

# DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

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## OFFICE OF DESIGN POLICY & SUPPORT INTERDEPARTMENTAL CORRESPONDENCE

**FILE** P.I. # 0006700 **OFFICE** Design Policy & Support  
CSMSL-0006-00(700)  
Chatham & Effingham Counties  
GDOT District 5 - Jesup **DATE** November 5, 2014  
Effingham Parkway from SR 119/Effingham  
To SR 30/Chatham  
New Location

**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  
Ben Rabun, State Bridge Engineer  
Kathy Zahul, State Traffic Engineer  
Angela Robinson, Financial Management Administrator  
Lisa Myers, State Project Review Engineer  
Charles "Chuck" Hasty, State Materials Engineer  
Mike Bolden, State Utilities Engineer  
Paul Tanner, Asst. State Transportation Data Administrator  
Attn: Systems & Classification Branch  
Richard Cobb, Statewide Location Bureau  
Katelyn Digioia, State Pedestrian and Bicycle Coordinator  
Karon Ivery, District Engineer  
Will Murphy, District Preconstruction Engineer  
Dallory Rozier, District Utilities Engineer  
Michelle Wright, Project Manager  
BOARD MEMBER - 1st Congressional District

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

Project Type: New Location P.I. Number: 0006700  
 GDOT District: 5 County: Chatham & Effingham  
 Federal Route Number: N/A State Route Number: N/A  
 Project Number: CSMSL-0006-00 (700)

**Project Description:** Effingham Parkway is a new location two-lane roadway that begins at SR 30 in Chatham County and ends at Blue Jay Road in Effingham County.

**Submitted for approval:**

<u>Brend Hale</u> Moreland Altobelli Associates, Inc.	<u>6/26/2014</u> DATE
<u>Toss Allen</u> Effingham County	<u>6/26/2014</u> DATE
<u>Albert Shulby</u> <u>BVA</u> State Program Delivery Engineer	<u>6/30/2014</u> DATE
<u>M. Decker</u> GDOT Project Manager	<u>6-26-14</u> DATE

(2)

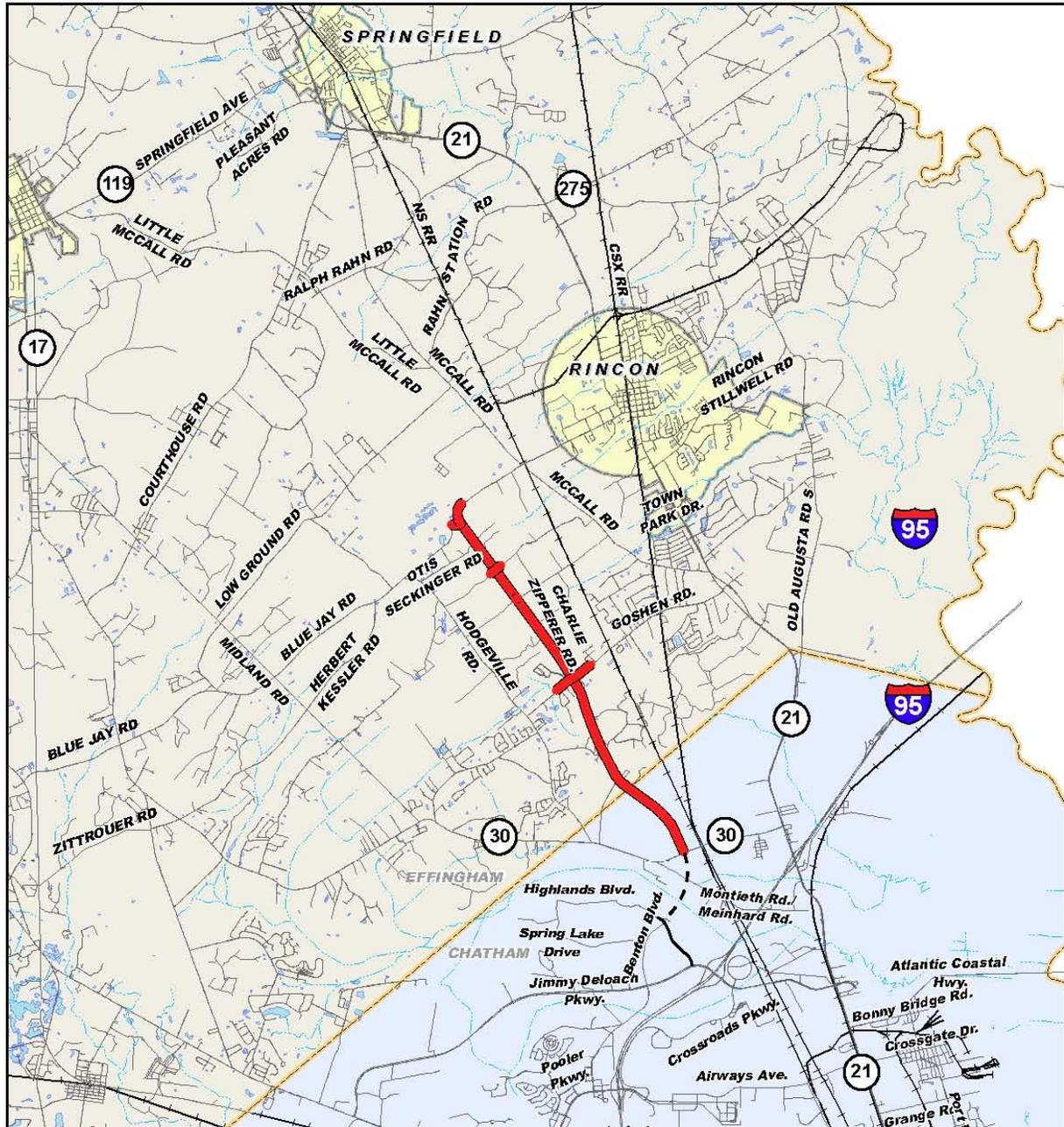
**Recommendation for approval:**

<u>* Hiral Patel / KLP</u> Program Control Administrator	<u>7-30-14</u> DATE
<u>* Kathy Zahal / KLP</u> State Environmental Administrator	<u>8-5-14</u> DATE
<u>* Lisa Myers / KLP</u> State Traffic Engineer	<u>7-22-14</u> DATE
<u>* Jun Birnkammer / KLP</u> Project Review Engineer	<u>7-22-14</u> DATE
<u>* Karen Ivery / KLP</u> State Utilities Engineer	<u>8-5-14</u> DATE
<u>* Ben Rabun / KLP</u> District Engineer	<u>8-4-14</u> DATE
<u>State Bridge Design Engineer</u>	<u>DATE</u>
<u>State Transportation Financial Management Administrator</u>	<u>DATE</u>

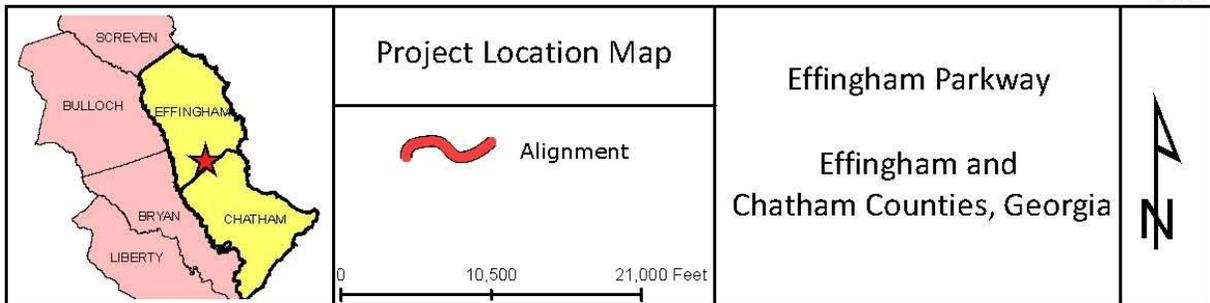
The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Plan (RTP) and/or the State Transportation Improvement Program (STIP).

<u>Cynthia L. Nance</u> State Transportation Planning Administrator	<u>9-25-14</u> DATE
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### PROJECT LOCATION MAP



3-18-14



## **PLANNING AND BACKGROUND**

### **Project Justification Statement:**

#### Background

The southern part of Effingham County has experienced steady population growth since the 1990's. The county population grew by 108% between 1990 (25,687) and 2010 (53,293). As a result of this population growth, traffic volumes in the region are expected to more than double on some roadways of the study area by the year 2040.

In February 2005, the Department added P.I. Number 0006700 to the work program which proposes to construct Effingham Parkway, a new location roadway to address the growing areas in Effingham County and the Savannah metropolitan area. The project was identified for earmark funding in 2005 by the 109<sup>th</sup> US Congress in citation – Project No. 109-59 in the amount of \$3,200,000. This high priority project (HPP) status was established as per provisions of a US Congressional Act referred to as the “Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users” or SAFETEA-LU.

The need for an additional north-south roadway in Effingham County was identified in the Comprehensive Growth Management Plan for Effingham County (1998). In addition, the Comprehensive Economic Development Strategy (CEDS) published in April 2009 by the Coastal Georgia Regional Development Center (CGRDC) identified the need for a new major transportation facility and has stated that such a facility is vital to the transportation system of Effingham Parkway.

In 2008, Effingham Parkway was specifically identified as a needed project for truck traffic and economic development by the Effingham County Multi-modal Transportation Study conducted by GDOT.

SR 21 is the only four-lane north-south classified arterial of Effingham County that provides direct access to I-95. This connectivity provides commuters with access to the north-south interstate system for travel to and from employment centers located in Chatham County and the City of Savannah. This commuter traffic pattern creates a highly directional traffic flow on SR 21, where traffic flow southbound is 75% of total morning peak hour traffic on SR 21 near I-95. With the exception of SR 21, the local roadway network in Effingham County consists solely of two-lane roadways with no continuous north-south connectivity to the interstate system or arterial system of Chatham County that would facilitate the commuter traffic. As growth continues in Effingham County, improved roadway connectivity is needed to accommodate future travel demands of its residents.

Economic growth and sustainability of development in Effingham County is another important need of Effingham County in the study area. Planned commercial and industrial development need improved or new transportation facilities to accommodate the projected traffic generated by these developments.

Historical Crash data from 2006 to 2008 was reviewed to identify roadway segments along SR 21 that are experiencing crash rates and injury rates that are higher than the statewide average for similar classified roadways. Therefore, the crash data analysis indicates that there is a need for reducing the frequency and severity of traffic crashes on SR 21.

P.I. No. 0006700 is needed to support ongoing economic development, improve connectivity options, provide congestion relief and reduce the frequency and severity of traffic crashes on SR 21. The new roadway is proposed to provide access to undeveloped land and sustain industrial and commercial development in the area. Effingham County needs improved north-south connectivity and alternatives for commuters, which is currently provided by SR 21. Due to the increasing traffic volumes, SR 21 is

anticipated to operate at an unacceptable level of service in the future. This proposed project would meet the recommendations of previous transportation and economic development planning efforts by the County and State.

**Existing conditions:**

The new location corridor is an area that has a significant number of wetlands. Every effort will be made to avoid, bridge or mitigate these features. Blue Jay Road, Goshen Road and SR 30 are the primary roadways that would cross the future alignment of the Effingham Parkway.

Utilities include AT&T, Planters Rural Telephone, Windstream, Comcast, Georgia Power Company-Distribution, Effingham County (water), Atlanta Gas Light Company, City of Claxton (gas), Southern Natural Gas Company. The Southern Natural Gas pipeline runs parallel and to the east of the proposed right-of-way of the Effingham Parkway.

**Other projects in the area:**

1. Benton Boulevard Extension. Chatham County plans to construct the Benton Boulevard Extension from Highlands Boulevard to SR 30 with local funds. This roadway would provide an alternate route for SR 30 commuters to reach the I-95 interchange at Jimmy Deloach Parkway.
2. McCall Road Improvement. Effingham County plans to improve the two-lane McCall Road from Blue Jay Road to SR 21 with local funds. This roadway would be resurfaced and widened to 24-foot wide with 2-foot paved shoulders.

**MPO:** Chatham Urban Transportation Study (CUTS) MPO Project ID: 2004-H-06  
The Effingham Parkway from Effingham County Line to SR 30 is located in Chatham County, which is part of the CUTS MPO.

**Regional Commission:** Coastal Georgia RC RC Project ID: RC12-000074

**Congressional District(s):** 1

**Federal Oversight:**  FOS/PoDI  Exempt  State Funded  Other

**Projected Traffic:** ADT

Open Year (2019): 7,080 Design Year (2039): 9,500  
Traffic Projections Performed by: *Moreland Altobelli Associates, Inc.*

**Functional Classification (Mainline):** Rural Minor Arterial

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

Warrants met:  None  Bicycle  Pedestrian  Transit

**Is this a 3R (Resurfacing, Restoration, & Rehabilitation) Project?**  No  Yes

**Pavement Evaluation and Recommendations**

Preliminary Pavement Evaluation Summary Report Required?

No

Yes

Preliminary Pavement Type Selection Report Required?

No

Yes

Feasible Pavement Alternatives:

HMA

PCC

HMA & PCC

**DESIGN AND STRUCTURAL**

**Description of the proposed project:**

The proposed project would consist of constructing a two-lane new location roadway from SR 30 to Blue Jay Road. The project would begin at SR 30 approximately 1.5 miles west of SR 21 and be located across from Chatham County’s proposed Benton Boulevard Extension project. The end of the project would terminate at Blue Jay Road, approximately 3.2 miles west of SR 21. The intersection of Effingham Parkway at Blue Jay Road would be realigned to have Effingham Parkway tie into the east side of Blue Jay Road and the west side of Blue Jay Road would form a T-intersection with Effingham Parkway. The typical section is proposed to have 12-foot lanes with 10-foot outside shoulders (including 6.5-foot paved) on an 80-foot right-of-way. Right-turn and left-turn lanes would be provided at the intersections of SR 30, Goshen Road and Blue Jay Road. The total length of the project is approximately 6.36 miles.

**Major Structures:**

Structure	Existing	Proposed
Bridge #1 over Wetlands	N/A	The approximate dimensions of the bridge are as follows: Length = 570’ Width = 44’
Bridge #2 over Wetlands	N/A	The approximate dimensions of the bridge are as follows: Length = 1946’ Width = 44’
Bridge #3 over Wetlands	N/A	The approximate dimensions of the bridge are as follows: Length = 2329’ Width = 44’
Bridge #4 over Wetlands	N/A	The approximate dimensions of the bridge are as follows: Length = 665’ Width = 44’
Bridge #5 over Wetlands	N/A	The approximate dimensions of the bridge are as follows: Length = 1330’ Width = 44’

**Mainline Design Features: Effingham Parkway – Rural Minor Arterial**

Feature	Existing	Standard*	Proposed
<b>Typical Section</b>			
- Number of Lanes	N/A	2 or 4	2
- Lane Width(s)	N/A	11'-12'	12'
- Median Width & Type	N/A	N/A	none
- Outside Shoulder Width & Type	N/A	10' Total / 6.5' Paved	10' Total / 6.5' Paved
- Outside Shoulder Slope	N/A	6%	6%
- Inside Shoulder Width & Type	N/A	N/A	none
- Sidewalks	N/A	N/A	none
- Auxiliary Lanes	N/A	At intersections as required by traffic volumes	At intersections as required by traffic volumes
- Bike Lanes	N/A	Not Marked. Available on Paved Shoulder	Not Marked. Available on Paved Shoulder
- Posted Speed	N/A	N/A	55
- Design Speed	N/A	55	55
- Min Horizontal Curve Radius	N/A	1060'	1500'
- Maximum Superelevation Rate	N/A	6%	6%
- Grade	N/A	4%	** 4%
- Access Control	N/A	Limited/By Permit	Limited/By Permit
- Right-of-Way Width	N/A	N/A	varies
- Maximum Grade – Sideroad	N/A	7% (collectors & locals) 5% (arterials)	**7% (collectors & locals) **5% (arterials)
- Design Vehicle	N/A	SU	WB-67

\*According to current GDOT design policy if applicable

\*\* Profile has not been developed yet. Due to the level topography, it is not anticipated that grades approaching the maximum will be necessary.

**Major Interchanges/Intersections:** Major intersections with Effingham Parkway are Blue Jay Road, Goshen Road and SR 30

**Lighting required:**  No  Yes

**Off-site Detours Anticipated:**  No  Undetermined  Yes

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

**Design Exceptions to FHWA/AASHTO controlling criteria anticipated:**

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

**Design Variances to GDOT Standard Criteria anticipated:**

GDOT Standard Criteria	Reviewing Office	No	Undeter-- mined	Yes	Appvl Date (if applicable)
1. Access Control/Median Openings	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Intersection Sight Distance	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Intersection Skew Angle	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Lateral Offset to Obstruction	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Rumble Strips	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Safety Edge	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Median Usage	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Roundabout Illumination Levels	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Complete Streets	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. ADA & PROWAG	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. GDOT Construction Standards	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. GDOT Drainage Manual	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. GDOT Bridge & Structural Manual	Bridges	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

VE Study anticipated:  No       Yes       Completed – Date:

**UTILITY AND PROPERTY**

Temporary State Route needed:  No       Yes       Undetermined

Railroad Involvement: None

**Utility Involvements:**

Telephone	AT&T Planters Rural Telephone Windstream
Water	Effingham County
CATV	Comcast
Power	Georgia Power Company-Distribution
Gas	Atlanta Gas Light Company City of Claxton Southern Natural Gas Company

**SUE Required:**  No  Yes  Undetermined

**Public Interest Determination Policy and Procedure recommended (Utilities)?**  No  Yes

**Right-of-Way (ROW):** Existing width: N/A Proposed width: 80-100 ft

Required Right-of-Way anticipated:  None  Yes  Undetermined  
Easements anticipated:  None  Temporary  Permanent  Utility  Other

Anticipated total number of impacted parcels:	32
Displacements anticipated:	Businesses: 0
	Residences: 0
	Other: 0
Total Displacements:	0

**Location and Design approval:**  Not Required  Required

**CONTEXT SENSITIVE SOLUTIONS**

**Issues of Concern:** There are no context sensitive issues or concerns identified within the corridor.

**Context Sensitive Solutions Proposed:** Although there are no specific context sensitive issues identified, the design will provide a 6.5-foot paved shoulder for bicycle use.

**ENVIRONMENTAL & PERMITS**

**Anticipated Environmental Document:**

GEPA:  NEPA:  CE  EA/FONSI  EIS

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

**Environmental Permits/Variations/Commitments/Coordination anticipated:**

Permit/ Variance/ Commitment/ Coordination Anticipated	No	Yes	Remarks
1. U.S. Coast Guard Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2. Forest Service/Corps Land	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3. CWA Section 404 Permit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
4. Tennessee Valley Authority Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5. Buffer Variance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6. Coastal Zone Management Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7. NPDES	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
8. FEMA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
9. Cemetery Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
10. Other Permits	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
11. Other Commitments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
12. Other Coordination	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Agency Coordination meetings, PIOH and PHOH and Stakeholder meetings

Is a PAR required?     No             Yes             Completed

Based on the current estimated impacts to streams and wetlands, an Individual 404 Permit is not anticipated, so a PAR would not be required. Potential impacts to five large wetlands would be minimized by constructing bridges.

**Environmental Comments and Information:**

**NEPA/GEPA:** Upon approval of the Concept report, Air, Noise, History, Ecology, and Archaeology will be prepared and submitted for review and approval. It is anticipated that based on further potential refinement of the project alignment, it may require updates to the History and Ecology reports. All efforts will be made in the study phase to minimize any impacts to potential 4(f) resources, protected species, wetlands, streams, and any Historic or Archaeological resources.

**Ecology:** A preliminary desktop survey for wetlands, streams, and endangered/threatened species has been performed for preparation of the Concept Report. Based on the National Wetlands Inventory Map (NWI) maps of the project area, approximately 16 impact areas to wetlands potentially exist within the survey limits of the proposed project corridor. The identified wetlands likely state and federal waters. The United States Fish and Wildlife Service (USFWS) Information, Planning, and Conservation (IPAC) website lists protected species which are known to potentially occur in Effingham County. All protected species and their associated habitats will be assessed through a field visit to determine the presence/absence of these species and habitats along the proposed project. The ecology impacts shown in the Mitigation Cost Estimate are based on the worst case scenario assuming all features within proposed right-of-way would be impacted.

A United States Army Corps of Engineers (USACE) Regional Permit 01 is anticipated for impacts to jurisdictional waters of the U.S.

**History:** A preliminary desktop survey for History has been performed for preparation of the Concept Report. Based on preliminary database research, six potential National Register of Historic Places eligible properties were identified within the project area potential effect. These potential resources will be further evaluated along with others that are identified during the history field survey.

**Archeology:** No known cemeteries or other publicly documented archeological resources are present in the project corridor. A Phase 1 Archeology Study and SHPO concurrence will be required. No significant issues are anticipated.

**Air Quality:**

Is the project located in a PM 2.5 Non-attainment area?	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
Is the project located in an Ozone Non-attainment area?	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
Is a Carbon Monoxide hotspot analysis required?	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes

**Noise Effects:** The Noise model that will be used is TNM. Potential mitigation measures may include; avoidance, noise barriers, property purchase, and/or noise reduction by soundproofing (only public institutions), if feasible. A type 1 noise study will be required.

**Public Involvement:** Agency coordination meetings will be conducted prior to the development of the environmental document to solicit input from the Federal, State, and Local agencies to determine the level of NEPA documentation for this project. In addition, informal kick-off meetings will be held with the public to introduce the project and solicit input. The agency meetings and public kick off meetings will be held concurrently. A PIOH would be held following concept approval during the EA preparation phase. A PHOH will be held upon approval of the Draft EA.

**Major stakeholders:** Traveling Public, Effingham County, Chatham County, Metropolitan Planning Commission, Georgia Ports Authority, Chamber of Commerce, Retail, Commercial, and Industrial business and services, and residents.

**CONSTRUCTION**

**Issues potentially affecting constructability/construction schedule:** None

**Early Completion Incentives recommended for consideration:**  No  Yes

**COORDINATION, ACTIVITIES, RESPONSIBILITIES, AND COSTS**

**Initial Concept Meeting:** A concept team meeting was held for the initial project that was 17 miles long on December 17, 2007. This meeting included the current project. See attached minutes.

**Concept Meeting:** A meeting was held with GDOT and FHWA to discuss the latest concept for Effingham Parkway on February 6, 2014. See attached minutes.

**Other coordination to date:** None

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

**Project Cost Estimate Summary and Funding Responsibilities:**

	Breakdown of PE	ROW	Reimbursable Utility	CST*	Environmental Mitigation	Total Cost
Funded By	Effingham County	Effingham County	Effingham County	GDOT	GDOT	
\$ Amount	\$2,828,656	\$3,011,000	\$180,000	\$40,409,375	\$548,000	\$46,977,031
Date of Estimate	8/22/2014	5/2/2014	5/5/2014	8/22/2014	4/30/2014	

\*CST Cost includes: Construction, Engineering and Inspection, and Liquid AC Cost Adjustment, *contingencies* *KLL*

**ALTERNATIVES DISCUSSION**

**Alternative selection:** Four alternatives were considered including the no-build alternative.

<b>Preferred Alternative (Alternative 3):</b> Construct a two-lane new location roadway from SR 30 to Blue Jay Road.			
<b>Estimated Property Impacts:</b>	<b>32</b>	<b>Estimated Total Cost:</b>	<b>\$46,977,031</b>
<b>Estimated ROW Cost:</b>	<b>\$3,011,000</b>	<b>Estimated CST Time:</b>	<b>2 years</b>
<b>Rationale:</b> The new location roadway is needed to support ongoing economic development, improve connectivity options, and provide congestion relief and reduce the frequency and severity of traffic crashes on SR 21. This alternative had the least combined impacts on the environment and property owners. There are moderate impacts to wetlands and five large wetlands will be bridged to minimize its impacts. No historic properties are impacted by this alignment. There are no displacements to homes or businesses.			
<b>No-Build Alternative:</b> No construction.			
<b>Estimated Property Impacts:</b>	<b>0</b>	<b>Estimated Total Cost:</b>	<b>0</b>
<b>Estimated ROW Cost:</b>	<b>0</b>	<b>Estimated CST Time:</b>	<b>0</b>
<b>Rationale:</b> The No-Build Alternative would not provide support for economic development or provide congestion relief and reduce the frequency and severity of traffic crashes on SR. 21.			
<b>Alternative 1:</b> This alternative would reconstruct Midland Road from Blue Jay Road to SR 30.			
<b>Rationale:</b> Alternative 1, while reducing the amount of impacted wetlands, the traffic analysis of the this alternative indicates that Alternative 1 would not provide enough traffic congestion relief to SR 21 to satisfy the need and purpose of the roadway. The location of this proposed route would not collect enough of the traffic in the central areas of Effingham County. As a result, some			

of the new employment centers located in central Effingham County would continue to use SR 21 and therefore Alternative 1 would not provide the additional north-south mobility which was identified as one of the purposes of the roadway. Additionally, the economic development would not be facilitated by Midland Road because it is located too far from public utilities and from the urbanized areas of Effingham County.

**Alternative 2:** This alternative would reconstruct Hodgeville Road from Blue Jay Road to SR 30.

**Rationale:** Alternative 2, while reducing the amount of impacted wetlands, the roadway would impact the residential community that lives adjacent to the roadway. Hodgeville Road is a local residential street that would have to be reconstructed to provide for higher vehicular and trucks volumes. New employment centers located in central Effingham County would likely continue to use SR 21 and therefore Alternative 2 would not provide the additional north-south mobility which was identified as one of the purposes of the roadway. Additional, economic development of employment centers could not be supported by this existing residential roadway.

**Roundabout Considerations:** A roundabout at the south end of the project at the intersection of SR 30 and Effingham Parkway/Benton Blvd was considered. The information is contained in Attachment #7 - Signal Warrant Analysis. The roundabout analysis indicates that a single-lane roundabout would operate at a level of service "F" because the through traffic volumes on westbound SR 30 during the AM peak hour are too high to allow the through movement from Benton Blvd to enter the roundabout. Additionally, the roundabout would require more right-of-way and truck traffic radii would have to be accommodated in the design of the roundabout.

Other roundabouts at some of the rural unsignalized intersections were considered as well. However, the need and purpose is to construct a 55-mph new location roadway to facilitate vehicular and truck movements to increase north-south mobility in the region. If roundabouts were introduced, the traffic would have to be posted around 35 mph, which would reduce the functionality of the roadway.

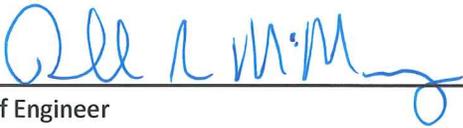
**Comments:** None

## LIST OF ATTACHMENTS/SUPPORTING DATA

1. Concept Layout
2. Typical section
3. Detailed Cost Estimates:
  - a. Construction including Engineering and Inspection
  - b. Completed Fuel & Asphalt Price Adjustment forms
  - c. Right-of-Way
  - d. Utilities
  - e. Environmental Mitigation
4. Crash summaries
5. Traffic diagrams
6. Capacity analysis summary
7. Signal Warrant Analysis
8. Hydrology Study for MS4 Permit
9. Pavement studies
10. Minutes of Concept Meetings
11. Project Framework Agreement

**APPROVALS**

Concur:   
Director of Engineering

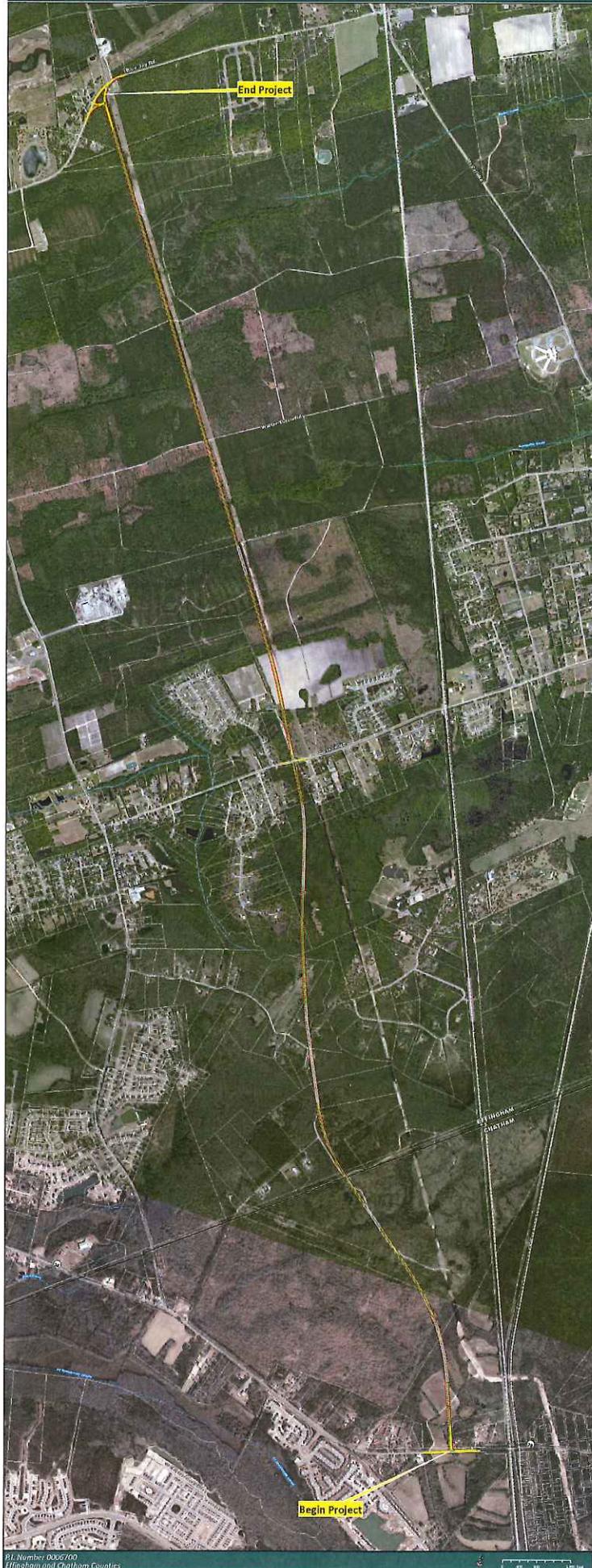
Approve:   
Chief Engineer

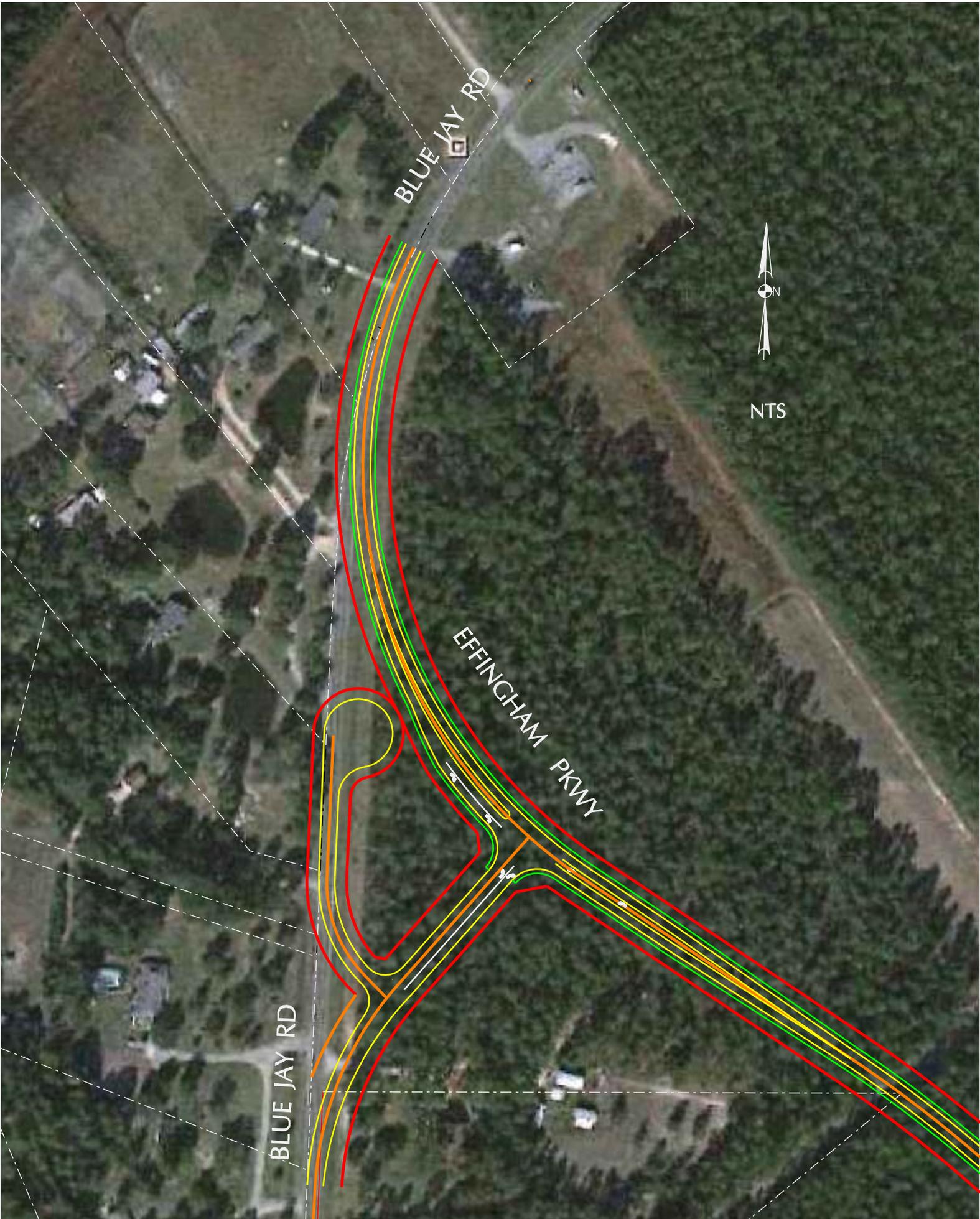
10/10/14  
Date

# Attachment #1

## Concept Layout

# Effingham Parkway





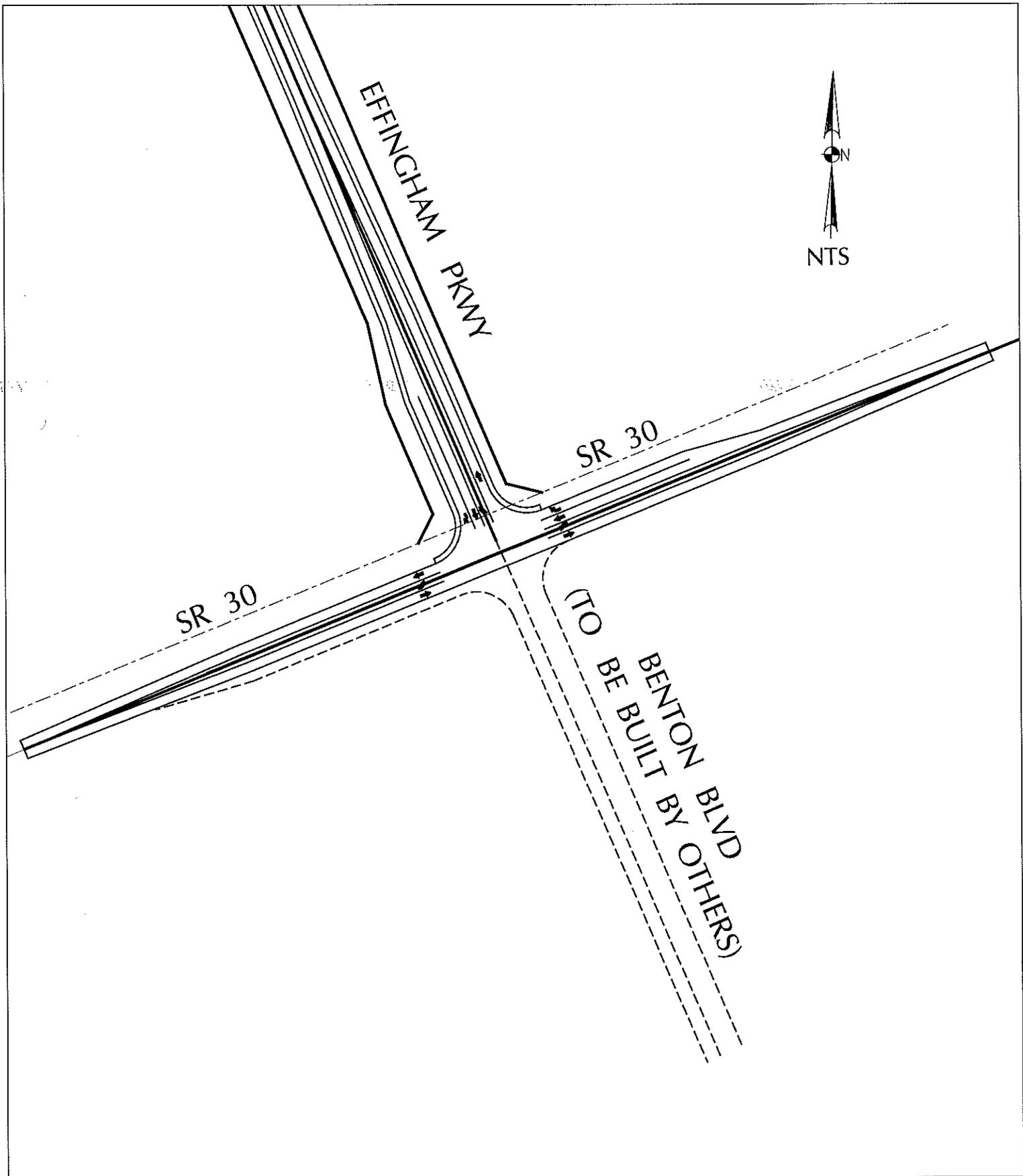
BLUE JAY RD



NTS

EFFINGHAM PKWY

BLUE JAY RD



EFFINGHAM PKWY



SR 30

SR 30

(TO  
BE BUILT BY OTHERS)  
BENTON BLVD

# Attachment #2

## Typical Section



# Attachment #3

## Detailed Cost Estimates

# DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

## INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No.

0006700

OFFICE

Program Delivery

### PROJECT DESCRIPTION

Effingham Parkway from Blue Jay Road in Effingham County to SR 30 in Chatham County

DATE

August 22, 2014

From: Albert V. Shelby, III, State Program Delivery Engineer

To: Lisa L. Myers, State Project Review Engineer

Subject: REVISIONS TO PROGRAMMED COSTS

PROJECT MANAGER

Michelle Wright

MGMT LET DATE

NA

MGMT ROW DATE

NA

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

### LAST ESTIMATE UPDATE

CONSTRUCTION \$ 73,273,835.02

DATE 4/30/2012

RIGHT OF WAY \$ 26,112,084.05

DATE 11/1/2011

UTILITIES \$ 1,195,833.53

DATE 9/20/2012

### REVISED COST ESTIMATES

CONSTRUCTION\* \$ 40,409,375.26

RIGHT OF WAY \$ 3,011,000.00

UTILITIES \$ 180,000.00

\*Cost Contains 15 % Contingency

### REASONS FOR COST INCREASE AND CONTINGENCY JUSTIFICATION:

THE PROJECT HAS BEEN SHORTEN FROM 16.6 MILES TO 6.36 MILES OF NEW LOCATION ROADWAY AND THE TYPICAL SECTION HAS BEEN REDUCED FROM A 4-LANE DIVIDED ROADWAY TO A TWO-LANE UNDIVIDED ROADWAY.

# CONTINGENCY SUMMARY

<b>A. CONSTRUCTION COST ESTIMATE:</b>	\$	32,603,749.55	Base Estimate From CES
<b>B. ENGINEERING AND INSPECTION (E &amp; I):</b>	\$	1,630,187.48	Base Estimate (A) x <span style="border: 1px solid black; padding: 2px 10px;">5</span> %
<b>C. CONTINGENCY:</b>	\$	5,135,090.55	Base Estimate (A) + E & I (B) x <span style="border: 1px solid black; padding: 2px 10px;">15</span> % <a href="#">See % Table in "Risk Based Cost Estimation" Memo</a>
<b>D. TOTAL LIQUID AC ADJUSTMENT:</b>	\$	1,040,347.68	Total From Liquid AC Spreadsheet
<b>E. CONSTRUCTION TOTAL:</b>	\$	40,409,375.26	(A + B + C + D = E)

## REIMBURSABLE UTILITY COSTS

UTILITY OWNER	REIMBURSABLE COST
Georgia Power Company Distribution	\$170,000.00
Southern Natural Gas	\$10,000.00
<b>TOTAL</b>	<b>\$ 180,000.00</b>

**ATTACHMENTS:**

Detailed Cost Estimate Printout From TRAQS  
Liquid AC Adjustment Spreadsheet

GEORGIA DEPARTMENT OF TRANSPORTATION

DATE : 08/22/2014

PAGE : 1

JOB DETAIL ESTIMATE

JOB NUMBER : 0006700  
 DESCRIPTION: EFFINGHAM PARKWAY  
 PI 0006700

SPEC YEAR: 01

ITEMS FOR JOB 0006700

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	150-1000		LS	TRAFFIC CONTROL - PI 0006700	1.000	100000.00	100000.00
0010	201-1500		LS	CLEARING & GRUBBING - PI 0006700	1.000	1600000.00	1600000.00
0019	208-0100		CY	IN PLACE EMBANKMENT	150000.000	6.05	907500.00
0025	207-0203		CY	FOUND BK FILL MATL, TP II	500.000	60.78	30390.76
0039	301-4161		SY	PMIX S-CEM STB BASE X, 8", MT&HL	167000.000	8.93	1491310.00
0040	318-3000		TN	AGGR SURF CRS	100.000	34.99	3499.34
0045	402-1812		TN	RECYL AC LEVELING, INC BM&HL	100.000	100.69	10069.61
0050	402-3121		TN	RECYL AC 25MM SP, GP 1/2, BM&HL	19910.000	68.79	1369638.37
0055	402-3141		TN	RECYL AC 12.5 MM SP, GP 1 OR 2, INCL BM	16500.000	58.49	965085.00
0060	402-3190		TN	RECYL AC 19 MM SP, GP 1 OR 2, INC BM&HL	20130.000	69.06	1390297.37
0065	413-1000		GL	BITUM TACK COAT	10230.000	2.69	27582.74
0080	441-0016		SY	DRIVEWAY CONCRETE, 6 IN TK	400.000	45.91	18367.01
0085	441-0748		SY	CONC MEDIAN, 6 IN	100.000	49.01	4901.20
0099	500-3800		CY	CL A CONC, INCL REINF STEEL	60.000	892.96	53577.71
0100	550-1180		LF	STM DR PIPE 18", H 1-10	2000.000	41.03	82062.60
0105	550-1240		LF	STM DR PIPE 24", H 1-10	2000.000	48.20	96408.42
0110	550-2180		LF	SIDE DR PIPE 18", H 1-10	200.000	31.04	6209.83
0139	603-2180		SY	STN DUMPED RIP RAP, TP 3, 12"	200.000	55.46	11093.00
0144	603-2024		SY	STN DUMPED RIP RAP, TP 1, 24"	2500.000	56.76	141903.40
0145	603-7000		SY	PLASTIC FILTER FABRIC	1570.000	3.61	5671.01
0150	634-1200		EA	RIGHT OF WAY MARKERS	150.000	93.97	14095.91
0155	641-1100		LF	GUARDRAIL, TP T	420.000	40.20	16887.45
0160	641-1200		LF	GUARDRAIL, TP W	3000.000	16.68	50055.03
0170	641-5012		EA	GUARDRAIL ANCHORAGE, TP 12	20.000	2030.49	40609.91
0175	643-8200		LF	BARRIER FENCE (ORANGE), 4 FT	3500.000	1.93	6789.44
0179	668-8012		SF	SAFETY GRATE, TP 2	1000.000	120.00	120000.00
0180	163-0232		AC	TEMPORARY GRASSING	35.000	36.34	1272.20
0185	163-0240		TN	MULCH	1000.000	167.38	167382.52
0190	163-0300		EA	CONSTRUCTION EXIT	6.000	1343.35	8060.12
0200	165-0101		EA	MAINT OF CONST EXIT	6.000	512.13	3072.80
0205	165-0010		LF	MAINT OF TEMP SILT FENCE, TP A	14000.000	0.42	5983.32
0210	165-0030		LF	MAINT OF TEMP SILT FENCE, TP C	30500.000	0.46	14123.33
0220	167-1000		EA	WATER QUALITY MONITORING AND SAMPLING	2.000	344.75	689.51
0225	167-1500		MO	WATER QUALITY INSPECTIONS	24.000	478.19	11476.64
0230	171-0010		LF	TEMPORARY SILT FENCE, TYPE A	14000.000	2.30	32293.52
0235	171-0030		LF	TEMPORARY SILT FENCE, TYPE C	30500.000	3.27	99990.29
0240	700-6910		AC	PERMANENT GRASSING	35.000	574.31	20100.87

GEORGIA DEPARTMENT OF TRANSPORTATION

DATE : 08/22/2014  
 PAGE : 2

JOB DETAIL ESTIMATE

0245	700-7000	TN	AGRICULTURAL LIME	70.000	52.42	3669.54
0250	700-8000	TN	FERTILIZER MIXED GRADE	38.000	494.04	18773.73
0255	700-8100	LB	FERTILIZER NITROGEN CONTENT	2100.000	1.85	3885.40
0264	711-0100	SY	TURF REINFORCING MATTING, TP 1	35000.000	3.40	119000.00
0265	716-2000	SY	EROSION CONTROL MATS, SLOPES	10000.000	1.46	14626.40
0269	999-2015	LS	CONSTRUCTION COMPLETE MS4 WATER TREATMENT PONDS	1.000	600000.00	600000.00
0274	636-1020	SF	HWY SGN, TP1MAT, REFL SH TP3	50.000	13.68	684.20
0275	636-1033	SF	HWY SIGNS, TP1MAT, REFL SH TP 9	100.000	17.28	1728.40
0280	636-2070	LF	GALV STEEL POSTS, TP 7	100.000	6.95	695.28
0285	636-2080	LF	GALV STEEL POSTS, TP 8	260.000	8.67	2255.81
0289	639-3004	EA	STEEL STRAIN POLE, TP IV	4.000	11490.20	45960.80
0290	647-1000	LS	TRAF SIGNAL INSTALLATION NO - EFFINGHAM PKWY AT SR 30	1.000	100000.00	100000.00
0295	653-0120	EA	THERM PVMT MARK, ARROW, TP 2	30.000	78.00	2340.21
0300	653-1704	LF	THERM SOLID TRAF STRIPE, 24", WH	200.000	6.90	1381.33
0305	653-2501	LM	THERMO SOLID TRAF ST, 5 IN, WH	16.375	1601.37	26222.44
0310	653-2502	LM	THERMO SOLID TRAF ST, 5 IN YE	16.375	1604.96	26281.30
0315	653-3501	GLF	THERMO SKIP TRAF ST, 5 IN, WHI	1500.000	0.25	376.20
0320	653-6004	SY	THERM TRAF STRIPING, WHITE	100.000	4.00	400.58
0325	654-1001	EA	RAISED PVMT MARKERS TP 1	450.000	3.42	1542.73
0330	654-1003	EA	RAISED PVMT MARKERS TP 3	200.000	3.28	657.42
0335	657-1085	LF	PRF PL SD PVT MKG, 8", B/W, TP PB	14140.000	4.76	67353.91
0340	657-6085	LF	PRF PL SD PVMT MKG, 8", B/Y, TPPB	14140.000	4.62	65463.68
0350	999-2015	LS	CONSTRUCTION COMPLETE BRIDGE #1- 25080 SF	1.000	1881000.00	1881000.00
0355	999-2015	LS	CONSTRUCTION COMPLETE BRIDGE #2 - 85624 SF	1.000	6421800.00	6421800.00
0360	999-2015	LS	CONSTRUCTION COMPLETE BRIDGE #3 - 102476 SF	1.000	7685700.00	7685700.00
0365	999-2015	LS	CONSTRUCTION COMPLETE BRIDGE #4 - 29260 SF	1.000	2194500.00	2194500.00
0370	999-2015	LS	CONSTRUCTION COMPLETE BRIDGE #5 - 58520 SF	1.000	4389000.00	4389000.00
ITEM TOTAL						32603749.55
INFLATED ITEM TOTAL						32603749.55
TOTALS FOR JOB 0006700						
ESTIMATED COST:						32603749.59
CONTINGENCY PERCENT ( 0.0 ):						0.00
ESTIMATED TOTAL:						32603749.59

PROJ. NO. CSMSL-0006-00(700)  
P.I. NO. 0006700  
DATE 8/15/2014

CALL NO. 9/29/2009

INDEX (TYPE)	DATE	INDEX
REG. UNLEADED	Aug-14	\$ 3.500
DIESEL		\$ -
LIQUID AC		\$ 608.00

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

**LIQUID AC ADJUSTMENTS**

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

**Asphalt**

Price Adjustment (PA)				<b>1033113.6</b>	\$	<b>1,033,113.60</b>
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	972.80		
Monthly Asphalt Cement Price month project let (APL)			\$	608.00		
Total Monthly Tonnage of asphalt cement (TMT)				<b>2832</b>		

ASPHALT	Tons	%AC	AC ton
Leveling	100	5.0%	5
12.5 OGFC		5.0%	0
12.5 mm	16500	5.0%	825
9.5 mm SP		5.0%	0
25 mm SP	19910	5.0%	995.5
19 mm SP	20130	5.0%	1006.5
	<b>56640</b>		<b>2832</b>

**BITUMINOUS TACK COAT**

Price Adjustment (PA)				\$	<b>16,028.90</b>	\$	<b>16,028.90</b>
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	972.80			
Monthly Asphalt Cement Price month project let (APL)			\$	608.00			
Total Monthly Tonnage of asphalt cement (TMT)				<b>43.93888243</b>			

Bitum Tack

Gals	gals/ton	tons
10230	232.8234	43.9388824

**BITUMINOUS TACK COAT (surface treatment)**

Price Adjustment (PA)					<b>0</b>	\$	<b>-</b>
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	972.80			
Monthly Asphalt Cement Price month project let (APL)			\$	608.00			
Total Monthly Tonnage of asphalt cement (TMT)				<b>0</b>			

Bitum Tack

	SY	Gals/SY	Gals	gals/ton	tons
Single Surf. Trmt.	0	0.20	0	232.8234	0
Double Surf. Trmt.		0.44	0	232.8234	0
Triple Surf. Trmt		0.71	0	232.8234	0

**TOTAL LIQUID AC ADJUSTMENT** \$ **1,049,142.50**

GEORGIA DEPARTMENT OF TRANSPORTATION  
PRELIMINARY ROW COST ESTIMATE SUMMARY

Date: 5/2/2014 Project: CSMSL-0006-00(700)  
 Revised: County: Effingham/Chatham  
 PI: 6700

Description: Effingham Parkway in Chatham & Effingham Counties  
 Project Termini: SR 30 to Blue Jay Road

Existing ROW: Varies  
 Required ROW: 80 FT Minimum  
 Parcels: 32

Land and Improvements \$2,407,350.00

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

Valuation Services \$61,250.00

Legal Services \$209,100.00

Relocation \$64,000.00

Demolition \$0.00

Administrative \$269,000.00

TOTAL ESTIMATED COSTS \$3,010,700.00

**TOTAL ESTIMATED COSTS (ROUNDED) \$3,011,000.00**

Preparation Credits	Hours	Signature
Benjamin M. Garland Jr.	2	<i>[Signature]</i>
Michael H. Yee	1	<i>[Signature]</i>

Prepared By: *[Signature]* CG#: 286999  
 Approved By: *[Signature]* CG#: 286999 05/15/2014

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

# DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

## INTERDEPARTMENT CORRESPONDENCE

FILE CSMSL-0006-00(700), PI 0006700, Chatham, Effingham  
Effingham Pkwy from SR 119/Effingham to SR 30/Chatham

OFFICE Jesup

DATE 5-5-2014

FROM Dallery Rozier, District Utilities Engineer

TO Michelle Wright, Project Manager

SUBJECT Revised Preliminary Utility Cost Estimate

As requested by your office, we are furnishing you with a Revised Preliminary Utility Cost Estimate of each Utility with facilities potentially located within the above referenced project limits.

Facility Owner	Non-Reimbursable	Reimbursable	Comments
AT&T	\$37,500.00		
Planters Rural Telephone	\$113,250.00		
Windstream	\$3,000.00		
Comcast	\$25,000.00		
Georgia Power Co -D	\$187,000.00	\$170,000.00	On GPC Easement
Effingham County (water)	\$234,000.00		
Atlanta Gas Light	\$180,000.00		
City of Claxton (Gas)	\$20,000.00		
Southern Natural Gas (Kinder Morgan)		\$10,000.00	On SNG Easement
Totals	\$799,750.00	\$180,000.00	
Total Reimbursement		\$180,000.00	

CC: Angie Robinson, Office of Financial Management;  
Lee Upkins, Assistant State Utilities Engineer  
District Office File  
Utilities Office File



**Moreland Altobelli Associates, Inc.**  
 2211 Beaver Ruin Road, Suite 190  
 Norcross, Georgia 30071  
 Phone: 770-263-5945 Fax: 770-263-0166

**Preliminary Mitigation  
 Cost Estimate**

**Project:** Effingham Parkway  
PI No. 0006700  
 Prepared By: Matt Chamblee  
 Prepared On: 04/28/14

Date	04/28/14
MA Project No.	EFF008
CC:	Project File

As requested for the concept cost estimate of the subject project, a preliminary mitigation cost estimate has been prepared as detailed below. The cost estimate is based on an anticipated cost of \$5,000 per wetland credit and \$60 per stream credit. The impacts are based on NWI mapping of wetlands.

Wetlands Credits	Cost	Stream Credits	Cost
13.7	\$548,000	N/A	N/A
Total Cost	\$548,000		

**Since design plans have not been completed for the preferred alternative, impacts to Waters of the U.S. are based on a worse-case scenario from right-of-way limit to right-of-way limit.**

# Attachment #4 Crash Summaries

### Crash, Injury and Fatality Rates for Roadway Segments in the Project Area

<b>SR 21 from Effingham/Chatham County Line to Goshen Road (1.34 miles) - Rural Minor Arterial</b>									
Year	No. of Crashes	Crash Rate	Statewide Average Crash Rate	No. of Injuries	Injury Rate	Statewide Average Injury Rate	No. of Fatalities	Fatality Rate	Statewide Average Fatality Rate
2006	22	161	179	5	37	62	0	0.00	2.61
2007	23	173	187	6	45	62	0	0.00	2.58
2008	23	173	181	6	45	60	0	0.00	2.53
<b>SR 21 from Goshen Road to Town Park Drive (1.63 miles) - Rural Minor Arterial</b>									
Year	No. of Crashes	Crash Rate	Statewide Average Crash Rate	No. of Injuries	Injury Rate	Statewide Average Injury Rate	No. of Fatalities	Fatality Rate	Statewide Average Fatality Rate
2006	75	419	179	37	207	62	0	0.00	2.61
2007	72	426	187	36	213	62	0	0.00	2.58
2008	69	408	181	43	254	60	0	0.00	2.53
<b>Blue Jay Road from Horsepen Road to SR 21 (4.71 miles) - Rural Major Collector</b>									
Year	No. of Crashes	Crash Rate	Statewide Average Crash Rate	No. of Injuries	Injury Rate	Statewide Average Injury Rate	No. of Fatalities	Fatality Rate	Statewide Average Fatality Rate
2006	32	452	203	8	113	73	0	0.00	3.56
2007	36	515	203	7	100	72	0	0.00	3.55
2008	21	301	194	8	114	68	1	14.31	3.39
<b>McCall Road from Blue Jay Road to SR 21 (5.99 miles) - Rural Minor Collector</b>									
Year	No. of Crashes	Crash Rate	Statewide Average Crash Rate	No. of Injuries	Injury Rate	Statewide Average Injury Rate	No. of Fatalities	Fatality Rate	Statewide Average Fatality Rate
2006	29	431	85	16	238	32	0	0.00	1.31
2007	15	223	91	6	89	33	0	0.00	1.49
2008	15	223	178	6	89	60	0	0.00	2.93

<b>Goshen Road from Hodgeville Road to SR 21 (3.55 miles) - Rural Major Collector</b>									
Year	No. of Crashes	Crash Rate	Statewide Average Crash Rate	No. of Injuries	Injury Rate	Statewide Average Injury Rate	No. of Fatalities	Fatality Rate	Statewide Average Fatality Rate
2006	38	612	203	9	145	73	0	0.00	3.56
2007	33	555	203	9	151	72	0	0.00	3.55
2008	36	605	194	9	151	68	0	0.00	3.39
2007	2	221	514	0	0	126	0	0.00	1.47
2008	1	110	471	0	0	116	0	0.00	1.46
<b>SR 30 from Montieth Road to SR 21 (2.00 miles) - Urban Minor Arterial</b>									
Year	No. of Crashes	Crash Rate	Statewide Average Crash Rate	No. of Injuries	Injury Rate	Statewide Average Injury Rate	No. of Fatalities	Fatality Rate	Statewide Average Fatality Rate
2006	41	833	531	17	346	132	0	0.00	1.51
2007	48	953	514	22	437	126	0	0.00	1.47
2008	26	516	471	19	377	116	0	0.00	1.46

Note: Values for rate of crashes, injuries, and fatalities are per 100 million vehicle-miles traveled.

## Types of Collisions for Major Roadway Segments in the Project Area

<b>SR 21 From Effingham/Chatham County Line to Goshen Road</b>						
Year	Total	Angle	Rear End	Head On	Sideswipe	Hit an Object
2006	22	1	14	0	3	4
2007	23	2	13	0	3	5
2008	23	2	12	1	3	5
<b>SR 21 from Goshen Road to Town Park Drive</b>						
Year	Total	Angle	Rear End	Head On	Sideswipe	Hit an Object
2006	75	18	30	5	8	14
2007	72	18	40	2	4	8
2008	69	22	32	1	9	5
<b>Blue Jay Road from Horsepen Road to SR 21</b>						
Year	Total	Angle	Rear End	Head On	Sideswipe	Hit an Object
2006	32	5	8	2	2	15
2007	36	6	12	2	3	13
2008	21	4	3	3	0	11
<b>McCall Road from Blue Jay Road to SR 21</b>						
Year	Total	Angle	Rear End	Head On	Sideswipe	Hit an Object
2006	29	5	2	0	3	19
2007	15	2	2	1	0	10
2008	15	0	2	0	1	12
<b>Goshen Road from Hodgeville Road to SR 21</b>						
Year	Total	Angle	Rear End	Head On	Sideswipe	Hit an Object
2006	38	5	21	0	4	8
2007	33	3	13	0	4	13
2008	36	5	16	1	3	11
<b>SR 30 from Montieth Road to SR 21</b>						
Year	Total	Angle	Rear End	Head On	Sideswipe	Hit an Object
2006	41	6	24	1	7	3
2007	48	5	26	1	7	9
2008	26	4	13	1	3	5

# Attachment #5 Traffic Diagrams

# Department of Transportation State of Georgia

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## INTERDEPARTMENT CORRESPONDENCE

**FILE** CSMSL-0006-00(700) **OFFICE** Planning  
Chatham & Effingham Counties  
P.I. # 0006700  
**DATE** April 3, 2014

**FROM** Cynthia L. VanDyke, State Transportation Planning Administrator

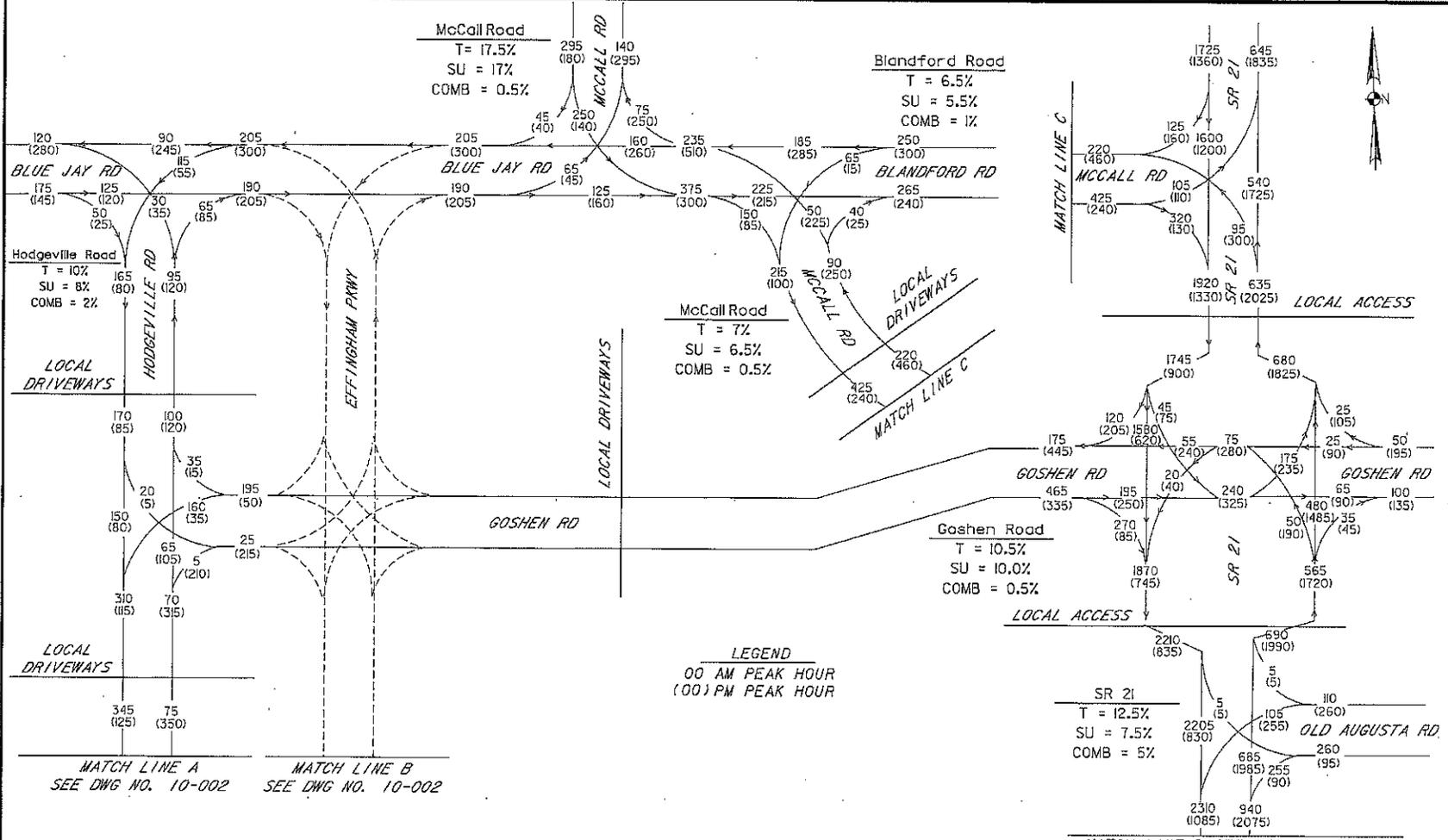
**TO** Albert Shelby, State Program Delivery Engineer  
**Attention:** Michelle Wright

**SUBJECT** **Reviewed Updated** Design Traffic for EFFINGHAM PKWY FROM SR  
119/EFFINGHAM TO SR 30/CHATHAM

Per request, we have reviewed the consultant's design traffic data for the above project. Based on the information furnished, we find the updated design traffic projections to be satisfactory, and approve the updated design traffic volume.

If you have any questions concerning this information please contact  
Andre Washington at (404) 631-1925.

CLV/AMW



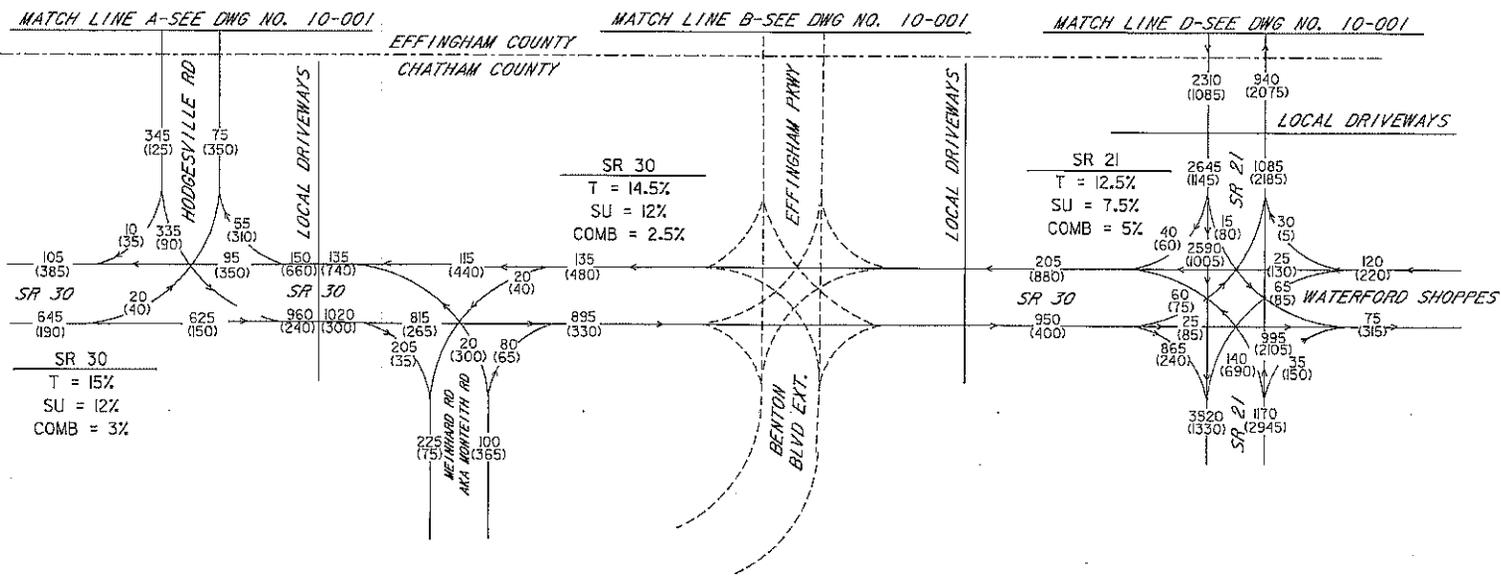
**Moreland Atchell Associates, Inc.**  
 2211 Beaver Run Road  
 Marietta, Georgia 30067  
 Telephone 770-593-9448  
 KP 3/14

**EFFINGHAM & CHATHAM COUNTIES, GEORGIA**

REVISION DATES

STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE:  
**TRAFFIC FLOW DIAGRAMS**  
 CSMSL-0006-00 (700) P. I. NO. 0006700  
 EFFINGHAM PARKWAY  
 2013 PEAK HOUR TRAFFIC

DRAWING NO. **10-001**



**LEGEND**  
00 AM PEAK HOUR  
00 PM PEAK HOUR

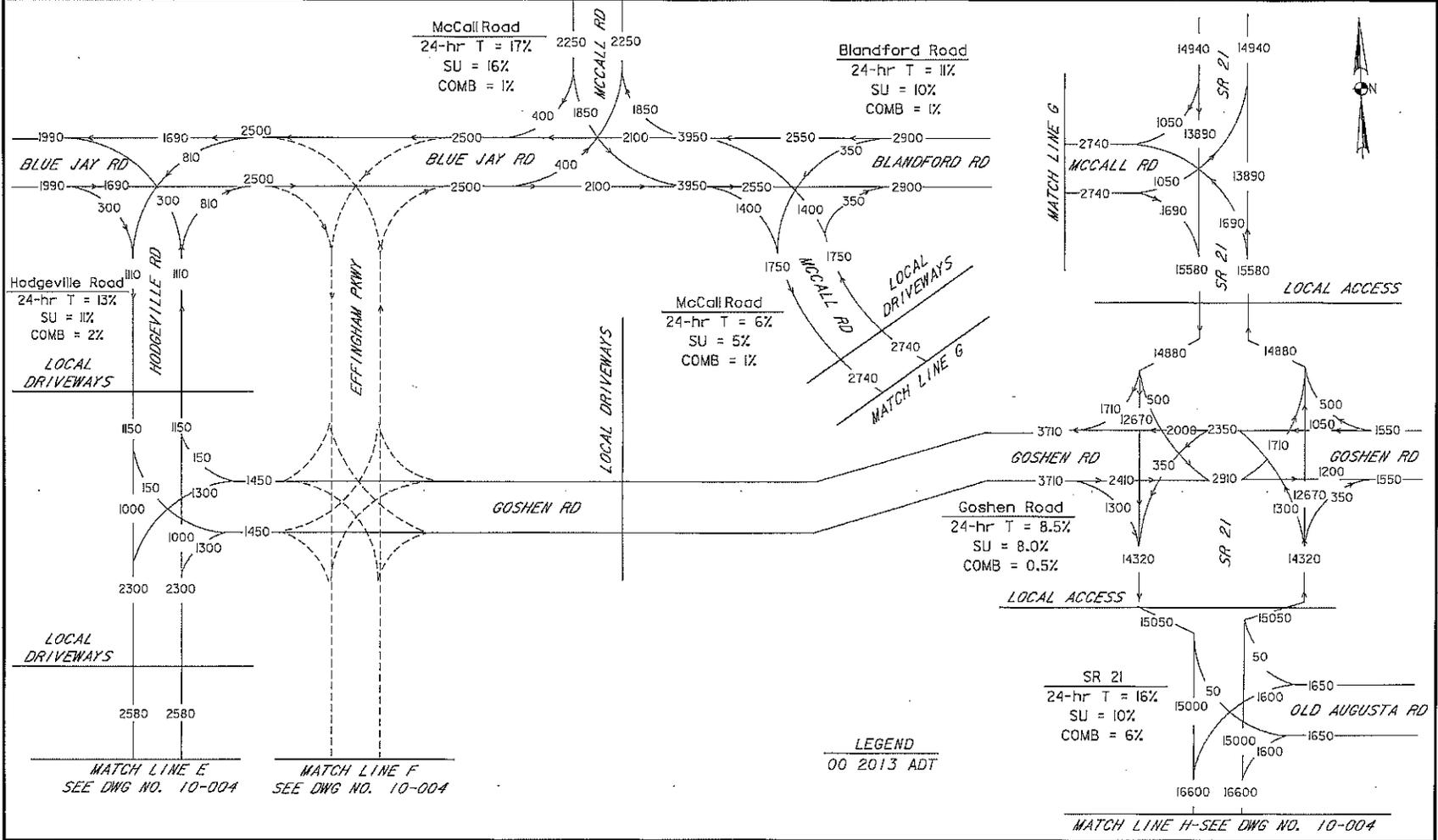
**MA**  
Mazzelland Algebelli  
Associates, Inc.  
2211 Brown Ridge Road  
Norcross, Georgia 30271  
Telephone 1770-285-9748  
KP 3/14

**EFFINGHAM & CHATHAM  
COUNTIES, GEORGIA**

REVISION DATES

STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
OFFICE:  
**TRAFFIC FLOW DIAGRAMS**  
CSMSL-0006-00 (700) P.I. NO. 0006700  
EFFINGHAM PARKWAY  
2013 PEAK HOUR TRAFFIC

10-002



**LEGEND**  
 00 2013 ADT



Meredith Akobelli  
 Associates, Inc.  
 2311 Gower North Road  
 Duluth, GA 30091  
 Telephone 1-770-962-9146

EFFINGHAM & CHATHAM  
 COUNTIES, GEORGIA

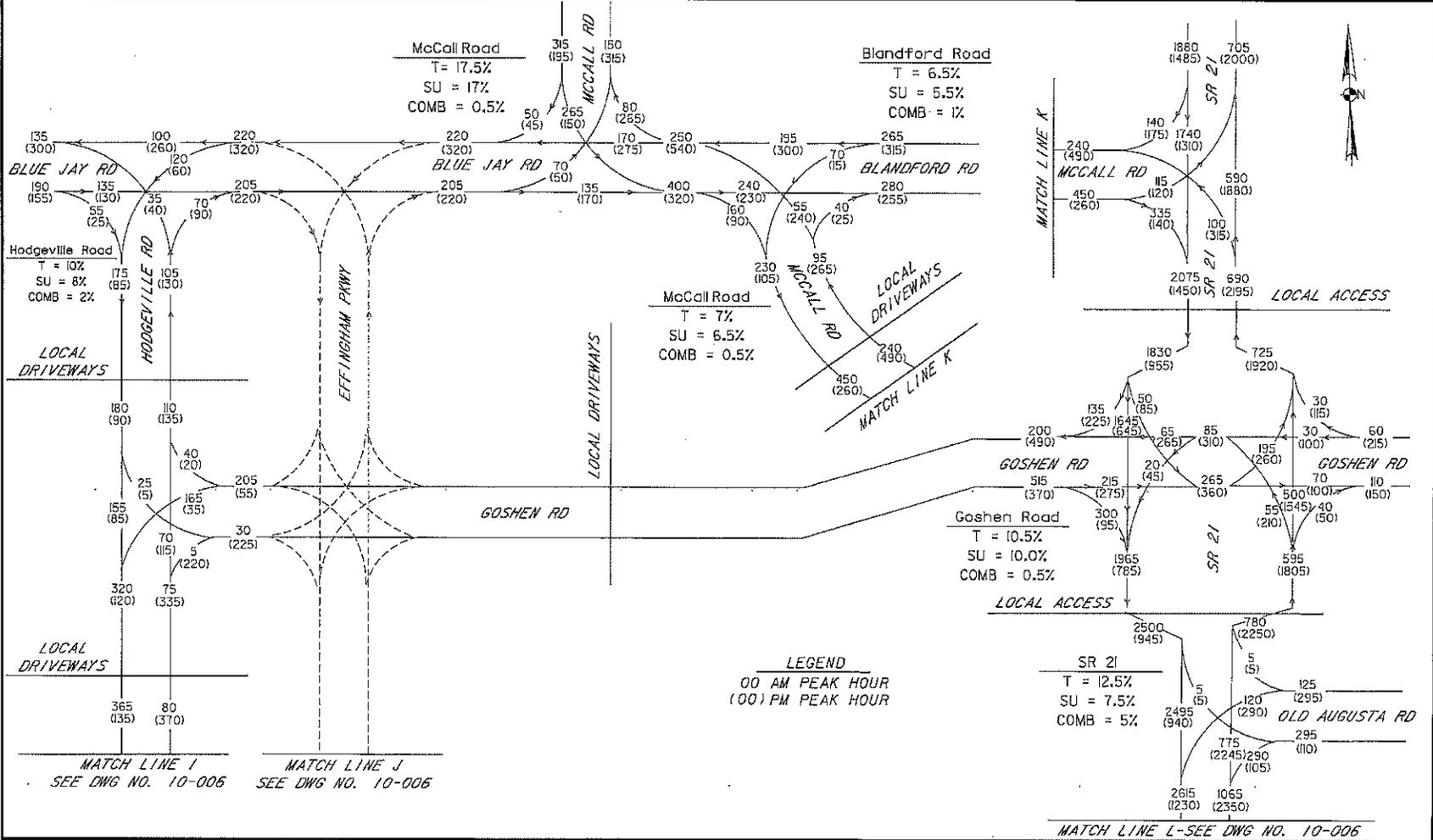
KP 3/14

REVISION DATES

STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE:  
 TRAFFIC FLOW DIAGRAMS  
 CSM-0006-00 (700) P. I. NO. 0006700  
 EFFINGHAM PARKWAY  
 2013 EXISTING ADT

10-003





28866  
 02/23/92



Merleland Atchell  
 Associates, Inc.  
 2711 Bayview Rd  
 Marietta, Georgia 30067  
 Telephone (770) 582-9141

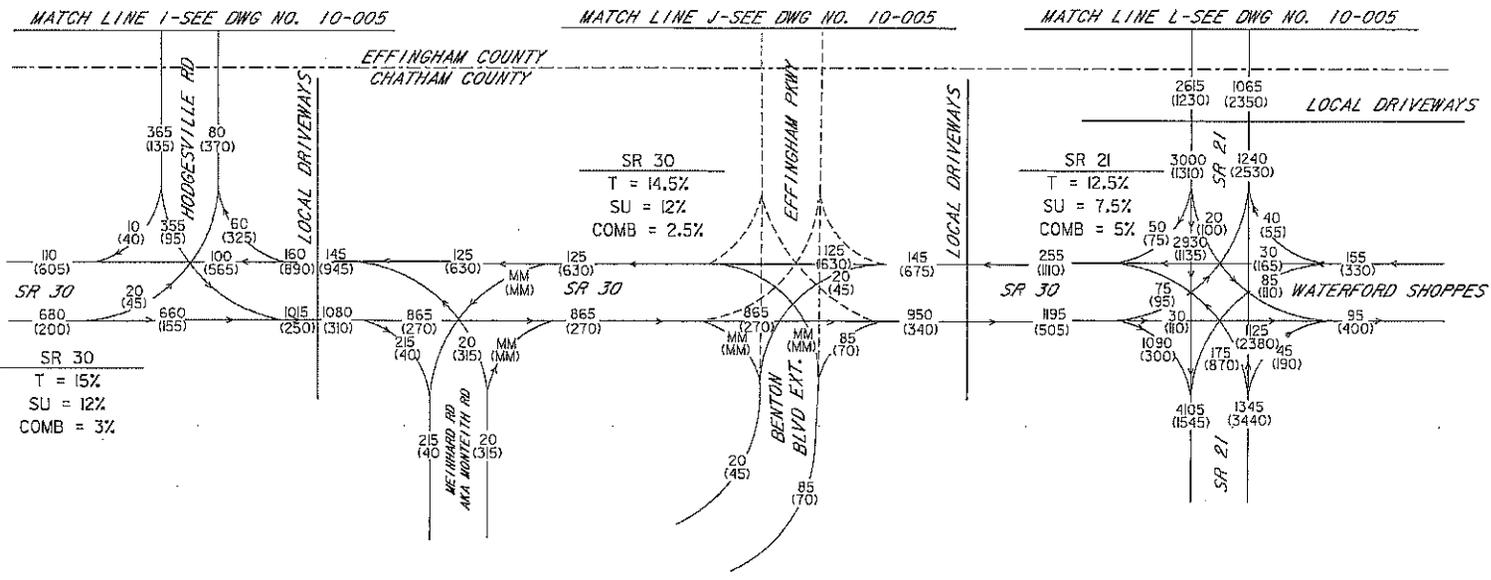
EFFINGHAM & CHATHAM  
 COUNTIES, GEORGIA

KP 3/14

REVISION DATES

STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE:  
**TRAFFIC FLOW DIAGRAMS**  
 CSMSL-0006-00 (700) P. 1, NO. 0006700  
 EFFINGHAM PARKWAY  
 2019 NO-BUILD DHV

10-005



**LEGEND**  
 00 AM PEAK HOUR  
 (00) PM PEAK HOUR

10-006



MD Asphalt Association, Inc.  
 2211 Dufferin Road  
 Suite 100  
 Norcross, Georgia 30071  
 Telephone 1-770-253-9945

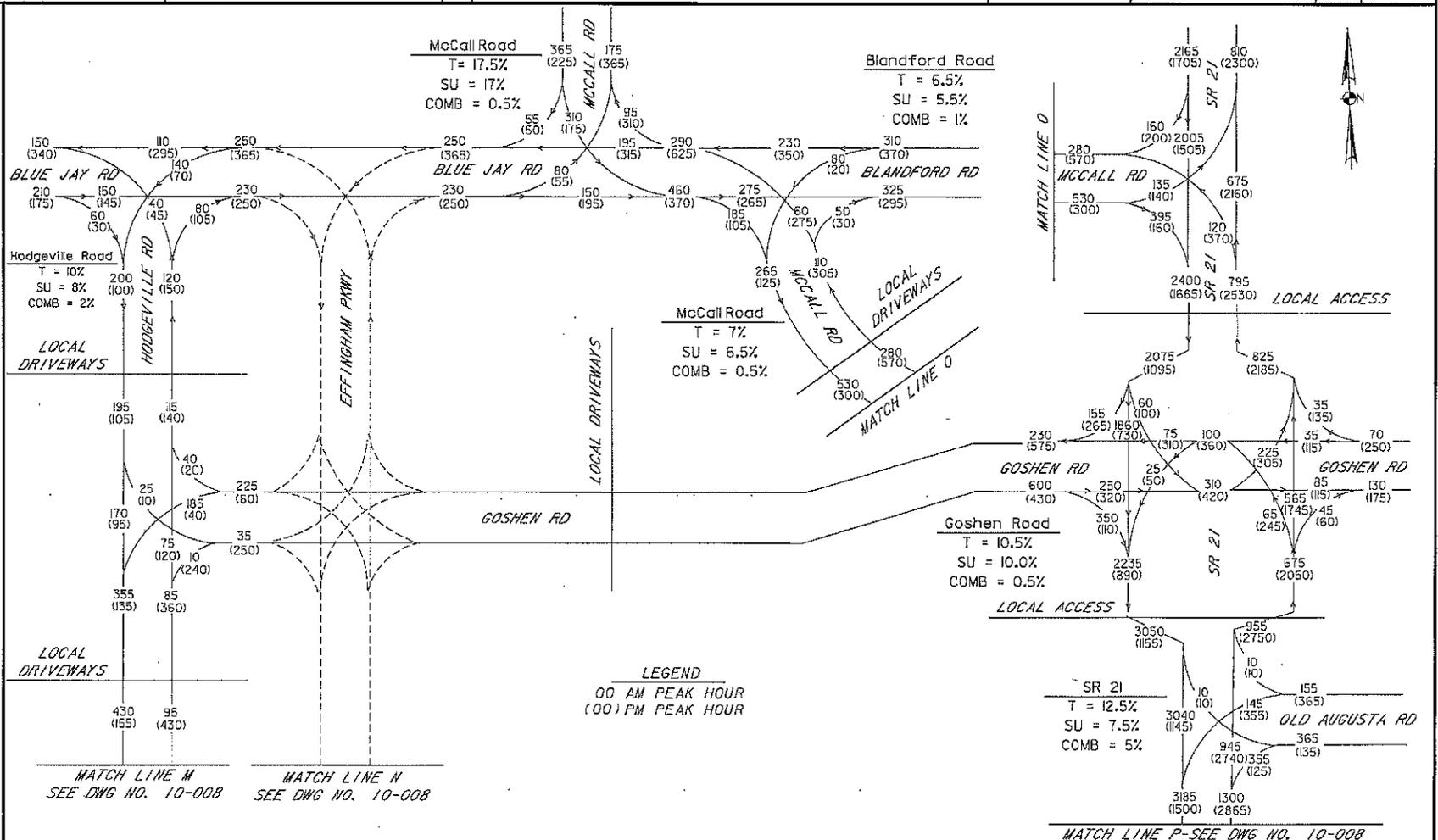
KP 3/14

EFFINGHAM & CHATHAM  
 COUNTIES, GEORGIA

REVISION DATES

STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE:  
 TRAFFIC FLOW DIAGRAMS  
 CSMSL-0006-00 (700) P. I. NO. 0006700  
 EFFINGHAM PARKWAY  
 2019 NO-BUILD DHV

10-006



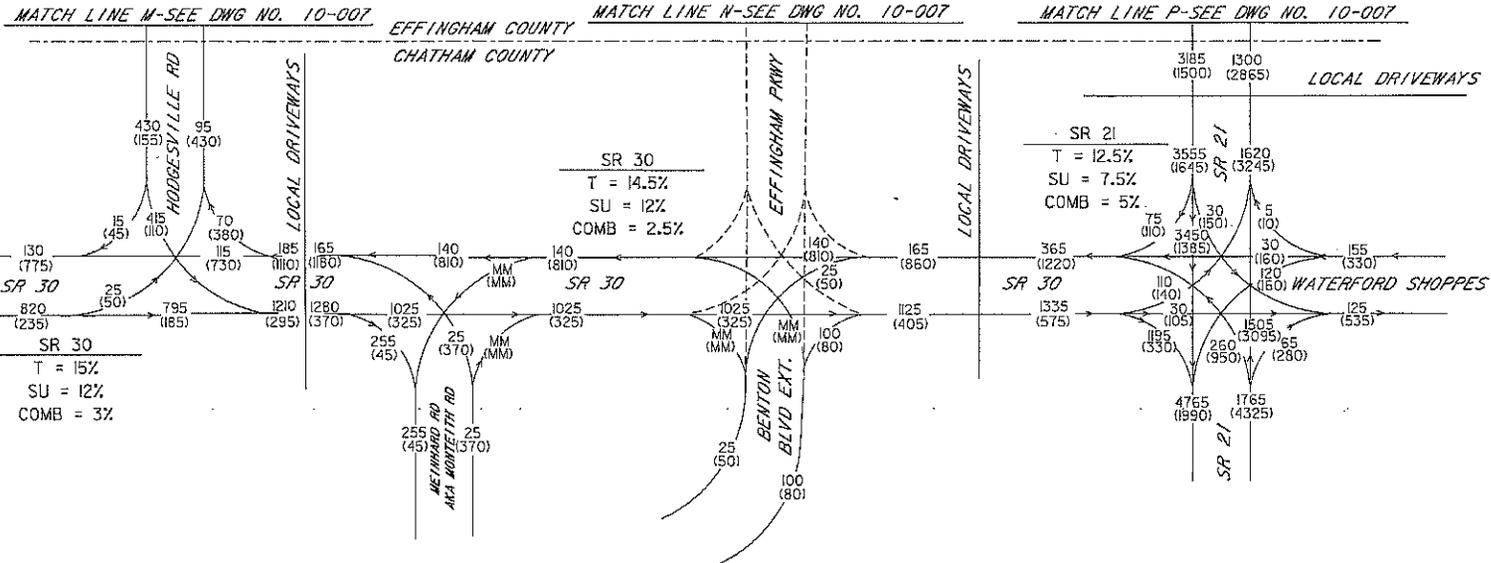
**MA** Maryland Altabelli Associates, Inc.  
 3211 Governor Martin Road  
 Suite 102  
 Marietta, Georgia 30067  
 Telephone 770/575-2822

EFFINGHAM & CHATHAM  
 COUNTIES, GEORGIA

REVISION DATES

STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE:  
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 CSMSL-0006-00 (700) P.I. NO. 0006700  
 EFFINGHAM PARKWAY  
 2039 NO-BUILD DHV

DRAWING NO. **10-007**



**LEGEND**  
 00 AM PEAK HOUR  
 100 PM PEAK HOUR

**MA** **Moyland Alghell:**  
**Associates, Inc.**  
 2211 Beaver Run Road  
 Suite 105  
 Norcross, Georgia 30071  
 Telephone 1-770-283-9945

**EFFINGHAM & CHATHAM**  
**COUNTIES, GEORGIA**

RP 3/14

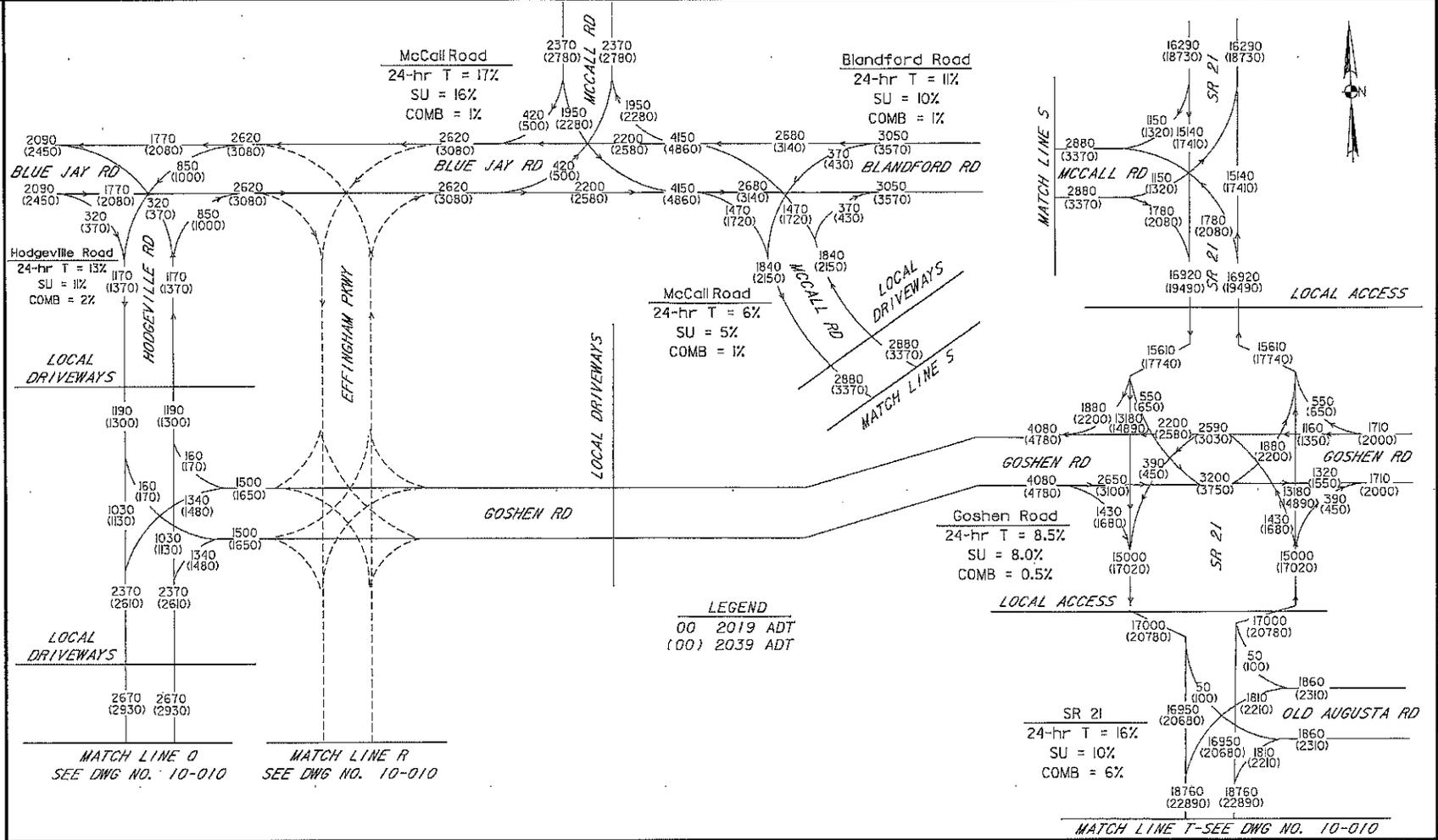
REVISION DATES	

STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION

OFFICE:

**TRAFFIC FLOW DIAGRAMS**  
 CSMSL-0006-00 (700) P. I. NO. 0006700  
 EFFINGHAM PARKWAY  
 2039 NO-BUILD DHV

DRAWING NO.  
**10-008**



**LEGEND**  
 00 2019 ADT  
 (00) 2039 ADT



**Macleod Algebelli Associates, Inc.**  
 2211 Dunwoody Park Road  
 Dunwoody, GA 30075  
 Telephone (770) 263-9945

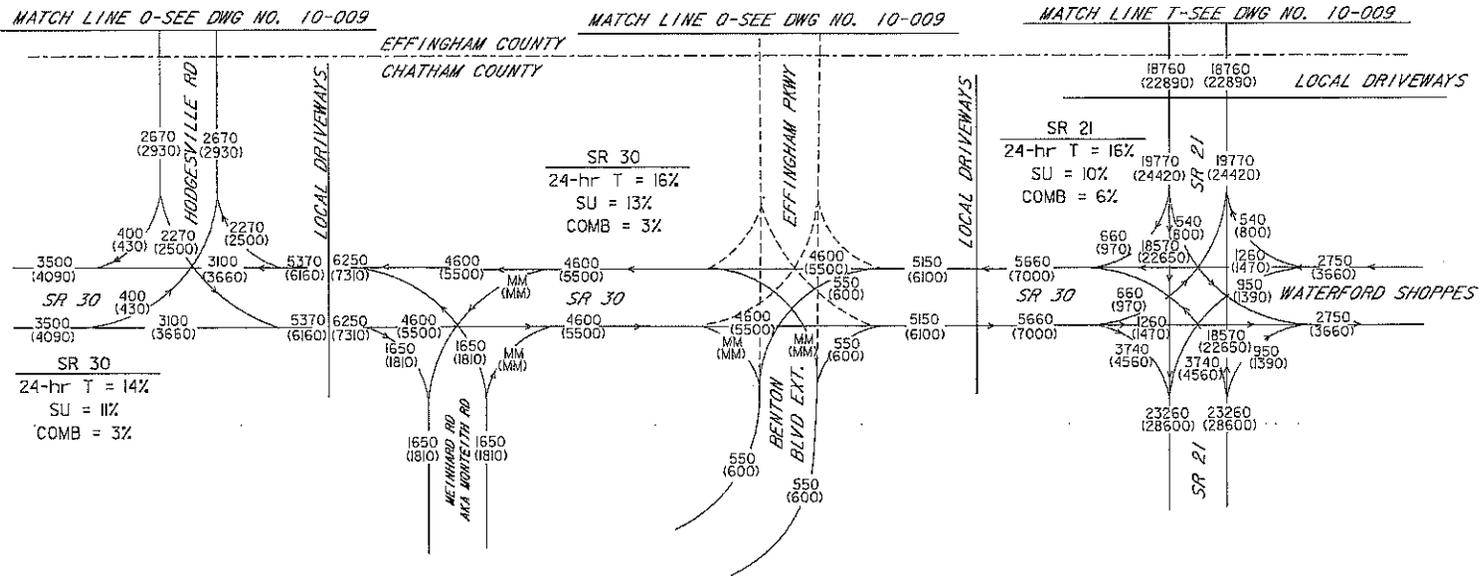
**EFFINGHAM & CHATHAM COUNTIES, GEORGIA**

KP 3/14

REVISION DATES

STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE:  
**TRAFFIC FLOW DIAGRAMS**  
 CSM-0005-00 (700) P. I. NO. 0006700  
 EFFINGHAM PARKWAY  
 2019/2039 NO-BUILD ADT

10-009



**LEGEND**  
 00 2019 ADT  
 (00) 2039 ADT

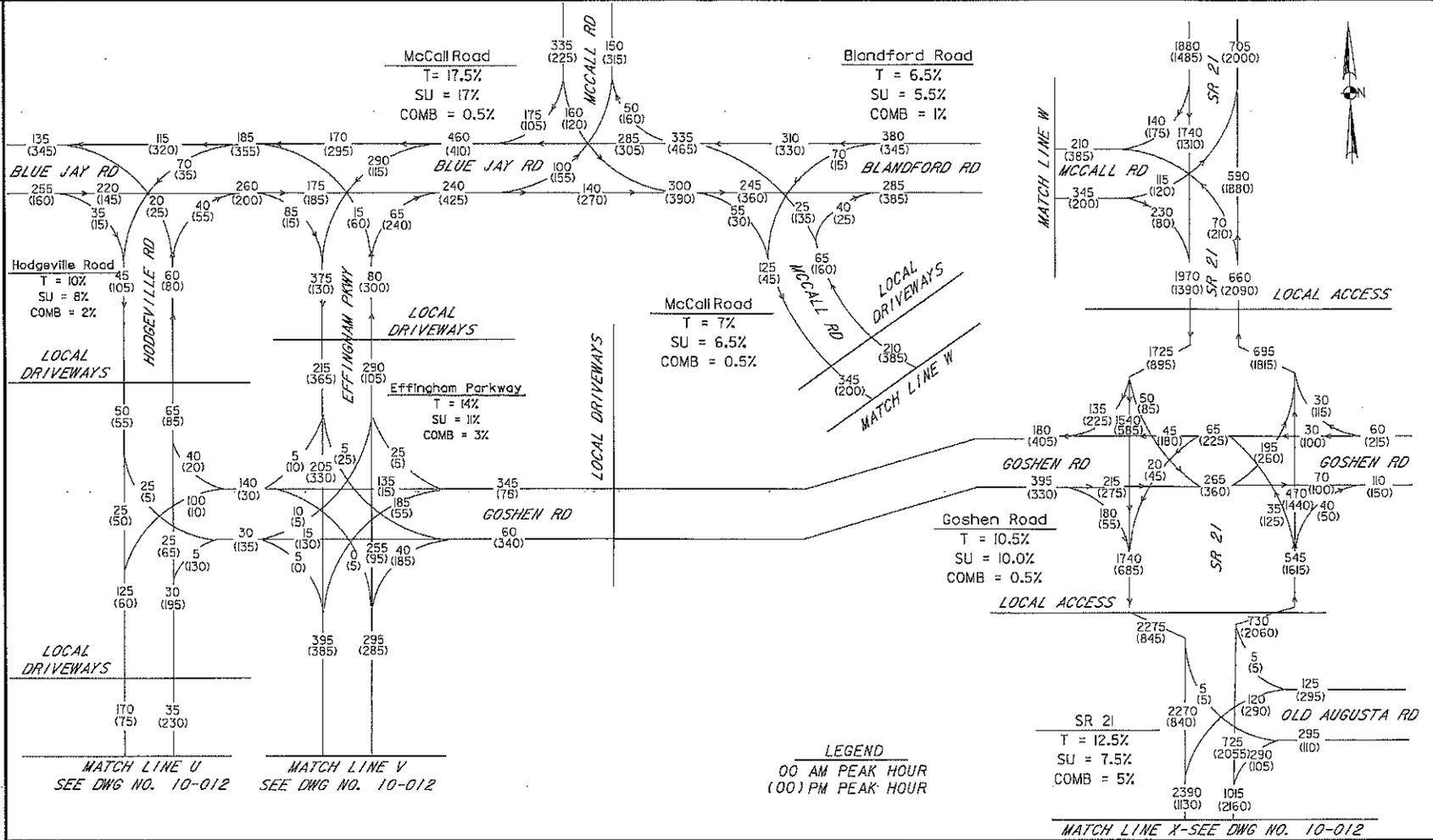
**MA** **Meredith Akabelli**  
 Associates, Inc.  
 2211 Boyer Rd  
 Marietta, Georgia 30067  
 Tel: 770.426.1946

EFFINGHAM & CHATHAM  
 COUNTIES, GEORGIA

REVISION DATES

STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE:  
**TRAFFIC FLOW DIAGRAMS**  
 CSM-0006-00 (700) P. I. NO. 0006700  
 EFFINGHAM PARKWAY  
 2019/2039 NO-BUILD ADT

DRAWING NO.  
**10-010**



**LEGEND**  
 00 AM PEAK HOUR  
 (00) PM PEAK HOUR

MATCH LINE U  
 SEE DWG NO. 10-012

MATCH LINE V  
 SEE DWG NO. 10-012

MATCH LINE X-SEE DWG NO. 10-012



Moreland Alcohol  
 Associates, Inc.  
 2211 Weaver Run Road  
 Suite 107  
 Norcross, Georgia 30071  
 Telephone: 770-363-3945

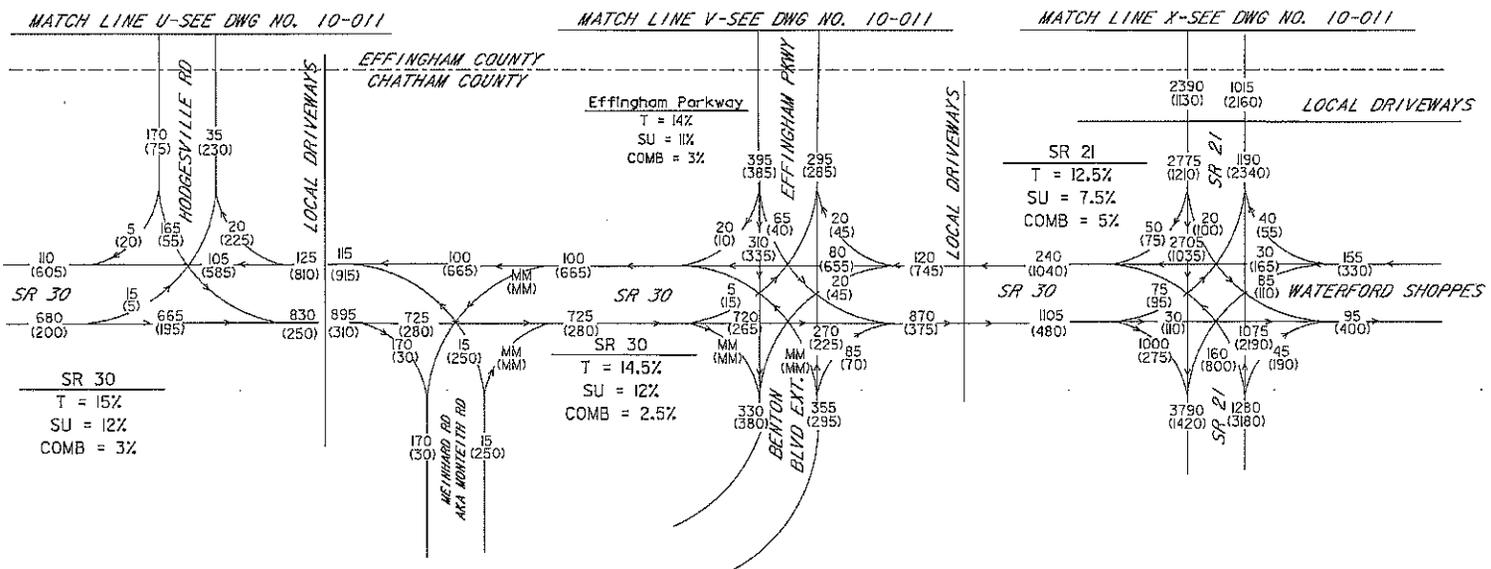
EFFINGHAM & CHATHAM  
 COUNTIES, GEORGIA

RP 3/14

REVISION DATES

STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE:  
**TRAFFIC FLOW DIAGRAMS**  
 CSM-0006-00 (700) P. 1. NO. 006700  
 EFFINGHAM PARKWAY  
 2019 BUILD DHV

10-011



**MA** Maryland Akobelli Associates, Inc.  
2211 Gower Run Road  
Suite 100  
Marietta, Georgia 30067  
Telephone 1-770-262-9946

RP 3/14

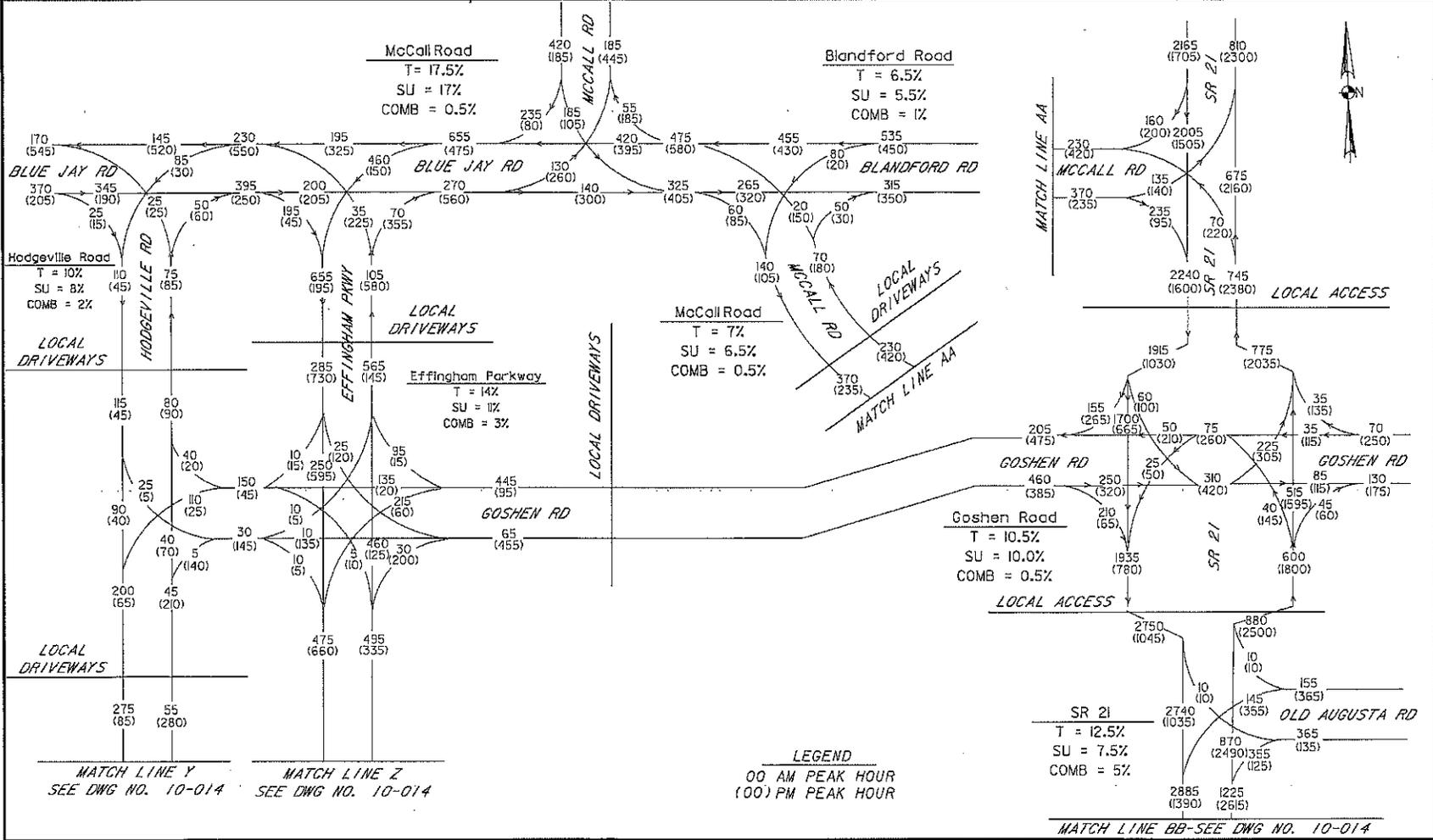
**EFFINGHAM & CHATHAM COUNTIES, GEORGIA**

REVISION DATES

STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
OFFICE:  
**TRAFFIC FLOW DIAGRAMS**  
CSWSL-0006-00 (700) P. I. NO. 0006700  
EFFINGHAM PARKWAY  
2019 BUILD DHV

DRAWING NO. **10-012**

80000  
1000  
12000



Merriand Atchelli  
Associates, Inc.  
2211 Sawyer Mill Road  
Atlanta, GA 30329  
Telephone (770) 262-9176

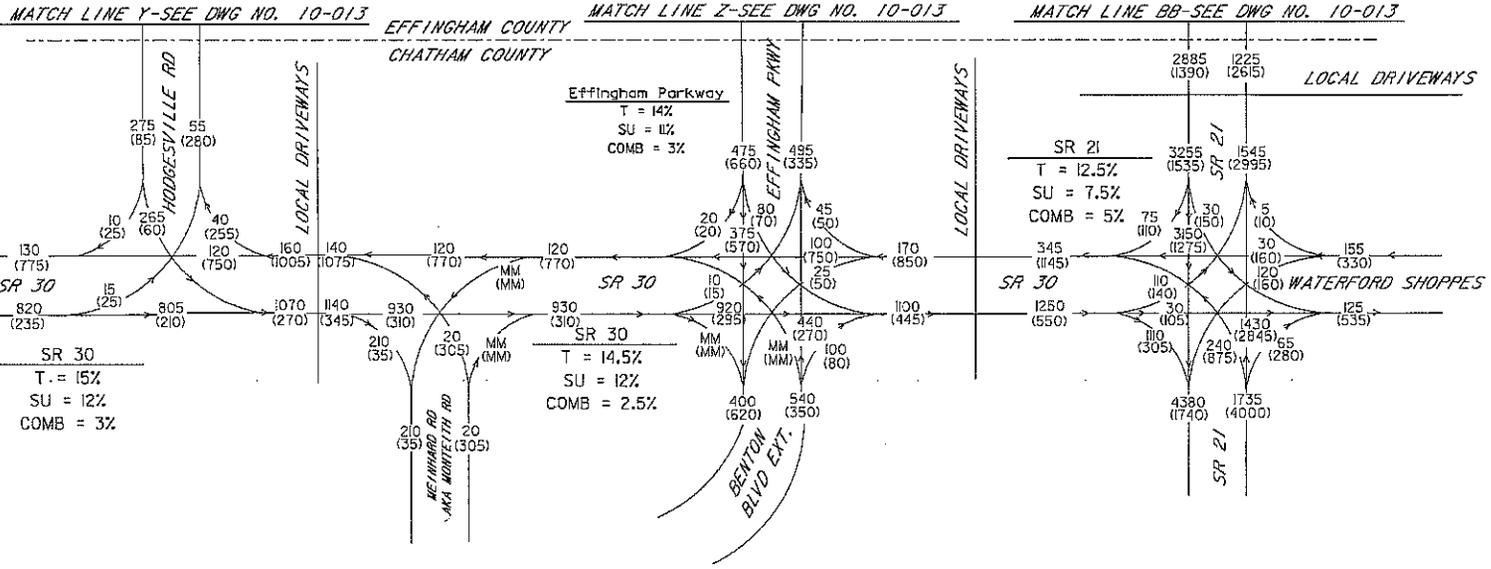
EFFINGHAM & CHATHAM  
COUNTIES, GEORGIA

KP 3/14

REVISION DATES

STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
OFFICE:  
**TRAFFIC FLOW DIAGRAMS**  
CSMSL-0006-00 (700) P. I. NO. 0006700  
EFFINGHAM PARKWAY  
2039 BUILD DHV

DRAWING NO.  
**10-013**



**LEGEND**  
 00 AM PEAK HOUR  
 (00) PM PEAK HOUR



Moreland Altabelli  
 Associates, Inc.  
 5211 Bayway, Suite 800  
 Norcross, Georgia 30071  
 Telephone 1770/285-9545

EFFINGHAM & CHATHAM  
 COUNTIES, GEORGIA

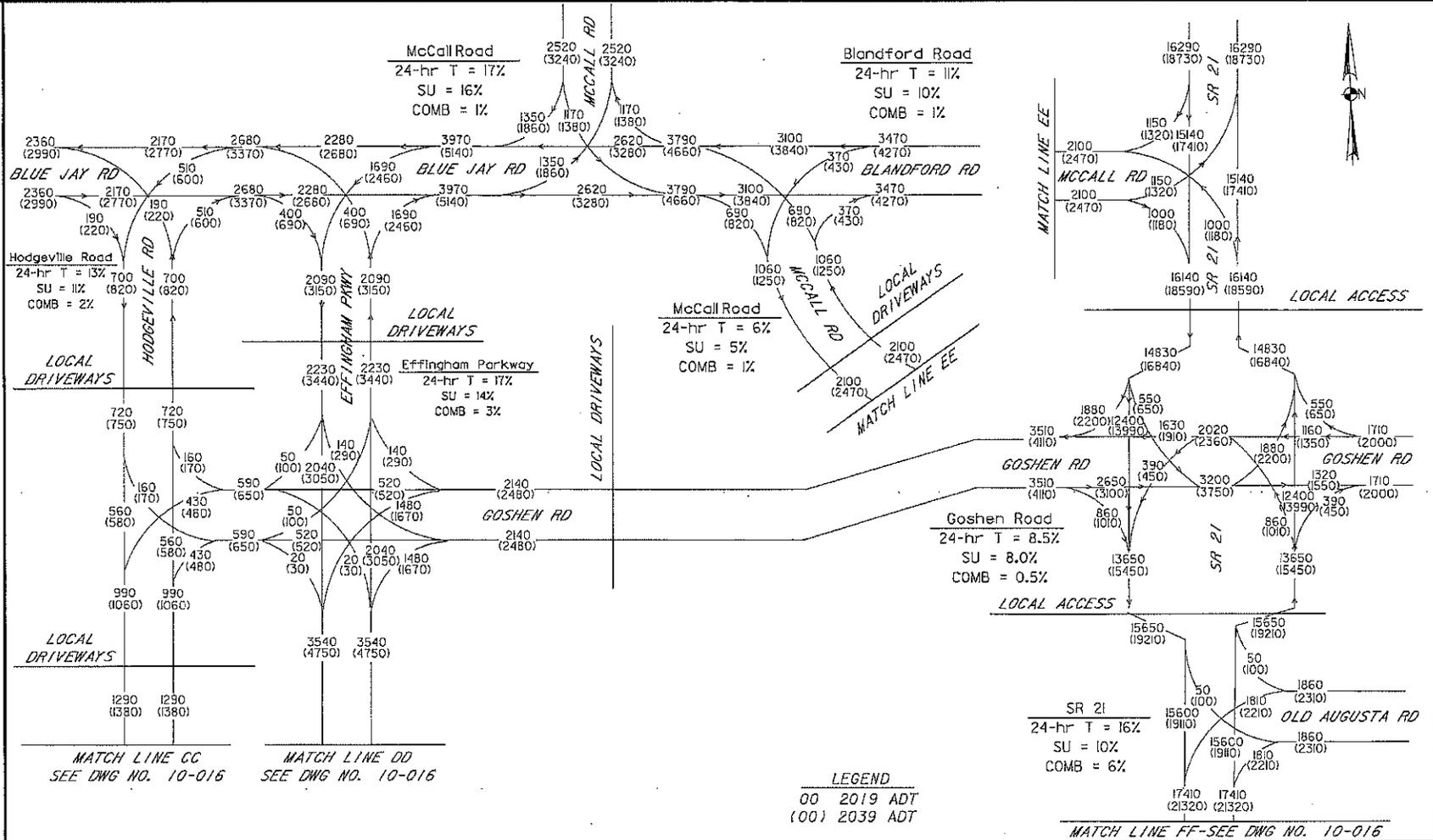
KP 3/14

REVISION DATES

STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE:  
 TRAFFIC FLOW DIAGRAMS  
 CSMSL-0006-00 (700) P. I. NO. 0006700  
 EFFINGHAM PARKWAY  
 2039 BUILD DHV

GRAPHIC NO.  
 10-014

REVISIONS  
 DATE



**MA**  
Moyland Atbelli  
Associates, Inc.  
2711 Beaver Run Road  
Suite 300  
Norcross, Georgia 30071  
Telephone 770-422-3946

**EFFINGHAM & CHATHAM  
COUNTIES, GEORGIA**

REVISION DATES

STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
OFFICE:  
**TRAFFIC FLOW DIAGRAMS**  
CSMSL-0006-00 (700) P. I. NO. 0006700  
EFFINGHAM PARKWAY  
2019/2039 BUILD ADT

10-015



# Attachment #6

## Capacity Analysis Summary

## Summary of Capacity Analysis

### LOS Analysis for Road Segments on the Existing Corridor<sup>1</sup>

ROAD SEGMENTS OF SR 21	2013 Existing Year			2019 (Opening Year)						2039 (Design Year)					
				No-Build			Build			No-Build			Build		
	ADT <sup>2</sup>	LOS AM	LOS PM	ADT <sup>2</sup>	LOS AM	LOS PM	ADT <sup>2</sup>	LOS AM	LOS PM	ADT <sup>2</sup>	LOS AM	LOS PM	ADT <sup>2</sup>	LOS AM	LOS PM
Westwood Dr to McCall Rd	29,880	C	C	32,580	C	C	32,580	C	C	37,460	D	D	37,460	D	D
McCall Rd to Goshen Rd	31,160	C	D	33,840	D	D	32,280	C	D	38,980	D	D	37,180	D	D
Goshen Rd to Old Augusta Rd	30,100	D	C	34,000	D	D	31,300	D	D	41,560	E	E	38,420	E	D
Old Augusta Rd to SR 30	34,760	D	D	39,540	E	D	36,840	E	D	48,840	E	E	45,700	E	E
SR 30 to I-95	41,360	D	E	46,520	E	F	42,880	D	E	57,200	F	F	53,400	E	F

<sup>1</sup>Analysis used HCS<sup>+</sup> Software.

<sup>2</sup>The highest Eastbound / Westbound or Northbound / Southbound peak hour traffic for each segment is used to determine the HCS.

### LOS Analysis for Road Segments on the Project Corridor<sup>1</sup>

ROAD SEGMENTS OF Effingham Parkway	2019 (Opening Year)			2039 (Design Year)		
	ADT <sup>2</sup>	LOS AM	LOS PM	ADT <sup>2</sup>	LOS AM	LOS PM
Blue Jay Rd to Walter Tuten Rd	4,180	C	B	6,300	D	B
Walter Tuten Rd to Goshen Rd	4,460	B	C	6,880	B	C
Goshen Rd to SR 30	7,080	C	C	9,500	D	D
SR 30 to Meinhard Rd	6,680	C	C	8,600	C	D

<sup>1</sup>Analysis used HCS<sup>+</sup> Software.

<sup>2</sup>The highest Eastbound / Westbound or Northbound / Southbound peak hour traffic for each segment is used to determine the HCS.

### LOS Analysis for Intersections on the Existing Corridor<sup>1</sup>

Intersection <sup>2</sup>	Existing Year 2013		Opening Year 2019				Design Year 2039			
			No-Build		Build		No-Build		Build	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
McCall Road at SR 21	<b>B</b>	<b>B</b>	<b>C</b>	<b>B</b>	<b>B</b>	<b>B</b>	<b>D</b>	<b>C</b>	<b>B</b>	<b>B</b>
Goshen Road at SR 21 SB	<b>B</b>	<b>A</b>	<b>B</b>	<b>A</b>	<b>B</b>	<b>A</b>	<b>C</b>	<b>B</b>	<b>B</b>	<b>A</b>
Goshen Road at SR 21 NB	<b>A</b>	<b>C</b>	<b>A</b>	<b>C</b>	<b>A</b>	<b>C</b>	<b>B</b>	<b>E</b>	<b>B</b>	<b>D</b>
Old Augusta Road at SR 21	D	D	E (C)	E (D)	D (B)	D (B)	F (D)	F (F)	E (C)	F (D)
SR 30 at SR 21	<b>F</b>	<b>F</b>	<b>F</b>	<b>F</b>	<b>F</b>	<b>E</b>	<b>F</b>	<b>F</b>	<b>F</b>	<b>F</b>

<sup>1</sup>Analysis used SYNCHRO Software.

<sup>2</sup>Signalized intersections are indicated by bold-faced type. All other intersections are stop-controlled. Values in parenthesis are for a signalized analysis. LOS for un-signalized intersections is for the stop-controlled (side street) movement. LOS for signalized intersections is the weighted average of all movements

### LOS Analysis for Intersections on the Project Corridor<sup>1</sup>

Intersection <sup>2</sup>	Opening Year 2020		Design Year 2040	
	AM	PM	AM	PM
Blue Jay Rd at Effingham Pkwy	B	C	B (A)	F (A)
Goshen Road at Effingham Pkwy	D	C	F (B)	F (B)
SR 30 at Effingham Pkwy	<b>C</b>	<b>C</b>	<b>D</b>	<b>C</b>

<sup>1</sup>Analysis used SYNCHRO Software.

<sup>2</sup>Signalized intersections are indicated by bold-faced type. All other intersections are stop-controlled. Values in parenthesis are for a signalized analysis. LOS for un-signalized intersections is for the stop-controlled (side street) movement. LOS for signalized intersections is the weighted average of all movements

# Attachment #7

## Signal Warrant Analysis

# Traffic Signal Warrant Study

## SR 30 at Effingham Pkwy/Benton Blvd

Year 2019 Traffic Analysis

### Signal Warrants - Summary

#### Major Street Approaches

**Eastbound: SR 30**

Number of Lanes: 1  
 85% Speed < 40 MPH.  
 Total Approach Volume: **3,763**

**Westbound: SR 30**

Number of Lanes: 1  
 85% Speed < 40 MPH.  
 Total Approach Volume: **4,661**

#### Minor Street Approaches

**Northbound: Benton Blvd**

Number of Lanes: 1  
  
 Total Approach Volume: **2,789**

**Southbound: Effingham Pkwy**

Number of Lanes: 1  
  
 Total Approach Volume: **3,342**

#### Warrant Summary (Rural values apply.)

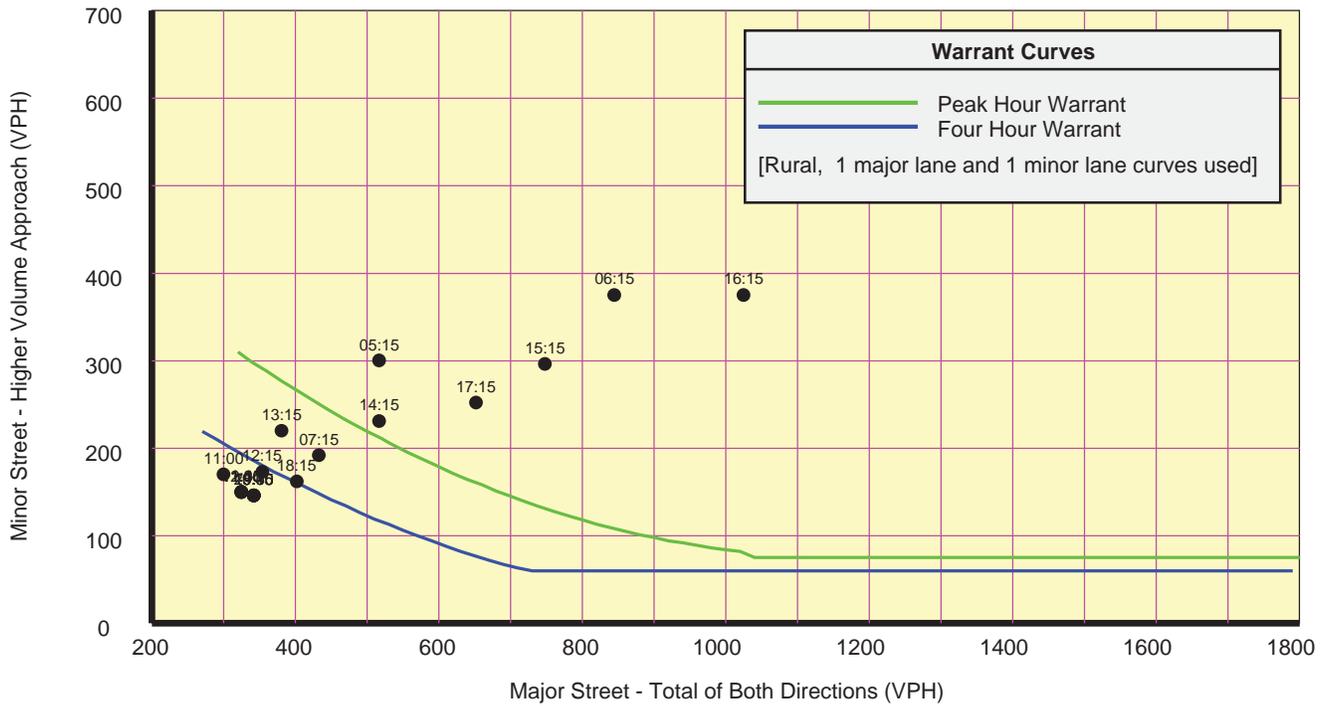
<b>Warrant 1 - Eight Hour Vehicular Volumes</b> .....	<b>Satisfied</b>
<b>Warrant 1A - Minimum Vehicular Volume</b> ..... <b>Satisfied</b>	
Required volumes reached for 10 hours, 8 are needed	
<b>Warrant 1B - Interruption of Continuous Traffic</b> ..... <b>Not Satisfied</b>	
Required volumes reached for 4 hours, 8 are needed	
<b>Warrant 1 A&amp;B - Combination of Warrants</b> ..... <b>Not Satisfied</b>	
Required volumes reached for 7 hours, 8 are needed	
<b>Warrant 2 - Four Hour Volumes</b> .....	<b>Satisfied</b>
Number of hours (9) volumes exceed minimum >= minimum required (4).	
<b>Warrant 3 - Peak Hour</b> .....	<b>Satisfied</b>
<b>Warrant 3A - Peak Hour Delay</b> ..... <b>Satisfied</b>	
Number of hours (28) volumes exceed minimum >= required (1). Delay data not evaluated.	
<b>Warrant 3B - Peak Hour Volumes</b> ..... <b>Satisfied</b>	
Volumes exceed minimums for at least one hour.	
<b>Warrant 4 - Pedestrian Volumes</b> .....	Not Evaluated
<b>Warrant 5 - School Crossing</b> .....	Not Evaluated
<b>Warrant 6 - Coordinated Signal System</b> .....	Not Evaluated
<b>Warrant 7 - Crash Experience</b> .....	Not Evaluated
<b>Warrant 8 - Roadway Network</b> .....	Not Evaluated
<b>Warrant 9 - Intersection Near a Grade Crossing</b> .....	Not Evaluated

# Traffic Signal Warrant Study

## SR 30 at Effingham Pkwy/Benton Blvd

Year 2019 Traffic Analysis

### Signal Warrants - Summary



### Analysis of 8-Hour Volume Warrants:

War 1A-Minimum Volume

War 1B-Interruption of Traffic

War 1C-Combination of Warrants

Hour Begin	Major Total	Minor Vol	Dir	Maj 350	Min 105	Hour Begin	Major Total	Minor Vol	Dir	Maj 525	Min 53	Hour Begin	Major Total	Minor Vol	Dir	Maj 420	Min 84
16:15	1,025	375	SB	Yes	Yes	16:15	1,025	375	SB	Yes	Yes	16:15	1,025	375	SB	Yes	Yes
06:15	845	375	SB	Yes	Yes	06:15	845	375	SB	Yes	Yes	06:15	845	375	SB	Yes	Yes
15:15	748	296	NB	Yes	Yes	15:15	748	296	NB	Yes	Yes	15:15	748	296	NB	Yes	Yes
17:15	652	252	NB	Yes	Yes	17:15	652	252	NB	Yes	Yes	17:15	652	252	NB	Yes	Yes
14:15	517	231	NB	Yes	Yes	15:00	517	231	NB	No	Yes	14:15	517	231	NB	Yes	Yes
05:15	517	300	SB	Yes	Yes	14:45	517	231	NB	No	Yes	05:15	517	300	SB	Yes	Yes
07:15	433	192	SB	Yes	Yes	14:30	517	231	NB	No	Yes	07:15	433	192	SB	Yes	Yes
18:15	402	162	NB	Yes	Yes	14:15	517	231	NB	No	Yes	19:00	402	162	NB	No	Yes
13:15	381	220	SB	Yes	Yes	06:00	517	300	SB	No	Yes	18:45	402	162	NB	No	Yes
12:15	354	173	NB	Yes	Yes	05:45	517	300	SB	No	Yes	18:30	402	162	NB	No	Yes
20:00	342	146	NB	No	Yes	05:30	517	300	SB	No	Yes	18:15	402	162	NB	No	Yes
19:45	342	146	NB	No	Yes	05:15	517	300	SB	No	Yes	14:00	381	220	SB	No	Yes
19:30	342	146	NB	No	Yes	08:00	433	192	SB	No	Yes	13:45	381	220	SB	No	Yes
19:15	342	146	NB	No	Yes	07:45	433	192	SB	No	Yes	13:30	381	220	SB	No	Yes
12:00	325	150	SB	No	Yes	07:30	433	192	SB	No	Yes	13:15	381	220	SB	No	Yes
11:45	325	150	SB	No	Yes	07:15	433	192	SB	No	Yes	13:00	354	173	NB	No	Yes
11:30	325	150	SB	No	Yes	19:00	402	162	NB	No	Yes	12:45	354	173	NB	No	Yes
11:15	325	150	SB	No	Yes	18:45	402	162	NB	No	Yes	12:30	354	173	NB	No	Yes
11:00	300	170	SB	No	Yes	18:30	402	162	NB	No	Yes	12:15	354	173	NB	No	Yes
10:45	300	170	SB	No	Yes	18:15	402	162	NB	No	Yes	20:00	342	146	NB	No	Yes
10:30	300	170	SB	No	Yes	14:00	381	220	SB	No	Yes	19:45	342	146	NB	No	Yes
10:15	300	170	SB	No	Yes	13:45	381	220	SB	No	Yes	19:30	342	146	NB	No	Yes
09:00	287	170	SB	No	Yes	13:30	381	220	SB	No	Yes	19:15	342	146	NB	No	Yes
08:45	287	170	SB	No	Yes	13:15	381	220	SB	No	Yes	12:00	325	150	SB	No	Yes

Welcome to GDOT's Roundabout Analysis Tool. This tool is designed for the user to determine the functionality of a proposed roundabout. The analysis is based on the 2010 Highway Capacity Manual Methodology and NCHRP Report 672, FHWA's Roundabout Informational Guide. Please read the notes in the [Instructions](#) tab before using the spreadsheet.

Analyst:	Karla Poshedly
Agency/Company:	Moreland Altobelli Associates
Date:	8/26/2014
Project Name or PI#:	P.I. No. 0006700 Effingham Parkway
Year, Peak Period:	2039, AM Peak Hour
County/District:	City of Sandy Springs
Intersection:	SR 30 at Effingham Pkwy/Benton Blvd Ext.

**Insert Project Information Here in the BLUE SPACE. This information is linked to the Single Lane and Multi Lane Worksheets.**

### Roundabout Considerations Worksheet

Roundabouts may not operate well if there is too much traffic entering the intersection or if the percentage of traffic on the major road is too high. Candidate intersections shall be analyzed to determine whether a roundabout will perform acceptably. Shown below are thresholds to determine if a roundabout capacity analysis is required:

# of circulatory lanes	ADTs (current/ build year)	% traffic on Major Road
Single Lane	less than 25,000	less than 90%
Multi-Lane	less than 45,000	less than 90%

Other things to consider when evaluating roundabouts as an alternative are Right of Way, sight distance, environmental impacts, and access to adjacent properties.

### Volume Information (for Analysis Time Period)

1 Enter the Major/Minor Street ADT Volumes in the Chart below:

	Volumes	Split
Major Street	9,050	47%
Minor Street	10,230	53%
Total volumes	19,280	

### Proximity to Other Intersections

2 How close is the nearest signal (miles or feet)?

3 Is the proposed intersection located within a coordinated signal network?

**Go up to next section...**



→ **Proposed Design Configuration Chart**

**Directions for this Section only:** (see *Instructions Tab* for other sections)

1. **Select** the type of roundabout you are analyzing.
2. **Key in** the number of approaches and the street names at the proposed intersections.
3. Complete the Approach Characteristics Chart:
  - a. **Select** the Street Name from the pulldown menu for each approach leg
  - b. **Select** the Lane Type for each entry approach lane  
*\*The first box is the inner lane, the second box is the outer lane*
  - c. **Select** Yes or No if a right turn bypass will be added to each approach leg

Roundabout Characteristics

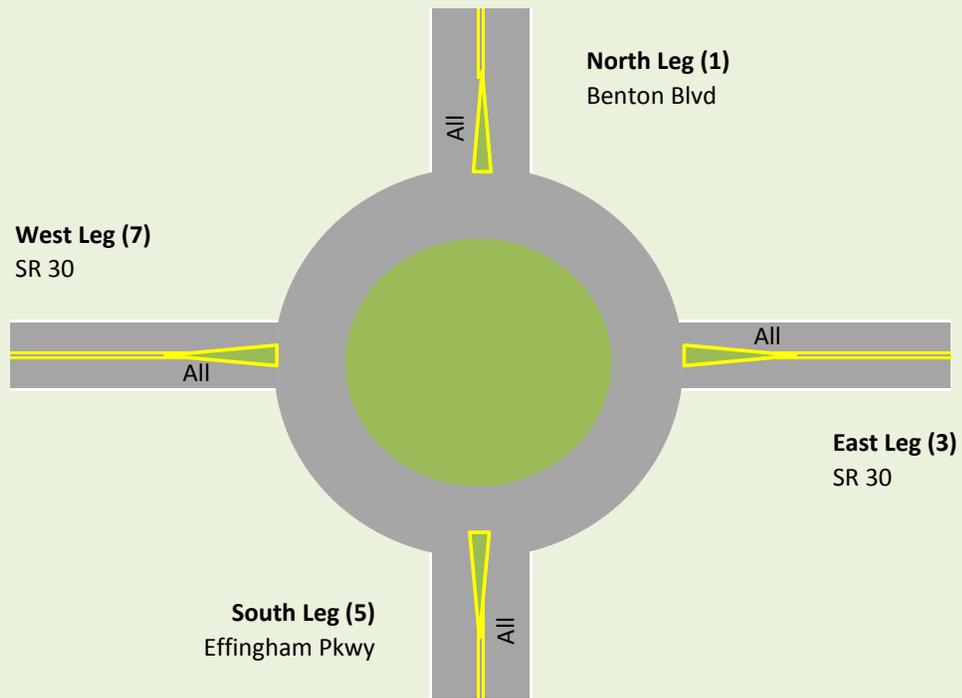
Roundabout Type:	Single Lane
# of Approaches:	4
Name of Streets:	SR 30
	Effingham Pkwy
	Benton Blvd

Chart Key:	
Single Lane	Street Name
	All
Multi-lane	Bypass?
	Street Name
	Inner Ln    Outer Ln
	Bypass?

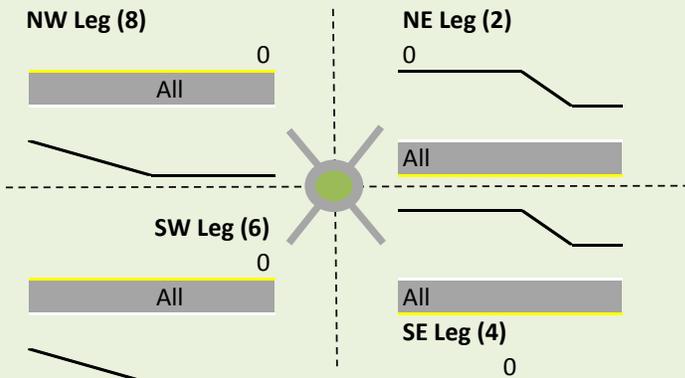
Approach Leg Characteristics:

	North Leg (1)	NE Leg (2)	East Leg (3)	SE Leg (4)
Street Name:	Benton Blvd		SR 30	
Entry Lane Config	All	All	All	All
Bypass to Adj Leg?	No			
	South Leg (5)	SW Leg (6)	West Leg (7)	NW Leg (8)
Street Name:	Effingham Pkwy		SR 30	
Entry Lane Config	All	All	All	All
Bypass to Adj Leg?	No			

**Preliminary Roundabout Rendering\*\***



**Additional Legs**

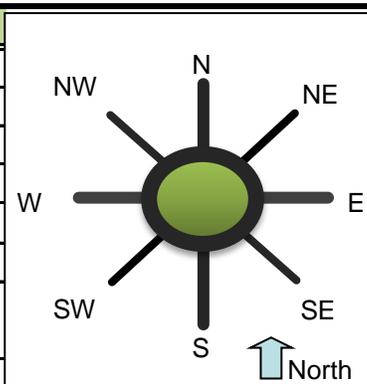


**\*\*Note**

*This roundabout sketch does not include the secondary cardinal direction legs due to restrictions in the Excel software. For complex roundabouts, a separate sketch is recommended by the designer.*

**General & Site Information** v2.1

Analyst:	Karla Poshedly
Agency/Co:	Moreland Altobelli Associates
Date:	8/26/2014
Project or PI#:	P.I. No. 0006700 Effingham Parkway
Year, Peak Hour:	2039, AM Peak Hour
County/District:	City of Sandy Springs
Intersection Name:	SR 30 at Effingham Pkwy/Benton Blvd Ext.



**Volumes** Entry Legs (FROM)

		N (1)	NE (2)	E (3)	SE (4)	S (5)	SW (6)	W (7)	NW (8)
<b>Exit Legs (TO)</b>	N (1), vph			10		440		45	
	NE (2), vph								
	E (3), vph	80				100		920	
	SE (4), vph								
	S (5), vph	375		25				0	
	SW (6), vph								
	W (7), vph	20		100		0			
	NW (8), vph								
Output	Total Vehicles	475	0	135	0	540	0	965	0

**Volume Characteristics**

	N	NE	E	SE	S	SW	W	NW
% Cars	86%	100%	86%	100%	86%	100%	85%	100%
% Heavy Vehicles	14%	0%	15%	0%	14%	0%	15%	0%
% Bicycle	0%	0%	0%	0%	0%	0%	0%	0%
# of Pedestrians (ped/hr)	0	0	0	0	0	0	0	0
PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
F <sub>HV</sub>	0.877	1.000	0.873	1.000	0.877	1.000	0.870	1.000
F <sub>ped</sub>	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

**Entry/Conflicting Flows**

	N	NE	E	SE	S	SW	W	NW
Flow to Leg #								
N (1), pcu/h	0	0	12	0	545	0	56	0
NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	99	0	0	0	124	0	1150	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	465	0	31	0	0	0	0	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	25	0	124	0	0	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h	589	0	168	0	669	0	1206	0
Conflicting flow, pcu/h	156	0	601	0	1305	0	595	0

**Roundabout Type** Standard Single Lane or Urban Compact

Enter type here...	Standard Single Lane
--------------------	----------------------

**Results: Approach Measures of Effectiveness**

HCM 2010 Model (build)	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	848	NA	541	NA	269	NA	542	NA
Entry Flow Rates, vph	516	NA	147	NA	587	NA	1049	NA
V/C ratio	0.61		0.27		2.18		1.94	
Control Delay, s/veh	14		10		575		446	
LOS	B		B		F		F	
95th % Queue (ft)	121		31		1274		1985	
Calibrated Model (future)	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	1032	NA	720	NA	412	NA	720	NA
Entry Flow Rates, vph	516	NA	147	NA	587	NA	1049	NA
V/C ratio	0.57		0.23		1.63		1.67	
Control Delay, sec/pcu	11		8		317		326	
LOS	B		A		F		F	
95th % Queue (ft)	106		26		1103		1940	

Notes:

v2.1

Unit Legend:

- vph = vehicles per hour
- PHF = peak hour factor
- F<sub>HV</sub> = heavy vehicle factor
- pcu = passenger car unit

**Bypass Lane Merge Point Analysis (if applicable)**

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
<i>Volumes</i>						
Right Turn Volume removed from Entry Leg						
<i>Volume Characteristics (for entry leg)</i>						
PHF						
F <sub>HV</sub>						
F <sub>ped</sub>						
<b>NOTE: Volume Characteristics for Exit Leg are already taken into account</b>						
<i>Entry/Conflicting Flows</i>						
Entry Flow, pcu/hr						
Conflicting Flow, pcu/hr						
<b>Bypass Lane Results (HCM 2010 Model)</b>						
Entry Capacity of Bypass, vph						
Flow Rates of Exiting Traffic, vph						
V/C ratio						
Control Delay, s/veh						
LOS						
95th % Queue (ft)						
Approach w/Bypass Delay, s/veh						
Approach w/Bypass LOS						

# Attachment #8

## Concept Hydrology Study for MS4 Requirements

Area 1 80+00 LT

Pervious Area	1.56	Acres
Total Area	2.80	Acres
Impervious Area	1.23	Acres
Percent Imp. Cover	44.05%	
Rv=	0.446428571	
WQv=	0.124827824	acre-ft
WQv=	5438	Cubic Ft
Permanent Poolv=	2719	Cubic Ft
CPv=	16314	Cubic Ft
25-year detention	19576.8	Cubic Ft
Total Volume	38609.8	Cubic Ft
Length	98	ft
Width	65	ft
Depth	6	ft

Area 2 105+00 LT

Pervious Area	1.78	Acres
Total Area	3.18	Acres
Impervious Area	1.40	Acres
Percent Imp. Cover	44.05%	
Rv=	0.446428571	
WQv=	0.142045455	acre-ft
WQv=	6188	Cubic Ft
Permanent Poolv=	3094	Cubic Ft
CPv=	18564	Cubic Ft
25-year detention	22276.8	Cubic Ft
Total Volume	43934.8	Cubic Ft
Length	105	ft
Width	70	ft
Depth	6	ft

Area 3 105+00 RT

Pervious Area	1.78	Acres
Total Area	3.18	Acres
Impervious Area	1.40	Acres
Percent Imp. Cover	44.05%	
Rv=	0.446428571	
WQv=	0.142045455	acre-ft
WQv=	6188	Cubic Ft
Permanent Poolv=	3094	Cubic Ft
CPv=	18564	Cubic Ft
25-year detention	22276.8	Cubic Ft
Total Volume	43934.8	Cubic Ft
Length	105	ft
Width	70	ft
Depth	6	ft

Area 4 136+00 LT

Pervious Area	1.94	Acres
Total Area	3.47	Acres
Impervious Area	1.53	Acres
Percent Imp. Cover	44.05%	
Rv=	0.446428571	
WQv=	0.154958678	acre-ft
WQv=	6750	Cubic Ft
Permanent Poolv=	3375	Cubic Ft
CPv=	20250	Cubic Ft
25-year detention	24300	Cubic Ft
Total Volume	47925	Cubic Ft
Length	110	ft
Width	73	ft
Depth	6	ft

Area 5		136+00 RT	
Pervious Area	1.94	Acres	
Total Area	3.47	Acres	
Impervious Area	1.53	Acres	
Percent Imp. Cover	44.05%		
Rv=	0.446428571		
WQv=	0.154958678	acre-ft	
WQv=	6750	Cubic Ft	
Permanent Poolv=	3375	Cubic Ft	
CPv=	20250	Cubic Ft	
25-year detention	24300	Cubic Ft	
Total Volume	47925	Cubic Ft	
Length	110	ft	
Width	73	ft	
Depth	6	ft	

Area 6		168+50 LT	
Pervious Area	1.24	Acres	
Total Area	2.22	Acres	
Impervious Area	0.98	Acres	
Percent Imp. Cover	44.05%		
Rv=	0.446428571		
WQv=	0.099001377	acre-ft	
WQv=	4313	Cubic Ft	
Permanent Poolv=	2156.5	Cubic Ft	
CPv=	12939	Cubic Ft	
25-year detention	15526.8	Cubic Ft	
Total Volume	30622.3	Cubic Ft	
Length	87	ft	
Width	58	ft	
Depth	6	ft	

Area 7 168+50 RT

Pervious Area	1.24	Acres
Total Area	2.22	Acres
Impervious Area	0.98	Acres
Percent Imp. Cover	44.05%	
Rv=	0.446428571	
WQv=	0.099001377	acre-ft
WQv=	4313	Cubic Ft
Permanent Poolv=	2156.5	Cubic Ft
CPv=	12939	Cubic Ft
25-year detention	15526.8	Cubic Ft
Total Volume	30622.3	Cubic Ft
Length	87	ft
Width	58	ft
Depth	6	ft

Area 8 195+00 RT

Pervious Area	4.32	Acres
Total Area	7.71	Acres
Impervious Area	3.40	Acres
Percent Imp. Cover	44.05%	
Rv=	0.446428571	
WQv=	0.344352617	acre-ft
WQv=	15000	Cubic Ft
Permanent Poolv=	7500	Cubic Ft
CPv=	45000	Cubic Ft
25-year detention	54000	Cubic Ft
Total Volume	106500	Cubic Ft
Length	141	ft
Width	94	ft
Depth	8	ft

Area 9 220+00 LT

Pervious Area	1.35	Acres
Total Area	2.41	Acres
Impervious Area	1.06	Acres
Percent Imp. Cover	44.05%	
Rv=	0.446428571	
WQv=	0.107610193	acre-ft
WQv=	4688	Cubic Ft
Permanent Poolv=	2344	Cubic Ft
CPv=	14064	Cubic Ft
25-year detention	16876.8	Cubic Ft
Total Volume	33284.8	Cubic Ft
Length	92	ft
Width	61	ft
Depth	6	ft

Area 10 220+00 RT

Pervious Area	1.35	Acres
Total Area	2.41	Acres
Impervious Area	1.06	Acres
Percent Imp. Cover	44.05%	
Rv=	0.446428571	
WQv=	0.107610193	acre-ft
WQv=	4688	Cubic Ft
Permanent Poolv=	2344	Cubic Ft
CPv=	14064	Cubic Ft
25-year detention	16876.8	Cubic Ft
Total Volume	33284.8	Cubic Ft
Length	92	ft
Width	61	ft
Depth	6	ft

Area 11 255+00 LT

Pervious Area	2.16	Acres
Total Area	3.86	Acres
Impervious Area	1.70	Acres
Percent Imp. Cover	44.05%	
Rv=	0.446428571	
WQv=	0.172176309	acre-ft
WQv=	7500	Cubic Ft
Permanent Poolv=	3750	Cubic Ft
CPv=	22500	Cubic Ft
25-year detention	27000	Cubic Ft
Total Volume	53250	Cubic Ft
Length	101	ft
Width	67	ft
Depth	8	ft

Area 12 220+00 RT

Pervious Area	2.16	Acres
Total Area	3.86	Acres
Impervious Area	1.70	Acres
Percent Imp. Cover	44.05%	
Rv=	0.446428571	
WQv=	0.172176309	acre-ft
WQv=	7500	Cubic Ft
Permanent Poolv=	3750	Cubic Ft
CPv=	22500	Cubic Ft
25-year detention	27000	Cubic Ft
Total Volume	53250	Cubic Ft
Length	101	ft
Width	67	ft
Depth	8	ft

Area 13 285+00 LT

Pervious Area	2.16	Acres
Total Area	3.86	Acres
Impervious Area	1.70	Acres
Percent Imp. Cover	44.05%	
Rv=	0.446428571	
WQv=	0.172176309	acre-ft
WQv=	7500	Cubic Ft
Permanent Poolv=	3750	Cubic Ft
CPv=	22500	Cubic Ft
25-year detention	27000	Cubic Ft
Total Volume	53250	Cubic Ft
Length	101	ft
Width	67	ft
Depth	8	ft

Area 14 285+00 RT

Pervious Area	2.16	Acres
Total Area	3.86	Acres
Impervious Area	1.70	Acres
Percent Imp. Cover	44.05%	
Rv=	0.446428571	
WQv=	0.172176309	acre-ft
WQv=	7500	Cubic Ft
Permanent Poolv=	3750	Cubic Ft
CPv=	22500	Cubic Ft
25-year detention	27000	Cubic Ft
Total Volume	53250	Cubic Ft
Length	101	ft
Width	67	ft
Depth	8	ft

Area 15 325+00 LT

Pervious Area	2.16	Acres
Total Area	3.86	Acres
Impervious Area	1.70	Acres
Percent Imp. Cover	44.05%	
Rv=	0.446428571	
WQv=	0.172176309	acre-ft
WQv=	7500	Cubic Ft
Permanent Poolv=	3750	Cubic Ft
CPv=	22500	Cubic Ft
25-year detention	27000	Cubic Ft
Total Volume	53250	Cubic Ft
Length	101	ft
Width	67	ft
Depth	8	ft

Area 16 325+00 RT

Pervious Area	2.16	Acres
Total Area	3.86	Acres
Impervious Area	1.70	Acres
Percent Imp. Cover	44.05%	
Rv=	0.446428571	
WQv=	0.172176309	acre-ft
WQv=	7500	Cubic Ft
Permanent Poolv=	3750	Cubic Ft
CPv=	22500	Cubic Ft
25-year detention	27000	Cubic Ft
Total Volume	53250	Cubic Ft
Length	101	ft
Width	67	ft
Depth	8	ft

Area 17 365+00 LT

Pervious Area	2.16	Acres
Total Area	3.86	Acres
Impervious Area	1.70	Acres
Percent Imp. Cover	44.05%	
Rv=	0.446428571	
WQv=	0.172176309	acre-ft
WQv=	7500	Cubic Ft
Permanent Poolv=	3750	Cubic Ft
CPv=	22500	Cubic Ft
25-year detention	27000	Cubic Ft
Total Volume	53250	Cubic Ft
Length	101	ft
Width	67	ft
Depth	8	ft

Area 18 365+00 RT

Pervious Area	2.16	Acres
Total Area	3.86	Acres
Impervious Area	1.70	Acres
Percent Imp. Cover	44.05%	
Rv=	0.446428571	
WQv=	0.172176309	acre-ft
WQv=	7500	Cubic Ft
Permanent Poolv=	3750	Cubic Ft
CPv=	22500	Cubic Ft
25-year detention	27000	Cubic Ft
Total Volume	53250	Cubic Ft
Length	101	ft
Width	67	ft
Depth	8	ft

# Attachment #9

## Pavement Design

## Flexible Pavement Design Analysis

<b>PI Number</b>	0006700	<b>County(s)</b>	Effingham
<b>Project Number</b>	CSMSL-0006-00(700)	<b>Design Name</b>	moreland
<b>Project Description</b>	New location 2 lane rural		

Traffic Data (AADTs are one-way)						Miscellaneous Data	
<b>Initial Design Year</b>	2019	<b>Initial AADT, VPD</b>	3,540	<b>24 Hour Truck %</b>	17.00	<b>Lanes in one direction</b>	1
<b>Final Design Year</b>	2039	<b>Final AADT, VPD</b>	4,750	<b>SU Truck %</b>	14.00	<b>Curb &amp; Gutter/Barrier</b>	No
		<b>Mean AADT, VPD</b>	4,145	<b>MU Truck %</b>	3.00		

Design Data					
<b>Lane Distribution Factor (%)</b>	100.00	<b>Soil Support Value</b>	4.00	<b>Single Unit ESAL</b>	0.40
<b>Terminal Serviceability Index</b>	2.50	<b>Regional Factor</b>	1.60	<b>Multiple Unit ESAL</b>	1.50
		<b>User Defined 18-KIP ESAL</b>	0.00	<b>Calculated 18-KIP ESAL</b>	0.59
<b>Non-Standard Value Comment</b>					

Design Loading (Calculated 18-KIP ESAL)					
Mean AADT, VPD	LDF (%)	Vehicle Type	Volume (%)	ESAL Factor	Daily ESAL
4,145	100.00	Single Unit Truck	14.00	0.40	233
		Multi Unit Truck	3.00	1.50	187
<b>Total Daily ESALs</b>					420
<b>Total Design Period ESALs</b>					3,066,000

Proposed Flexible Full Depth Pavement Structure				
Course	Material	Thickness (inches)	Structural Coefficient	Structural Value
Course 1	12.5 mm Superpave	1.50	0.4400	0.66
Course 2	19 mm Superpave	2.00	0.4400	0.88
Course 3	25 mm Superpave	1.00	0.4400	0.44
		2.00	0.3000	0.60
Course 4	Soil Cement Base	8.00	0.2000	1.60
<b>Required SN</b>	4.43	<b>Proposed pavement is 5.57% Underdesigned</b>		<b>Proposed SN</b>
				4.18

<b>Design Remarks</b>	Concept pavement design
-----------------------	-------------------------

Prepared By \_\_\_\_\_ Date 4/29/2014 1:45 PM

Ralph C. Ramsdell

Recommended By \_\_\_\_\_ Date \_\_\_\_\_

District Engineer

Approved By \_\_\_\_\_ Date \_\_\_\_\_

State Pavement Engineer

# Attachment #10

## Minutes of Concept Meetings

**Minutes of Final Concept meeting for  
Effingham Parkway Project  
Project Numbers: CSMSL-0006-00 (700)  
County: Chatham and Effingham Counties  
P. I. Number: 0006700**

The final concept team meeting was held at the Effingham County Conference Room on December 17, 2007 at 9:00 a.m. Attendees included:

<b>Name</b>	<b>Company</b>	<b>Phone</b>	<b>Email</b>
Pete Liakakis	Chatham County	912-652-7877	<a href="mailto:peteliakakis@chathamcounty.org">peteliakakis@chathamcounty.org</a>
Karla Poshedly	MAAI	770-263-5945	<a href="mailto:kposhedly@maai.net">kposhedly@maai.net</a>
Reggie Loper	Effingham Commissioner	912-754-6286	
Adam Kobek	Effingham County	912-754-2111	<a href="mailto:akobek@effinghamcounty.org">akobek@effinghamcounty.org</a>
George Shaw	Effingham County	912-754-8009	<a href="mailto:gshaw@effinghamcounty.org">gshaw@effinghamcounty.org</a>
John Henry	Effingham IDA	912-754-3301	<a href="mailto:jahenry@effinghamcounty.com">jahenry@effinghamcounty.com</a>
Brett Bennett	City of Springfield	912-754-6666	<a href="mailto:bbennett@cityofspringfield.com">bbennett@cityofspringfield.com</a>
David Crawley	Effingham Zoning Admin.	912-754-2105	<a href="mailto:dcrawley@effinghamcounty.org">dcrawley@effinghamcounty.org</a>
C.R. Jackson	GDOT– Dist. 5 Area Eng.	912-871-1103	<a href="mailto:cjackson@dot.ga.gov">cjackson@dot.ga.gov</a>
Mark Wilkes	Savannah MPO	912-651-1451	<a href="mailto:wilkesm@thempc.org">wilkesm@thempc.org</a>
Teresa Scott	GDOT – Dist. Planning	912-427-5788	<a href="mailto:tscott@dot.ga.gov">tscott@dot.ga.gov</a>
Kyle Mote	GDOT - Planning	404-656-6016	<a href="mailto:kmote@dot.ga.gov">kmote@dot.ga.gov</a>
Brad Saxon	GDOT – Dist. 5 Preconst.	912-427-5715	<a href="mailto:bsaxon@dot.ga.gov">bsaxon@dot.ga.gov</a>
Gary Johnson	GDOT – Dist. 5 Preconst.	912-530-4124	<a href="mailto:gjohnson@dot.ga.gov">gjohnson@dot.ga.gov</a>
Ed Williams	Effingham Administrator	912-754-2111	<a href="mailto:ewilliams@effinghamcounty.org">ewilliams@effinghamcounty.org</a>
Randy Weitman	Georgia Ports	912-964-3916	<a href="mailto:rweitman@gaports.com">rweitman@gaports.com</a>
Mike Weiner	City of Savannah	912-651-6600	<a href="mailto:mweiner@savannah.ga.gov">mweiner@savannah.ga.gov</a>
Keith Stewart	GDOT– Dist. 5 Preconst.	912-427-5865	<a href="mailto:kstewart@dot.ga.gov">kstewart@dot.ga.gov</a>
Cynthia Phillips	GDOT– Dist. 5 Traf. Ops.	912-427-5767	<a href="mailto:cphillips@dot.ga.gov">cphillips@dot.ga.gov</a>
Dennis Hutton	Savannah MPO	912-651-1446	<a href="mailto:huttond@thempc.org">huttond@thempc.org</a>
Malcolm Coleman	GDOT – Right-of-way	912-427-1999	<a href="mailto:mcoleman@dot.ga.gov">mcoleman@dot.ga.gov</a>
Donnie Boyd	GDOT– Dist. 5 Locations	912-370-2588	<a href="mailto:dboyd@dot.ga.gov">dboyd@dot.ga.gov</a>
Jeffery Young	GDOT– Dist. 5 Locations	912-370-2711	<a href="mailto:jyoung@dot.ga.gov">jyoung@dot.ga.gov</a>
Stephen Thomas	GDOT– Dist. 5 Utilities	912-427-5779	<a href="mailto:sthamas@dot.ga.gov">sthamas@dot.ga.gov</a>
George Shenk	GDOT– Dist. 5 Utilities	912-427-5859	<a href="mailto:gshenk@dot.ga.gov">gshenk@dot.ga.gov</a>
Rosalind Russell	GDOT– Dist. 5 Utilities	912-427-5779	<a href="mailto:rrussell@dot.ga.gov">rrussell@dot.ga.gov</a>
Buddy Carter	State Representative	912-604-5149	<a href="mailto:bcarter331@aol.com">bcarter331@aol.com</a>
Glenn Jones	Mayor of Port Wentworth	912-657-2889	<a href="mailto:pigjones@comcast.net">pigjones@comcast.net</a>
Hubert Sapp	Effingham Commissioner	912-748-4066	
Kenyatta Pruitt	City of Savannah	912-651-6573	
Charles Hinely	Councilman of Springfield	912-754-6494 or 912-655-1184	
Leon Davenport	Chatham County Engr.	912-652-7800	
Steve Liatta	Effingham County Engr.	912-754-8016	<a href="mailto:sliatta@effinghamcounty.org">sliatta@effinghamcounty.org</a>
Billy Gordon	MAAI – Right-of-way	912-266-1141	<a href="mailto:savannah@maai.net">savannah@maai.net</a>
Verna Phillips	Commission Chairman	912-826-4931	
Myra Lewis	Effingham Commissioner	912-728-3164	
Thomas Thomson	(Unable to attend) MPO	912-651-1446	<a href="mailto:thomsont@thempc.org">thomsont@thempc.org</a>

Ms. Teresa Scott began the meeting by identifying the project and stating the reason for the meeting. She then asked everyone to introduce him or herself. Ms. Scott then introduced Ms. Karla Poshedly of Moreland Altobelli Associates, Inc. to present the project.

Ms. Poshedly began by stating the project number and project description. She then stated the need and purpose of the project, the functional classification of the proposed road, the projected traffic volumes, the proposed typical section, environmental concerns, cost estimates and the alternatives considered. She then proceeded to explain the roadway concept design. She described the beginning and end of the project, the location of the median openings, the horizontal alignment, design speed of Effingham Parkway and side streets, and realignments of side streets.

Ms. Poshedly then opened the meeting to questions and comments. State Representative Buddy Carter asked who would purchase the right-of-way in Chatham County. Ms. Poshedly called on Mr. Billy Gordon to respond. Mr. Gordon said that Effingham County would be allowed to purchase right-of-way but would not be able to condemn property for the roadway. Ms. Poshedly commented that because of the regional impacts of this roadway that Effingham Parkway should become a state route and then the Georgia Department of Transportation would have jurisdiction to purchase right-of-way in both counties. Also, the Georgia Department of Transportation could oversee the permit and development review process to reserve the right-of-way until it could be purchased.

Commission Chairman Verna Phillips asked when should the request to make Effingham Parkway a state route be submitted. Ms. Scott said that the County could submit a request for consideration to the District now. She said that a revised Project Management Agreement would have to be signed by GDOT and Effingham County. Mr. Brad Saxon, GDOT District 5 preconstruction engineer said that if GDOT places the project on the state system, the purchase of right-of-way and the process would take longer. He also said that if GDOT takes over the 16.5 miles of Effingham Parkway, then 16.5 miles would have to be taken off the state system in Effingham or Chatham counties. Ms. Poshedly asked why couldn't the state designate the Effingham Parkway a state route without dropping state route miles in Effingham or Chatham counties. Ms. Scott said that there is a law in the State of Georgia that for every mile that the State takes over the same number of miles needs to be taken off system. Ms. Poshedly commented that the law should be changed because new miles of regional roadways need to be constructed in areas where there are growing populations of people.

Ms. Poshedly said that a resolution should be signed by all jurisdictions to reserve the right-of-way when possible. Mr. Gordon said that advance acquisition could be done on parcels if right-of-way funds are available at the time. Also, he stated that advance-acquisition parcels would need to be environmentally cleared before purchase.

Mr. George Shenk, GDOT District Utilities, said that he did not have any specific comments at this time but said that he believes the reimbursable utilities cost estimate may be low. He said that if MAAI sends him a copy of the concept layout, then he could mark the utilities on the layout and estimate the reimbursable utilities cost. Ms. Poshedly said that she would forward him a copy.

Mr. Mike Weiner said that the City of Savannah has approved the business park development plan that is located at the corner of Highlands Boulevard and Benton Boulevard. He said that he believes that the developer has begun to build Phase 1 of the project. Mr. Weiner also asked what is the distance between the Highlands Blvd intersection with Benton Blvd and the Effingham Parkway intersection

with Benton Blvd. Mr. Weiner said that a traffic signal might be needed in the future at both of these intersections. Ms. Poshedly said that the spacing is approximately 800 feet so there should not be a problem with installing and coordinating signals at both these intersections.

There was a comment made that there is a sewer line on Highlands Blvd that may be impacted by the construction of the Effingham Parkway.

Someone asked about the traffic signal locations. Ms. Poshedly said that individual traffic signal studies would have to be conducted during preliminary and/or final design to determine if each major intersection warrants traffic signal control.

Mr. John Henry of the Effingham IDA asked if he could get a copy of the Effingham Parkway layout. He said that there is a site that the IDA plans to develop along the route and that the right-of-way would be gifted for the parkway.

Mayor Glenn Jones, City of Port Wentworth, stated that the City is supportive of the project. There are some concerns about the project; however, the City is in favor of the construction of the Effingham Parkway through the city.

Mr. Kyle Mote, GDOT Office of Planning, stated that his office reviewed the need and purpose of the project and had only two comments: future population data should be included in the need and purpose and no-build traffic numbers are usually not included in the levels of service analysis. He said he reviewed the logical termini and alternatives considered and agreed with the location of the extension of the parkway from SR 30 to Jimmy Deloach Parkway at I-95.

Mr. Mark Wilkes, Savannah MPO, asked why the traffic on Jimmy Deloach Parkway east of Crossroads Parkway is the same for the build and no-build conditions. Ms. Poshedly said that it is assumed that if the Effingham Parkway Extension is not built, traffic would either travel through to Jimmy Deloach Parkway from SR 30, Monteith Road and Benton Blvd or traffic would travel down I-95 to Jimmy Deloach Parkway and turn left off of the freeway. Therefore, traffic would essentially be the same at this location.

Mr. Gary Johnson, GDOT District Preconstruction, stated that he had some minor changes to the concept report that he would forward to Ms. Poshedly to be revised.

With no other comments, the meeting was adjourned.

## Meeting Minutes

**Location:** GDOT OES  
February 6, 2014  
10:15 to 11:00 AM

**RE: Effingham Parkway, Effingham & Chatham Counties, CSMSL-0006-00(700), PI# 0006700**

### Attendees:

Jennifer Giersch, FHWA	404-562-3653	<a href="mailto:jennifer.giersch@dot.gov">jennifer.giersch@dot.gov</a>
David Hedeem, GDOT Ecology	404-631-1419	<a href="mailto:dhedeem@dot.ga.gov">dhedeem@dot.ga.gov</a>
Keisha Jackson, GDOT NEPA	404-631-1160	<a href="mailto:kejackson@dot.ga.gov">kejackson@dot.ga.gov</a>
Michelle Wright, GDOT PM (Video Conference)	912-271-7562	<a href="mailto:micwright@dot.ga.gov">micwright@dot.ga.gov</a>
LN Manchi, MAAI	770-263-5945	<a href="mailto:lmanchi@maai.net">lmanchi@maai.net</a>
Mike Wilson, MAAI	770-263-5945	<a href="mailto:mwilson@maai.net">mwilson@maai.net</a>
Matt Chamblee, MAAI	770-263-5945	<a href="mailto:mchamblee@maai.net">mchamblee@maai.net</a>
Karla Poshedly, MAAI	770-263-5945	<a href="mailto:kposhedly@maai.net">kposhedly@maai.net</a>

The meeting was opened by Mr. LN Manchi who explained the history and purpose of the project. Ms. Michelle Wright and Mr. Manchi indicated that the PAR and concept report had been approved by GDOT but had not been approved by FHWA because the NEPA process (EIS) has not been completed.

Mr. Manchi informed the attendees that Effingham officials met with GDOT management recently as they were concerned with the overall schedule and funding of the project. Effingham officials wanted to reduce the size and scope of the project because of the inadequate funding resources. Chatham County also has a SPLOST project to extend Benton Blvd from Highlands Blvd to SR 30. Effingham County would fund the project to upgrade McCall Road, an existing two-lane roadway from SR 21 just south of SR 119 to Blue Jay Road.

The project has changed to a federally funded new location roadway from Blue Jay Road to SR 30. Mr. Manchi stated that although the project has reduced in size and scope that the road would still have independent utility at a local level as opposed to a regional level. He said that MA staff is working on the logical termini analysis and the revised need and purpose document for the project. He also mentioned that efforts are being made to bridge the wetlands as much as possible to avoid triggering the PAR process.

Ms. Jennifer Giersch (FHWA) asked how much has been earmarked for this project. Ms. Keisha Jackson checked her records and stated that the earmark is roughly \$3.8 million.

Ms. Giersch requested that we should note why we have removed the larger project in the logical termini report. Ms. Giersch asked if whether the revised project would be a 2 or 4-lane. Mr. Manchi responded that depending on the traffic, the County may want to build a two-lane and acquire right-of-way for a future 4-lane. Ms. Jennifer Giersch said that a 2-lane would be acceptable and it would be up to the County if they wanted to look into an option to preserve right-of-way for 4-lanes. Ms. Giersch also noted that if the project ended up being a 4 lane project, the indirect and cumulative effects (ICI) analysis needs to be pretty comprehensive.

Mr. Manchi told Ms. Wright that once the traffic analysis and the logical termini report were prepared, it would be an appropriate time to revisit the schedule update process to reflect the updated federally funded project termini.

# Attachment #11

# Project Framework Agreement



12/16

# Department of Transportation

HAROLD E. LINNENKOHL  
COMMISSIONER  
(404) 656-5206

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

State of Georgia  
#2 Capitol Square, S.W.  
Atlanta, Georgia 30334-1002

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

EARL L. MAHFUZ  
TREASURER  
(404) 656-5224

May 30, 2007

The Honorable Verna H. Phillips, Commission Chairman  
Effington County Commission  
601 North Laurel Street  
Springfield Georgia 31329

Dear Chairman Phillips:

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

**PROJECT#:CSMSL-0006-00(700) Effington County, P.I.#0006700**

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 Dennis Odom at (912)427-5716.

Sincerely,

James T. Simpson,  
Financial Management Administrator

JTS:as

Enclosure

- c: Bob Rogers
- Glenn Durrence - District 5
- Jeff Baker - Utilities

District # 5  
Josup

Date: 6-1-07

- Dist. Engr.
- Personnel
- Contracts *GUC*
- Dist. Set.
- Mt's Test
- Conslr.
- Progr. & M.I. *B 6/14*
- Pre-Conslr. *WC of 1*
- Local Gov./R.W.
- Design *FD 6-11*
- State Aid
- Right of Way
- E.E.O. & Tr.
- Employee Stdy
- Traffic Stdy
- Utilities
- Adm. Officer
- Purchasing
- Maintenance
- File Room

*No funds*

**AGREEMENT**

**BETWEEN**

**DEPARTMENT OF TRANSPORTATION**

**STATE OF GEORGIA**

**AND**

**Effingham County**

**FOR**

**TRANSPORTATION FACILITY IMPROVEMENTS**

This AGREEMENT is made and entered into this 11<sup>th</sup> day of May, 2006, by and between the DEPARTMENT OF TRANSPORTATION, an agency of the State of Georgia, hereinafter called the "DEPARTMENT", and the Effingham County, acting by and through its Board of Commissioners, hereinafter called the "SPONSOR".

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

WHEREAS, the SPONSOR has represented to the DEPARTMENT a desire to participate in certain activities of the PROJECT as set forth in this AGREEMENT, 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.

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

1. The SPONSOR shall contribute to the PROJECT by funding all or certain portions of the PROJECT costs for the preconstruction engineering (design) activities as per Exhibit "A", utility relocations, right of way acquisitions as per a future Right of Way Agreement and construction as per a future Construction Agreement. Expenditures incurred by the SPONSOR and eligible for reimbursement by the DEPARTMENT shall not be considered reimbursible to the SPONSOR until execution of this agreement and written notice to proceed for each phase.

2. The DEPARTMENT shall contribute to the PROJECT by funding all or certain portions of the PROJECT costs for the preconstruction engineering (design) activities as per Exhibit "A", right of way acquisitions as per a future agreement or construction as per a future construction agreement.

3. It is understood and agreed by the DEPARTMENT and the SPONSOR that the funding portion as identified in Exhibit "A" of this agreement only applies to the Preconstruction Engineering Activities. Additional agreements will be required to be executed by the DEPARTMENT and the SPONSOR for the funding portion of subsequent phases.

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

5. The SPONSOR shall Certify that they have read and understands the regulations for "CERTIFICATION OF COMPLIANCES WITH FEDERAL PROCUREMENT REQUIREMENTS, STATE AUDIT REQUIREMENTS, AND FEDERAL AUDIT REQUIREMENTS" as stated in attachment A of this Agreement and will comply in full with said provisions.

6. When applicable engineering invoicing can only be submitted following submittal and acceptance of project milestones. Project milestones are defined as approval of the Concept Report, Completion and verification of the Database Preparation, approval of the Environmental Document, submittal of Preliminary Plans for PFPR, approval of Right of Way plans, and submittal of Final Plans for letting.

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

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

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

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

d. Prepare environmental studies, documentation, and reports for the PROJECT that show the PROJECT is in compliance with the provisions of the National Environmental Protection Act and Georgia Environmental Protection Act, as appropriate to the PROJECT funding. This shall include any and all archaeological, historical, ecological; air, noise, underground storage tanks (UST), and hazardous waste site studies required as well as any environmental

reevaluations required. The SPONSOR shall submit to the DEPARTMENT all environmental documents and reports for review and approval by the DEPARTMENT and the FHWA.

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

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

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

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

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

j. Provide certification, by a Georgia Registered Professional Engineer, that the construction plans have been prepared under the guidance of the

professional engineer and are in accordance with AASHTO and DEPARTMENT guidelines.

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

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

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

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

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

12. The SPONSOR 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 SPONSOR shall perform all necessary survey efforts in order to complete the design of the bridge(s) and prepare any required hydraulic and hydrological studies. The final bridge plans shall be incorporated into this PROJECT as a part of this AGREEMENT.

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

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

15. Upon the SPONSOR's determination of the rights of way required for the PROJECT and the approval of the right of way plans by the DEPARTMENT, the necessary rights of way for the PROJECT shall be acquired by the SPONSOR. Right of way acquisition shall be in accordance with the law and the rules and regulations of the FHWA including, but not limited to, Title 23, United States Code; 23 CFR 710, et. seq., and 49 CFR Part 24, and the rules and regulations of the DEPARTMENT and in accordance with the Contract for the Acquisition of Right of Way to be prepared by the DEPARTMENT and executed between the SPONSOR and the DEPARTMENT prior to the commencement of any right of way activities. Failure of the SPONSOR to follow these requirements may result in the loss of Federal funding for the PROJECT and it

will be the responsibility of the SPONSOR to make up the loss of that funding. All required right of way shall be obtained and cleared of obstructions, including underground storage tanks, prior to advertising the PROJECT for bids. The SPONSOR shall further be responsible for making all changes to the approved right of way plans, as deemed necessary by the DEPARTMENT, for whatever reason, as needed to purchase the right of way or to match actual conditions encountered.

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

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

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

19. The SPONSOR shall be responsible for the professional quality, technical accuracy, and the coordination of all designs, drawings, specifications, and other services furnished by or on behalf of the SPONSOR pursuant to this AGREEMENT. The SPONSOR shall correct or revise, or cause to be corrected or revised, any errors or deficiencies in the designs, drawings, specifications, and other services furnished for this PROJECT. Failure by the SPONSOR to address the errors or deficiencies within 30 days shall cause the SPONSOR to assume all responsibility for construction delays caused by the errors and deficiencies. All revisions shall be coordinated with the DEPARTMENT prior to issuance. The SPONSOR 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 SPONSOR pursuant to this AGREEMENT.

20. Both the SPONSOR and the DEPARTMENT hereby acknowledge that time is of the essence and both parties shall adhere to the priorities established in the approved Transportation Improvement Program/State Transportation Improvement Program (TIP/STIP) or earlier. Furthermore, all parties shall adhere to the detailed project schedule, as approved by the DEPARTMENT. In the completion of respective commitments contained herein, if a change in the schedule is needed, the DEPARTMENT shall have final authority. If, for any reason, the SPONSOR does not produce acceptable deliverables at the milestone dates defined in the current TIP/STIP, or in the approved schedule, the DEPARTMENT reserves the right to delay the

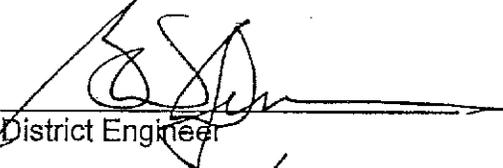
project's implementation until funds can be re-identified for construction or right of way, as applicable.

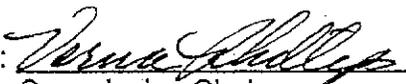
21. This AGREEMENT is made and entered into in FULTON COUNTY, GEORGIA, and shall be governed and construed under the laws of the State of Georgia. The covenants herein contained shall, except as otherwise provided, accrue to the benefit of and be binding upon the successors and assigns of the parties hereto.

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

RECOMMENDED:

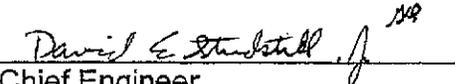
Effingham County

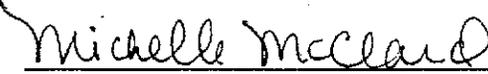
  
District Engineer

BY:   
Commission Chairman

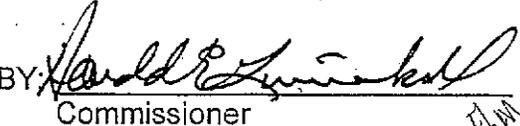
  
Deputy Commissioner

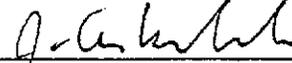
Signed, sealed and delivered this 10<sup>th</sup>  
day of September-October, 2006, in the  
presence of:

  
Chief Engineer

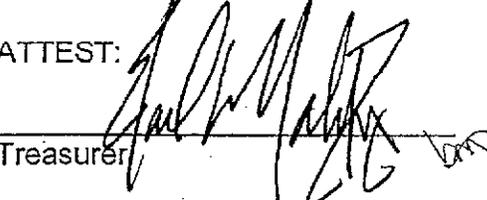
  
Witness

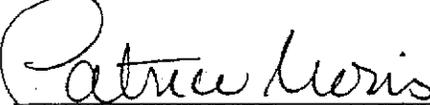
DEPARTMENT OF TRANSPORTATION

BY:   
Commissioner

  
Notary Public Notary Public, Effingham County, Georgia  
My Commission Expires August 1, 2010

This Agreement approved on the  
17<sup>th</sup> day of October, 2006.

ATTEST:   
Treasurer

  
City/County Clerk (as appropriate)

REVIEWED AS TO LEGAL FORM:

FEIN: 58-6000821

  
Office of Legal Services



## ATTACHMENT A

## CERTIFICATION OF COMPLIANCES

I hereby certify that I am a principle and duly authorized representative of \_\_\_\_\_  
 whose address is \_\_\_\_\_ and it is also certified that:

### I. PROCUREMENT REQUIREMENTS

The below listed provisions of Federal Procurement requirements shall be complied with throughout the contract period:

- (a) 49 CFR Part 18 Section 36  
Uniform Administrative Requirements for Grants and Cooperative  
Agreements to State and Local Governments – Procurement
- (b) 23 CFR 635 Subpart A – Contract Procedures

### II. STATE AUDIT REQUIREMENT

The provisions of Section 36-81-7 of the Official Code of Georgia Annotated, relating to the "Requirement of Audits" shall be complied with throughout the contract period in full such that:

- (a) Each unit of local government having a population in excess of 1,500 persons or expenditures of \$ 175,000.00 or more shall provide for and cause to be made an annual audit of the financial affairs and transactions of all funds and activities of the local government for each fiscal year of the local government.
- (b) The governing authority of each local unit of government not included above shall provide for and cause to be made the audit required not less often than once every two fiscal years.
- (c) The governing authority of each local unit of government having expenditures of less than \$ 175,000.00 in that government's most recently ended fiscal year may elect to provide for and cause to be made, in lieu of the biennial audit, an annual report of agreed upon procedures for that fiscal year.
- (d) A copy of the report and any comments made by the state auditor shall be maintained as a public record for public inspection during the regular working hours at the principal office of the local government. Those units of local government not having a principal office shall provide a notification to the public as to the location of and times during which the public may inspect the report.

- (e) The audits of each local government shall be conducted in accordance with generally accepted government auditing standards.

### III. FEDERAL AUDIT REQUIREMENT

The provisions of OMB Circular A-133 issued pursuant to the Single Audit Act of 1984, P.L. 98-502, and the Single Audit Act Amendments of 1996, P.L. 104-156 shall be complied with throughout the contract period in full such that:

- (a) Non-Federal entities that expend \$ 300,000 or more in a year in Federal awards shall have a single or program-specific audit conducted for that year in accordance with the provisions of OMB Circular A-133.
- (b) Non-Federal entities that expend less than \$ 300,000 a year in Federal awards are exempt from Federal audit requirements for that year, but records must be available for review or audit by appropriate officials of the Federal agency, pass-through entity, and General Accounting Office (GAO).
- (c) Except for the provisions for biennial audits provided in paragraphs (1) and (2) below, audits required shall be performed annually. Any biennial audit shall cover both years within the biennial period.
  - (1) A State or local government that is required by constitution or statute, in effect on January 1, 1987, to undergo its audits less frequently than annually, is permitted to undergo its audits biennially. This requirement must still be in effect for the biennial period under audit.
  - (2) Any non-profit organization that had biennial audits for all biennial periods ending between July 1, 1992, and January 1, 1995, is permitted to undergo its audits biennially.
- (d) The audit shall be conducted in accordance with Generally Accepted Government Auditing Standards.

Oct 17<sup>th</sup> 2006  
Date

  
Signature



December 31, 2010

The Honorable C. D. Zeigler  
Commission Chairman  
601 North Laurel Street  
Springfield, Georgia 31329

Dear Chairman Zeigler:

I am returning for your files a copy of an executed agreement between the Georgia Department of Transportation and Effingham County for the following projects:

**PROJECT#: CSMSL-0006-00(700) Effingham County, P.I. #0006700**

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 Michelle O. Wright at (912)271-7562.

Sincerely,

A handwritten signature in black ink, appearing to read "Angela Robinson".

Angela Robinson,  
Financial Management Administrator

AR: rm

Enclosure

c: Bob Rogers  
Glen Durrence - District 5  
Teresa Scott - District 5  
Jeff Baker - Utilities

**SUPPLEMENTAL AGREEMENT NUMBER ONE  
BY AND BETWEEN  
DEPARTMENT OF TRANSPORTATION  
And  
EFFINGHAM COUNTY  
For  
CSMSL-0006-00(700)  
Chatham, Effingham Counties  
PI 0006700  
Effingham Parkway beginning at SR 119 in Effingham  
County and extending to SR 30 in Chatham County**

**THIS AGREEMENT** is made and entered into this 2 day of February 2010, by and between the Georgia Department of Transportation, (hereinafter referred to as the "DEPARTMENT"), an agency of the State of Georgia, whose address for purposes of this Agreement is One Georgia Center, 600 W. Peachtree Street N.W., Atlanta, Georgia 30308, and Effingham County, acting by and through its Board of Commissioners, hereinafter referred to as the "SPONSOR".

**WHEREAS**, the DEPARTMENT and SPONSOR heretofore entered into an Agreement dated May 11, 2007, hereinafter called the "Original Agreement", for the purpose of constructing a new roadway facility beginning at SR 119 in Effingham County and extending to SR 30 in Chatham County, Georgia Department of Transportation Project Number CSMSL-0006-00(700), and P.I. Number 0006700, hereinafter referred to as the "PROJECT"; and

**WHEREAS**, the parties mutually desire to amend the Original Agreement to amend paragraph 6, page 3 to allow submission of engineering invoicing before approval of the concept report.

**NOW, THEREFORE**, the parties hereto mutually agree that for and in consideration of the mutual promises, the public purposes, and acknowledgements and agreements contained herein, together with other good and valuable consideration, the receipt of which is hereby acknowledged, the parties do hereby agree to amend the Original Agreement dated, May 11, 2007 as follows:

1. Delete paragraph 6., page 3 in its entirety and insert in lieu thereof, the following:  
"6. When applicable, engineering invoicing can only be submitted following submittal and acceptance of project milestones. Project milestones are defined as Initial Concept Submission, Completion and Verification of the Database Preparation, approval of the Environmental Document, submittal of Preliminary Plans for PFPR, approval of Right of Way plans, and submittal of Final Plans for letting."

Except as modified, changed or amended, all terms and conditions of the Original Agreement dated May 11, 2007, shall remain in full force and effect.

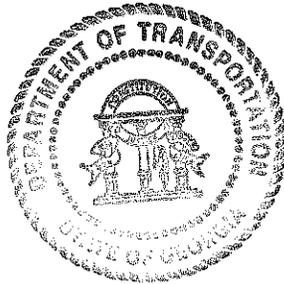
The covenants herein contained shall, except as otherwise provided, accrue to the benefit of and be binding up on the successors and assigns of the parties hereto.

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

Department of Transportation

By: Vance C. Smith  
Commissioner

ATTEST:  
Salynn Pluman - (A) AD  
Treasurer



Effingham County

By: C. D. Zeigler  
Name: C. D. Zeigler  
Title: Commission Chairman

Signed, sealed and delivered this  
2nd day of Feb, 2010 in the  
presence of:

Nate  
Witness

Daniel Johnson  
Notary Public **My Commission Expires August 16, 2013**

This Agreement approved on the  
2nd day of Feb, 2010

Patrice Crowley  
City/County Clerk (as appropriate)

FEIN: 586000821