes	Yes	Yes
1-8	3.1-3.4	1-7	6.6. The system contractor shall provide a five days annually of training provided in Atlanta area for period of five years.	Yes	Yes	Yes	Yes	Yes
Total No's				19	1	3	11	4

- Notes:**
1. Numbers shown in column 1 reference the eight goals defined in Section 2.
  2. Numbers shown in column 2 reference processes and constraints shown in subsections 3.1 through 3.5.
  3. Numbers shown in column 3 reference the seven needs identified in Table 1 in Section 4.
- Shaded rows are header rows.**

## **7 Recommendations and Conclusion**

Implementing a Level 4 – Adaptive Control System on the SR 9 corridor is recommended. Adaptive control systems are known to have several advantages over traditional traffic signal timing operations with time-of-day plans. Adaptive control systems work best in conditions like those commonly experienced on SR 9, including high levels of non-recurring congestion due to incidents and special events combined with ever fluctuating traffic demand. An adaptive control system is not necessarily the solution for every traffic signal system. The Cities are aware that it will not completely resolve all traffic congestion issues, and it may not help significantly during oversaturated traffic conditions. Instead, the Cities envision adaptive traffic control as the best tool currently available to enhance their timing practices. Because the Cities are implementing adaptive control across their jurisdictional boundaries, the reduction of delays, stops, and improved operational performance will be a benefit to the region.

Although three of the systems satisfy the majority of the requirements shown in Table 2, only one system, SCOOT, meets all of the key external constraints indicated in requirements 4.1 through 4.2. These requirements are critical in meeting the cities' goals to not only improve throughput and reduce delay, but to continue to provide dual coordination between SR 9 and its major crossing arterials; thus achieving east-west throughput across SR 9 during oversaturated traffic conditions. As indicated in Table 2, Requirement 4.2, only the SCOOT system can run in parallel to the existing GDOT statewide signal system, TACTICS, and the SCOOT adaptive mode can be activated by time of day which allows dual coordination to be achieved when desired with major crossing arterials.

One of the few limitations of adaptive control systems is their ability to appropriately adapt to oversaturated conditions as well as an experienced timing engineer can manage the system by applying personal knowledge and experience. With SCOOT, the timing engineer has the opportunity to use its preferential features to influence oversaturated timing plans, but if those features prove unsatisfactory, the timing engineer still has the option to revert to the existing dual coordination plans by temporarily running the intersection in a Level 2 – Interconnected Control mode. In addition, selection of the SCOOT system will greatly reduce the cities' learning curve because the SEPAC local controller firmware and TACTICS central system will remain the same. The cities will only have to learn the new SCOOT adaptive software. Operations and maintenance training will be included with the system as well as five years of annual user training and support.

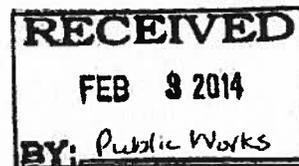
Keith Golden, P.E., Commissioner



GEORGIA DEPARTMENT OF TRANSPORTATION

One Georgia Center, 600 West Peachtree Street, NW  
Atlanta, Georgia 30308  
Telephone: (404) 631-1000

January 27, 2014



Mr. Garrin Coleman  
Director of Public Works  
City of Sandy Springs  
7840 Roswell Road, Building 500  
Sandy Springs, GA 30350

Dear Mr. Coleman:

I am returning for your files an executed agreement between the Georgia Department of Transportation and the City of Sandy Springs for the following project:

**Fulton County, PI# 0012629**

We look forward to working with you on the successful completion of the joint project.  
Should you have any questions, please contact the Project Manager Cynthia Burney at (404) 631-1851.

Sincerely,

A handwritten signature in black ink that reads "Angela Robinson".

Angela Robinson,  
Financial Management Administrator

AR:kp

Enclosure

c: Bob Rogers  
Rachel Brown – District 7 Engineer  
Scott Lee – District 7 Planning & Programming Engineer  
Patrick Allen, P.E. – District 7 Utilities Engineer  
Mike Bolden – State Utilities Engineer

**AGREEMENT  
BETWEEN  
DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
AND  
CITY OF SANDY SPRINGS  
FOR  
TRANSPORTATION FACILITY IMPROVEMENTS**

This Framework Agreement is made and entered into this 19<sup>th</sup> day of January, 2014 by and between the DEPARTMENT OF TRANSPORTATION, an agency of the State of Georgia, hereinafter called the "DEPARTMENT", and the CITY OF SANDY SPRINGS, acting by and through its Mayor and City Council, hereinafter called the "LOCAL GOVERNMENT".

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

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

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

**WHEREAS, the DEPARTMENT has provided an estimated cost to the LOCAL GOVERNMENT for its participation in certain activities of the PROJECT; and**

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

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

**1. The LOCAL GOVERNMENT has applied for and received "Qualification Certification" to administer federal-aid projects. The GDOT Local Administered Project (LAP) Certification Committee has reviewed, confirmed and approved the certification for the LOCAL GOVERNMENT to develop federal project(s) within the scope of its certification using the DEPARTMENT'S Local Administered Project Manual procedures. The LOCAL GOVERNMENT shall contribute to the PROJECT by funding all or certain portions of the PROJECT costs for the preconstruction engineering (design) activities,**

Revised: 12/2011

hereinafter referred to as "PE", all reimbursable utility relocations, all non-reimbursable utilities owned by the LOCAL GOVERNMENT, railroad costs, right of way acquisitions and construction, as specified in Attachment "A", affixed hereto and incorporated herein by reference. In addition, the September 17, 2010 Planning Office memorandum titled "Preliminary Engineering Oversight for Project Managers/Project Delivery Staff", outlines the five (5) conditions when the LOCAL GOVERNMENT will be requested to fund the PE oversight activities at 100%, and is enclosed as Attachment "C" and incorporated herein by reference. Expenditures incurred by the LOCAL GOVERNMENT prior to the execution of this AGREEMENT or subsequent funding agreements shall not be considered for reimbursement by the DEPARTMENT. PE expenditures incurred by the LOCAL GOVERNMENT after execution of this AGREEMENT shall be reimbursed by the DEPARTMENT once a written notice to proceed is given by the DEPARTMENT.

2. The DEPARTMENT shall contribute to the PROJECT by funding all or certain portions of the PROJECT costs for the PE, right of way acquisitions, reimbursable utility relocations, railroad costs, or construction (specified in Attachment "A") affixed hereto and incorporated herein by reference, and none of the five (5) conditions apply from the Planning Office memorandum dated September 17, 2010 (specified in Attachment "C").

3. The DEPARTMENT shall provide a PE Oversight Estimate to the LOCAL GOVERNMENT, if appropriate, appended as Attachment "D" and incorporated by reference as if fully set out herein. The LOCAL GOVERNMENT will be responsible for

Revised: 12/2011

providing payment, which represents 100% of the DEPARTMENT's PE Oversight Estimate at the time of the Project Framework Agreement execution.

If at any time the PE Oversight funds are depleted within \$5,000 of the remaining PE Oversight balance and project activities and tasks are still outstanding, the LOCAL GOVERNMENT shall, upon request, make additional payment to the DEPARTMENT. The payment shall be determined by prorating the percentage complete and using the same estimate methodology as provided in Attachment "D". If there is an unused balance after completion of all tasks and phases of the project, then pending a final audit, the remainder will be refunded to the sponsor.

4. It is understood and agreed by the DEPARTMENT and the LOCAL GOVERNMENT that the funding portion as identified in Attachment "A" of this Agreement only applies to the PE. The Right of Way and Construction funding estimate levels as specified in Attachment "A" are provided herein for planning purposes and do not constitute a funding commitment for right of way and construction. The DEPARTMENT will prepare LOCAL GOVERNMENT Specific Activity Agreements for funding applicable to other activities when appropriate.

Further, the LOCAL GOVERNMENT shall be responsible for repayment of any expended federal funds if the PROJECT does not proceed forward to completion due to a lack of available funding in future PROJECT phases, changes in local priorities or

cancellation of the PROJECT by the LOCAL GOVERNMENT without concurrence by the DEPARTMENT.

5. In accordance with Georgia Code 32-2-2, the LOCAL GOVERNMENT shall be responsible for all costs for the continual maintenance and operations of any and all sidewalks and the grass strip between the curb and sidewalk within the PROJECT limits. The LOCAL GOVERNMENT shall also be responsible for the continual maintenance and operation of all lighting systems installed to illuminate any roundabouts constructed as part of this PROJECT. Furthermore, the LOCAL GOVERNMENT shall also be responsible for the maintaining of all landscaping installed as part of any roundabout constructed as part of this PROJECT.

6. Both the LOCAL GOVERNMENT and the DEPARTMENT hereby acknowledge that Time is of the Essence. It is agreed that both parties shall adhere to the schedule of activities currently established in the approved Transportation Improvement Program/State Transportation Improvement Program, hereinafter referred to as "TIP/STIP". Furthermore, all parties shall adhere to the detailed project schedule as approved by the DEPARTMENT, attached as Attachment "B" and incorporated herein by reference. In the completion of respective commitments contained herein, if a change in the schedule is needed, the LOCAL GOVERNMENT shall notify the DEPARTMENT in writing of the proposed schedule change and the DEPARTMENT shall acknowledge the change through written response letter, provided that the DEPARTMENT shall have final authority for approving any change.

Revised: 12/2011

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

7. The LOCAL GOVERNMENT shall certify that the regulations for "CERTIFICATION OF COMPLIANCES WITH FEDERAL PROCUREMENT REQUIREMENTS, STATE AUDIT REQUIREMENTS, and FEDERAL AUDIT REQUIREMENTS" are understood and will comply in full with said provisions.

8. The LOCAL GOVERNMENT shall accomplish the PE activities for the PROJECT. The PE activities shall be accomplished in accordance with the DEPARTMENT's Plan Development Process hereinafter referred to as "PDP", the applicable guidelines of the American Association of State Highway and Transportation Officials, hereinafter referred to as "AASHTO", the DEPARTMENT's Standard Specifications Construction of Transportation Systems, and all applicable design guidelines and policies of the DEPARTMENT to produce a cost effective PROJECT. Failure to follow the PDP and all applicable guidelines and policies will jeopardize the use of Federal Funds in some or all categories outlined in this agreement, and it shall be the responsibility of the LOCAL GOVERNMENT to make up the loss of that funding. The LOCAL GOVERNMENT's responsibility for PE activities shall include, but is not limited to the following items:

a. Prepare the PROJECT Concept Report and Design Data Book in accordance with the format used by the DEPARTMENT. The concept for the PROJECT shall be developed to accommodate the future traffic volumes as generated by the LOCAL GOVERNMENT as provided for in paragraph 8b and approved by the DEPARTMENT. The concept report shall be approved by the DEPARTMENT prior to the LOCAL GOVERNMENT beginning further development of the PROJECT plans. It is recognized by the parties that the approved concept may be updated or modified by the LOCAL GOVERNMENT as required by the DEPARTMENT and re-approved by the DEPARTMENT during the course of PE due to updated guidelines, public input, environmental requirements, Value Engineering recommendations, Public Interest Determination (PID) for utilities, utility/railroad conflicts, or right of way considerations.

b. Prepare a Traffic Study for the PROJECT that includes Average Daily Traffic, hereinafter referred to as "ADT", volumes for the base year (year the PROJECT is expected to be open to traffic) and design year (base year plus 20 years) along with Design Hour Volumes, hereinafter referred to as "DHV", for the design year. DHV includes morning (AM) and evening (PM) peaks and other significant peak times. The Study shall show all through and turning movement volumes at intersections for the ADT and DHV volumes and shall indicate the percentage of trucks on the facility. The Study shall also include signal warrant evaluations for any additional proposed signals on the PROJECT.

c. Prepare environmental studies, documentation reports and complete Environmental Document for the PROJECT along with all environmental re-

evaluations required that show the PROJECT is in compliance with the provisions of the National Environmental Policy Act or the Georgia Environmental Policy Act as per the DEPARTMENT's Environmental Procedures Manual, as appropriate to the PROJECT funding. This shall include any and all archaeological, historical, ecological, air, noise, community involvement, environmental justice, flood plains, underground storage tanks, and hazardous waste site studies required. The completed Environmental Document approval shall occur prior to Right of Way funding authorization. A re-evaluation is required for any design change as described in Chapter 7 of the Environmental Procedures Manual. In addition, a re-evaluation document approval shall occur prior to any Federal funding authorizations if the latest approved document is more than 6 months old. The LOCAL GOVERNMENT shall submit to the DEPARTMENT all studies, documents and reports for review and approval by the DEPARTMENT, the FHWA and other environmental resource agencies. The LOCAL GOVERNMENT shall provide Environmental staff to attend all PROJECT related meetings where Environmental issues are discussed. Meetings include, but are not limited to, concept, field plan reviews and value engineering studies.

d. Prepare all PROJECT public hearing and public information displays and conduct all required public hearings and public information meetings with appropriate staff in accordance with DEPARTMENT practice.

e. Perform all surveys, mapping, soil investigations and pavement evaluations needed for design of the PROJECT as per the appropriate DEPARTMENT Manual.

f. Perform all work required to obtain all applicable PROJECT permits, including, but not limited to, Cemetery, TVA and US Army Corps of Engineers permits, Stream Buffer Variances and Federal Emergency Management Agency (FEMA) approvals. The LOCAL GOVERNMENT shall provide all mitigation required for the project, including but not limited to permit related mitigation. All mitigation costs are considered PE costs. PROJECT permits and non-construction related mitigation must be obtained and completed 3 months prior to the scheduled let date. These efforts shall be coordinated with the DEPARTMENT.

g. Prepare the stormwater drainage design for the PROJECT and any required hydraulic studies for FEMA Floodways within the PROJECT limits. Acquire of all necessary permits associated with the Hydrology Study or drainage design.

h. Prepare utility relocation plans for the PROJECT following the DEPARTMENT's policies and procedures for identification, coordination and conflict resolution of existing and proposed utility facilities on the PROJECT. These policies and procedures, in part, require the Local Government to submit all requests for existing, proposed, and relocated facilities to each utility owner within the project area. Copies of all such correspondence, including executed agreements for reimbursable utility/railroad relocations, shall be forwarded to the DEPARTMENT's Project Manager and the District Utilities Engineer and require that any conflicts with the PROJECT be resolved by the LOCAL GOVERNMENT. If it is determined that the PROJECT is located on an on-system route or is a DEPARTMENT LET PROJECT, the LOCAL GOVERNMENT and the District Utilities Engineer shall ensure that permit applications are approved for each utility company in conflict with

the project. If it is determined through the DEPARTMENT's Project Manager and State Utilities Office during the concept or design phases the need to utilize Overhead/Subsurface Utility Engineering, hereinafter referred to as "SUE", to obtain the existing utilities, the LOCAL GOVERNMENT shall be responsible for acquiring those services. SUE costs are considered PE costs.

i. Prepare, in English units, Preliminary Construction plans, Right of Way plans and Final Construction plans that include the appropriate sections listed in the Plan Presentation Guide, hereinafter referred to as "PPG", for all phases of the PDP. All drafting and design work performed on the project shall be done utilizing Microstation V8i and InRoads software respectively using the DEPARTMENT's Electronic Data Guidelines. The LOCAL GOVERNMENT shall further be responsible for making all revisions to the final right of way plans and construction plans, as deemed necessary by the DEPARTMENT, for whatever reason, as needed to acquire the right of way and construct the PROJECT.

j. Prepare PROJECT cost estimates for construction, Right of Way and Utility/railroad relocation at the following project stages: Concept, Preliminary Field Plan Review, Right of Way plan approval (Right of Way cost only), Final Field Plan Review and Final Plan submission using the applicable method approved by the DEPARTMENT. The cost estimates shall also be updated annually if the noted project stages occur at a longer frequency. Failure of the LOCAL GOVERNMENT to provide timely and accurate cost estimates may delay the PROJECT's implementation until additional funds can be identified for right of way or construction, as applicable.

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

l. Provide certification, by a Level II Certified Design Professional that the Erosion Control Plans have been prepared under the guidance of the certified professional in accordance with the current Georgia National Pollutant Discharge Elimination System.

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

9. The Primary Consultant firm or subconsultants hired by the LOCAL GOVERNMENT to provide services on the PROJECT shall be prequalified with the DEPARTMENT in the appropriate area-classes. The DEPARTMENT shall, on request, furnish the LOCAL GOVERNMENT with a list of prequalified consultant firms in the appropriate area-classes. The LOCAL GOVERNMENT shall comply with all applicable state and federal regulations for the procurement of design services and in accordance with the Brooks Architect-Engineers Act of 1972, better known as the Brooks Act, for any consultant hired to perform work on the PROJECT.

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

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

12. The LOCAL GOVERNMENT unless otherwise noted in Attachment "A" shall be responsible for funding all LOCAL GOVERNMENT owned utility relocations and all other reimbursable utility/railroad costs. The utility costs shall include but are not limited to PE, easement acquisition, and construction activities necessary for the utility/railroad to accommodate the PROJECT. The terms for any such reimbursable relocations shall be laid out in an agreement that is supported by plans, specifications, and itemized costs of the work agreed upon and shall be executed prior to certification by the DEPARTMENT. The LOCAL GOVERNMENT shall certify via written letter to the DEPARTMENT's Project Manager and District Utilities Engineer that all Utility owners' existing and proposed facilities are shown on the plans with no conflicts 3 months prior

Revised: 12/2011

to advertising the PROJECT for bids and that any required agreements for reimbursable utility/railroad costs have been fully executed. Further, this certification letter shall state that the LOCAL GOVERNMENT understands that it is responsible for the costs of any additional reimbursable utility/railroad conflicts that arise during construction.

13. The DEPARTMENT will be responsible for all railroad coordination on DEPARTMENT Let and/or State Route (On-System) projects; the LOCAL GOVERNMENT shall address concerns, comments, and requirements to the satisfaction of the Railroad and the DEPARTMENT. If the LOCAL GOVERNMENT is shown to LET the construction in Attachment "A" on off-system routes, the LOCAL GOVERNMENT shall be responsible for all railroad coordination and addressing concerns, comments, and requirements to the satisfaction of the Railroad and the DEPARTMENT for PROJECT.

14. The LOCAL GOVERNMENT shall be responsible for acquiring a Value Engineering Consultant for the DEPARTMENT to conduct a Value Engineering Study if the total estimated PROJECT cost is \$10 million or more. The Value Engineering Study cost is considered a PE cost. The LOCAL GOVERNMENT shall provide project related design data and plans to be evaluated in the study along with appropriate staff to present and answer questions about the PROJECT to the study team. The LOCAL GOVERNMENT shall provide responses to the study recommendations indicating whether they will be implemented or not. If not, a valid response for not implementing

shall be provided. Total project costs include PE, right of way, and construction, reimbursable utility/railroad costs.

15. The LOCAL GOVERNMENT, unless shown otherwise on Attachment "A", shall acquire the Right of way in accordance with the law and the rules and regulations of the FHWA including, but not limited to, Title 23, United States Code; 23 CFR 710, et. Seq., and 49 CFR Part 24 and the rules and regulations of the DEPARTMENT. Upon the DEPARTMENT's approval of the PROJECT right of way plans, verification that the approved environmental document is valid and current, a written notice to proceed will be provided by the DEPARTMENT for the LOCAL GOVERNMENT to stake the right of way and proceed with all pre-acquisition right of way activities. The LOCAL GOVERNMENT shall not proceed to property negotiation and acquisition whether or not the right of way funding is Federal, State or Local, until the right of way agreement named "Contract for the Acquisition of Right of Way" prepared by the DEPARTMENT's Office of Right of Way is executed between the LOCAL GOVERNMENT and the DEPARTMENT. Failure of the LOCAL GOVERNMENT to adhere to the provisions and requirements specified in the acquisition contract may result in the loss of Federal funding for the PROJECT and it will be the responsibility of the LOCAL GOVERNMENT to make up the loss of that funding. Right of way costs eligible for reimbursement include land and improvement costs, property damage values, relocation assistance expenses and contracted property management costs. Non reimbursable right of way costs include administrative expenses such as appraisal, consultant, attorney fees and any in-house property management or staff expenses. The LOCAL GOVERNMENT

Revised: 12/2011

shall certify that all required right of way is obtained and cleared of obstructions, including underground storage tanks, 3 months prior to advertising the PROJECT for bids.

16. The DEPARTMENT unless otherwise shown in Attachment "A" shall be responsible for Letting the PROJECT to construction, solely responsible for executing any agreements with all applicable utility/railroad companies and securing and awarding the construction contract for the PROJECT when the following items have been completed and submitted by the LOCAL GOVERNMENT:

- a. Submittal of acceptable PROJECT PE activity deliverables noted in this Agreement.
- b. Certification that all needed rights of way have been obtained and cleared of obstructions.
- c. Certification that the environmental document is current and all needed permits and mitigation for the PROJECT have been obtained.
- d. Certification that all Utility/Railroad facilities, existing and proposed, within the PROJECT limits are shown, any conflicts have been resolved and reimbursable agreements, if applicable, are executed.

If the LOCAL GOVERNMENT is shown to LET the construction in Attachment "A", the LOCAL GOVERNMENT shall provide the above deliverables and certifications and shall follow the requirements stated in Chapters 10, 11, 12 and 13 of the DEPARTMENT's Local Administered Project Manual. The LOCAL GOVERNMENT

shall be responsible for providing qualified construction oversight with their personnel or by employing a Consultant firm prequalified in Area Class 8.01 to perform construction oversight. The LOCAL GOVERNMENT shall be responsible for employing a GDOT prequalified consultant in area classes 6.04a and 6.04b for all materials testing on the PROJECT, with the exception of field concrete testing. All materials testing, including field concrete testing shall be performed by GDOT certified technicians who are certified for the specific testing they are performing on the PROJECT. The testing firm(s) and the individual technicians must be submitted for approval prior to Construction.

17. The LOCAL GOVERNMENT shall provide a review and recommendation by the engineer of record concerning all shop drawings prior to the DEPARTMENT review and approval. The DEPARTMENT shall have final authority concerning all shop drawings.

18. The LOCAL GOVERNMENT agrees that all reports, plans, drawings, studies, specifications, estimates, maps, computations, computer files and printouts, and any other data prepared under the terms of this Agreement shall become the property of the DEPARTMENT if the PROJECT is being let by the DEPARTMENT. This data shall be organized, indexed, bound, and delivered to the DEPARTMENT no later than the advertisement of the PROJECT for letting. The DEPARTMENT shall have the right to use this material without restriction or limitation and without compensation to the LOCAL GOVERNMENT.

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

20. The DEPARTMENT shall be furnished with a copy of all contracts and agreements between the LOCAL GOVERNMENT and any other agency or contractor associated with construction activities. The DEPARTMENT's Project Manager shall be the primary point of contact unless otherwise specified.

21. The LOCAL GOVERNMENT shall provide the DEPARTMENT with a detailed project schedule that reflects milestones, deliverables with durations for all pertinent

activities to develop critical path elements. An electronic project schedule shall be submitted to the Project Manager after execution of this agreement.

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

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

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

DEPARTMENT OF TRANSPORTATION

BY: [Signature]  
Commissioner

ATTEST: [Signature]  
Treasurer



LOCAL GOVERNMENT NAME

BY: [Signature]  
Eva Galambos Tiberio DeJulio  
Mayor, Pro Tempore

Signed, sealed and delivered this 13<sup>th</sup> day of May, 2013 in the presence of:

[Signature]  
Witness

[Signature]  
Notary Public



This Agreement approved by Local Government, the City of May, 2013

Attest  
[Signature]  
Michael Casey, City Clerk



FEIN: 20-3767748

**Attachment "A" Funding Sources and Distribution**  
 Project No.: 0012629 Sponsor: City of Sandy Springs

Attach "Project Manager" Project Charging Form for Approval

Preliminary Engineering - Phase I <sup>1</sup>				GDOT Oversight for PE (Phase I) <sup>2</sup>			Preliminary Engineering Grand Total (Phase I)		
Percentage	PE Amount	Maximum PE Participation Amount (\$)	Participant	Percentage	Amount	Participant	Percentage	Amount	
80%	\$120,000.00	\$120,000.00	Federal	RDV/DI	\$0.00	Federal	80%	\$120,000.00	
0%	\$0.00	\$0.00	State	RDV/DI	\$0.00	State	0%	\$0.00	
20%	\$0.00	N/A	Local	RDV/DI	\$0.00	Local	20%	\$0.00	
0%	\$0.00	\$0.00	Other	RDV/DI	\$0.00	Other	0%	\$0.00	
100%	\$120,000.00			RDV/DI	\$0.00		100%	\$120,000.00	
<b>Total</b>									

Right of Way Phase II				Right of Way - Phase II <sup>1</sup>				Utility Phase IV		Utility Relocation - Phase IV	
Percentage	ROW Amount	Maximum ROW Participation Amount (\$)	Participant	Percentage	Amount	Participant	Acquisition By:	Percentage	Amount	Percentage	Amount
RDV/DI	\$0.00	\$0.00	Federal	RDV/DI	\$0.00	Federal	Local Government	100%	\$0.00	100%	\$0.00
RDV/DI	\$0.00	\$0.00	State	RDV/DI	\$0.00	State	Local Government				
RDV/DI	\$0.00	N/A	Local	RDV/DI	\$0.00	Local	Local Government				
RDV/DI	\$0.00	\$0.00	Other	RDV/DI	\$0.00	Other	Local Government				
<b>Total</b>											

Construction Phase III				Construction - Phase III <sup>3</sup>				Construction Oversight Phases V & VI		GDOT Oversight for CST (Phase III) <sup>2</sup>	
Percentage	CST Amount	Maximum CST Participation Amount (\$)	Participant	Percentage	Amount	Participant	Letting By:	Percentage	Amount	Percentage	Amount
80%	\$1,200,000.00	\$1,200,000.00	Federal	80%	\$1,200,000.00	Federal	Local Govt	100%	\$0.00	100%	\$0.00
0%	\$0.00	\$0.00	State	0%	\$0.00	State	Local Govt				
20%	\$300,000.00	N/A	Local	20%	\$300,000.00	Local	Local Govt				
0%	\$0.00	\$0.00	Other	0%	\$0.00	Other	Local Govt				
<b>Total</b>											

Summary of Phases I through III				Grand Total - All Phases I through III			
Percentage	TOTAL Amount	Maximum Participation Amount (\$)	Participant	Percentage	TOTAL Amount	Maximum Participation Amount (\$)	Participant
80%	\$1,320,000.00	\$1,320,000.00	Federal	80%	\$1,320,000.00	\$1,320,000.00	Federal
0%	\$0.00	\$0.00	State	0%	\$0.00	\$0.00	State
20%	\$330,000.00	N/A	Local	20%	\$330,000.00	N/A	Local
0%	\$0.00	\$0.00	Other	0%	\$0.00	\$0.00	Other
<b>Total</b>				<b>100%</b>	<b>\$1,650,000.00</b>		

<sup>1</sup>The maximum allowable GDOT participating amounts for PE phase are shown above. The local government will only be reimbursed the percentage of the accrued invoiced amounts up to but not to exceed the maximum amount indicated.

<sup>2</sup>GDOT Oversight for PE (Phase I) is detailed in Attachment "D".

<sup>3</sup> Right-of-Way and Construction amounts shown are for budget planning purposes only.

NOTE: Separate GDOT P.O.s will be established for each funding phase.

Revised: 12/2011

**ATTACHMENT "B" Project Timeline**  
**PI # 0012629 – City of Sandy Springs**

**Proposed Project Timeline**

	Execute Agreement	Month/Year (Approve Concept)	Month/Year (Approve Env. Document)	Month/Year (Authorize Right of Way funds)	Month/Year (Authorize Const. funds)
<b>Environmental Phase</b>					
<b>Concept Phase</b>					
<b>Preliminary Plan Phase</b>					
<b>Right of Way Phase</b>					
		8/2014	9/2014	N/A	1/2015

**Annual Reporting Requirements**

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

Revised: 12/2011

## T-0044 ATMS PROJECT DELIVERY SCHEDULE

**COUNTY:** Fulton County  
**PROJECT SPONSOR:** City of Sandy Springs  
**PI #:** 0012629  
**ARC#:** FN-282

**PROPOSED SCHEDULE:**

Milestone	Proposed Date (MM/YY)	Notes
Consultant Procurement	01/14	
Consultant NTP	03/14	
Concept Team Meeting	03/14	
Concept Report Submitted to GDOT for Approval	06/14	
Concept Approval	08/14	
PCE/CE Approval	09/14	
Re-evaluation Approval	n/a	
PFPR held	10/14	
ROW Plan Approval	11/14	
NTP with ROW Acquisition	n/a	No right-of-way acquisition is anticipated.
ROW Certification	11/14	
FFPR (or if waived, Final Plans submitted to GDOT for approval)	11/14	
Utilities submitted to GDOT for certification	11/14	
Photometric Plans submitted to GDOT	n/a	
Utility Certification	12/14	
Final Plan Approval	12/14	
Photometric Approval	n/a	
NTP w/bidding	01/15	
NTP w/ CST	03/15	

ATTACHMENT "C"

ject 0012829 City of Sandy Springs

D.O.T. 69

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

**FILE** **OFFICE** Planning

**DATE** September 17, 2010

**FROM**   
Angela T. Alexander, State Transportation Planning Administrator

**TO** Todd I. Long, PE, PTOE, Director of Planning  
Gerald M. Ross, PE, Chief Engineer/Deputy Commissioner

**SUBJECT** Preliminary Engineering Oversight for Project Managers/Project Delivery Staff

*Note: This memo supersedes the previous PE Oversight Memo, dated August 17, 2010. PE Oversight funding for Safe Route to School (SRTS) projects are eligible for PE Oversight funds, paid for with funding from the SRTS program. No other changes were made to the memo.*

As you are aware, the Department is unable to continue funding PE oversight with 100% motor fuel funds due to the decline in motor fuel revenues. As a result, the Department needs an established procedure detailing the circumstances under which the Department will fund PE oversight with federal-aid funds (matched with state motor fuel funds) and when the Department will request that the local government/project sponsor fund the Department's expenses associated with PE oversight. The PE Oversight funds will be used to fund staff man-hours and any other associated expenses incurred by any GDOT employee working on the project. Please note that the process detailed below applies equally to routes both on and off the state highway system.

**GDOT Funds PE Oversight with Federal-Aid:**

The Department will fund PE oversight with federal-aid funds (and matching motor fuel funds), only if a subsequent project phase (ROW, UTL, CST) is programmed within the first 4 active years of the currently approved TIP/STIP. The source of federal-aid funds to be used for the PE oversight activities is as follows:

- 1) Projects on the National Highway System will use NHS funds (L050) to finance GDOT's PE oversight expenses
- 2) Projects *not* on the National Highway System but eligible for Surface Transportation Program (STP) funds, will follow one of the scenarios below:
  - a) Projects in urban areas between 5,000 and 199,999 in population will use L200 funds (with MPO approval, if applicable)
  - b) Projects in urban areas with a population greater than 200,000 will use L230 funds (with MPO approval)
  - c) Projects in rural areas with a population less than 5,000 will use L250 funds
  - d) The Department may, at the joint discretion of the Chief Engineer and Director of Planning, apply L240 funds to any federal-aid eligible project

- 3) Projects which have received an earmark in federal legislation, will use a portion of the earmark funding for GDOT's PE oversight expenses, pending MPO approval if applicable. (Note: earmark funded projects could receive PE oversight funding regardless of the funding being programmed within the first 4 active years of a currently approved TIP/STIP).
- 4) Projects funded with Safe Route to School (SRTS) funds will use SRTS funds to finance GDOT's PE oversight expenses, regardless of whether or not a subsequent phase of the project appears in the STIP/TIP.

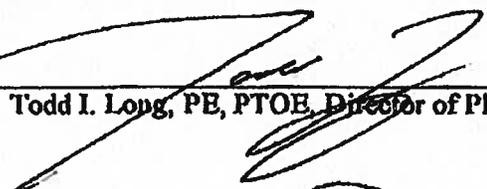
**GDOT Requests Local Government/Project Sponsor to Fund PE Oversight:**

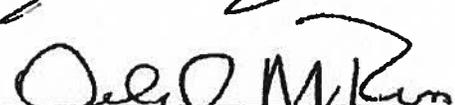
The Department will request that the local government fund PE oversight with 100% local funds under the following conditions:

- 1) A subsequent phase of the project is not programmed within the first 4 active years of the Currently approved TIP/STIP
- 2) The MPO has elected to not approve the use of L200 or L230 funds for GDOT's PE oversight expenses
- 3) The project is funded with CMAQ funds
- 4) The project is funded with an earmark identified in federal legislation and the local government/entity which secured the earmark (or MPO, if applicable) declines to allow GDOT to use a portion of the earmark for PE oversight expenses
- 5) The project is currently funded entirely with local funds; however, the local government intends to secure federal funding at a future date

Once the PE oversight process is implemented, it will be the responsibility of the GDOT Project Manager to work with the GDOT Office of Financial Management to establish an appropriate amount of federal-aid funded PE oversight funding, or work with the local government to secure locally sourced PE oversight funds.

If you approve of this process, please sign below. Once an acceptable process is developed and approved by both the Chief Engineer and Director of Planning, we will provide the finalized process to the Office of Program Control for distribution to the GDOT Project Managers and incorporation into future Project Framework Agreements. If you have any questions, please contact Matthew Fowler at 404-631-1777.

Approved:  \_\_\_\_\_ 7/27/10  
Todd I. Long, PE, PTOE, Director of Planning Date

Approved:  \_\_\_\_\_ 10/7/20  
Gerald M. Ross, PE, Chief Engineer/Deputy Commissioner Date

**ATTACHMENT "D"**

**GDOT Oversight Estimate for Locally Administered Project**

Thursday, April 11, 2013 1:36 PM

<b>PI Number</b>	<input type="text" value="0012629"/>	<b>Project Number</b>	<input type="text"/>
<b>County</b>	<input type="text" value="Fulton"/>	<b>Project Length</b>	<input type="text" value="8.600"/> Miles
<b>Project Manager</b>	<input type="text" value="Burney, Cynthia"/>	<b>Project Cost</b>	<input type="text" value="\$ 1,650,000.00"/>
<b>Project Type</b>	<input type="text" value="ITS (Intelligent Transportation System)"/>		
<b>Project Description</b>	<input type="text" value="SR 9 From Atlanta City Limits to CS 7000/Abernathy Road"/>		
<b>Expected Life of Project</b>	<input type="text" value="2.00"/> Years		

Project Phase	Oversight Hours	Oversight Cost
1. Project Initiation	0	\$ 0.00
2. Concept Development	0	\$ 0.00
3. Database Preparation*	0	\$ 0.00
4. Preliminary Design	0	\$ 0.00
5. Environmental	0	\$ 0.00
6. Final Design	0	\$ 0.00
Travel Expenses		\$ -
<b>Total Oversight Estimate</b>	<b>0</b>	<b>\$ 0.00</b>
Percentage of Project Cost	.00%	

C:\Documents and Settings\vgavalas\My Documents\Oversight Estimate 0012629.dox

**ATTACHMENT "E"**  
**GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT**  
**AFFIDAVIT**

Name of Contracting Entity:

City of Sandy Springs

Contract No. and Name:

0012629

Revised: 12/2011

By executing this affidavit, the undersigned person or entity verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm, or entity which is contracting with the Georgia Department of Transportation has registered with, is authorized to participate in, and is participating in the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91.

The undersigned person or entity further agrees that it will continue to use the federal work authorization program throughout the contract period, and it will contract for the physical performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the undersigned with the information required by O.C.G.A. § 13-10-91(b).

The undersigned person or entity further agrees to maintain records of such compliance and provide a copy of each such verification to the Georgia Department of Transportation within five (5) business days after any subcontractor is retained to perform such service.

103304  
E-Verify / Company Identification Number

[Signature]  
Signature of Authorized Officer or Agent

2/27/2008  
Date of Authorization

Tiberio DeJulio  
Printed Name of Authorized Officer or Agent

Mayor, Pro Tempore  
Title of Authorized Officer or Agent

5/13/2013  
Date

SUBSCRIBED AND SWORN  
BEFORE ME ON THIS THE

13th DAY OF May, 2013

Patricia B. Wheeler  
Notary Public

My Commission Expires: June 24, 2015



## **ATTACHMENT "F"**

### **TITLE VI INTRODUCTION**

As a sub-recipient of federal funds from Georgia Department of Transportation, all municipalities are required to comply with Title VI of the Civil Rights Act of 1964 which provides that:

**"No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, or be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal assistance under This title or carried out under this title."**

Additionally, the Civil Rights Restoration Act of 1987, expanded the definition of the terms "programs and activities" to include all programs or activities of federal recipients, subrecipients, and contractors, whether or not such programs and activities are federally assisted.

The provisions of Title VI apply to all contractors, subcontractors, consultants and suppliers. And is a condition for receiving federal funds. All sub recipients must sign Title VI assurances that they will not discriminate as stated in Title VI of the Civil Rights Act of 1964.

In the event that the sub recipient distributes federal aid funds to second tier entity, the sub-recipient shall include Title VI language in all written documents and will monitor for compliance. If, these assurances are not signed, the City or County government may be subjected to the loss of federal assistance.

All sub recipients that receive federal assistance must also include Federal Highways Administrations 1273 in their contracts. The FHWA 1273 sets out guidance for ensuring non discrimination and encouraging minority participation and outreach.

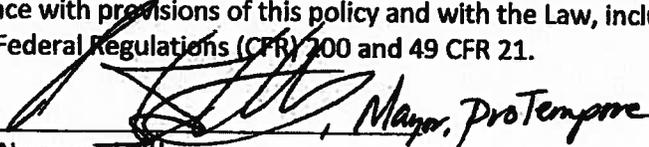
Enclosed you will find Title VI acknowledgment form and the Title VI assurances. The Title VI acknowledgment form and Title VI assurances must be signed by your local government official if it has not been signed.

**ATTACHMENT "F"**

**TITLE VI ACKNOWLEDGEMENT FORM**

The City of Sandy Springs assures that no person shall on the grounds or race, color, national origin or sex as provided by Title VI of the Civil Rights Act of 1964, and the Civil Rights Restoration Act of 1987 be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any City or County sponsored program or activity. The City of Sandy Springs assures that every effort will be made to ensure non discrimination in all of its programs or activities, whether those programs are federally funded or not.

Assurance of compliance therefore falls under the proper authority of the City Council or the County Board of Commissioners. The Title VI Coordinator or Liaison is authorized to ensure compliance with provisions of this policy and with the Law, including the requirements of 23 Code of Federal Regulations (CFR) 200 and 49 CFR 21.

  
\_\_\_\_\_  
Official Name and Title

5/13/2013  
Date

**Citations:**

Title VI of the Civil Rights Act of 1964; 42 USC 2000d to 2000d-4; 42 USC 4601 to 4655; 23 USC 109(h); 23 USC 324; DOT Order 1050.2; EO 12250; EO 12898; 28CFR 50.3

**Other Nondiscrimination Authorities Expanded the range and scope of Title VI coverage and applicability**

- The 1970 Uniform Act (42 USC 4601)
- Section 504 of the 1973 Rehabilitation Act (29 USC 790)
- The 1973 Federal-aid Highway Act (23 USC 324)
- The 1975 Age Discrimination Act (42 USC 6101)
- Implementing Regulations (49 CFR 21 & 23 CFR 200)
- Executive Order 12898 on Environmental Justice (EJ)
- Executive Order 13166 on Limited English Proficiency (LEP)