ORIGINAL TO GENERAL FILES

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

OFFICE OF DESIGN POLICY & SUPPORT
INTERDEPARTMENTAL CORRESPONDENCE

FILE P.I. # 0008666
CSSTP-0008-00(666)
Camden County
GDOT District 5 - Jesup
Kingsland Bypass from CR 61 to I-95

OFFICE Design Policy & Support

DATE March 27, 2013

FROM for Brent Story, State Design Policy Engineer

TO SEE DISTRIBUTION

SUBJECT **APPROVED CONCEPT REPORT**

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

Attachment

DISTRIBUTION:

Bobby Hilliard, Program Control Administrator
Genetha Rice-Singleton, State Program Delivery Engineer
Glenn Bowman, State Environmental Administrator
Cindy VanDyke, State Transportation Planning Administrator
Ben Rabun, State Bridge Engineer
Kathy Zahul, State Traffic Engineer
Angela Robinson, Financial Management Administrator
Lisa Myers, State Project Review Engineer
Charles "Chuck" Hasty, State Materials Engineer
Mike Bolden, State Utilities Engineer
Paul Tanner, Asst. State Transportation Data Administrator
Attn: Systems & Classification Branch
Ken Thompson, Statewide Location Bureau Chief
Karon Ivery, District Engineer
Brad Saxon, District Preconstruction Engineer
Stephen Thomas, District Utilities Engineer
Robert Murphy, Project Manager
BOARD MEMBER - 1st Congressional District

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
PROJECT CONCEPT REPORT

Project Type:	Exempt	**P.I. Number:**	0008666
GDOT District:	5	**County:**	Camden
Federal Route Number:	N/A	**State Route Number:**	SR40

This project would construct a four lane divided highway in Camden County. It would provide connectivity between two current widening projects and easier access to the I-95.

Submitted for approval: *(email to "Concept Reports"; delete any inapplicable signature lines)*

Marc Altobell — 10/30/12
Consultant Designer & Firm *or* GDOT Concept/Design Phase Office Head & Office — DATE

(Public Works Director) — 10-30-12
Local Government *(if applicable)* — DATE

11/13/2012
Office Head *(GDOT Project Manager's Office)* — DATE

Tim Matthews — 11/8/2012
GDOT Project Manager — DATE

Recommendation for approval:

Program Control Administrator — DATE

GLENN BOWMAN*/EKP — 11/21/2012
State Environmental Administrator *(recommendation required)* — DATE

KATHY ZAHUL*/EKP — 12/10/2012
State Traffic Engineer *(recommendation required for roundabout projects)* — DATE

LISA MYERS*/EKP — 11/16/2012
Project Review Engineer — DATE

State Utilities Engineer — DATE

District Engineer *(projects not originating in District Office)* — DATE

BEN RABUN*/EKP — 12/27/2012
State Bridge Design Engineer *(if applicable)* — DATE

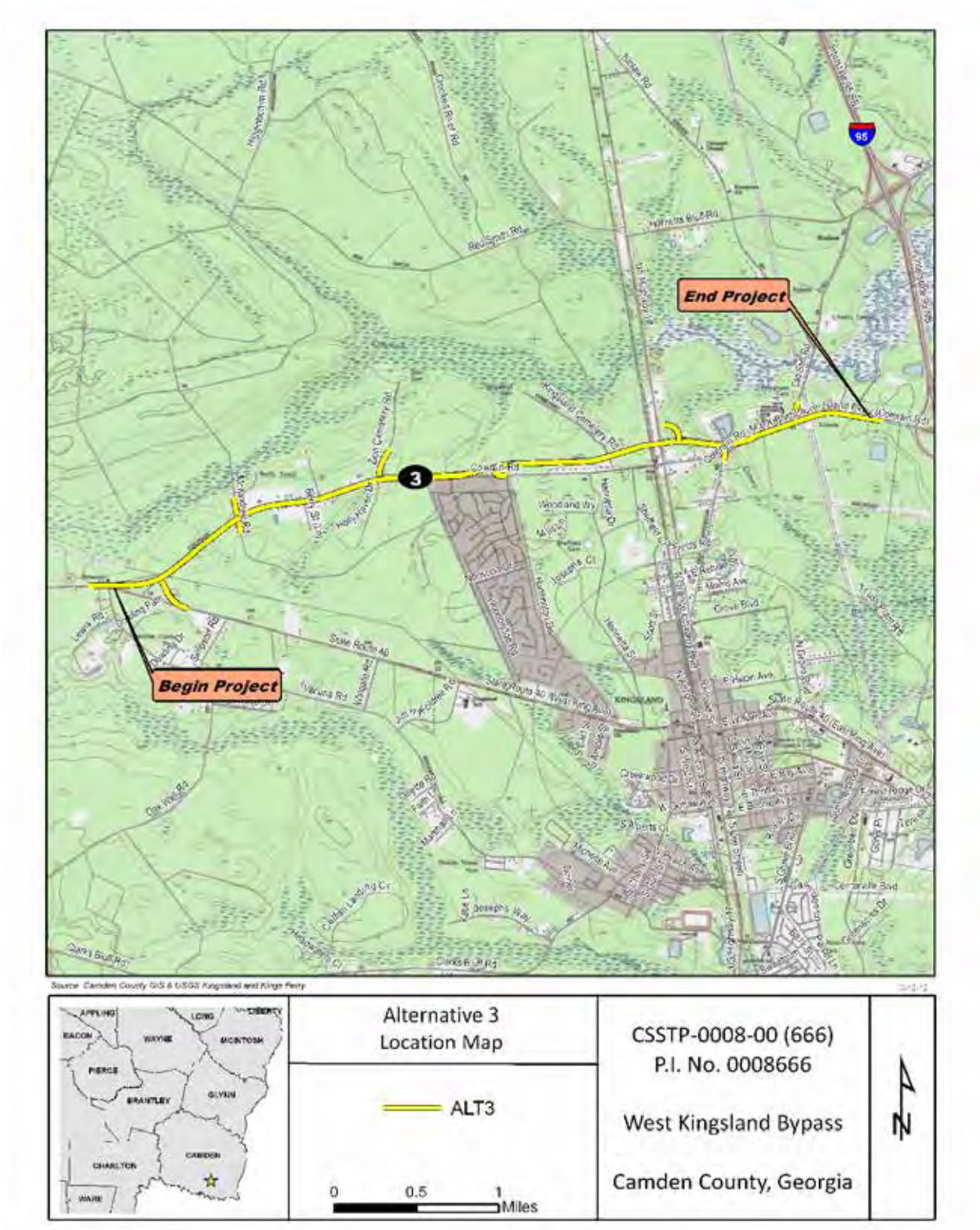
State Transportation Financial Management Administrator — DATE

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

CINDY VAN DYKE*/EKP — 11/20/2012
State Transportation Planning Administrator *(recommendation required)* — DATE

* - RECOMMENDATION ON FILE

PROJECT LOCATION



PLANNING & BACKGROUND DATA

Project Justification Statement:
Colerain Road/Kingsland Bypass is a two lane rural roadway located in Camden County. While not listed on any major GDOT programs (such as GRIP or State Bike route), this road would serve a growing area of the region, complete the Kingsland Bypass, and connect PI#0007414 (Kingsland Bypass Phase 1) and PI#0000820 (SR40 from MP 5 in Charlton County to Vacuna Road (CR61) in Camden County), two other widening projects.

Several studies have recommended projects that would increase the capacity of SR 40, thus providing a westbound vehicular movement recommended by GDOT for emergency evacuation. Each and every one of these studies has identified the widening of SR 40 to Folkston as a key component to improving the capacity of SR 40. The major obstacle to this improvement is the section of SR 40 through the city of Kingsland, in particular, the intersection of SR 40 and US 17. This intersection is bordered by historic structures that are part of the Kingsland Commercial Historic District, which is included in the National Register of Historic Places. An additional obstacle is that major overhead and underground utility lines are within required right-of-way.

After considering the impacts associated with widening SR 40 through Kingsland, the cities of St. Marys and Kingsland, and the Camden County Board of Commissioners determined that the only practical alternative would be to construct a bypass around Kingsland. A preliminary route was identified along Colerain Road from SR 40 east of Kingsland to Kings Bay Road west of Kingsland.

Colerain Road was formerly classified as a rural minor collector. However, because this proposed route is projected to serve the needs of regional, commercial, and commuter traffic around the City of Kingsland, it has been reclassified as a minor arterial. Bike lanes or a multi-use path would be provided along the length of this route.

In addition to providing traffic relief to SR 40, an overpass at the existing railroad and an essential evacuation route, this project would also provide regional economic benefits by facilitating access to area development and providing the necessary infrastructure for future economic development.

The limits of the project are defined by PI#0000820 (SR40 from MP 5 in Charlton County to Vacuna Road (CR61) in Camden County) at the west end and PI#0007414 (Kingsland Bypass Phase 1) to the east.

Description of the proposed project:
Laurel Island Parkway/Colerain Road is currently a two-lane corridor traversing east/west through Camden County, Georgia. The West Kingsland Bypass Phase 2 would begin at the intersection of SR 40 and Vacuna Road (the end of PI# 0000820) and then continue northeasterly along the alignment of Laurel Island Parkway/Colerain Road. The bypass continues on new alignment near the intersection of CR 109, crossing over the railroad and US 17 on structure, and then proceeds east on the existing alignment of Colerain Road to tie into Kingsland Bypass Phase 1(PI# 0007414) approximately 2,500 feet west of Interstate 95.
The typical section will be two lanes in each direction with a depressed 32’ median and rural shoulders from the beginning of the project to Old Still Road. This typical section matches the typical section used in PI# 0000820. At Old Still Road the typical section will change to an urban section with a 20’ raised median, a 5’ sidewalk on the south side and a 10’ multiuse trail on the north side. The 10’ multiuse trail is a continuation of the Coastal Greenway. The Coastal Greenway leaves Colerain Road at Old Still Road and continues north on Old Still Road. This typical section matches the typical section used in PI# 0007414.

Federal Oversight: ☐ Full Oversight ☒ Exempt ☐ State Funded ☐ Other

MPO: ☒ N/A ☐ MPO - Choose
MPO Project TIP #

Regional Commission: ☒ N/A ☐ RC – Coastal Georgia RC
RC Project ID #

Congressional District(s): 1

Projected Traffic: **AADT** **Mainline**
Current Year (2011): 4300 Open Year (2019): 10000 Design Year (2039): 16800

Projected Traffic: AADT **SR17**
Current Year (2011): 4380 Open Year (2019): 5260 Design Year (2039): 7080

Functional Classification (Mainline): Rural Minor Arterial

Is this project on a designated bike route? ☒ No ☐ YES

Is this project located on a pedestrian plan? ☒ No ☐ YES

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

CONTEXT SENSITIVE SOLUTIONS

Issues of Concern: The Coastal Georgia Greenway has designated this route from Old Still Road to the end of the project as a potential part of the Maine to Miami bike trail.

Context Sensitive Solutions: This section of the project will have an urban typical section. A 10' wide multiuse path will be constructed on the north side of the roadway from Old Still Road to the end of the project and connect to the trail in Phase 1 of this project.

DESIGN AND STRUCTURAL DATA

Mainline Design Features:
Roadway Name/Identification: Laurel Island Parkway/ Colerain Road from the Beginning of the Project to Old Still Road (Rural Section)

Feature	Existing	Standard*	Proposed
Typical Section			
- **Number of Lanes**	**2**	**4**	**4**
- **Lane Width(s)**	**12'**	**11'-12'**	**11'12'**
- **Median Width & Type**	**N/A**	**32' depressed**	**32' depressed**
- **Outside Shoulder Width & Type**	**4' grassed**	**10'- 6.5' paved rural**	**10'- 6.5' paved rural**
- **Outside Shoulder Slope**	**6%**	**6%**	**6%**
- **Inside Shoulder Width & Type**	**N/A**	**6'- 2' paved**	**6'- 2' paved**
- **Sidewalks**	**None**	**None**	**None**
- **Auxiliary Lanes**	**None**		**12' wide right and left turn lanes as required by traffic and geometry**
- **Bike Lanes**	**None**	**Not Marked. Available on Paved Shoulder**	**Not Marked. Available on Paved Shoulder**
Posted Speed	**45MPH**		**45 MPH**
Design Speed	**N/A**	**55 MPH**	**55 MPH**
Min Horizontal Curve Radius	**1060'**	**1060'**	**1060'**
Superelevation Rate	**6%**	**6%**	**6%**
Grade	**4%**	**4%**	**4%**
Access Control	**By Permit**	**By Permit**	**By Permit**
Right-of-Way Width	**80'-100'**	**N/A**	**Varies 100' - 150'**
Design Vehicle	**N/A**	**WB-67**	**WB-67**

*According to current GDOT design policy if applicable

Roadway Name/Identification: Laurel Island Parkway/ Colerain Old Still Road to the end of the project. (Urban Section)

Feature	Existing	Standard*	Proposed
Typical Section			
- **Number of Lanes**	**2**	**4**	**4**
- **Lane Width(s)**	**12'**	**11'-12'**	**12'**
- **Median Width & Type**	**N/A**	**20' raised**	**20' raised**
- **Outside Shoulder Width & Type**	**4' grassed**	**10' to 16' urban**	**16' to 20' urban**
- **Outside Shoulder Slope**	**6%**	**2%**	**2%**
- **Inside Shoulder Width & Type**	**N/A**	**N/A**	**N/A**
- **Sidewalks**	**None**	**5' sidewalk with 6' buffer**	**5' sidewalk with 6' buffer south 10' multiuse path with 6' buffer north****
- **Auxiliary Lanes**	**None**		**12' wide right and left turn lanes as required by traffic and geometry**
- **Bike Lanes**	**None**	**4'**	**10' multiuse path on north side of road**
Posted Speed	**45MPH**		**45 MPH**
Design Speed	**N/A**	**45 MPH**	**45 MPH**
Min Horizontal Curve Radius	**1060'**	**711'**	**711'**
Superelevation Rate	**6%**	**4%**	**4%**
Grade	**4%**	**4%**	**4%**
Access Control	**By Permit**	**By Permit**	**By Permit**
Right-of-Way Width	**80'-100'**	**N/A**	**Varies 100' - 150'**
Design Vehicle	**N/A**	**WB-67**	**WB-67**

*According to current GDOT design policy if applicable

**The wide shoulders and multiuse path proposed on the on the north side of the roadway in this section are in place to conform to the typical section of PI#0007414.

Major Structures:

Structure	Existing	Proposed
Span over SR17 and CSX Railroad	N/A	The proposed structure is 520 feet in length with 2-12' travel lanes in each direction, 8' shoulders and a 20' raised median
Retaining walls	N/A	N/A
Other	N/A	N/A

Major Interchanges/Intersections:

The utility and appropriateness of roundabouts was analyzed at major intersections in the corridor. The initial traffic split analysis and capacity analysis worksheets are attached.

The following intersections were not considered for roundabouts due to the traffic split being greater than 90%/10% major/minor:

- Holly Haven at Colerain Road
- Old Colerain at Relocated Colerain Road
- Martin Luther King Road at Relocated Colerain Road
- Old Still Road at Colerain Road

The remaining intersections were analyzed for capacity. All analyzed intersections would have a Level of Service of A or B in the design year (2039) with a roundabout installed:

- SR 40 at Colerain Road
- US 17 Connector at US 17
- US 17 Connector at Colerain Road

Roundabouts were not considered feasible at SR 40 and US 17 with Colerain Road due to the nature of the road being an evacuation route and that multilane roundabouts would be required. A 55 MPH design speed may contribute to higher crash frequencies than currently exist. No other roundabouts are present in the vicinity and it was judged that this was not an ideal roadway for the first installation. It is likely that substantial public opposition may occur.

A roundabout is considered feasible at US 17 with US 17 Connector but unnecessary due to a limited crash history at the existing intersection. Furthermore, no other roundabouts are present in the vicinity and it was judged that this was not an ideal roadway for the first installation. It is likely that substantial public opposition may occur.

See Appendix 8 for detailed analysis.

Utility Involvements: Georgia Power-Distribution, Georgia Power-Transmission, Okefenoke Rural EMC, , Kingsland Cable TV, TDS Telecom, City of Kingsland Water, City of Kingsland Sewer, Atlanta Gas Light (Brunswick)

Public Interest Determination Policy and Procedure recommended (Utilities)? ☐ YES ☒ NO

SUE Required: ☒ Yes ☐ No

Railroad Involvement: Laurel Island Parkway currently crosses the spur CSX railroad that parallels SR17. The current at grade crossing will be closed and an overpass will be constructed north of the existing crossing. The railroad is owned by CSX and is leased to First Coast Railroad. The proposed bridge may need to be wide enough to accommodate additional tracks underneath in the future.

Right-of-Way:

Required Right-of-Way anticipated: ☒ YES ☐ NO ☐ Undetermined

Easements anticipated: ☒ Temporary ☒ Permanent ☐ Utility ☐ Other

Anticipated number of impacted parcels:	64
Anticipated number of displacements (Total):	1
Businesses:	0
Residences:	1
Other:	0

Location and Design approval: ☐ Not Required ☒ Required

Off-site Detours Anticipated: ☒ No ☐ Yes ☐ Undetermined

Transportation Management Plan Anticipated: ☒ YES ☐ NO

Design Exceptions to FHWA/AASHTO controlling criteria anticipated:

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

Design Variances to GDOT standard criteria anticipated:

GDOT Standard Criteria	Reviewing Office	YES	Appvl Date (if applicable)	NO	Undetermined
1. Access Control - Median Opening Spacing	DP&S	☐		☒	☐
2. Median Usage & Width	DP&S	☐		☒	☐
3. Intersection Skew Angle	DP&S	☐		☒	☐
4. Lateral Offset to Obstruction	DP&S	☐		☒	☐
5. Intersection Sight Distance	DP&S	☐		☒	☐
6. Bike & Pedestrian Accommodations	DP&S	☐		☒	☐
7. GDOT Drainage Manual	DP&S	☐		☒	☐
8. Georgia Standard Drawings	DP&S	☐		☒	☐
9. GDOT Bridge & Structural Manual	Bridge Design	☐		☒	☐
10. Roundabout Illumination	DP&S	☐		☒	☐
11. Rumble Strips	DP&S	☐		☒	☐
12. Safety Edge	DP&S	☐		☒	☐

VE Study anticipated: ☐ No ☒ Yes ☐ Completed – Date:

ENVIRONMENTAL DATA

Anticipated Environmental Document:

GEPA: ☐ **NEPA:** ☐ Categorical Exclusion ☒ EA/FONSI ☐ EIS

Air Quality:

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

Environmental Permits/Variances/Commitments/Coordination anticipated:

Permit/ Variance/ Commitment/ Coordination Anticipated	YES	NO	Remarks
1. U.S. Coast Guard Permit	☐	☒	
2. Forest Service/Corps Land	☐	☒	
3. CWA Section 404 Permit	☒	☐	
4. Tennessee Valley Authority Permit	☐	☒	
5. Buffer Variance	☒	☐	
6. Coastal Zone Management Coordination	☐	☒	
7. NPDES	☒	☐	
8. FEMA	☐	☒	
9. Cemetery Permit	☐	☒	
10. Other Permits	☐	☒	
11. Other Commitments	☐	☒	
12. Other Coordination	☐	☒	

Is a PAR required? ☐ No ☒ Yes ☒ Completed – Date: 10/15/2012

NEPA/GEPA: No 4(f) resources have been identified in the project area.

Ecology: A preliminary wetlands and endangered/threatened species survey has been performed for preparation of the PAR. Wetlands have been identified and field located. Twenty two jurisdictional Waters of the U.S. (one perennial stream, one intermittent stream, five ephemeral streams and fifteen wetlands) were identified within the survey limits of the proposed project corridor. Two non-jurisdictional channels were also identified within the survey limits of the proposed project corridor. The identified wetlands, intermittent stream, ephemeral streams and perennial stream are state and federal waters and are jurisdictional waters of the U.S. A state buffer variance would be required for the identified intermittent stream and perennial stream if the 25-foot buffer associated with these resources were impacted by the proposed project. No endangered/threatened species were identified, however potential habitat was observed for the following species Elanoides forficatus, Mycteria Americana, Vermivora bachmanii, Drymarchon corais couperi, Gopherus polyphemus, Notophthalmus perstriatus, Baptisia arachnifera, Geomys pinetis. The ecology impacts shown in the Mitigation Cost Estimate are based on the worst case scenario. (All wetlands and streams inside the right of way)

History: The History survey has been performed for preparation of the PAR. SHPO has reviewed the document and concurred. No historical properties will be affected by the project.

Archeology: An archeology survey has not been performed. Kingsland Cemetery and Mt. Zion Cemetery are both near the project but would not be impacted.

Air & Noise: Air and Noise studies have not been performed.

Public Involvement: This project will require a PIOH and PHOH. In addition quarterly reports to the Camden County Board of Commissioners will be prepared and delivered during open board meetings.

Major stakeholders: Traveling Public, Camden County, City of Kingsland, City of St. Mary's, GDOT, USACE.

CONSTRUCTION

Issues potentially affecting constructability/construction schedule: None

Early Completion Incentives recommended for consideration: ☒ No ☐ Yes

PROJECT RESPONSIBILITIES

Project Activities:

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

Lighting required: ☒ No ☐ Yes

Initial Concept Meeting: *N/A*

Concept Meeting: Held August 29, 2012. Meeting minutes are attached.

Other projects in the area: PI#000821 SR40 Widening connects to the west end of this project and PI#0007414 Colerain Road connects to the east end of this project.

Other coordination to date: Ties to projects PI#000821 and PI#0007414 have been coordinated.

Project Cost Estimate and Funding Responsibilities:

	Breakdown of PE	ROW	Utility	CST*	Environmental Mitigation	Total Cost
By Whom	Camden County	GDOT	GDOT	GDOT	GDOT	
$ Amount	$1,816,653	$2,659,000	$38,000	$17,778,634	$250,554	$22,542,841
Date of Estimate	2/11/2011	6/15/2012	8/30/2012	2/26/2013	2/26/2013	

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

ALTERNATIVES DISCUSSION

Alternative selection: (Alt 3 in PAR)

Preferred Alternative: Maintain the alignment of Laural Island Parkway from SR40 to the point where residences are located close to both sides of the roadway. An overpass over the existing CSX Railroad and SR17 will be constructed and the existing crossing will be closed.			
Estimated Property Impacts:	**64, 1 Displacement**	**Estimated Total Cost:**	**$22,502,000**
Estimated ROW Cost:	**$2,659,000**	**Estimated CST Time:**	**24**
Rationale: This alternative had the least combined impacts on the environment and property owners. This alignment allows the at grade railroad crossing to be closed with little or no impact to the travel time of the residents of the area.			

No-Build Alternative:			
Estimated Property Impacts:	**0**	**Estimated Total Cost:**	**0**
Estimated ROW Cost:	**0**	**Estimated CST Time:**	**0**
Rationale: The No Build Alternative would not improve the hurricane evacuation time of the residents west of I-95 in Charlton and Camden Counties.			

Alternative 1: *Maintain and widen the existing alignment from SR40 to I95 (Alt 2 in PAR)*			
Estimated Property Impacts:	**76, 15 Displacements**	**Estimated Total Cost:**	**$24,500,000**
Estimated ROW Cost:	**$4,500,000**	**Estimated CST Time:**	**24**
Rationale: This alternate was rejected due to the increased impact to property owners and increased cost due to those impacts. This alternate had the least impact to wetlands.			

Alternative 2: *New Alignment north of the existing alignment (Alt 4 in PAR)*			
Estimated Property Impacts:	**40, 4 Displacements**	**Estimated Total Cost:**	**$24,000,000**
Estimated ROW Cost:	**$3,500,000**	**Estimated CST Time:**	**30**
Rationale: This alternate was rejected due to the increased impact to property owners and increased cost due to those impacts. This alternate had the most impact to wetlands. The construction cost would be higher and the construction time would be lengthened due to the wet condition. Essential Fish Habitat would be impacted. One historic resource is impacted.			

Attachments:

1. Concept Layout
2. Typical sections
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 (EPD, etc)
4. Cost Benefit Analysis
5. Crash summaries
6. Traffic diagrams
7. Capacity analysis summary *(tabular format)*
8. Summary of TE Study and/or Signal Warrant Analysis
9. Roundabout Analysis
10. Cost Benefit Analysis
11. Utility Risk Management Plan
12. Practical Alternatives Report
13. Minutes of Concept meetings
14. PFA

APPROVALS

Concur: _____ 3/20/2013
Director of Engineering

Approve: _____ 3/25/13
Chief Engineer Date

Concept Layout

			COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			CAMDEN	0008666		

PROPERTY AND EXISTING R/W LINE —— R ——
REQUIRED R/W LINE
CONSTRUCTION LIMITS ---C----F---
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

MORELAND-ALTOBELLI ASSOC., INC.
(912) 963-1112

DESIGNED BY:		
DRAWN BY:		
CHECKED BY:		
SUPERVISED BY:	WILLIAM DIAL P.E.	

SCALE IN FEET
0 200 400 800

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION

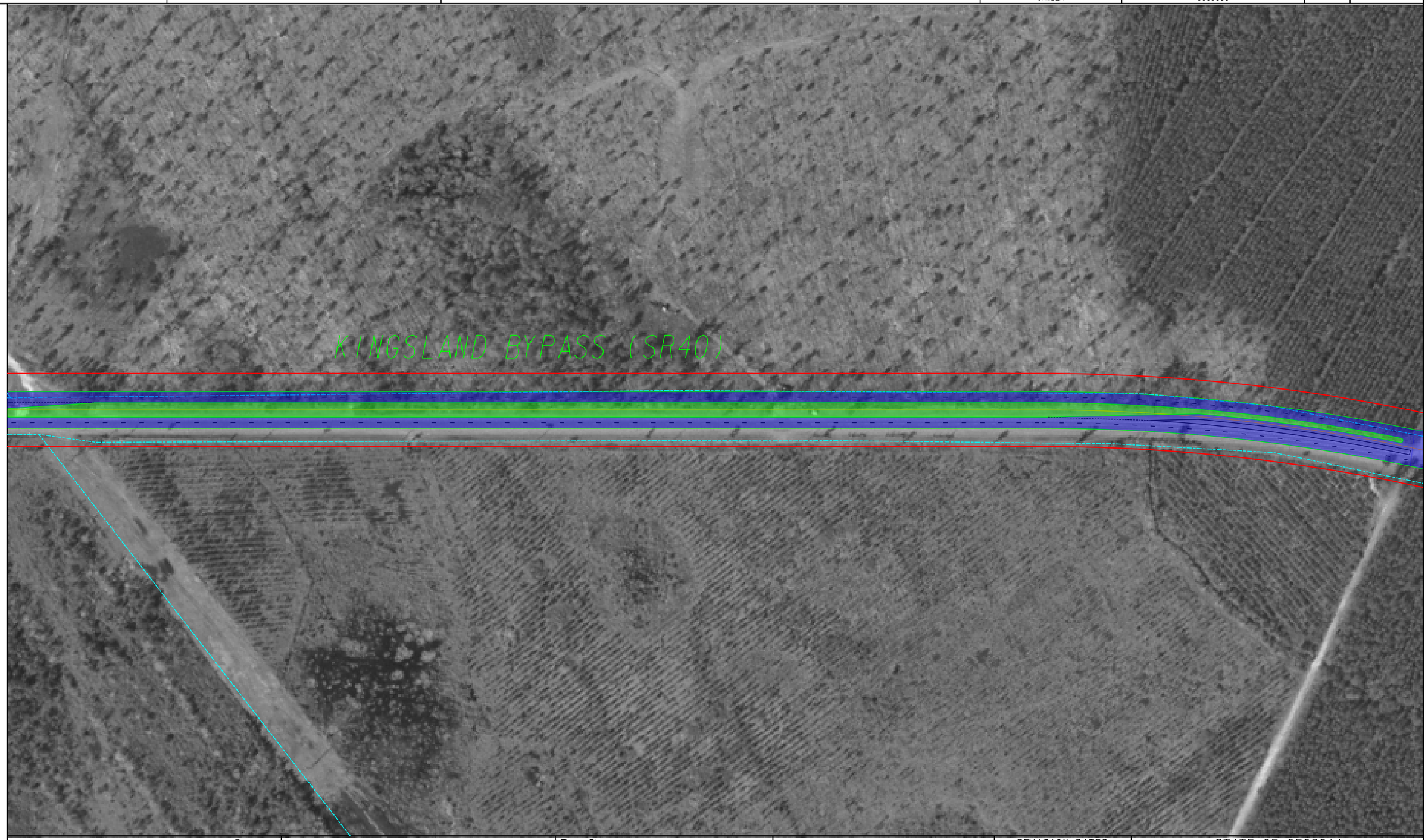
OFFICE:

MAINLINE PLAN

KINGSLAND BYPASS
PHASE II

DRAWING No. 13-01

			COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			CAMDEN	0008666		



PROPERTY AND EXISTING R/W LINE ——P——
REQUIRED R/W LINE ————
CONSTRUCTION LIMITS ----C----F---
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

MORELAND-ALTOBELLI ASSOC., INC.
(912) 963-1112

DESIGNED BY:		
DRAWN BY:		
CHECKED BY:		
SUPERVISED BY:	WILLIAM DIAL P.E.	

SCALE IN FEET
0 200 400 800

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION

OFFICE:

MAINLINE PLAN

KINGSLAND BYPASS
PHASE II

DRAWING No.
13-02

COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
CAMDEN	0008666		

PROPERTY AND EXISTING R/W LINE ——P——
REQUIRED R/W LINE
CONSTRUCTION LIMITS ---C----F---
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

MORELAND-ALTOBELLI ASSOC., INC.
(912) 963-1112

DESIGNED BY:		
DRAWN BY:		
CHECKED BY:		
SUPERVISED BY:	WILLIAM DIAL P.E.	

SCALE IN FEET
0 200 400 800

REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION

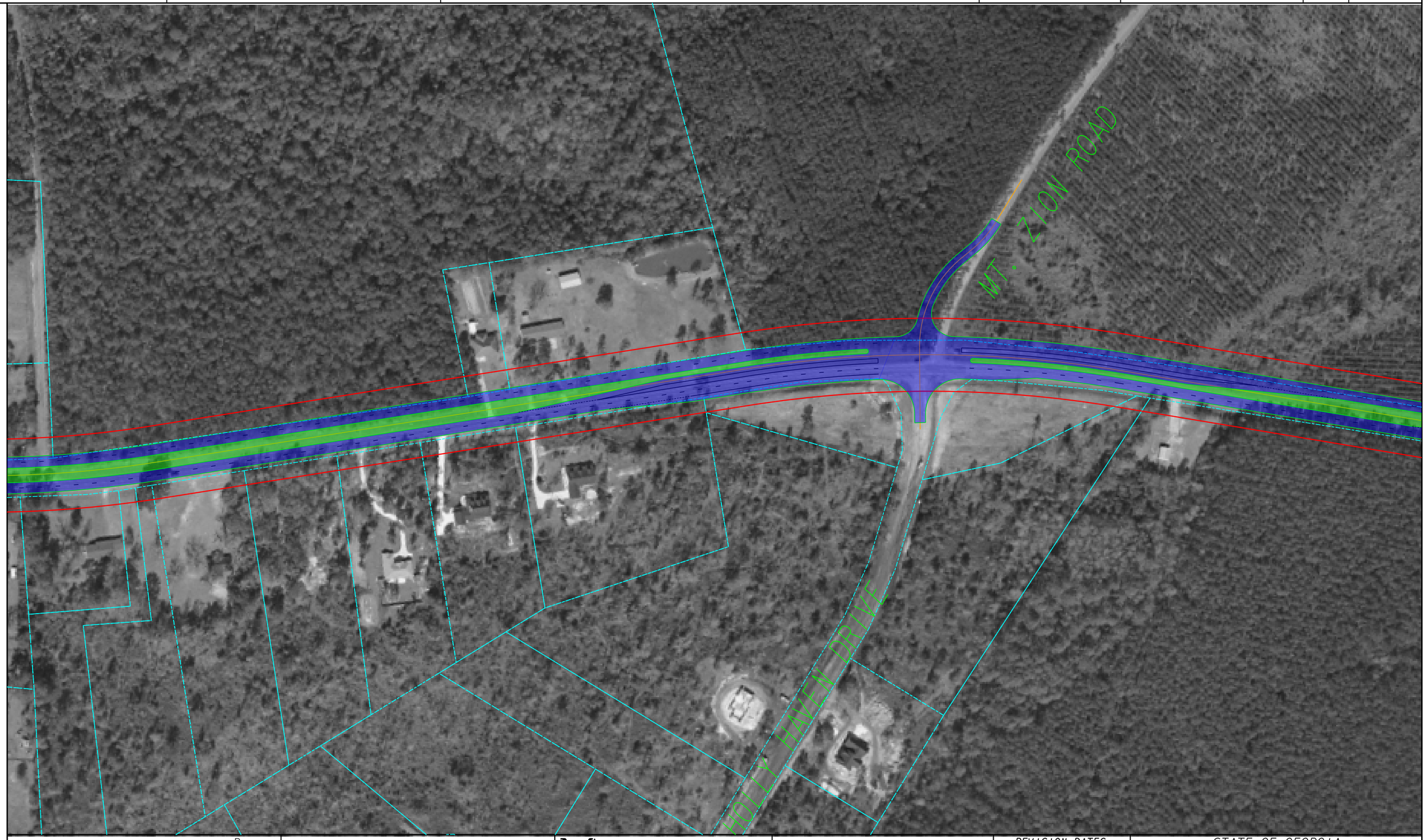
OFFICE:

MAINLINE PLAN

KINGSLAND BYPASS
PHASE II

DRAWING No.
13-03

			COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			CAMDEN	0008666		



PROPERTY AND EXISTING R/W LINE ——R——
REQUIRED R/W LINE
CONSTRUCTION LIMITS ---C----F---
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

MORELAND-ALTOBELLI ASSOC., INC.
(912) 963-1112

DESIGNED BY:		
DRAWN BY:		
CHECKED BY:		
SUPERVISED BY:	WILLIAM DIAL P.E.	

SCALE IN FEET
0 200 400 800

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION

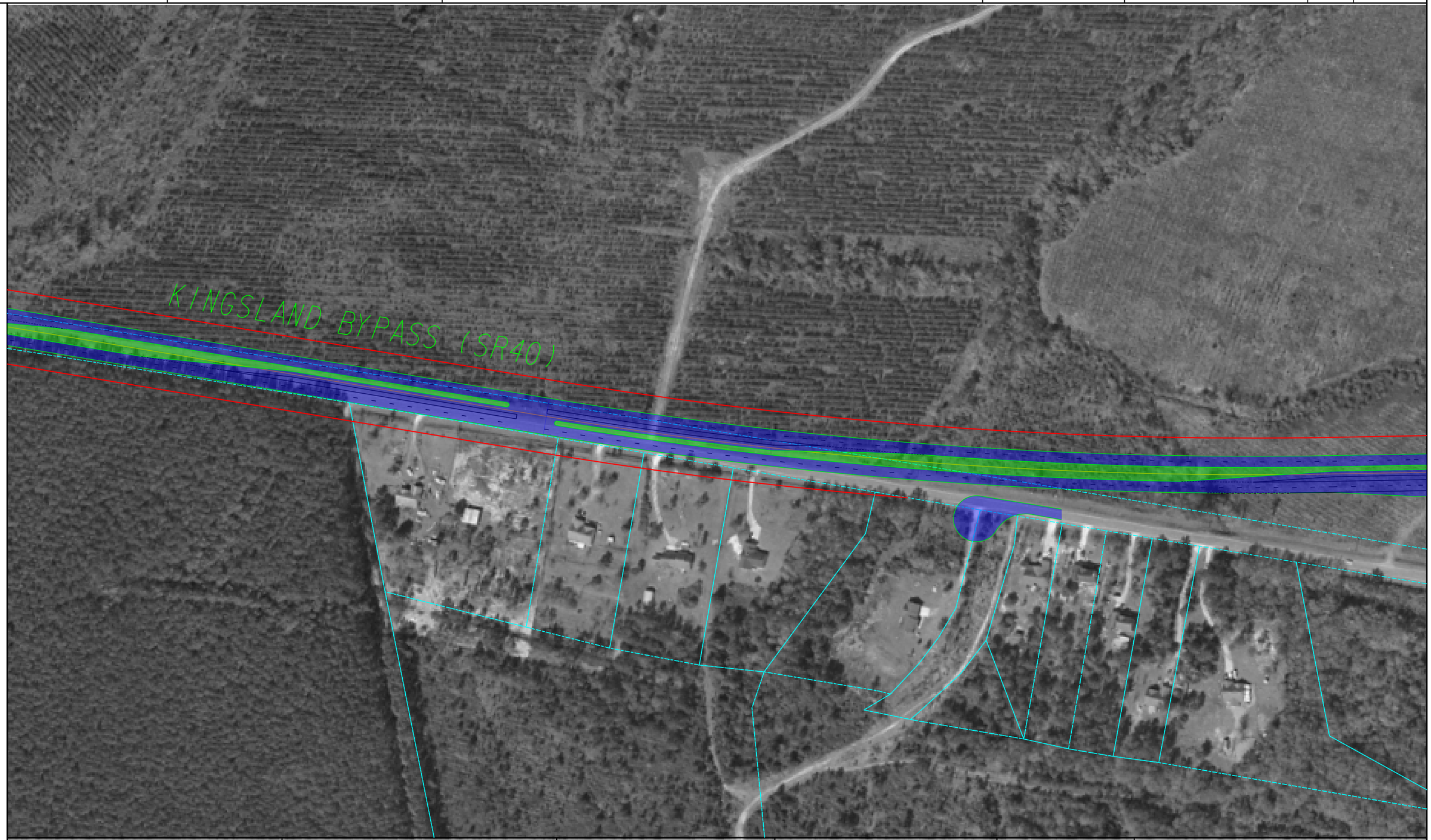
OFFICE:

MAINLINE PLAN

KINGSLAND BYPASS
PHASE II

DRAWING No.
13-04

COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
CAMDEN	0008666		



PROPERTY AND EXISTING R/W LINE ---PL---
REQUIRED R/W LINE ———
CONSTRUCTION LIMITS ---C----F---
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

MORELAND-ALTOBELLI ASSOC., INC.
(912) 963-1112

DESIGNED BY:		
DRAWN BY:		
CHECKED BY:		
SUPERVISED BY:	WILLIAM DIAL P.E.	

SCALE IN FEET
0 200 400 800

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION

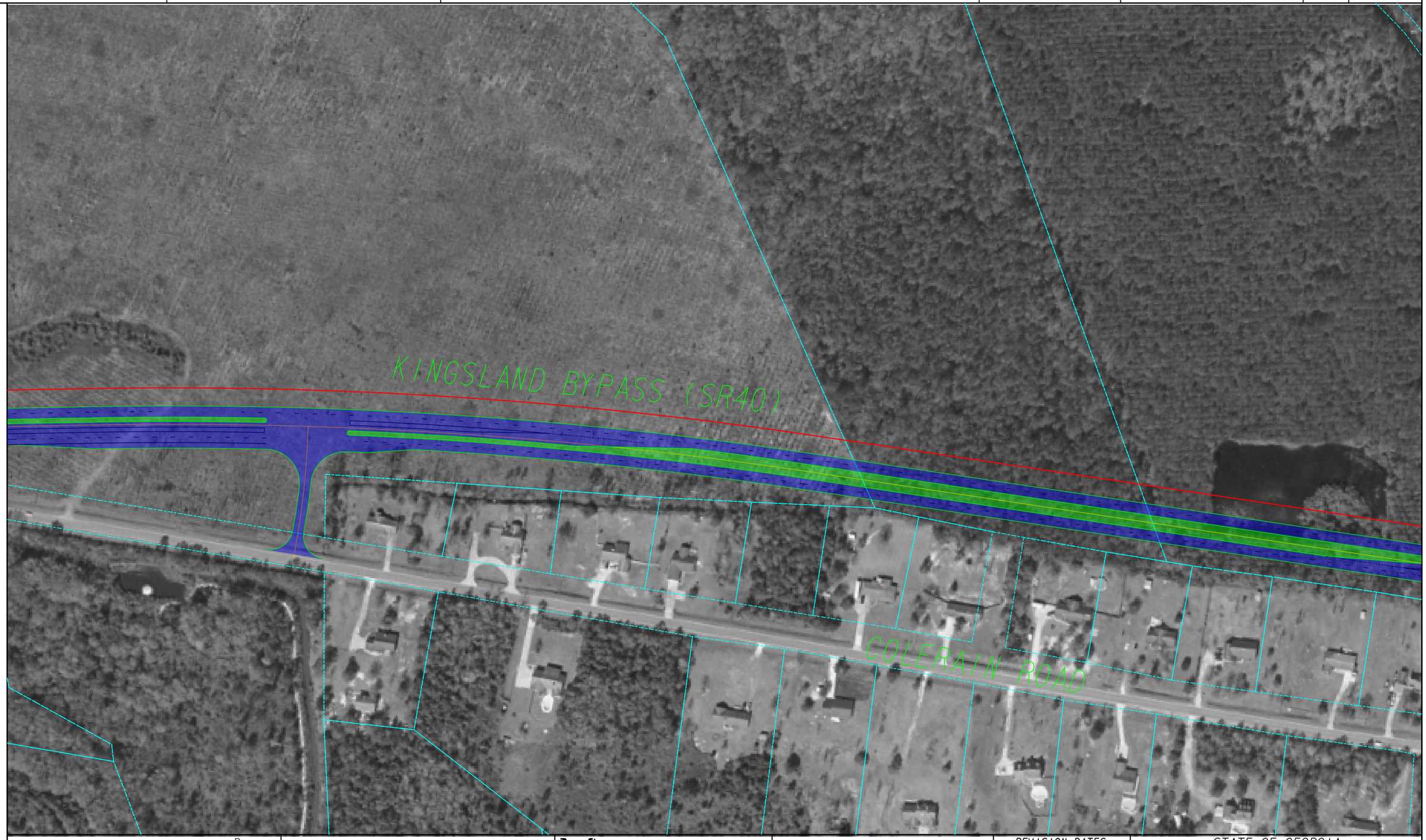
OFFICE:

MAINLINE PLAN

KINGSLAND BYPASS
PHASE II

DRAWING No.
13-05

COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
CAMDEN	0008666		



PROPERTY AND EXISTING R/W LINE ---P---
REQUIRED R/W LINE
CONSTRUCTION LIMITS ---C---F---
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

MORELAND-ALTOBELLI ASSOC., INC.
(912) 963-1112

DESIGNED BY:		
DRAWN BY:		
CHECKED BY:		
SUPERVISED BY:	WILLIAM DIAL P.E.	

SCALE IN FEET
0 200 400 800

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION

OFFICE:

MAINLINE PLAN

KINGSLAND BYPASS
PHASE II

DRAWING No.
13-06

COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
CAMDEN	0008666		

PROPERTY AND EXISTING R/W LINE ---R---
REQUIRED R/W LINE
CONSTRUCTION LIMITS ---C----F---
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

MORELAND-ALTOBELLI ASSOC., INC.
(912) 963-1112

DESIGNED BY:		
DRAWN BY:		
CHECKED BY:		
SUPERVISED BY:	WILLIAM DIAL P.E.	

SCALE IN FEET
0 200 400 800

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE:

MAINLINE PLAN

KINGSLAND BYPASS
PHASE II

DRAWING No. 13-07

COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
CAMDEN	0008666		

PROPERTY AND EXISTING R/W LINE ———℄———
REQUIRED R/W LINE ———————
CONSTRUCTION LIMITS ---C----F---
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

MORELAND-ALTOBELLI ASSOC., INC.
(912) 963-1112

DESIGNED BY:		
DRAWN BY:		
CHECKED BY:		
SUPERVISED BY:	WILLIAM DIAL P.E.	

SCALE IN FEET
0 200 400 800

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE:

MAINLINE PLAN

KINGSLAND BYPASS
PHASE II

DRAWING No.
13-08

COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
CAMDEN	0008666		

PROPERTY AND EXISTING R/W LINE ——R——
REQUIRED R/W LINE
CONSTRUCTION LIMITS ---C----F---
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

MORELAND-ALTOBELLI ASSOC., INC.
(912) 963-1112

DESIGNED BY:		
DRAWN BY:		
CHECKED BY:		
SUPERVISED BY:	WILLIAM DIAL P.E.	

SCALE IN FEET
0 200 400 800

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE:

MAINLINE PLAN

KINGSLAND BYPASS
PHASE II

DRAWING No.
13-09

			COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			CAMDEN	0008666		

PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

MORELAND-ALTOBELLI ASSOC., INC.
(912) 963-1112

DESIGNED BY:		
DRAWN BY:		
CHECKED BY:		
SUPERVISED BY:	WILLIAM DIAL P.E.	

SCALE IN FEET
0 200 400 800

REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE:

MAINLINE PLAN

KINGSLAND BYPASS
PHASE II

DRAWING No. 13-10

COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
CAMDEN	0008666		

PROPERTY AND EXISTING R/W LINE —R—
REQUIRED R/W LINE
CONSTRUCTION LIMITS —C—F—
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

MORELAND-ALTOBELLI ASSOC., INC.
(912) 963-1112

DESIGNED BY:		
DRAWN BY:		
CHECKED BY:		
SUPERVISED BY:	WILLIAM DIAL P.E.	

SCALE IN FEET
0 200 400 800

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE:

MAINLINE PLAN

KINGSLAND BYPASS
PHASE II

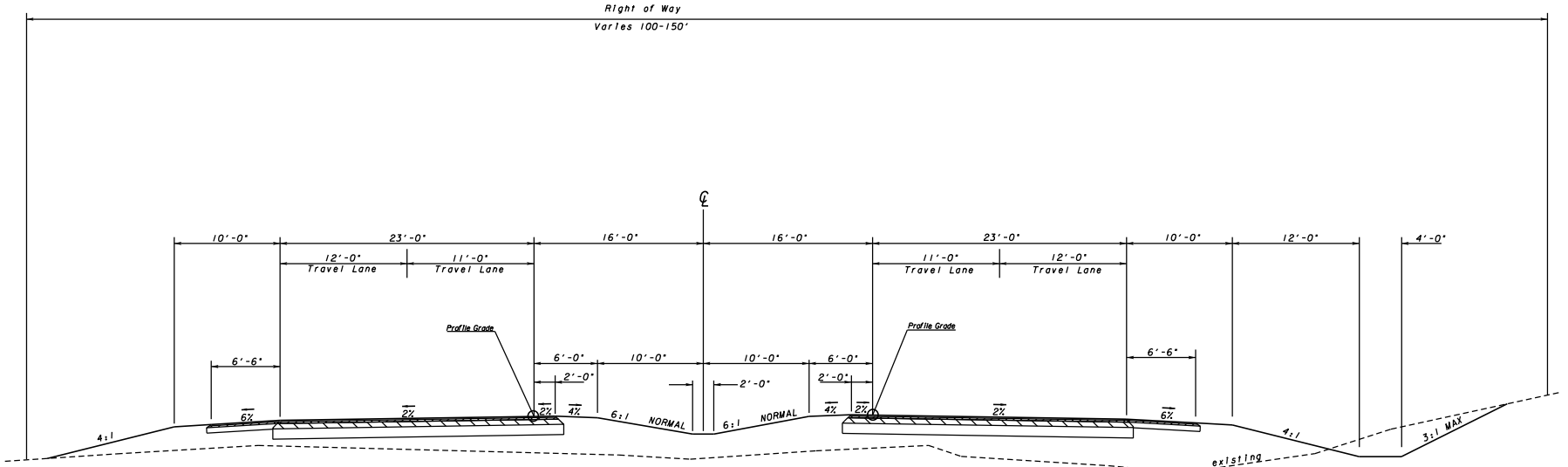
DRAWING No. 13-11

Typical Sections

		COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		CAMDEN	PI*0008666		

TYPICAL SECTION

NOT TO SCALE



KINGSLAND BYPASS RURAL SECTION

55 MPH SPEED DESIGN

MORELAND-ALTOBELLI ASSOC., INC.
(912) 963-1112

DESIGNED BY:		
DRAWN BY:		
CHECKED BY:		
SUPERVISED BY:	WILLIAM DIAL P.E.	

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION

OFFICE:

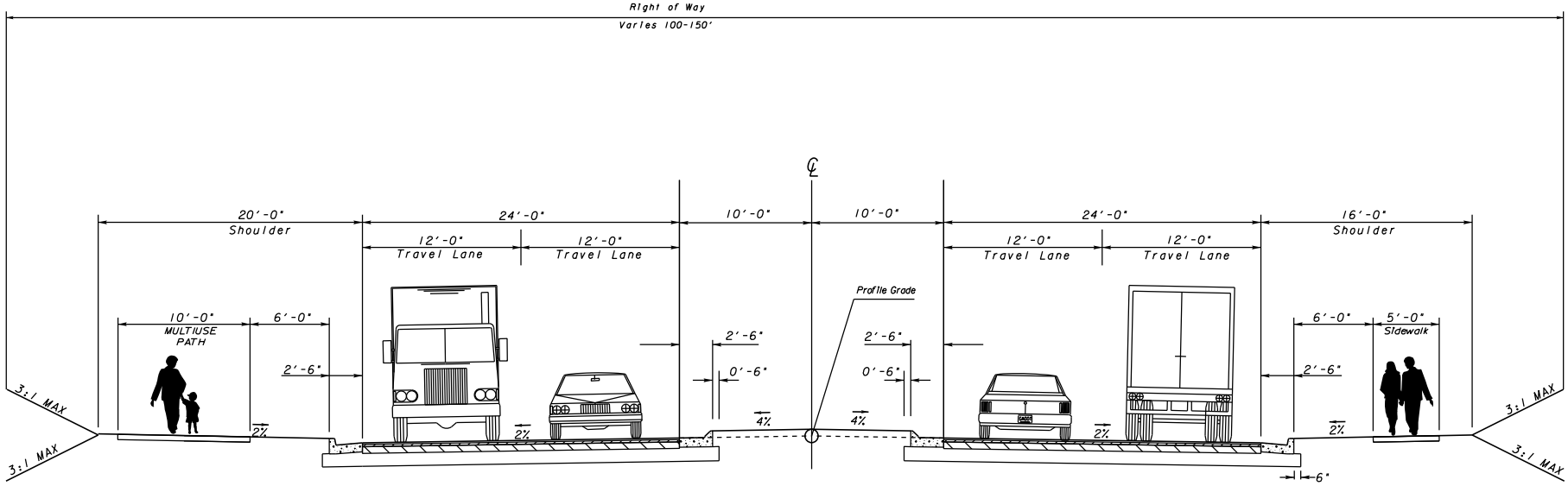
TYPICAL SECTIONS

DRAWING NO. 5-01

COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
CAMDEN	PI*0008666		

TYPICAL SECTION

NOT TO SCALE



KINGSLAND BYPASS URBAN SECTION

45 MPH SPEED DESIGN

MORELAND-ALTOBELLI ASSOC., INC. (912) 963-1112		
DESIGNED BY:		
DRAWN BY:		
CHECKED BY:		
SUPERVISED BY:	WILLIAM DIAL P.E.	

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION

OFFICE:

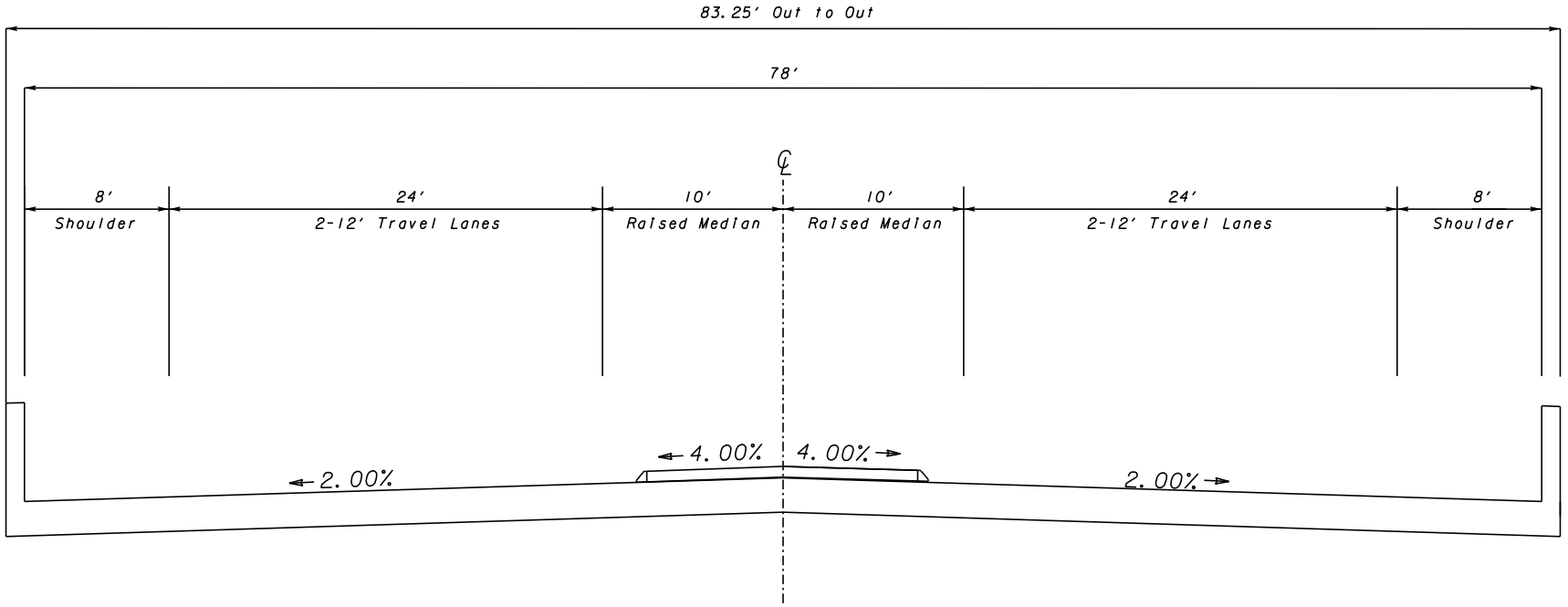
TYPICAL SECTIONS

DRAWING No. 5-02

COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
CAMDEN	PI*0008666		

TYPICAL SECTION

NOT TO SCALE



BRIDGE OVER SR17 AND RAILROAD

MORELAND-ALTOBELLI ASSOC., INC.
(912) 963-1112

DESIGNED BY:		
DRAWN BY:		
CHECKED BY:		
SUPERVISED BY:	WILLIAM DIAL P.E.	

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE:
TYPICAL SECTIONS

DRAWING No. 5-03

Detailed Cost Estimate

JOB ESTIMATE REPORT

JOB NUMBER : 0008666 CNCPT SPEC YEAR: 01
DESCRIPTION: KINGSLAND BYPASS

ITEMS FOR JOB 0008666 CNCPT

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	150-1000		LS	TRAFFIC CONTROL - LS	1.000	150000.00	150000.00
0010	201-1500		LS	CLEARING & GRUBBING - LS	1.000	200000.00	200000.00
0015	205-0001		CY	UNCLASS EXCAV	10000.000	5.34	53426.40
0020	206-0002		CY	BORROW EXCAV, INCL MATL	120000.000	3.86	463334.40
0025	207-0203		CY	FOUND BKFILL MATL, TP II	420.000	45.44	19086.48
0030	310-5100		SY	GR AGGR BS CRS 10IN INCL MATL	215000.000	15.40	3313094.10
0035	318-3000		TN	AGGR SURF CRS	3575.000	25.51	91222.20
0040	402-1812		TN	RECYL AC LEVELING,INC BM&HL	5000.000	75.22	376127.95
0045	402-3121		TN	RECYL AC 25MM SP,GP1/2,BM&HL	36743.000	68.43	2514540.27
0050	402-3141		TN	RECYL AC 12.5 MM SP,GP 1 OR 2,INCL BM	19424.000	58.49	1136109.76
0055	402-3190		TN	RECYL AC 19 MM SP,GP 1 OR 2 ,INC BM&HL	25652.000	72.66	1863946.15
0060	413-1000		GL	BITUM TACK COAT	18936.000	2.40	45559.45
0065	432-5010		SY	MILL ASPH CONC PVMT,VARB DEPTH	1850.000	4.31	7991.45
0070	433-1000		SY	REINF CONC APPROACH SLAB	587.000	132.62	77849.82
0075	436-1000		LF	ASPH CONC CURB - PROJECT	550.000	9.01	4956.92
0080	441-0016		SY	DRIVEWAY CONCRETE, 6 IN TK	705.000	29.35	20693.67
0085	441-0104		SY	CONC SIDEWALK, 4 IN	4125.000	28.36	117021.96
0090	441-0748		SY	CONC MEDIAN, 6 IN	3420.000	30.66	104868.28
0095	441-6222		LF	CONC CURB & GUTTER/ 8"X30"TP2	3000.000	16.13	48390.27
0100	441-6740		LF	CONC CURB & GUTTER/ 8"X30" TP7	3000.000	14.81	44451.18
0105	444-1000		LF	SAWED JTS IN EXIST PVMTS - PCC	290.000	3.80	1103.51
0109	446-1100		LF	PVMT REF FAB STRIPS, TP2,18 INCH WIDTH	9700.000	2.29	22290.70
0110	500-9999		CY	CL B CONC,BASE OR PVMT WIDEN	170.000	166.64	28329.13
0115	550-1180		LF	STM DR PIPE 18",H 1-10	2800.000	31.80	89057.36
0120	550-1240		LF	STM DR PIPE 24",H 1-10	700.000	36.02	25217.03
0125	550-2180		LF	SIDE DR PIPE 18",H 1-10	2124.000	24.24	51492.32
0130	550-2240		LF	SIDE DR PIPE 24",H 1-10	216.000	30.59	6609.58
0135	550-3318		EA	SAFETY END SECTION 18",STD,4:1	40.000	685.66	27426.62
0140	550-3324		EA	SAFETY END SECTION 24",STD,4:1	4.000	756.36	3025.46
0145	550-3618		EA	SAFETY END SECTION 18",SD,6:1	118.000	686.44	81000.61
0150	550-3624		EA	SAFETY END SECTION 24",SD,6:1	12.000	680.15	8161.91
0155	576-1018		LF	SLOPE DRAIN PIPE, 18 IN	200.000	31.10	6220.29
0160	603-2181		SY	STN DUMPED RIP RAP, TP 3, 18"	320.000	54.62	17479.83
0165	603-2182		SY	STN DUMPED RIP RAP, TP 3, 24"	515.000	47.74	24588.05
0170	603-7000		SY	PLASTIC FILTER FABRIC	835.000	2.93	2454.19
0175	634-1200		EA	RIGHT OF WAY MARKERS	88.000	110.10	9689.63
0180	641-1100		LF	GUARDRAIL, TP T	84.000	59.27	4979.34
0185	641-1200		LF	GUARDRAIL, TP W	550.000	18.30	10066.67
0190	641-5001		EA	GUARDRAIL ANCHORAGE, TP 1	2.000	640.66	1281.33
0195	641-5012		EA	GUARDRAIL ANCHORAGE, TP 12	2.000	1901.78	3803.57
0200	643-8200		LF	BARRIER FENCE (ORANGE), 4 FT	840.000	2.31	1941.20

JOB ESTIMATE REPORT

0205	668-1100	EA	CATCH BASIN, GP 1	16.000	2122.12	33953.93
0210	668-2100	EA	DROP INLET, GP 1	5.000	1803.89	9019.47
0215	999-2015	LS	CONSTRUCTION COMPLETE BRIDGE	1.000	3494400.00	3494400.00
0220	163-0232	AC	TEMPORARY GRASSING	98.000	494.87	48498.03
0225	163-0240	TN	MULCH	1320.000	166.24	219437.00
0230	163-0300	EA	CONSTRUCTION EXIT	4.000	1509.01	6036.06
0235	165-0101	EA	MAINT OF CONST EXIT	4.000	401.04	1604.17
0240	165-0010	LF	MAINT OF TEMP SILT FENCE, TP A	6925.000	0.88	6150.09
0245	165-0030	LF	MAINT OF TEMP SILT FENCE, TP C	6600.000	0.86	5685.64
0250	167-1000	EA	WATER QUALITY MONITORING AND SAMPLING	2.000	242.91	485.82
0255	167-1500	MO	WATER QUALITY INSPECTIONS	24.000	851.59	20438.22
0260	171-0010	LF	TEMPORARY SILT FENCE, TYPE A	13850.000	2.12	29476.40
0265	171-0030	LF	TEMPORARY SILT FENCE, TYPE C	13200.000	2.85	37702.90
0270	700-6910	AC	PERMANENT GRASSING	64.000	981.58	62821.47
0275	700-7000	TN	AGRICULTURAL LIME	130.000	16.88	2194.89
0280	700-8000	TN	FERTILIZER MIXED GRADE	59.000	458.48	27050.39
0285	700-8100	LB	FERTILIZER NITROGEN CONTENT	3222.000	2.36	7632.21
0290	710-9000	SY	PERM SOIL REINFORCING MAT	89300.000	2.20	196768.09
0295	716-2000	SY	EROSION CONTROL MATS, SLOPES	14630.000	1.35	19879.83
0300	636-1020	SF	HWY SGN,TP1MAT,REFL SH TP3	1060.000	12.12	12855.00
0305	636-1033	SF	HWY SIGNS, TP1MAT,REFL SH TP 9	980.000	16.20	15883.57
0310	636-2070	LF	GALV STEEL POSTS, TP 7	2085.000	6.22	12968.97
0315	636-2080	LF	GALV STEEL POSTS, TP 8	1170.000	8.83	10331.90
0320	653-0120	EA	THERM PVMT MARK, ARROW, TP 2	378.000	66.53	25152.00
0325	653-1501	LF	THERMO SOLID TRAF ST 5 IN, WHI	67205.000	0.36	24555.36
0330	653-1502	LF	THERMO SOLID TRAF ST, 5 IN YEL	58362.000	0.39	22790.36
0335	653-1704	LF	THERM SOLID TRAF STRIPE,24",WH	350.000	4.31	1510.11
0340	653-3501	GLF	THERMO SKIP TRAF ST, 5 IN, WHI	56104.000	0.24	13720.79
0345	653-6004	SY	THERM TRAF STRIPING, WHITE	8865.000	2.88	25563.38
0350	653-6006	SY	THERM TRAF STRIPING, YELLOW	700.000	3.26	2283.08
0355	654-1001	EA	RAISED PVMT MARKERS TP 1	505.000	3.06	1546.30
0360	654-1002	EA	RAISED PVMT MARKERS TP 2	70.000	2.81	197.37
0365	654-1003	EA	RAISED PVMT MARKERS TP 3	1610.000	3.03	4887.28
0370	657-1085	LF	PRF PL SD PVT MKG,8",B/W,TP PB	950.000	5.64	5366.78
0375	657-3085	GLF	PRF PL SK PVMT MKG,8",B/W,TPPB	950.000	3.22	3059.79
0380	657-5001	SY	PREFORMED PLASTIC PVMT MKG, WHITE, TP	127.000	20.23	2570.32
0385	657-6085	LF	PRF PL SD PVMT MKG,8",B/Y,TPPB	950.000	6.12	5821.54

ITEM TOTAL	15499187.51
INFLATED ITEM TOTAL	15499187.51

TOTALS FOR JOB 0008666 CNCPT

ESTIMATED COST:	15,499,187.55
Engineering and Inspection (5.0%):	774,959.38
ESTIMATED TOTAL:	16,274,146.93

PROJ. NO.	CSSTP-0008-00(666)
P.I. NO.	0008666
DATE	3/13/2013

CALL NO.

INDEX (TYPE)	DATE	INDEX
REG. UNLEADED	Mar-13	$ 3.683
DIESEL		$ 4.092
LIQUID AC		$ 567.00

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

LIQUID AC ADJUSTMENTS

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

Asphalt

Price Adjustment (PA)			**1476791.19**	**$ 1,476,791.19**
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	$ 907.20	
Monthly Asphalt Cement Price month project let (APL)			$ 567.00	
Total Monthly Tonnage of asphalt cement (TMT)			4340.95	

ASPHALT	Tons	%AC	AC ton
Leveling	5000	5.0%	250
12.5 OGFC	0	5.0%	0
12.5 mm	19424	5.0%	971.2
9.5 mm SP	0	5.0%	0
25 mm SP	36743	5.0%	1837.15
19 mm SP	25652	5.0%	1282.6
	86819		**4340.95**

BITUMINOUS TACK COAT

Price Adjustment (PA)			**$ 27,669.16**	**$ 27,669.16**
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	$ 907.20	
Monthly Asphalt Cement Price month project let (APL)			$ 567.00	
Total Monthly Tonnage of asphalt cement (TMT)			81.33203106	

Bitum Tack Gals	gals/ton	tons
18936	232.8234	81.3320311

PROJ. NO.	CSSTP-0008-00(666)		CALL NO.
P.I. NO.	0008666		
DATE	3/13/2013		

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)				**0**	**$ -**
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	$	907.20	
Monthly Asphalt Cement Price month project let (APL)			$	567.00	
Total Monthly Tonnage of asphalt cement (TMT)				0	

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

TOTAL LIQUID AC ADJUSTMENT	**$**	**1,504,460.35**

GEORGIA DEPARTMENT OF TRANSPORTATION
PRELIMINARY ROW COST ESTIMATE SUMMARY

Date: 6/14/2012
Revised:

Project: CSTP-0008-00 (666)
County: Camden
PI: 8666

Description: Kingsland Bypass
Project Termini: SR 40 to Old Still Road

Existing ROW: Varies
Parcels: 64
Required ROW: Varies

Land and Improvements		$1,435,950.00
Proximity Damage	*$182,000.00*	
Consequential Damage	*$50,000.00*	
Cost to Cures	*$0.00*	
Trade Fixtures	*$0.00*	
Improvements	*$75,000.00*	
Valuation Services		$81,250.00
Legal Services		$418,200.00
Relocation		$168,000.00
Demolition		$15,000.00
Administrative		$540,500.00
TOTAL ESTIMATED COSTS		$2,658,900.00
TOTAL ESTIMATED COSTS (ROUNDED)		***$2,659,000.00***

Preparation Credits	Hours	Signature
Benjamin M. Garland Jr.	13	GAL270880
John G. Simshauser	1	

Prepared By: CG#: 2772 (DATE) 6-15-12
Approved By: CG#: (DATE)

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

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

FILE: CSSTP-0008-00(666) Camden
PI # 0008666

OFFICE: Utilities

DATE: August 30, 2012

FROM: Stephen Thomas, District Utilities Engineer

TO: Tim Matthews, Project Manager

SUBJECT: Utility Cost Estimate- KINGSLAND BYPASS FROM CR 61 TO I-95

Per a request received May 21, 2012, from William Dial with Moreland Altobelli Associates, Inc., for a utility cost estimate on this project, a review of the concepts plots and a field visit was made by this office the following utilities were found to be located within the project limits:

Telephone	**TDS Telecommunications Corp. (TDS)**
Water	**City of Kingsland**
Sewer	**City of Kingsland**
CATV	**Kingsland Cable TV**
Power	**Georgia Power Company-Distribution** **Georgia Power Company-Transmission** **Okefenoke REMC**
Gas	**Atlanta Gas Light**

This project consists of widening Colerain Road, from near SR 40 starting at the end of PI# 0000820 to near I-95 ending at PI# 0007414, a two lane road widening to a four lane highway some on new alignment including an overpass bridge at SR 25/US 17 and the First Coast Railroad.

Continued……

Almost all existing utility facilities appear to be on existing R/W with the exception of Georgia Power Company-Transmission who has a substation on the south side of Colerain Road approximately 500' east of Old Still Road and the City of Kingsland who has what appears to be an abandoned lift station on the NW corner of Colerain Road and Rowland Moore Lane.

This estimate is based upon a field visit and concept plots dated May 15, 2012.

TELEPHONE

The existing telecommunication facilities that appear to be in conflict belong to **TDS Telecommunications Corp. (TDS)**;

TDS has facilities at the following locations;
33,300 LF of buried copper and fiber optic cable along both sides of Colerain Road from the end of PI 0000820 to where the alignment leaves the existing R/W of Colerain Road
14,400 LF of buried copper and fiber optic cable along both sides of Colerain Road from where the alignment enters existing R/W of Colerain Road east of Martin Luther King Blvd. to the end of the project.

1,150 LF of buried copper and/or fiber optic cable along SR 25/US 17.

TDS has approximately 48,550 LF of buried phone cable, including pedestals and hand holes, which appear to be on existing R/W.

These are the known facilities belonging to **TDS**; the total estimated cost to **TDS** is $728,250.00. The estimated non-reimbursable cost amounts to $728,250.00; the estimated reimbursable cost amounts to $0.00.

WATER

The water facilities that appear to be in conflict belong to **City of Kingsland.**

City of Kingsland has facilities at the following locations;

4,800 LF of water main along Colerain Road from where the alignment enters existing R/W of Colerain Road east of Martin Luther King Blvd. to the end of the project.

City of Kingsland has approximately 5,950 LF of water main and fire hydrant assemblies which appear to be on existing R/W.

Continued……

These are the known water facilities belonging to **City of Kingsland**; the total estimated cost to **City of Kingsland** is $192,000.00. The estimated non-reimbursable cost amounts to $192,000.00; the estimated reimbursable cost amounts to $0.00.

SEWER

The sewer facilities that appear to be in conflict belong to **City of Kingsland** and appear to be on existing R/W.

It appears that the **City of Kingsland** owns what appears to be an old lift station on the NW corner of Colerain Road and Rowland Moore Lane but has since built a new facility NE of the intersection of Colerain Road and MLK Blvd.

City of Kingsland has facilities at the following locations;

1,320 LF of 10” sanitary sewer along Colerain Road, from the lift station east of Martin Luther King Blvd., including 3 manholes, which may need to be relocated and/or adjusted to grade to accommodate the new alignment

1,000 LF of 6” sanitary sewer along Colerain Road from the end of the 10” gravity system to Old Still Road

City of Kingsland has approximately 2,320 LF of sanitary sewer facilities which may need to be relocated and/or adjusted to grade which will cost $102,000.00.

These are the known facilities belonging to **City of Kingsland**; the total estimated cost to **City of Kingsland** is $102,000.00. The estimated reimbursable cost amounts to $0.00.

CATV

The existing cable TV facilities that appear to be in conflict belong to **Kingsland Cable TV**

Kingsland Cable TV has facilities at the following locations;

Continued……

11,100’ of aerial fiber optic cable from the beginning of the project to where the new alignment leaves the existing Colerain Road R/W

2,485’ of aerial coaxial and fiber optic cables along Colerain Road starting at the intersection of Colerain Road and MLK Blvd and heading east to 960’ from the end of the project.

Kingsland Cable TV has approximately 16,070 LF of aerial cable which appears to be on existing R/W.

These are the known facilities belonging to **Kingsland Cable TV**; the total estimated cost to **Kingsland Cable TV** is $160,700.00. The estimated non-reimbursable cost amounts to $160,700.00.

POWER

The existing power facilities that appear to be in conflict on this project belong to **Georgia Power Company-Distribution, Georgia Power Company-Transmission, &Okefenoke REMC;**

Georgia Power Company-Distribution has facilities at the following locations;

2,580’ of pole line that OREMC under built from the beginning of the project to where the new alignment leaves the existing Colerain Road R/W.

2,485’ of pole line that OREMC under built from along Colerain Road starting at the intersection of Colerain Road and MLK Blvd and heading east to 960’ from the end of the project.

1,400’ of pole line along SR 25/US 17.

On this project **Georgia Power Company-Distribution** has a total 21 poles, all of which appear to be on existing right of way.

The estimated cost to **Georgia Power Company-Distribution** is $315,000.00.

These are the known facilities belonging to **Georgia Power Company-Distribution** in this project; the estimated reimbursable cost is $0.00. The estimated non-reimbursable cost is $315,000.00.

Continued……

FILE: CSSTP-0008-00(666) Camden PI # 0008666 continued

Georgia Power Company-Transmission has facilities at the following locations;

A 230 KV crossing approximately 1,400 feet from the end of the project

The proposed required R/W will be at GPC-T's existing fence line at their substation; the access drive may need to be relocated and some additional protection provided to protect their control house just inside the fence.

The estimated cost to **Georgia Power Company-Transmission** is $20,000.00.

These are the known facilities belonging to **Georgia Power Company-Transmission** in this project; the estimated reimbursable cost is $20,000.00. The estimated non-reimbursable cost is $0.00

Okefenoke REMC has facilities at the following locations;

10,820' of pole line (30 poles) along Colerain Road from the beginning of the project to where the new alignment leaves the existing Colerain Road R/W, of which 2,580' is under built on GPC-D (11) poles

2,485' of pole line (10 GPC-D and 5 OREMC poles) along Colerain Road starting at the intersection of Colerain Road and MLK Blvd and heading east to 960' from the end of the project.

On this project **Okefenoke REMC** has a total 13,300 LF 3PH power on 35 of their poles and all but 2 appear to be on existing right of way.

The estimated cost to **Okefenoke REMC** is $315,000.00.

These are the known facilities belonging to **Okefenoke REMC** in this project; the estimated non-reimbursable cost is $297,000.00; the estimated reimbursable cost is $18,000.00.

Continued……

GAS

The existing gas facilities that appear to be in conflict belong to **Atlanta Gas Light.**

Atlanta Gas Light facilities at the following locations;

11,100’ of buried 6” steel gas main from the beginning of the project to where the new alignment leaves the existing Colerain Road R/W.

3,445’ of buried 4” steel gas main along Colerain Road starting at the intersection of Colerain Road and MLK Blvd and heading east to the end of the project.

1,150 LF of 12” gas main along SR 25/US 17.

The estimated cost to **Atlanta Gas Light** is $1,510,375.00.

These are the known facilities belonging to **Atlanta Gas Light** in this project; the estimated non-reimbursable cost is $1,510,375.00, the estimated reimbursable cost is $0.00.

TOTALS

The total estimated non-reimbursable cost for this project is $3,305,325.00.
The total estimated reimbursable cost for this project is $38,000.00.
The total estimated non-reimbursable and reimbursable cost for this project is $3,343,325.00.

If there are any questions please contact John Royal at jroyal@dot.ga.gov or (912) 427-5859.

Copy:
Angie Robinson, Office of Financial Management (via e-mail)
Patrick Allen, Utilities Preconstruction Engineer (via e-mail)
Vahid Munshi, Utilities Preconstruction Engineer (via e-mail)
District Office files
Utility Office Files

Moreland Altobelli Associates, Inc.
67 Brampton Road
Garden City, Georgia 31408
Phone: 912-963-1112 Fax: 912-963-1120

Preliminary Mitigation Cost Estimate

Project:	**Kingsland Bypass Phase II**
	CSSTP-0008-00(666), PI No. 0008666
Prepared By:	Matt Chamblee
Prepared On:	02/26/13

Date	02/26/13
MA Project No.	11102
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 $3,800 per wetland credit and $45 per stream credit. This estimate was prepared as part of the PAR process.

Wetlands Credits	Cost	Stream Credits	Cost
42.27	$160,626	1998.4	$89,928
Total Cost	$250,554		

Since design plans have not be completed for the CSSTP-0008-00(666) 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.

Cost Benefit Analysis

GDOT Benefit-Cost Calculator

enter information in green cells

Project Information

ID	0008666
Description	West Kingsland Bypass Phase 2

Cost Estimate

Date of estimate		02/26/13
PE cost	$	1,600,000
ROW cost	$	2,659,000
UTILITY cost	$	38,000
CST cost	$	19,503,647
Total	$	23,800,647

Traffic in 2039

Source of traffic data	Design traffic approved by GDOT

Without project (nobuild)

Annual VMT	12,579,700
Annual VHT	325,718
Average speed (mph)	39

With project (build)

Annual VMT	13,275,500
Annual VHT	241,373
Average speed (mph)	55

Parameters	Default	Override	Used
Analysis year	2035	2039	2039
Discount rate	7.0%		7%
Design life (years)	25	20	20
Base year of cost estimate	N/A	2012	2012
Current CST program year	N/A	2019	2019
Fuel price ($/gallon)	3.22		3.22
Fuel economy (mpg)	18.03		18.03
Value of auto travel ($/hr)	13.75		13.75
Value of truck travel ($/hr)	72.65		72.65
Percent trucks	12%		12%
Include GSP benefits	No		No

Costs		
Total cost	$	23,800,647
Annualized cost	**$**	**1,545,700**
Auto Delay Costs		
Nobuild	$	3,941,188
Build	$	2,920,613
Auto delay savings	**$**	**1,020,575**
Truck Delay Costs		
Nobuild	$	2,839,610
Build	$	2,104,290
Truck delay savings	**$**	**735,320**
Fuel Costs		
Nobuild	$	2,246,624
Build	$	2,370,888
Fuel cost savings	**$**	**(124,264)**
Change in GSP		NA
Auto delay cost adjustment		NA
Truck delay cost adjustment		NA
Fuel cost adjustment		NA
Total benefit adjustment		**NA**
Benefits in 2039	**$**	**1,631,630**
Benefit-Cost Ratio		**1.06**

Notes

Crash Summaries

CRASH DATA SUMMARY & ANALYSIS

The most recent available roadway crash data was obtained from GDOT for 2006 through 2008 for Laurel Island Parkway/Colerain Road from SR 40 to I-95. The data provided recorded crashes including the number of injuries and fatalities. There were no fatalities recorded during the three years of available crash data. Crash and injury rates were calculated from the recorded data. The calculated rates were then compared to statewide average rates for crashes and injuries to determine if the data exceeds statewide averages for similar type facilities. This information is provided in Table 1.

Table 1: Roadway Crash Data for Laurel Island Parkway/ Colerain Road

Colerain Road from SR 40 to I-95: Urban Minor Arterial (5.0 miles)						
Year	**No. of Crashes**	**Crash Rate***	**Statewide Average Crash Rate***	**No. of Injury**	**Injury Rate***	**Statewide Average Injury Rate***
2006	34	783	548	20	460	208
2007	25	538	513	9	194	190
2008	21	452	469	6	129	176

** Values for rate of crashes and injuries are per 100 million vehicle-miles*

The analysis shows that the crash and injury rates for years 2006 and 2007 on Colerain Road are above the statewide average for similar facilities. Further examination of the crash data revealed that of the 80 total crashes reported for Colerain Road, approximately 38 percent were angle collisions, as shown in Table 2. Many of these collisions occur when motorists are entering or exiting the roadway from driveways or intersections along the roadway.

The second highest type of collision is rear-end collision which accounts for 33 percent of the total crashes on Colerain Road. Rear-end collisions indicates a demand for frequent left- and right-turn maneuvers along a two-lane roadway without separate turn lanes. Another notable percentage of crashes (23%) are crashes in which a vehicle has a collision with an object along the side of the roadway

Table 2: Summary of Type of Roadway Crashes for Colerain Road

Colerain Road from SR 40 to I-95 (Urban Minor Arterial)							
Year	**Angle**	**Head On**	**Object**	**Rear End**	**Sideswipe Opposite Dir.**	**Sideswipe Same Dir.**	**TOTAL (All Types)**
2006	15	1	5	13	0	0	34
2007	11	0	3	8	2	1	25
2008	4	0	10	5	1	1	21
Total (3-years)	30	1	18	26	3	2	80
% of Total	38%	1%	23%	33%	4%	3%	100%

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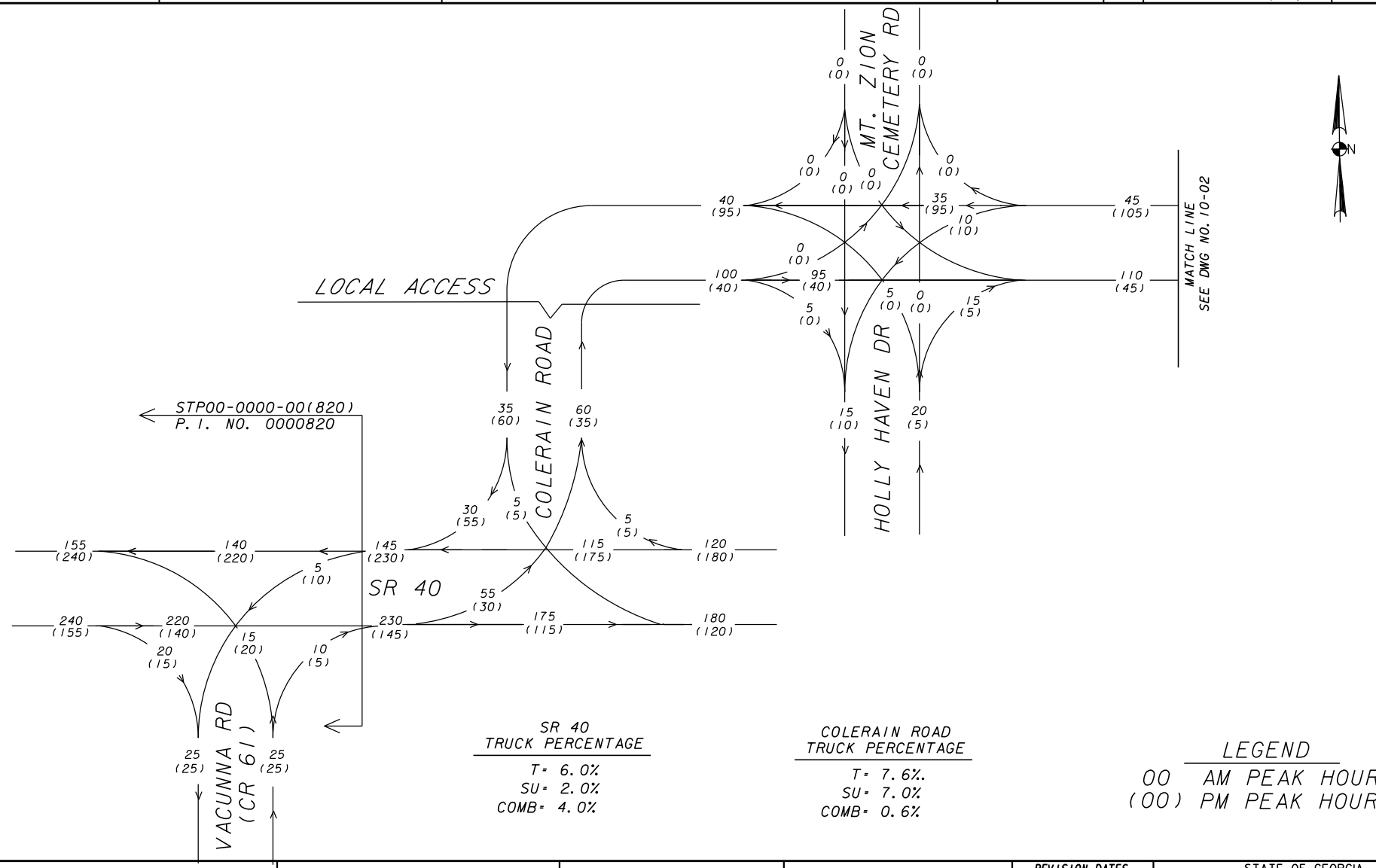
Traffic Diagrams

DATETIME$$$	TIME$$$	PRF	DGN	COUNTY	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		CAMDEN	GA	CSSTP-0008-00(666)		



SR 40 TRUCK PERCENTAGE

T= 6.0%
SU= 2.0%
COMB= 4.0%

COLERAIN ROAD TRUCK PERCENTAGE

T= 7.6%.
SU= 7.0%
COMB= 0.6%

LEGEND

00 AM PEAK HOUR
(00) PM PEAK HOUR

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CAMDEN COUNTY, GEORGIA
CSSTP-0008-00 (666)
P.I. No. 0008666

REVISION DATES

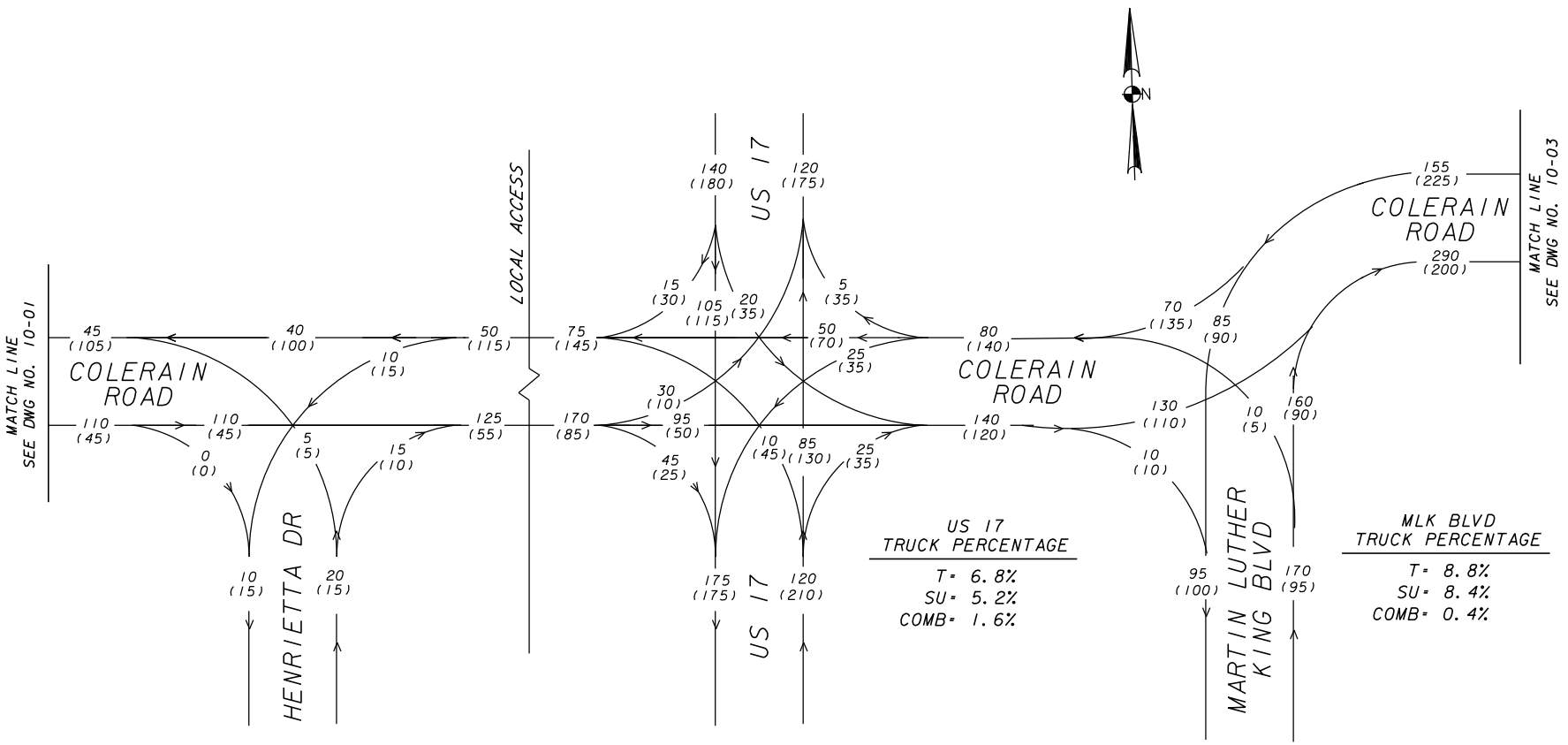
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE:

TRAFFIC DIAGRAM

KINGSLAND BYPASS PHASE II
EXISTING YEAR 2011
PEAK HOUR TRAFFIC

DRAWING No. 10-01

DATETIME$$$	TIME$$$	PRF	DGN	COUNTY	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		CAMDEN	GA	CSSTP-0008-00 (666)		



US 17 TRUCK PERCENTAGE

T= 6.8%
SU= 5.2%
COMB= 1.6%

MLK BLVD TRUCK PERCENTAGE

T= 8.8%
SU= 8.4%
COMB= 0.4%

COLERAIN ROAD TRUCK PERCENTAGE

T= 7.6%
SU= 7.0%
COMB= 0.6%

LEGEND

00 AM PEAK HOUR
(00) PM PEAK HOUR

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REVISION DATES

STATE OF GEORGIA
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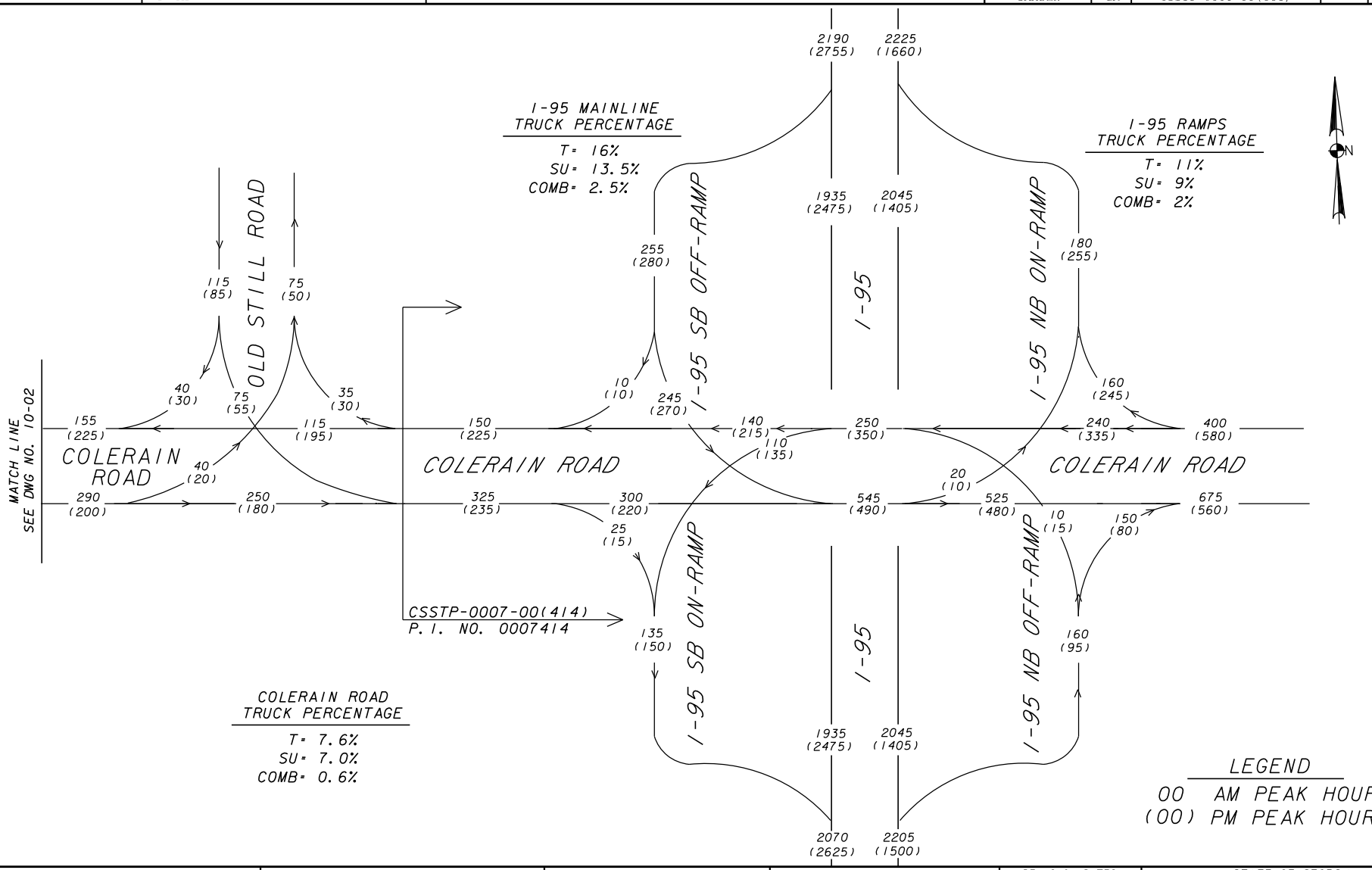
TRAFFIC DIAGRAM

KINGSLAND BYPASS PHASE II
EXISTING YEAR 2011
PEAK HOUR TRAFFIC

DRAWING No. 10-02

DATE/TIME$$$	TIME$$$	PRF	DGN	COUNTY	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		CAMDEN	GA	CSSTP-0008-00(666)		



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STATE OF GEORGIA
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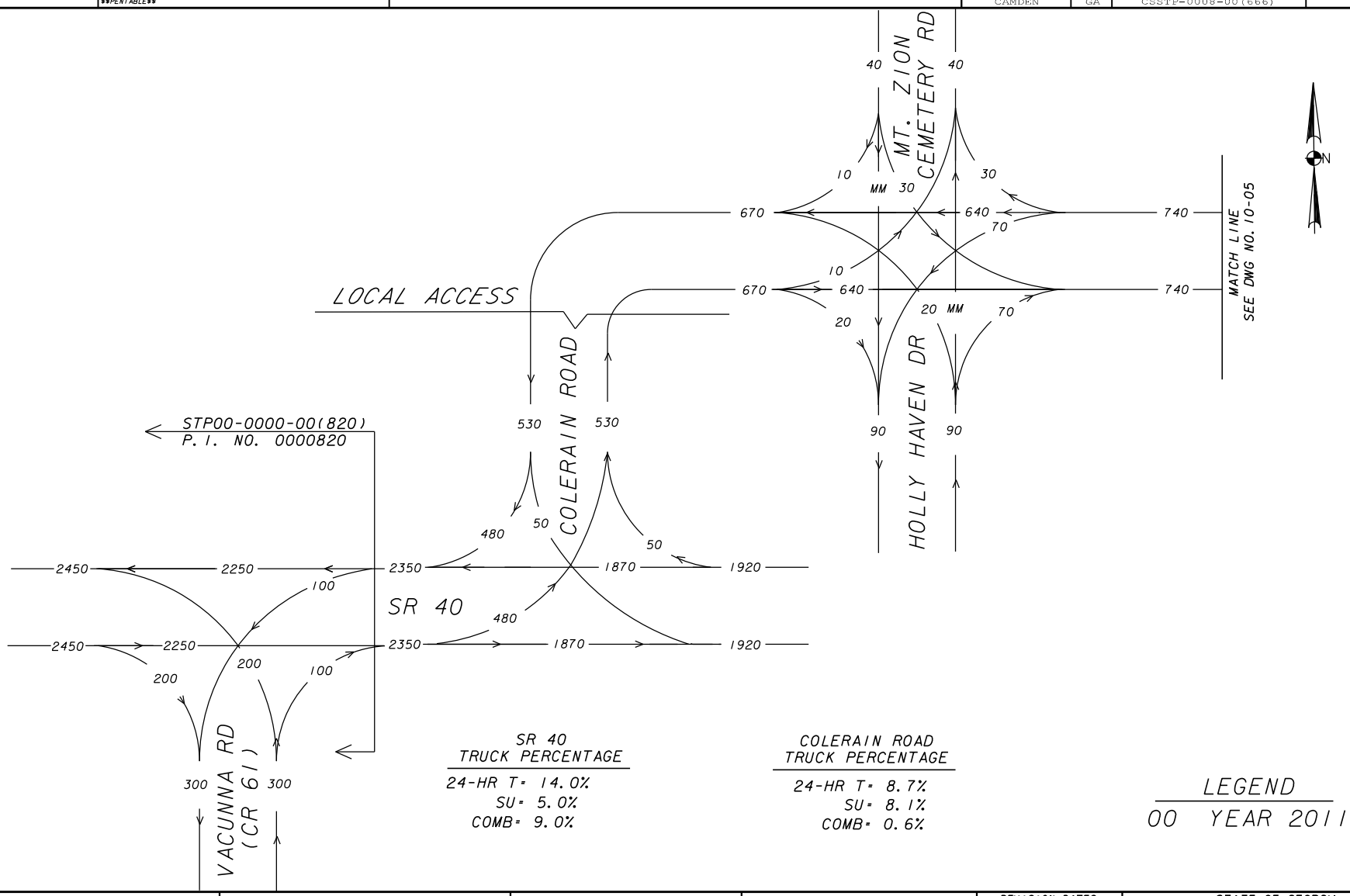
TRAFFIC DIAGRAM

KINGSLAND BYPASS PHASE II
EXISTING YEAR 2011
PEAK HOUR TRAFFIC

DRAWING No. 10-03

DATETIME$$$	TIME$$$	PRF	DGN	COUNTY	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		CAMDEN	GA	CSSTP-0008-00(666)		



SR 40 TRUCK PERCENTAGE

24-HR T= 14.0%
SU= 5.0%
COMB= 9.0%

COLERAIN ROAD TRUCK PERCENTAGE

24-HR T= 8.7%
SU= 8.1%
COMB= 0.6%

LEGEND

00 YEAR 2011

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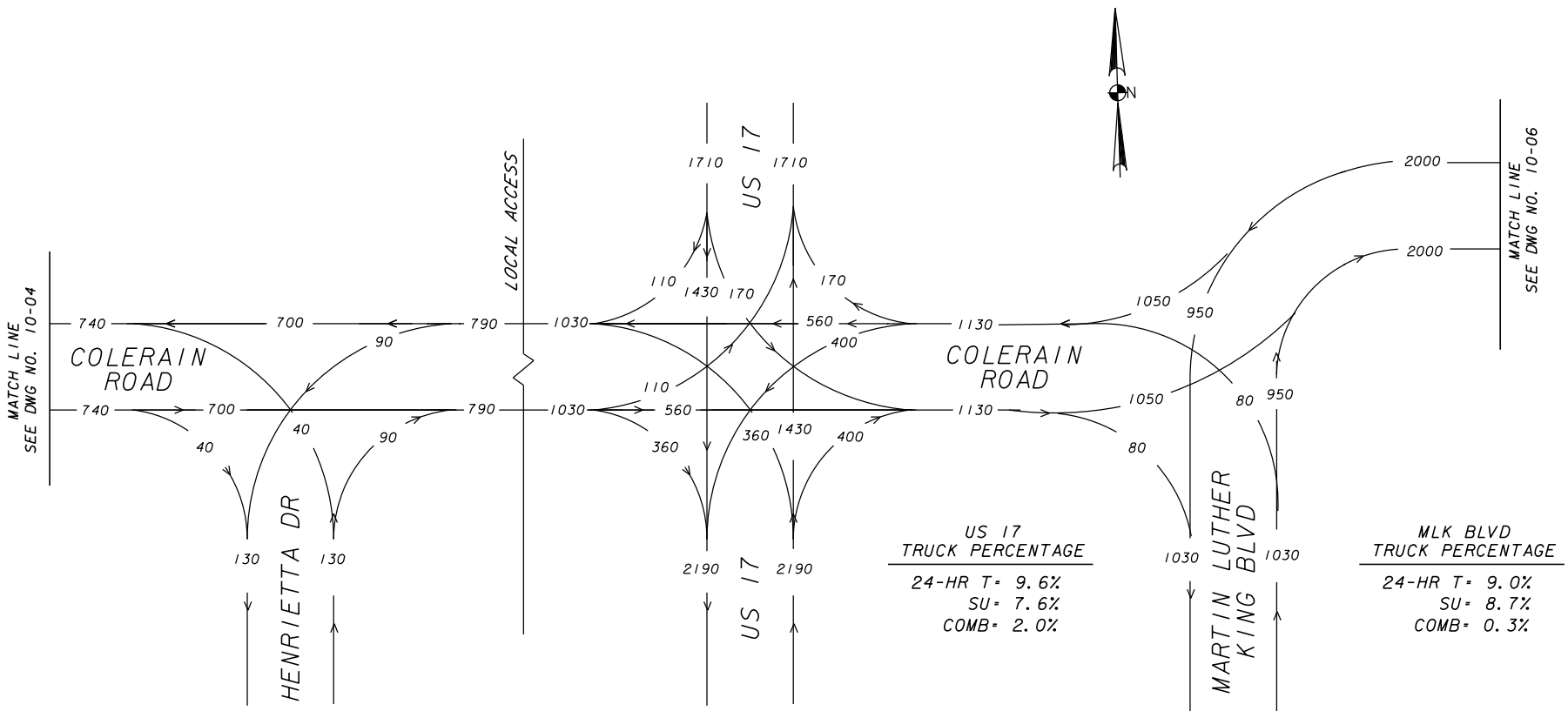
TRAFFIC DIAGRAM

KINGSLAND BYPASS PHASE II
EXISTING YEAR 2011
AVERAGE DAILY TRAFFIC

DRAWING No. 10-04

DATETIME$$$	TIME$$$	PRF	DGN	COUNTY	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		CAMDEN	GA	CSSTP-0008-00(666)		



US 17
TRUCK PERCENTAGE

24-HR T= 9.6%
SU= 7.6%
COMB= 2.0%

MLK BLVD
TRUCK PERCENTAGE

24-HR T= 9.0%
SU= 8.7%
COMB= 0.3%

COLERAIN ROAD
TRUCK PERCENTAGE

24-HR T= 8.7%
SU= 8.1%
COMB= 0.6%

LEGEND

00 YEAR 2011

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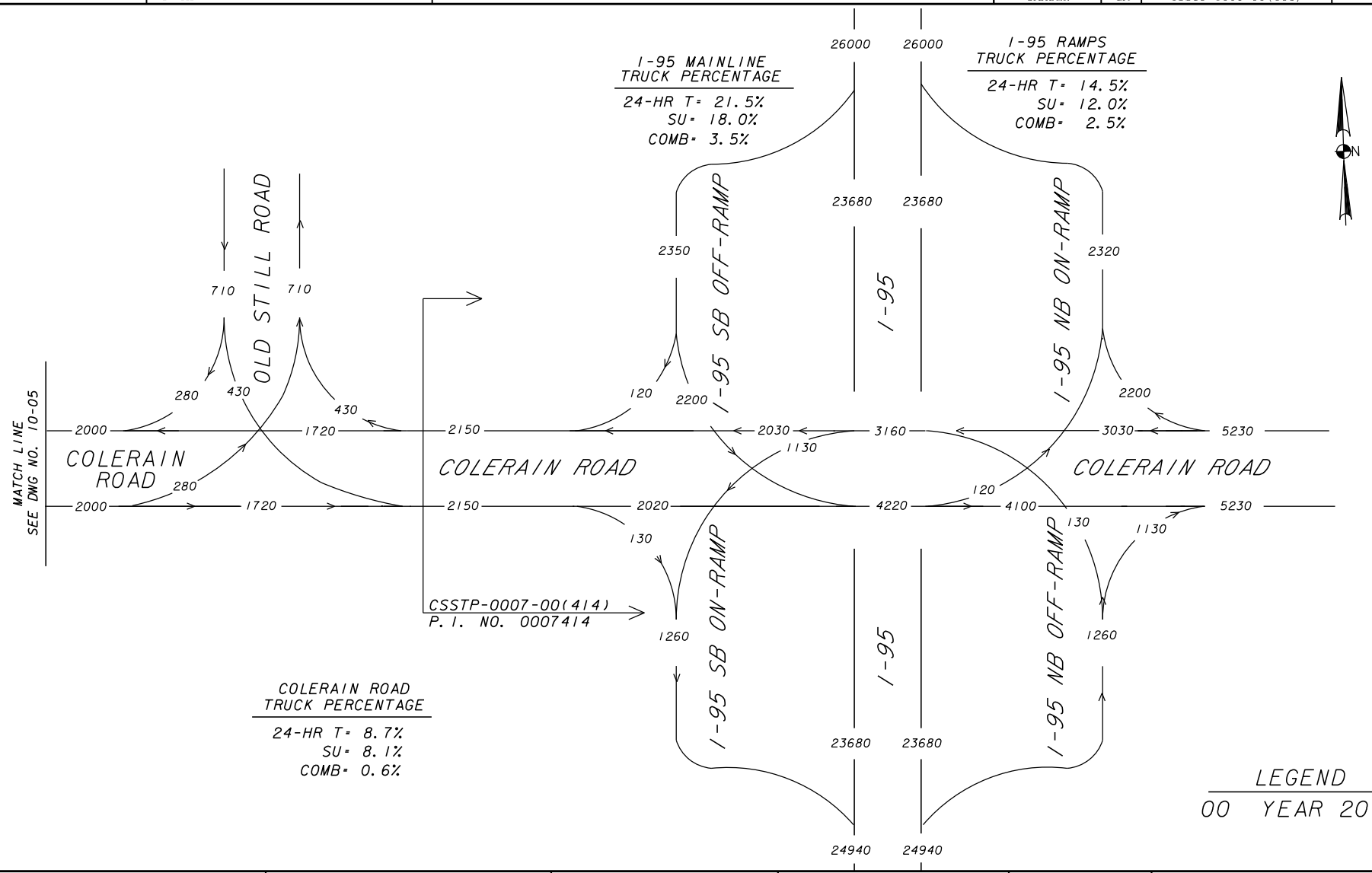
TRAFFIC DIAGRAM
KINGSLAND BYPASS PHASE II
EXISTING YEAR 2011
AVERAGE DAILY TRAFFIC

DRAWING No. 10-05



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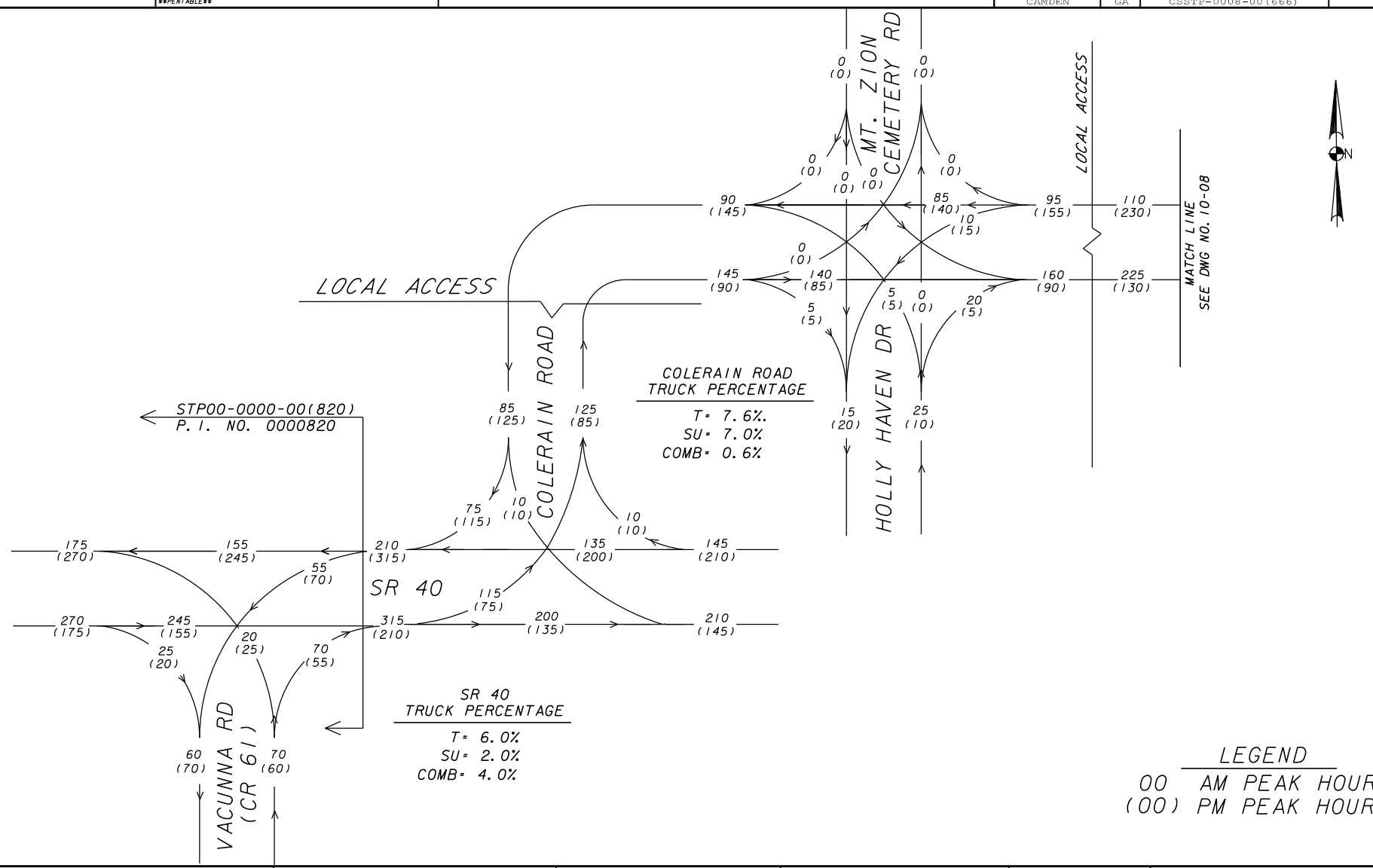
TRAFFIC DIAGRAM
KINGSLAND BYPASS PHASE II
EXISTING YEAR 2011
AVERAGE TRAFFIC

DRAWING No. 10-06

DATETIME$$$	TIME$$$	PRF	DGN	COUNTY	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		CAMDEN	GA	CSSTP-0008-00(666)		



COLERAIN ROAD
TRUCK PERCENTAGE

T= 7.6%.
SU= 7.0%
COMB= 0.6%

SR 40
TRUCK PERCENTAGE

T= 6.0%
SU= 2.0%
COMB= 4.0%

LEGEND

00 AM PEAK HOUR
(00) PM PEAK HOUR

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REVISION DATES

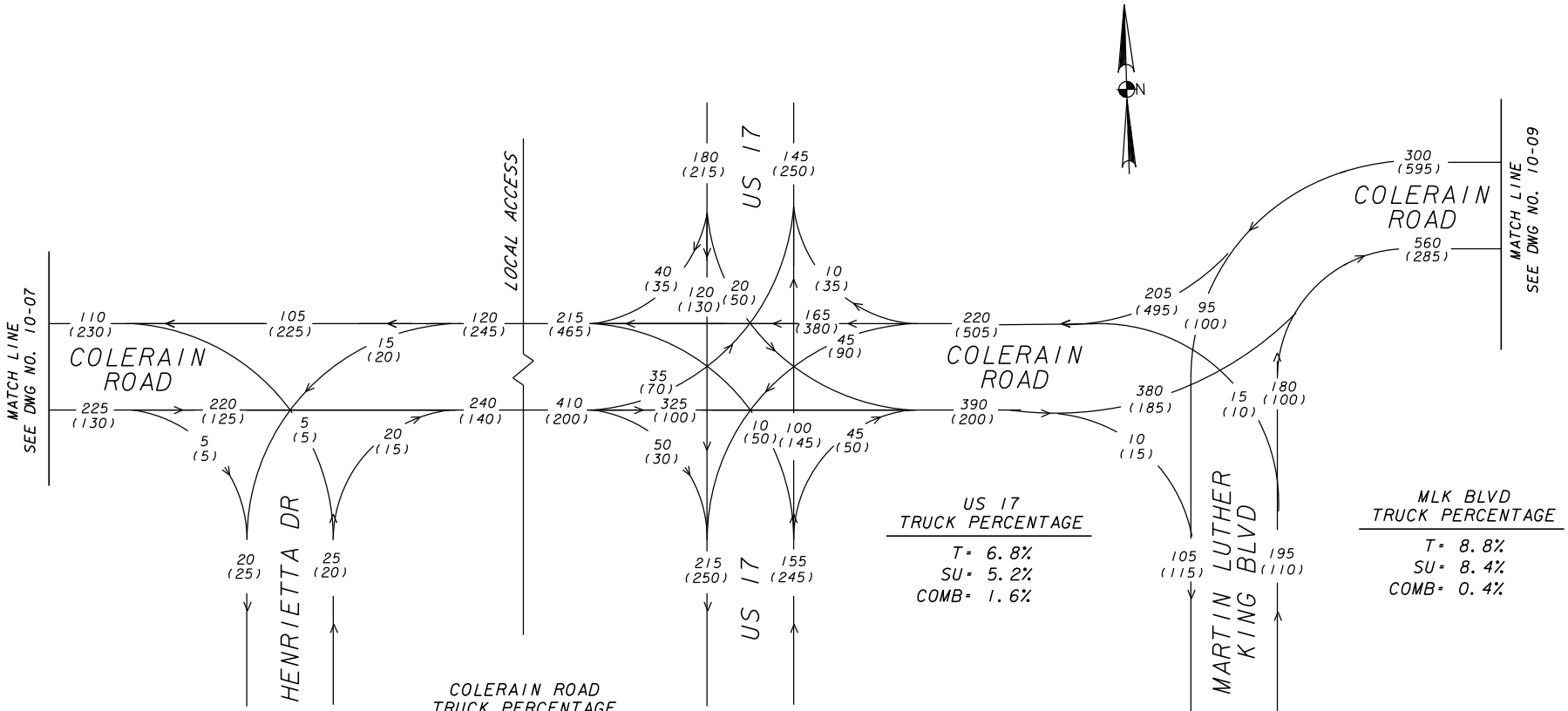
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE:

TRAFFIC DIAGRAM

KINGSLAND BYPASS PHASE II
YEAR 2019 NO-BUILD
PEAK HOUR TRAFFIC

DRAWING No. 10-07

DATETIME$$$	TIME$$$	PRF	DGN	COUNTY	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		CAMDEN	GA	CSSTP-0008-00(666)		



COLERAIN ROAD
TRUCK PERCENTAGE

T= 7.6%
SU= 7.0%
COMB= 0.6%

US 17
TRUCK PERCENTAGE

T= 6.8%
SU= 5.2%
COMB= 1.6%

MLK BLVD
TRUCK PERCENTAGE

T= 8.8%
SU= 8.4%
COMB= 0.4%

LEGEND

00 AM PEAK HOUR
(00) PM PEAK HOUR

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STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
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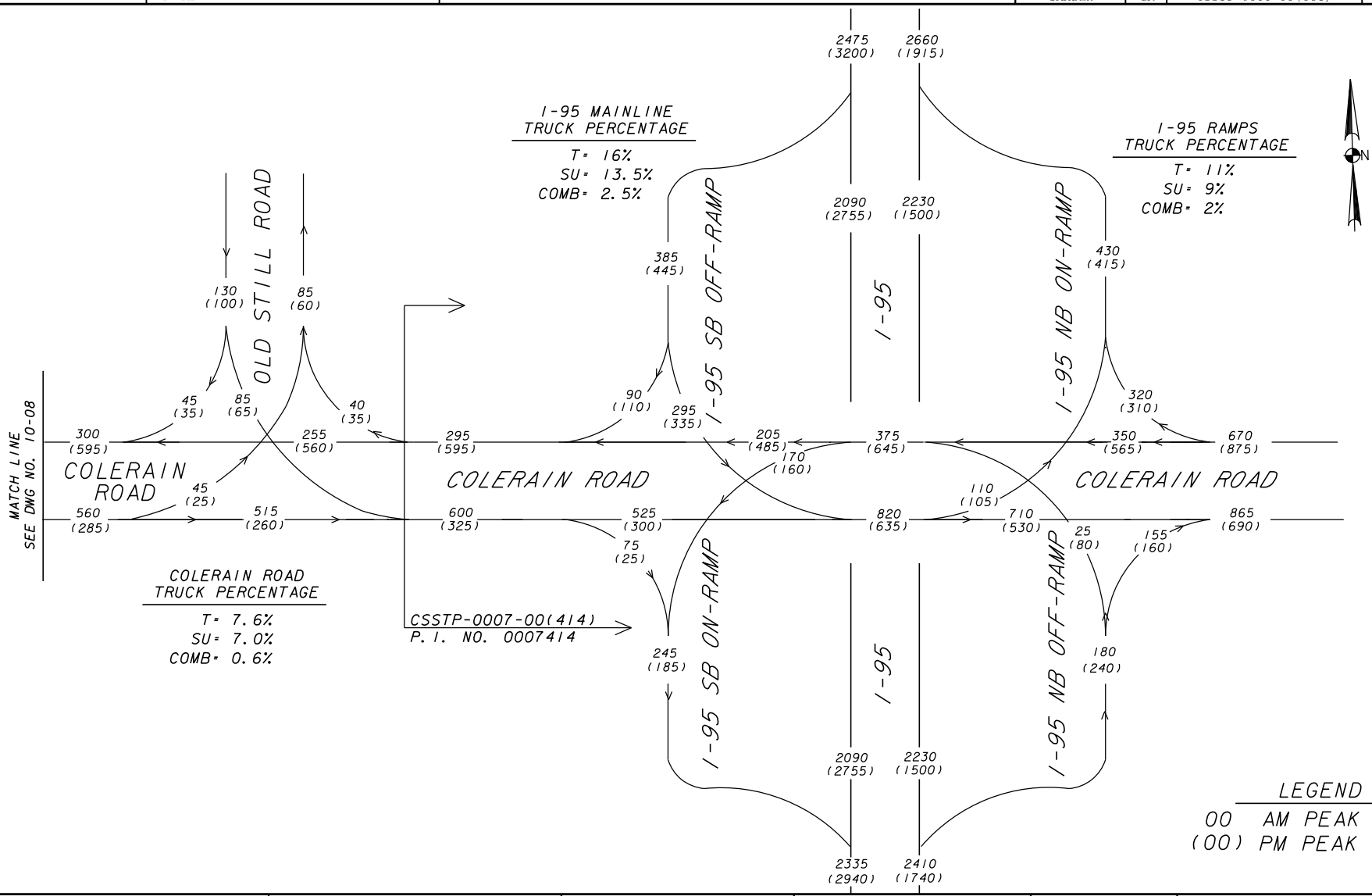
TRAFFIC DIAGRAM

KINGSLAND BYPASS PHASE II
YEAR 2019 NO-BUILD
PEAK HOUR TRAFFIC

DRAWING No. 10-08

DATE/TIME$$$	TIME$$$	PRF	DGN	COUNTY	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		CAMDEN	GA	CSSTP-0008-00(666)		



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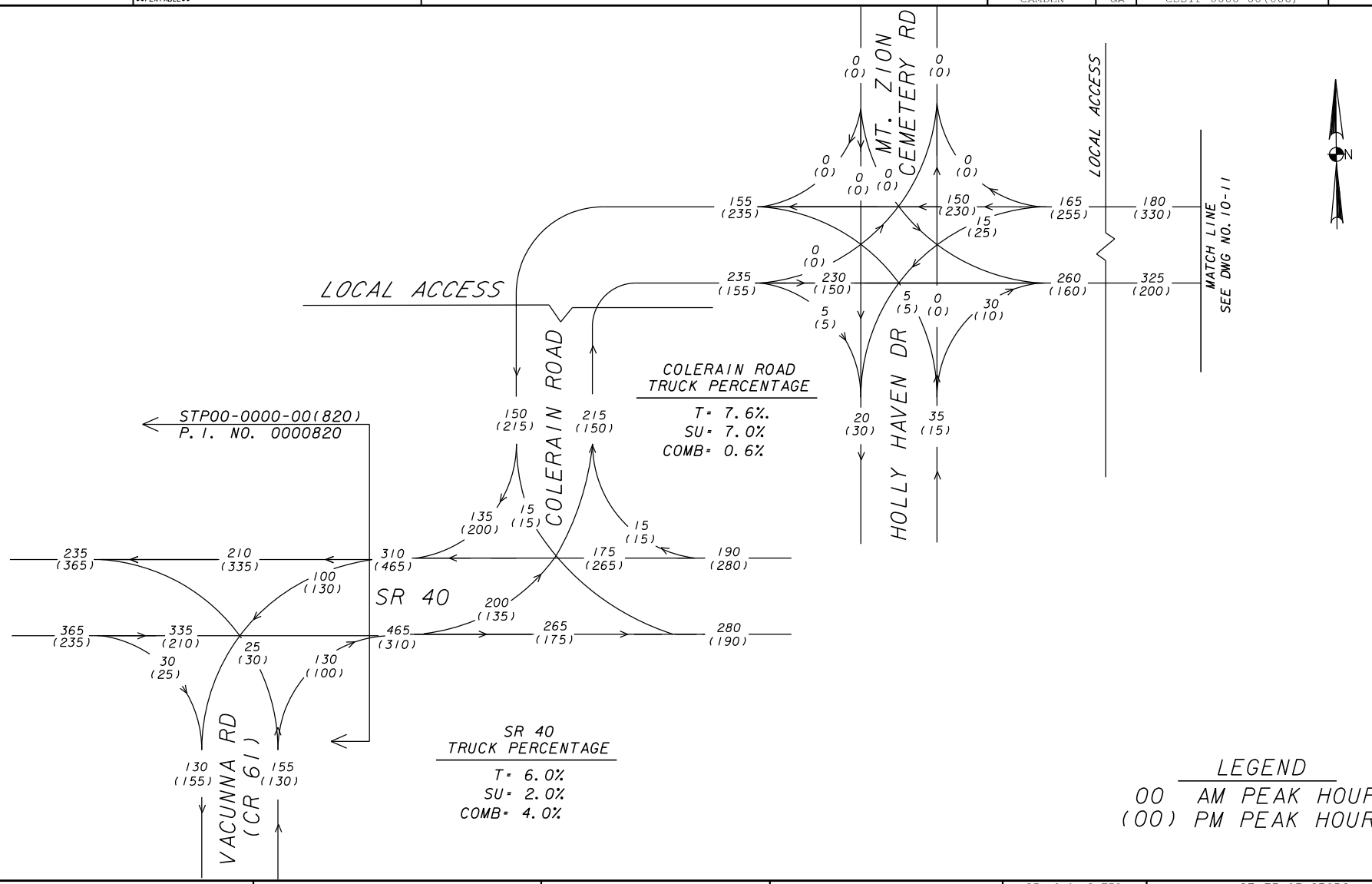
TRAFFIC DIAGRAM

KINGSLAND BYPASS PHASE II
YEAR 2019 NO-BUILD
PEAK HOUR TRAFFIC

DRAWING No. 10-09



COLERAIN ROAD
TRUCK PERCENTAGE

T = 7.6%.
SU = 7.0%
COMB = 0.6%

SR 40
TRUCK PERCENTAGE

T = 6.0%
SU = 2.0%
COMB = 4.0%

LEGEND

00 AM PEAK HOUR
(00) PM PEAK HOUR

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REVISION DATES

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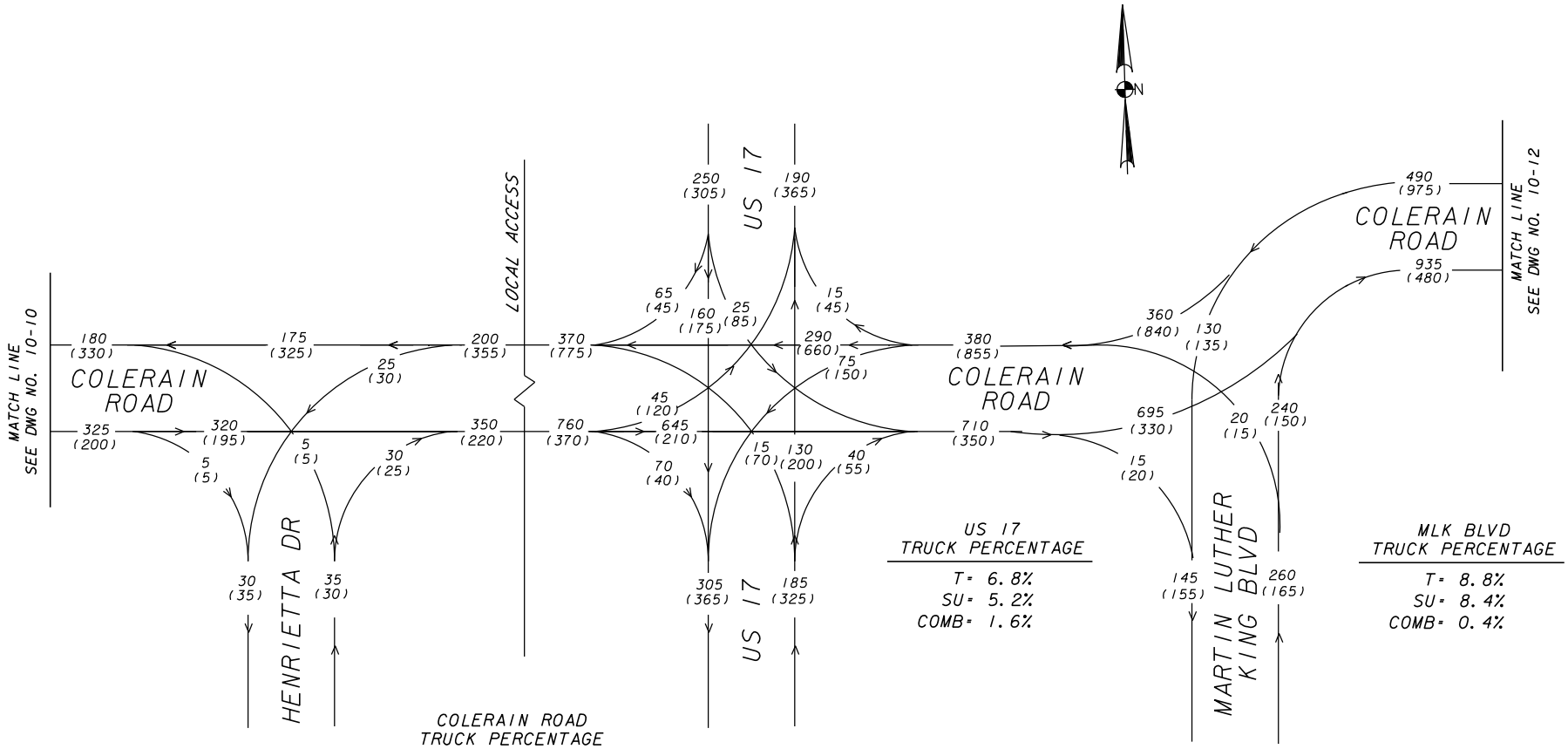
DEPARTMENT OF TRANSPORTATION
OFFICE:

TRAFFIC DIAGRAM
KINGSLAND BYPASS PHASE II
YEAR 2039 NO-BUILD
PEAK HOUR TRAFFIC

DRAWING No. 10-10



COLERAIN ROAD
TRUCK PERCENTAGE

T= 7.6%
SU= 7.0%
COMB= 0.6%

US 17
TRUCK PERCENTAGE

T= 6.8%
SU= 5.2%
COMB= 1.6%

MLK BLVD
TRUCK PERCENTAGE

T= 8.8%
SU= 8.4%
COMB= 0.4%

LEGEND

00 AM PEAK HOUR
(00) PM PEAK HOUR

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CAMDEN COUNTY, GEORGIA
CSSTP-0008-00 (666)
P.I. No. 0008666

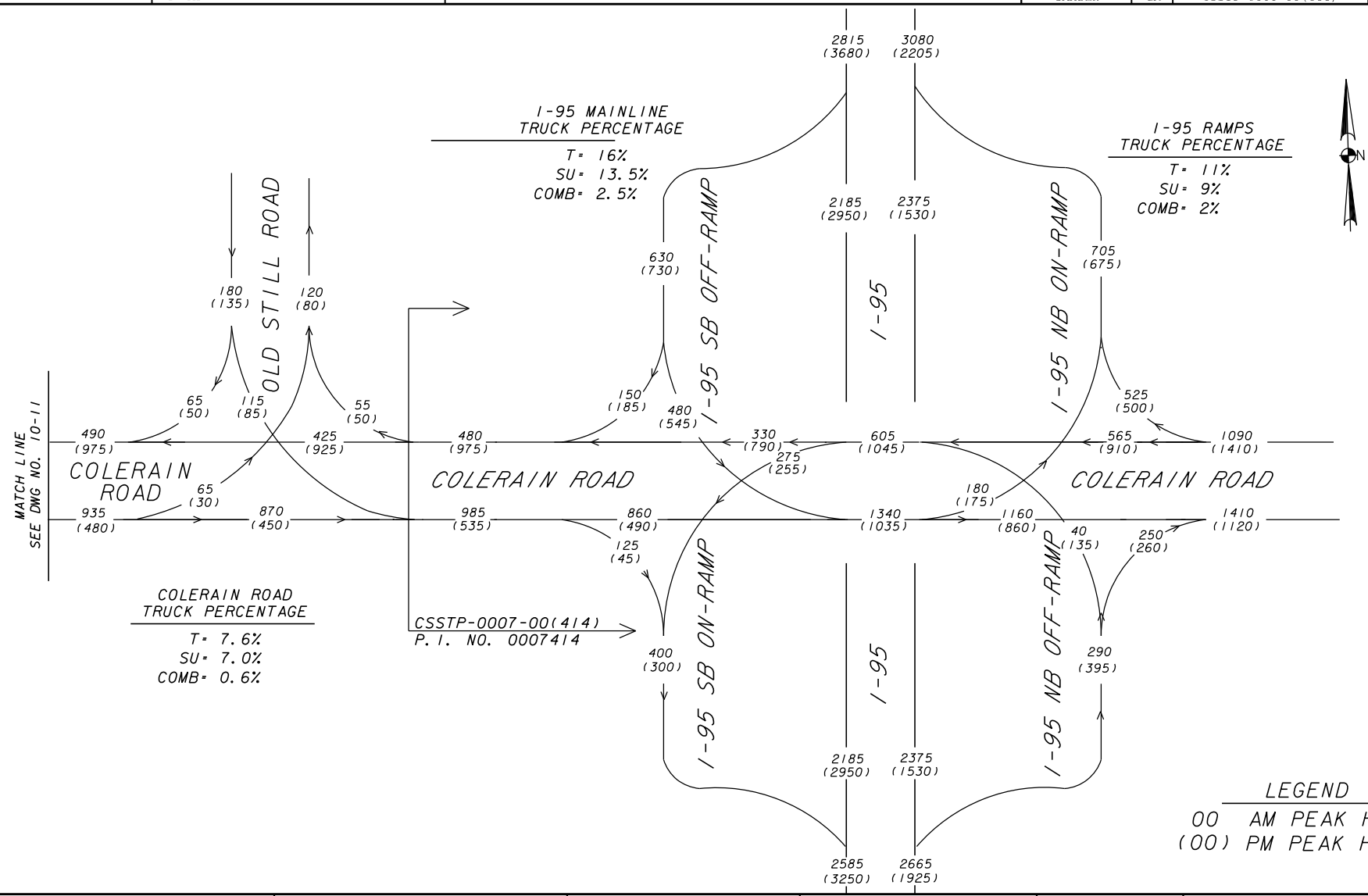
REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE:

TRAFFIC DIAGRAM

KINGSLAND BYPASS PHASE II
YEAR 2039 NO-BUILD
PEAK HOUR TRAFFIC

DRAWING No. 10-11



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CAMDEN COUNTY, GEORGIA
CSSTP-0008-00 (666)
P.I. No. 0008666

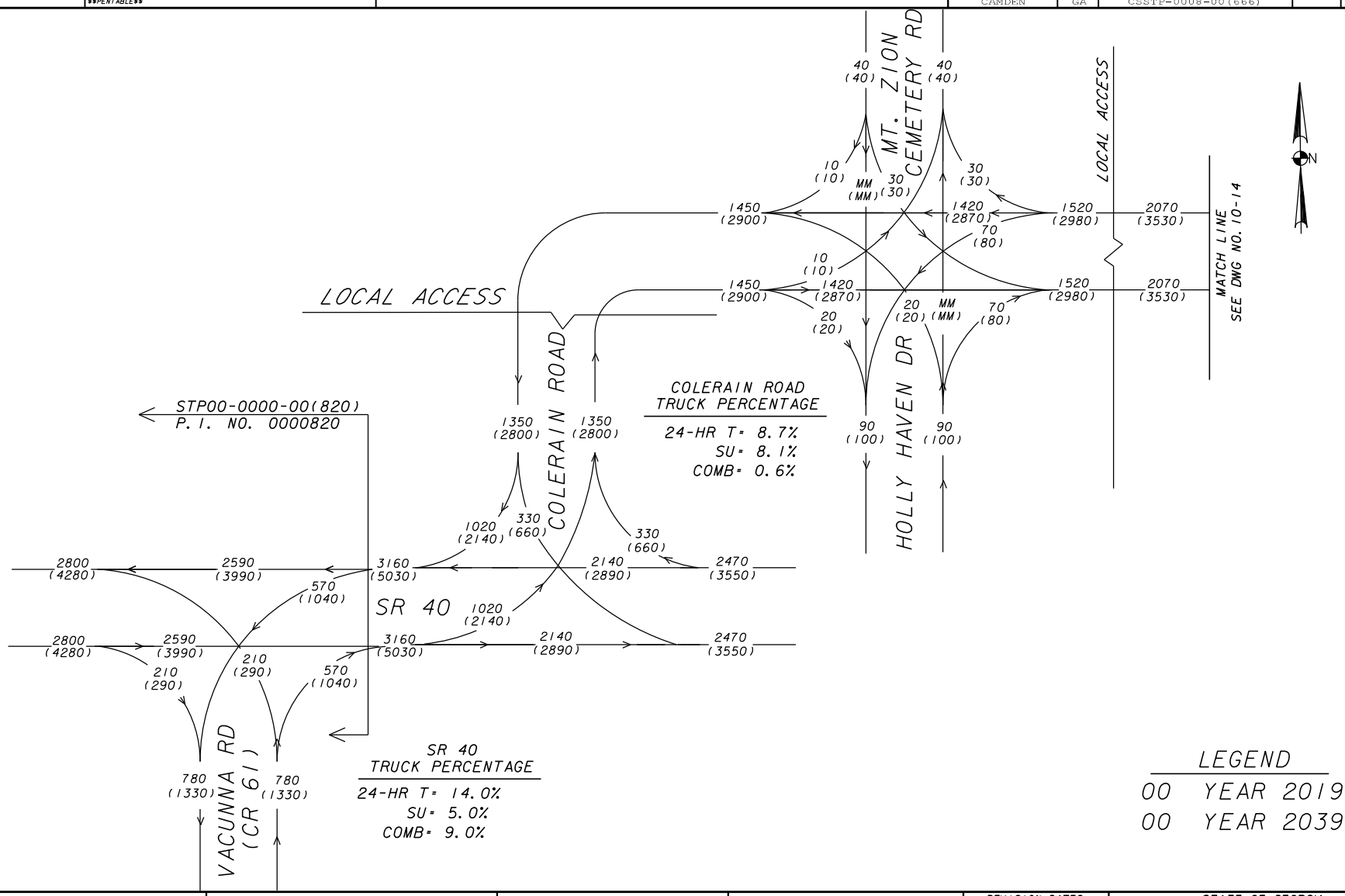
REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE:

TRAFFIC DIAGRAM
KINGSLAND BYPASS PHASE II
YEAR 2039 NO-BUILD
PEAK HOUR TRAFFIC

DRAWING No. 10-12

DATETIME$$$	TIME$$$	PRF	DGN	COUNTY	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		CAMDEN	GA	CSSTP-0008-00(666)		



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CAMDEN COUNTY, GEORGIA
CSSTP-0008-00 (666)
P.I. No. 0008666

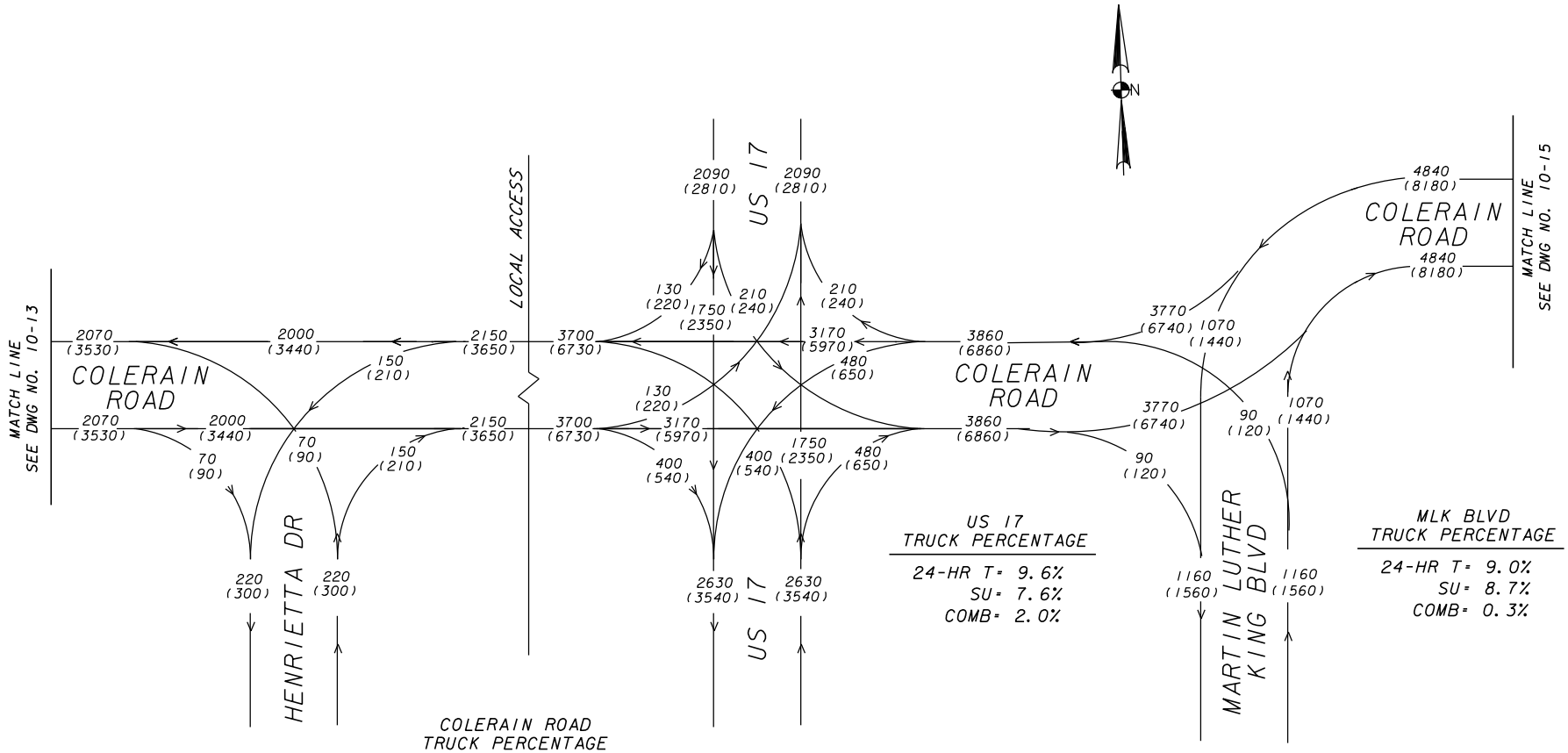
REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE:

TRAFFIC DIAGRAM
KINGSLAND BYPASS PHASE II
YEARS 2019/2039 NO-BUILD
AVERAGE DAILY TRAFFIC

DRAWING No. 10-13

DATETIME$$$	TIME$$$	PRF	DGN	COUNTY	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		CAMDEN	GA	CSSTP-0008-00(666)		



COLERAIN ROAD TRUCK PERCENTAGE

24-HR T= 8.7%
SU= 8.1%
COMB= 0.6%

US 17 TRUCK PERCENTAGE

24-HR T= 9.6%
SU= 7.6%
COMB= 2.0%

MLK BLVD TRUCK PERCENTAGE

24-HR T= 9.0%
SU= 8.7%
COMB= 0.3%

LEGEND

00 YEAR 2019
00 YEAR 2039

Moreland Altobelli Associates, Inc.
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Norcross, Georgia 30071
Telephone (770) 263-5945

CAMDEN COUNTY, GEORGIA
CSSTP-0008-00 (666)
P.I. No. 0008666

REVISION DATES

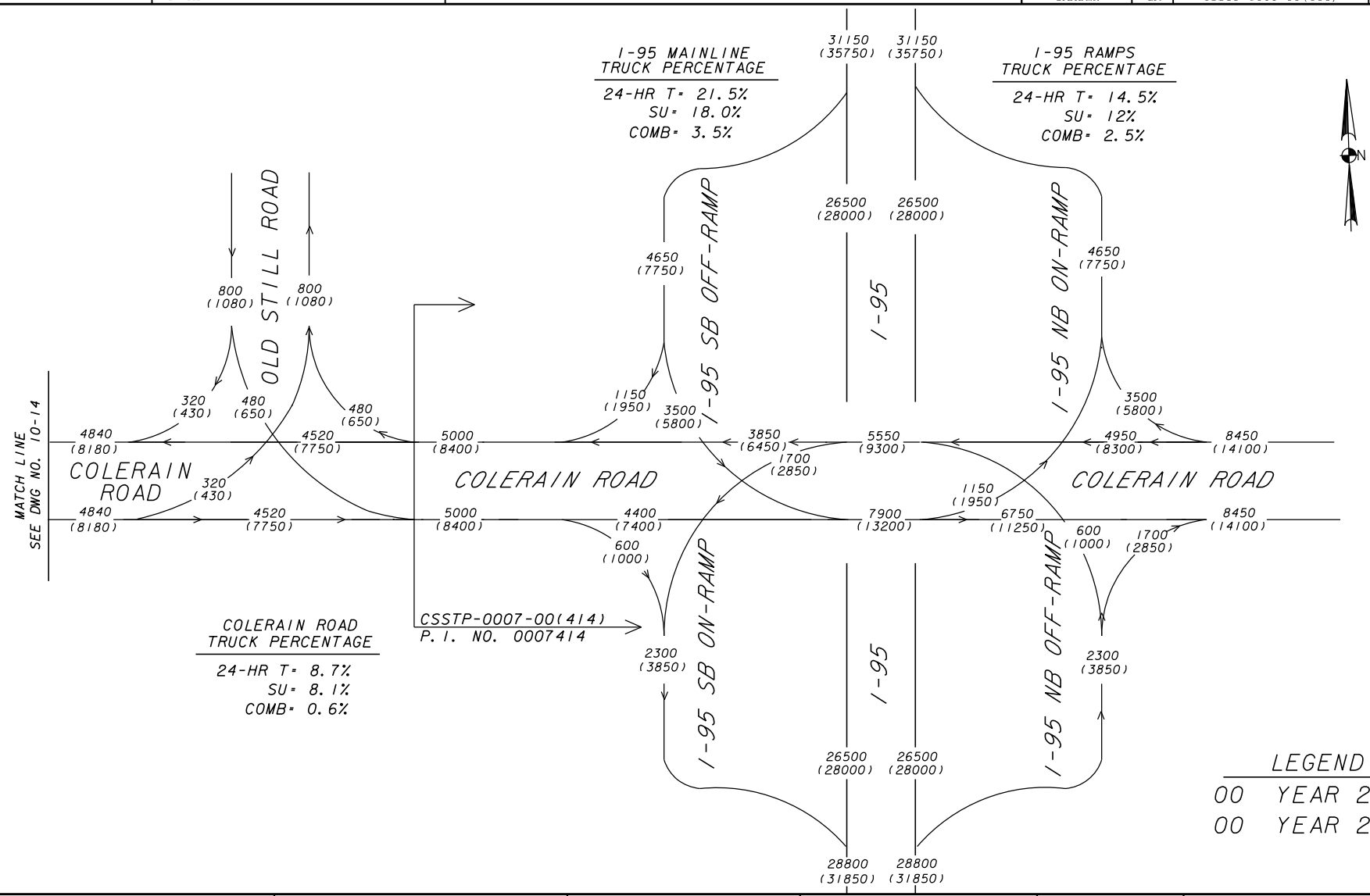
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE:

TRAFFIC DIAGRAM

KINGSLAND BYPASS PHASE II
YEARS 2019/2039 NO-BUILD
AVERAGE DAILY TRAFFIC

DRAWING No. 10-14

DATETIME$$$	TIME$$$	PRF	DGN	COUNTY	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		CAMDEN	GA	CSSTP-0008-00 (666)		



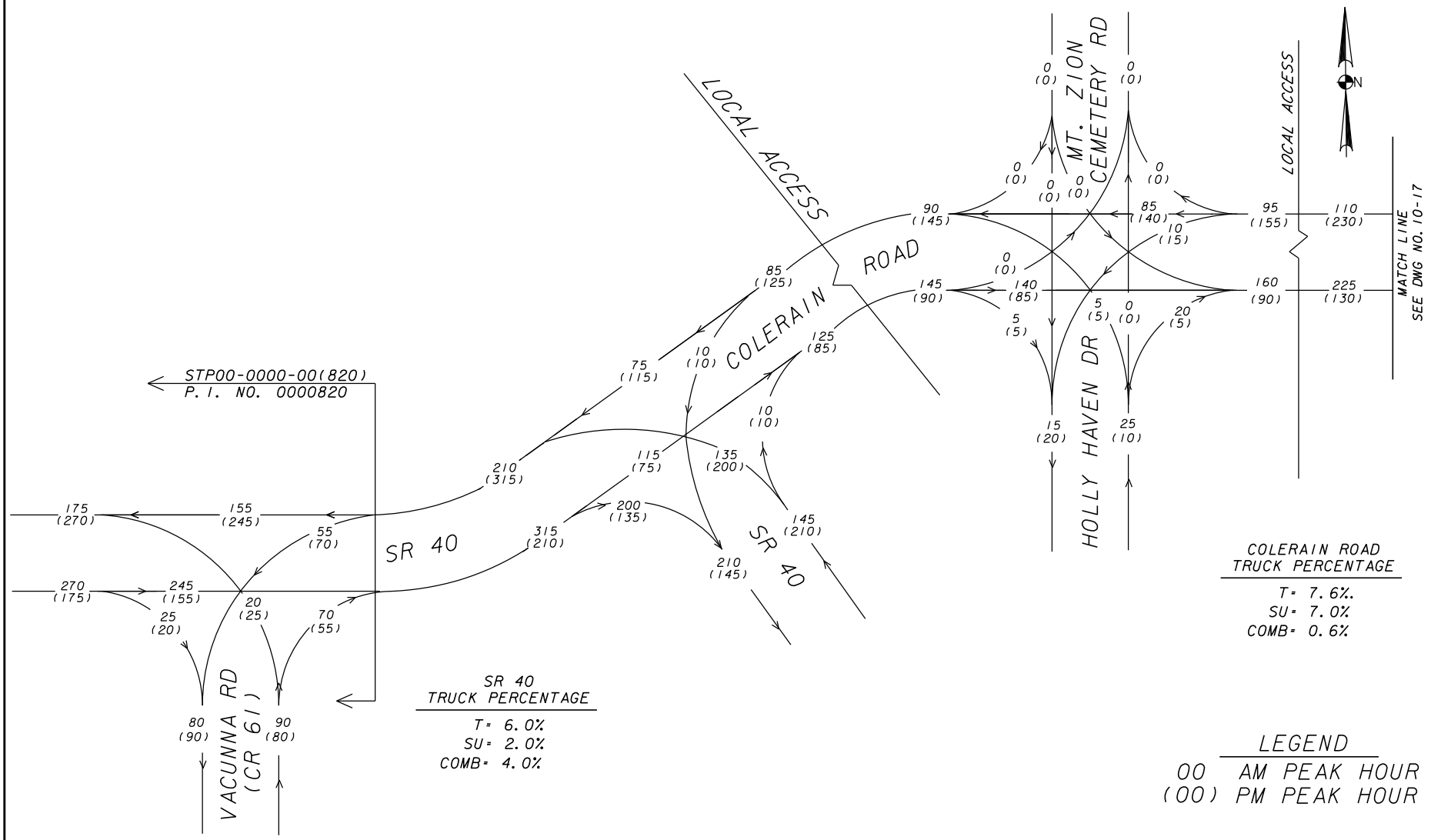
LEGEND

00 YEAR 2019

00 YEAR 2039

		Moreland Altobelli Associates, Inc. 2211 Beaver Ruin Road Suite 190 Norcross, Georgia 30071 Telephone (770) 263-5945	CAMDEN COUNTY, GEORGIA CSSTP-0008-00 (666) P.I. No. 0008666	REVISION DATES	STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE: TRAFFIC DIAGRAM KINGSLAND BYPASS PHASE II YEARS 2019/2039 NO-BUILD AVERAGE DAILY TRAFFIC DRAWING No. 10-15

DATETIME$$$	TIME$$$	PRF	DGN	COUNTY	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		CAMDEN	GA	CSSTP-0008-00(666)		



SR 40
TRUCK PERCENTAGE

T= 6.0%
SU= 2.0%
COMB= 4.0%

COLERAIN ROAD
TRUCK PERCENTAGE

T= 7.6%
SU= 7.0%
COMB= 0.6%

LEGEND

00 AM PEAK HOUR
(00) PM PEAK HOUR

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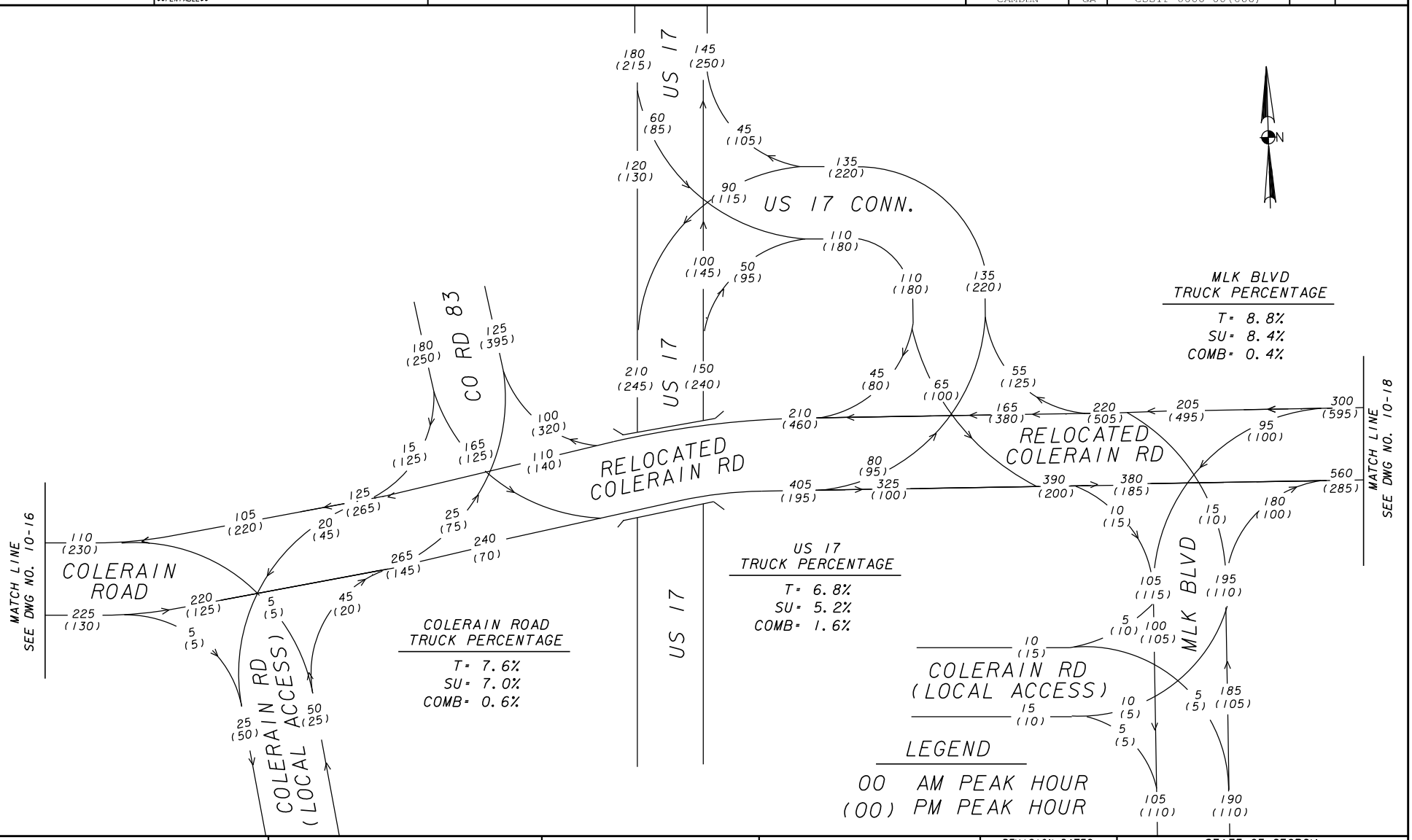
DEPARTMENT OF TRANSPORTATION
OFFICE:

TRAFFIC DIAGRAM
KINGSLAND BYPASS PHASE II
YEAR 2019 BUILD
PEAK HOUR TRAFFIC

DRAWING No. 10-16



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STATE OF GEORGIA
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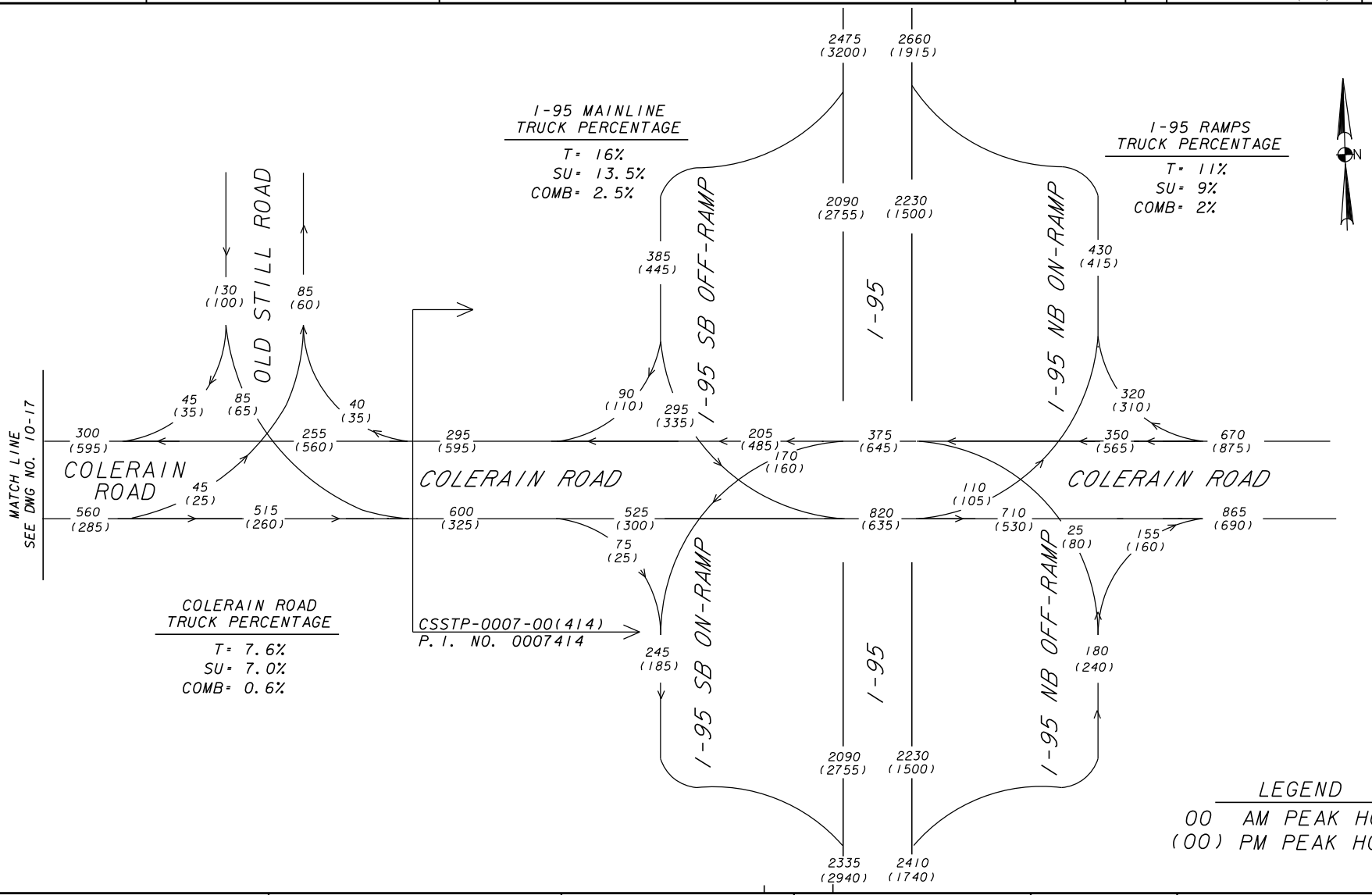
TRAFFIC DIAGRAM
KINGSLAND BYPASS PHASE II
YEAR 2019 BUILD
PEAK HOUR TRAFFIC

DRAWING No. 10-17

DATETIME$$$	TIME$$$	PRF	DGN	COUNTY	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		CAMDEN	GA	CSSTP-0008-00(666)		



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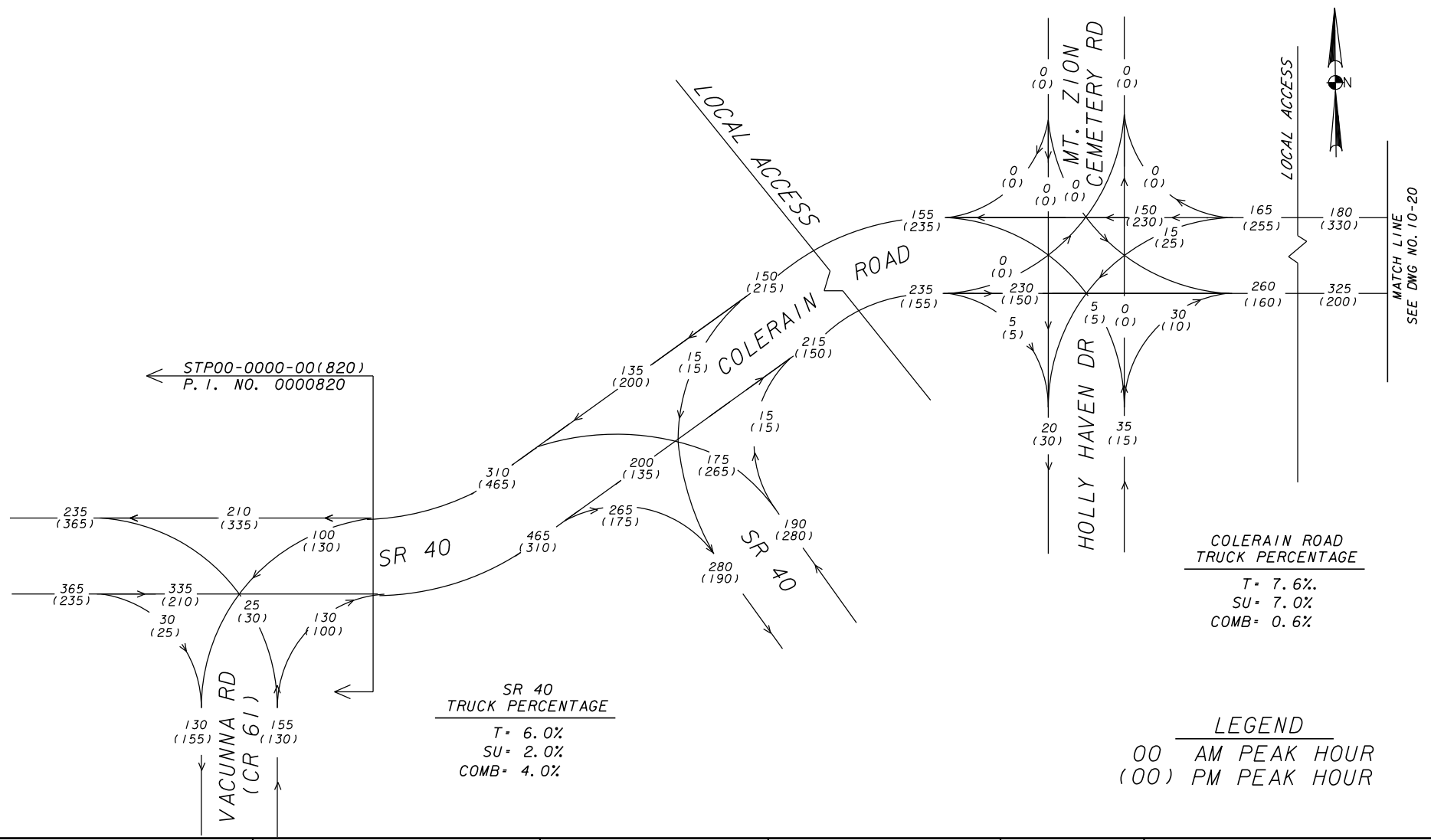
TRAFFIC DIAGRAM

KINGSLAND BYPASS PHASE II
YEAR 2019 BUILD
PEAK HOUR TRAFFIC

DRAWING No. 10-18



SR 40
TRUCK PERCENTAGE

T = 6.0%
SU = 2.0%
COMB = 4.0%

COLERAIN ROAD
TRUCK PERCENTAGE

T = 7.6%.
SU = 7.0%
COMB = 0.6%

LEGEND

00 AM PEAK HOUR
(00) PM PEAK HOUR

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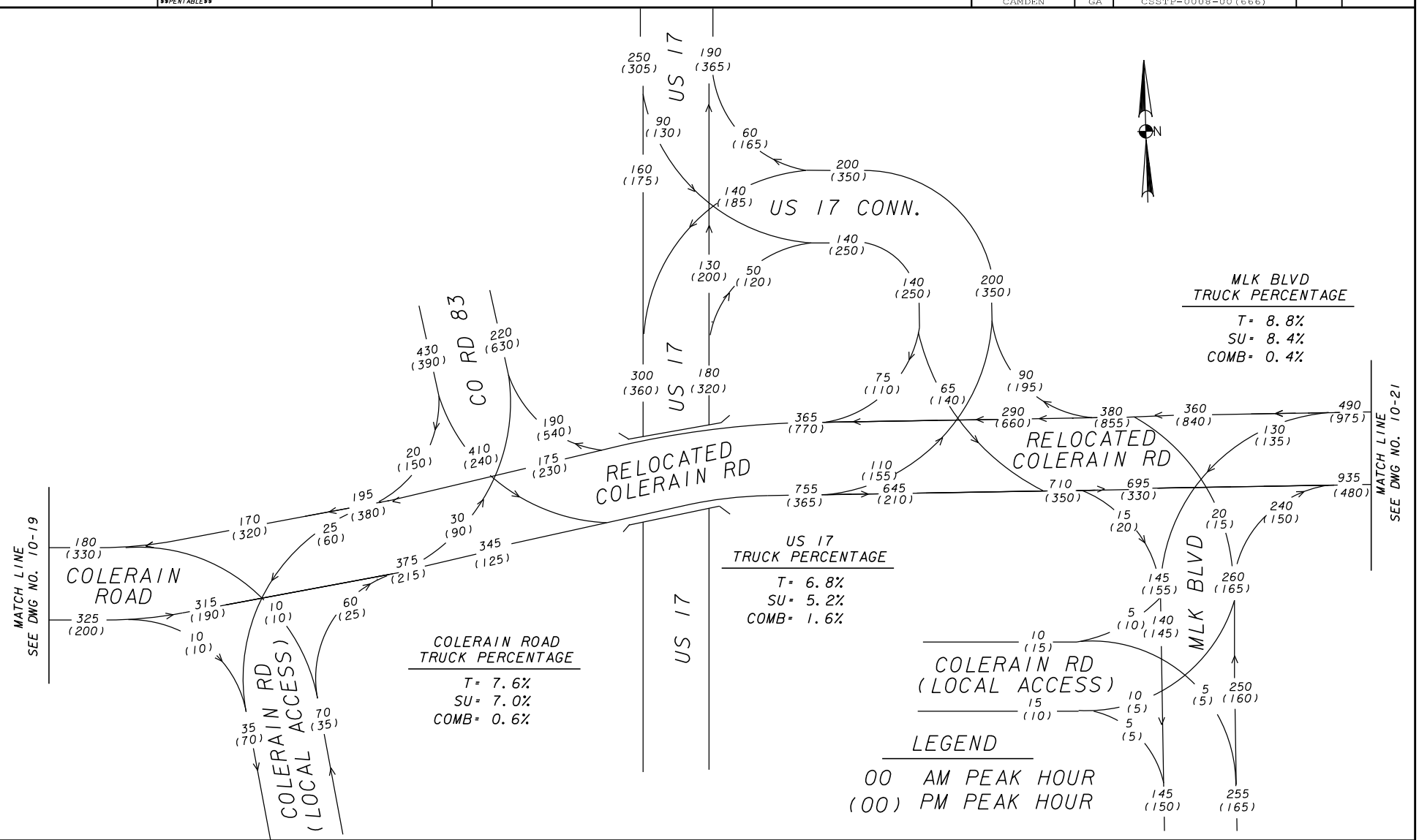
REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE:

TRAFFIC DIAGRAM
KINGSLAND BYPASS PHASE II
YEAR 2039 BUILD
PEAK HOUR TRAFFIC

DRAWING No. 10-19

COUNTY	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
CAMDEN	GA	CSSTP-0008-00 (666)		



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CAMDEN COUNTY, GEORGIA
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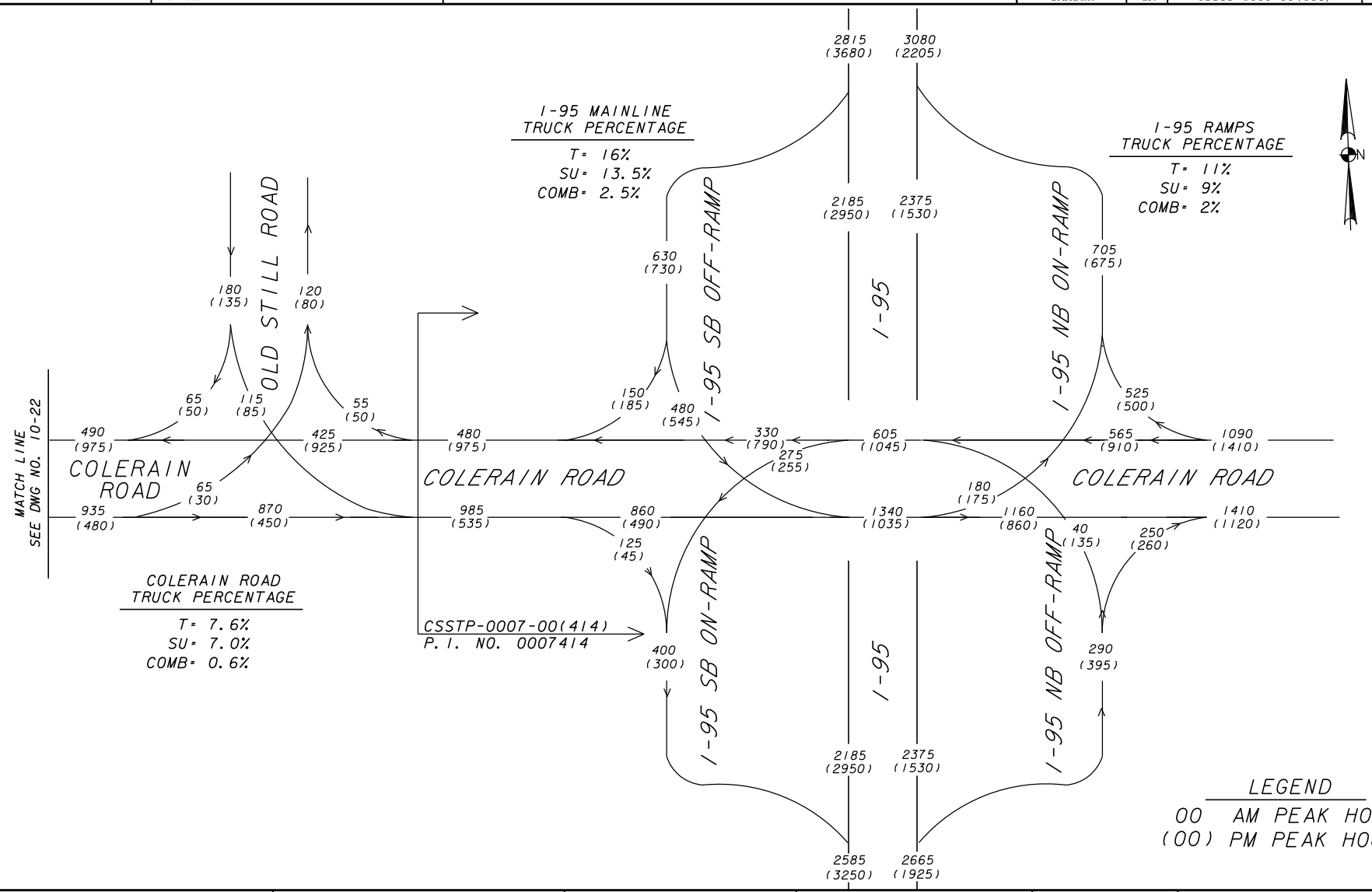
REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE:

TRAFFIC DIAGRAM
KINGSLAND BYPASS PHASE II
YEAR 2039 BUILD
PEAK HOUR TRAFFIC

DRAWING No. 10-20

COUNTY	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
CAMDEN	GA	CSSTP-0008-00(666)		



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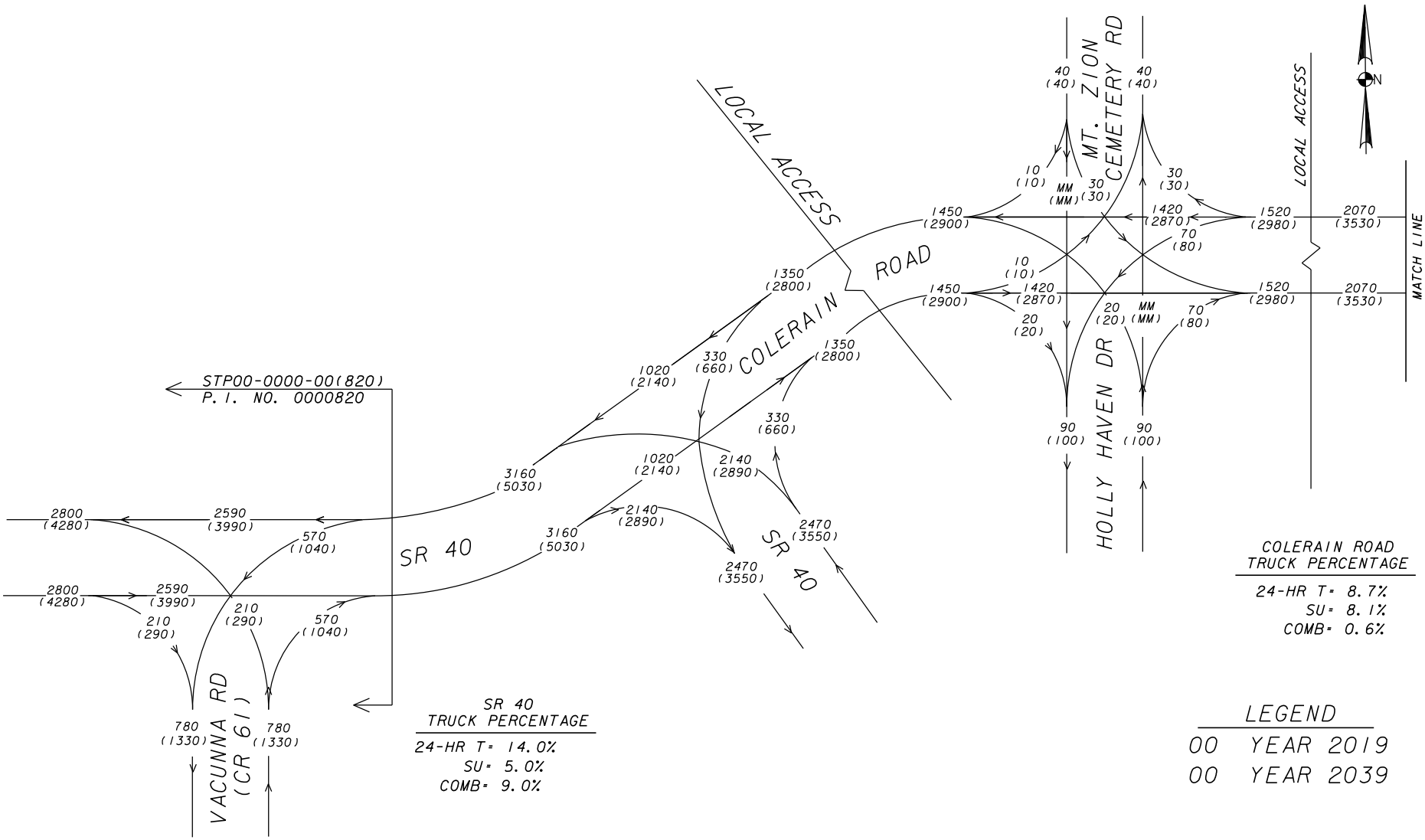
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE:

TRAFFIC DIAGRAM
KINGSLAND BYPASS PHASE II
YEAR 2039 BUILD
PEAK HOUR TRAFFIC

DRAWING No. 10-21

DATE/TIME$$$	TIME$$$	PRF	DGN	COUNTY	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		CAMDEN	GA	CSSTP-0008-00(666)		



SR 40
TRUCK PERCENTAGE

24-HR T= 14.0%
SU= 5.0%
COMB= 9.0%

COLERAIN ROAD
TRUCK PERCENTAGE

24-HR T= 8.7%
SU= 8.1%
COMB= 0.6%

LEGEND

00 YEAR 2019
00 YEAR 2039

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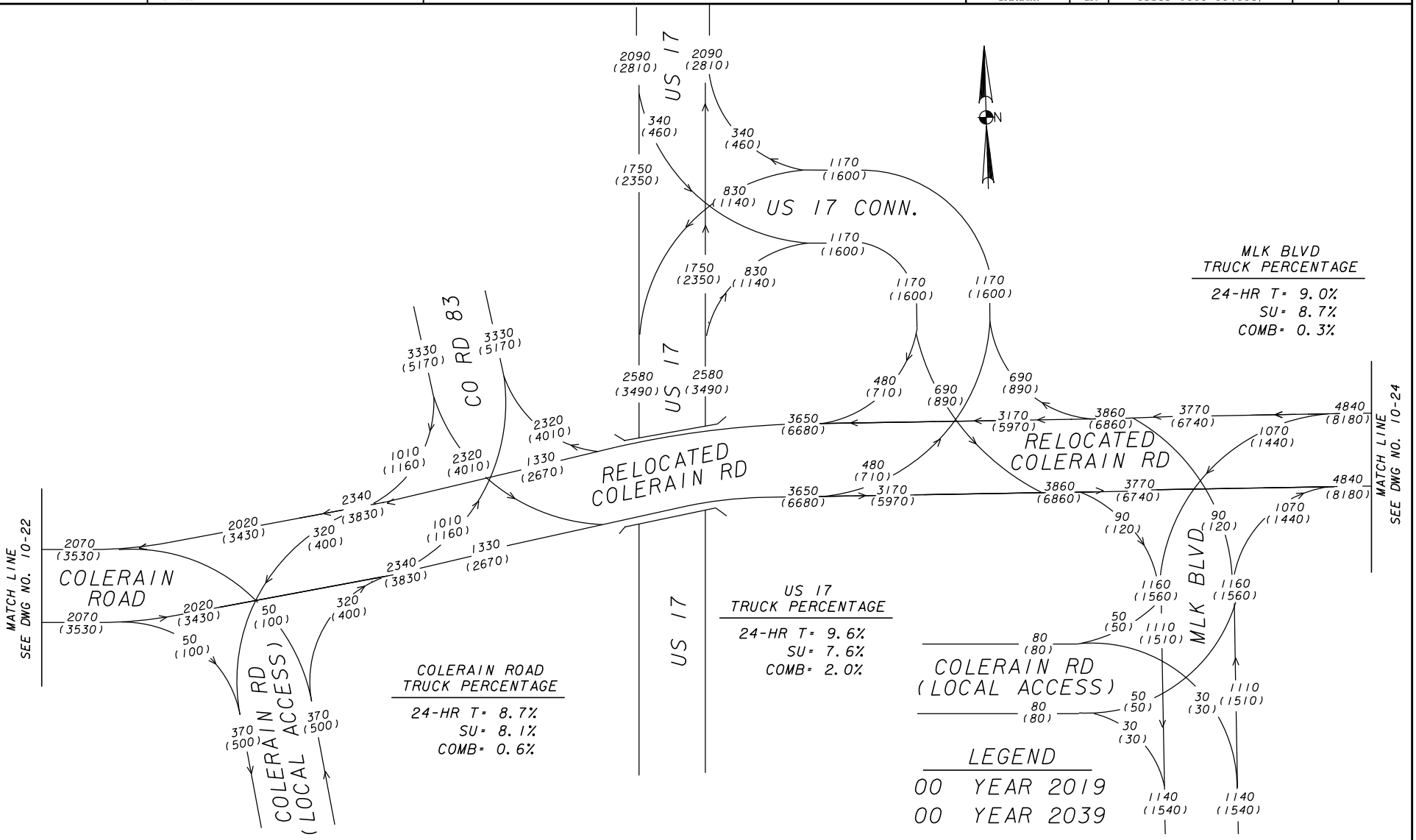
REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE:

TRAFFIC DIAGRAM
KINGSLAND BYPASS PHASE II
YEARS 2019/2039 BUILD
AVERAGE DAILY TRAFFIC

DRAWING No. 10-22

DATETIME$$$	TIME$$$	PRF	DGN	COUNTY	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		CAMDEN	GA	CSSTP-0008-00(666)		



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REVISION DATES

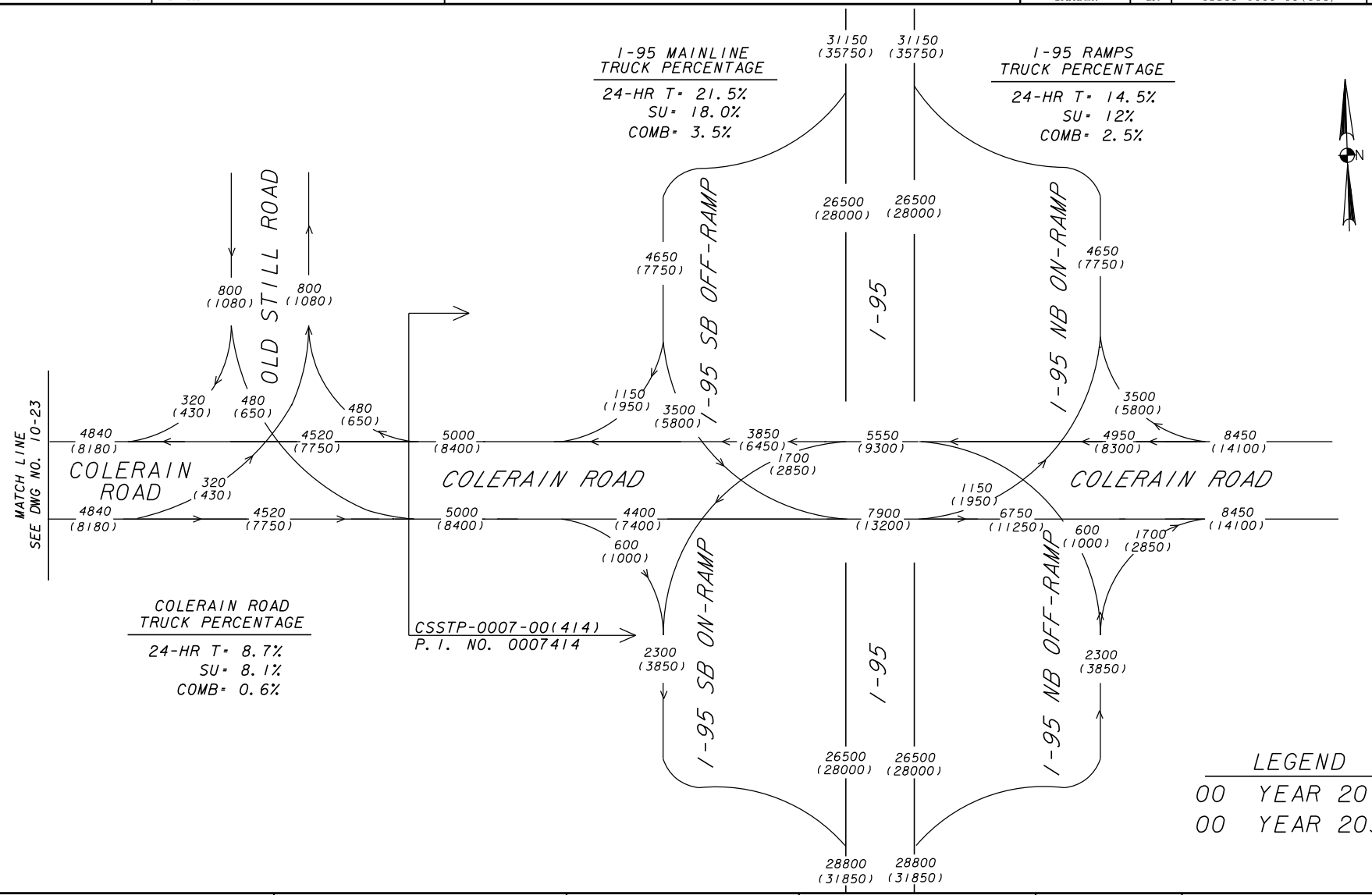
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE:

TRAFFIC DIAGRAM

KINGSLAND BYPASS PHASE II
YEARS 2019/2039 BUILD
AVERAGE DAILY TRAFFIC

DRAWING No. 10-23

DATETIME$$$	TIME$$$	PRF	DGN	COUNTY	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		CAMDEN	GA	CSSTP-0008-00 (666)		



		Moreland Altobelli Associates, Inc. 2211 Beaver Ruin Road Suite 190 Norcross, Georgia 30071 Telephone (770) 263-5945	CAMDEN COUNTY, GEORGIA CSSTP-0008-00 (666) P.I. No. 0008666	REVISION DATES	STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE: TRAFFIC DIAGRAM KINGSLAND BYPASS PHASE II YEARS 2019/2039 BUILD AVERAGE DAILY TRAFFIC DRAWING No. 10-24

Capacity Analysis Summary

TRAFFIC ANALYSIS

To determine the need for additional travel-lane capacity to provide a safe and efficient coastal evacuation route on Laurel Island Parkway/Colerain Road, roadway capacity analysis was conducted which is reported as Level of Service (LOS). LOS is a qualitative measure of the operational efficiency of a roadway under peak hour conditions as they are seen from the driver's perspective. There are a total of six different LOS designations, from A to F, with LOS A representing the best case operational conditions with no delays in traffic and LOS F indicating forced flow, extreme congestion, and long delays, i.e., a complete breakdown in traffic flow.

Highway Capacity Software (HCS) was utilized to determined LOS. HCS is based upon the Highway Capacity Manual 2010, which is the current state-of-the-practice document for analyzing traffic capacity. The LOS for this project was examined for three time frames and for two conditions. The LOS was evaluated for the 2011 existing conditions, the 2019 opening year under the build and no-build condition, and the 2039 design year under the build and no-build condition (see Table 1).

When conducting capacity analysis, a number of roadway characteristics factor into the determination of LOS along with the traffic flow volume. These factors include the highway class, the number of access points, shoulder encroachments, traffic signals and no passing zones. Laurel Island Parkway/Colerain Road has several of these roadway characteristics that reduce the ability for traffic to flow, thus reducing capacity.

Two-lane highways are categorized into two classes when conducting LOS analysis. Class I highways are two-lane highways on which motorists expect to travel at relatively high speeds. Class I highways include major intercity routes, daily commuter routes, or a connecting link between facilities that serve long distance routes. Class II highways are two-lane highways on which motorists do not necessarily expect to travel at high speeds. Class II highways function as local access routes to Class I facilities and serve relatively short trips.

As shown in Table 1: LOS Analysis Results for Roadway Segments, Laurel Island Parkway/Colerain Road was analyzed as a Class I highway with a speed design of 45 mph.

Table 1: LOS Analysis Results for Roadway Segments

Kingsland Bypass Phase 2 Roadway Segments		Existing	Opening Year 2019		Design Year 2039	
		2011	No-Build	Build	No-Build	Build
		2 lanes	2 lanes	4 lanes	2 lanes	4 lanes
SR 40 to Holly Haven Drive	ADT	1,340	2,900	2,900	5,800	5,800
	LOS Travel Speed Flow Rate	C 46.9 mph 119 pcph	C 46.0 mph 162 pcph	A 55 mph 83 pcph	D 43.5 mph 263 pcph	A 55 mph 135 pcph
Holly Haven Drive to Henrietta Dr or (Old) Colerain Rd under build conditions	ADT	1,480	4,140	4,140	7,060	7,060
	LOS Travel Speed Flow Rate	D 43.6 mph 123 pcph	D 41.0 mph 258 pcph	A 55 mph 132 pcph	E 39.0 mph 370 pcph	A 55 mph 190 pcph
Henrietta Dr or (Old) Colerain Rd to US 17 or US 17 Connector under build conditions	ADT	2,060	7,400	7,300	13,460	13,360
	LOS Travel Speed Flow Rate	D 41.6 mph 190 pcph	E 36.6 mph 517 pcph	A 55 mph 265 pcph	E 33.7 mph 861 pcph	A 55 mph 444 pcph
US 17 or US 17 Connector to Martin Luther King Jr. Blvd	ADT	2,260	7,720	7,720	13,720	13,720
	LOS Travel Speed Flow Rate	E 39.6 mph 157 pcph	E 35.0 mph 561 pcph	A 55 mph 291 pcph	E 31.8 mph 950 pcph	A 55 mph 494 pcph
Martin Luther King Jr. Blvd to Still Rd	ADT	4,000	9,680	9,680	16,360	16,360
	LOS Travel Speed Flow Rate	D 43.0 mph 325 pcph	E 39.9 mph 661 pcph	A 55 mph 343 pcph	E 36.0 mph 1083 pcph	A 55 mph 563 pcph
Old Still Rd to I-95 Southbound Ramps	ADT	4,300	10,000	10,000	16,800	16,800
	LOS Travel Speed Flow Rate	D 42.4 mph 364 pcph	E 39.3 mph 667 pcph	A 55 mph 343 pcph	E 35.4 mph 1094 pcph	A 55 mph 569 pcph

Table 1 also reports the average travel speed in miles per hour (mph) and the highest directional flow rate in passenger cars per hour per lane (pcph) for each roadway segment. These two performance measurements clarify the reason why widely varying traffic flow volumes can have the same LOS and function similarly. The analysis shows that without the proposed four-lane widening, traffic volumes would not flow at free flow speeds of 55 mph on the two-lane Laurel Island Parkway/Colerain Road.

Laurel Island Parkway/Colerain Road carries between 1,340 and 4,300 vehicles per day (vpd) in 2011. Under these conditions, only one segment of the roadway is operating at LOS C, which represents acceptable operations for coastal evaluation routes. By 2039, Laurel Island Parkway/Colerain Road would carry between 5,800 and 16,800 vpd and all segments would operate at LOS D or LOS E, which represents near or at capacity conditions and unstable operations. Traffic would not flow properly to facilitate coastal evacuation in periods of an impending hurricane emergency.

In summary, the proposed project will improve the LOS of Laurel Island Parkway/Colerain Road under both the opening year 2019 and the design year 2039. In addition, the corresponding average travel speed would increase and the number of passenger cars per hour per lane would decrease on all roadway segments within the project limits as a result of the proposed improvements

Intersection Operations

A capacity analysis was performed for each major intersection along the project under the 2011 existing traffic conditions. Analysis was also conducted for the 2019 opening year and 2039 design year for both the build and no-build conditions. Capacity analysis was conducted for both the AM and PM peak hours utilizing the most recent version of the HCS+, which replicates the procedures found in the Highway Capacity Manual (HCM), published by the Transportation Research Board in Washington, DC. These procedures measure the overall intersection LOS operations based on the intersection's turning movement (hourly) volume, lane configuration, and traffic control operations according to threshold values defined in the HCM. Six LOS letters are defined that designate each level, from A to F, with LOS A representing the best operating conditions and LOS F the worst. Each level of service represents a range of operating conditions and the driver's perception of those conditions. The results of the analysis are provided in Table 2: LOS Analysis Results for Major Intersections.

As the results of Table 2 indicate, all of the intersections currently operate at an acceptable LOS under 2011 unsignalized conditions. However by 2039, the LOS at the intersections of US 17, Martin Luther King, Jr Blvd and Old Still Road declines to LOS F. With the proposed project improvements, these intersections will be reconfigured and would operate at LOS D or better for the 2019 opening year and 2039 design year without the need to signalize the intersections.

Table 2: LOS Analysis Results for Major Intersections

Colerain Road (Kingsland Bypass Phase 2) Intersections	Existing		Opening Year 2019				Design Year 2039			
	2011		No-Build		Build		No-Build		Build	
	AM (Delay)	PM (Delay)	AM (Delay)	PM (Delay)	AM (Delay)	PM (Delay)	AM (Delay)	PM (Delay)	AM (Delay)	PM (Delay)
SR 40	A (9.3)	A (9.4)	B (10.1)	B (10.1)	B (10.8)	A (8.6)	B (11.8)	B (11.9)	B (12.5)	A (8.8)
Holly Haven Drive	A (9.0)	A (8.5)	A (9.3)	A (9.5)	A (9.0)	A (9.2)	B (10.1)	A (10.0)	A (9.3)	A (9.3)
Henrietta Dr (No-Build Condition)	A (9.1)	A (8.9)	A (9.9)	B (11.3)			B (10.9)	B (10.2)		
Old Colerain Road (Build Condition)					A (9.3)	A (9.2)			B (10.1)	B (10.2)
US 17 (No-Build Condition)	B (13.0)	C (16.2)	E (39.2)	F (290.4)			F (478.9)	F (3148)		
US 17 Connector (Build Condition)					B (11.5)	B (13.3)			B (13.6)	D (26.7)
Martin Luther King, Jr Blvd	B (11.1)	B (11.3)	D (31.1)	C (17.4)	B (10.9)	A (9.6)	F (433.6)	F (132.9)	B (14.4)	B (10.9)
Old Still Road	B (12.6)	B (12.4)	C (22.6)	C (22.2)	B (13.3)	B (14.7)	F (231.6)	F (157.1)	C (21.3)	D (26.8)

Note: Delay is reported in seconds per vehicle.

Summary Signal Warrant Analysis

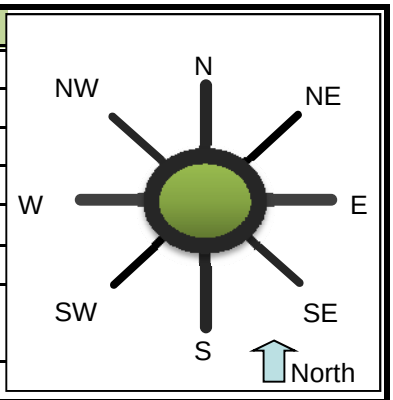
No warrant analyses are included in this concept report. All intersections are well below the levels of traffic volume that would require signals in order to operate effectively. No warrants are necessary for justification of signal emplacements.

Roundabout Analysis

General & Site Information

v2.1

Analyst:	William Ruhsam
Agency/Co:	Moreland Altobelli
Date:	3/6/2013
Project or PI#:	0008666
Year, Peak Hour:	2039 AM
County/District:	Camden
Intersection Name:	US 17 CONN at US 17



Volumes

		Entry Legs (FROM)							
		N (1)	NE (2)	E (3)	SE (4)	S (5)	SW (6)	W (7)	NW (8)
	N (1), vph			**165**		**200**			
Exit	NE (2), vph								
Legs	E (3), vph	**130**				**120**			
(TO)	SE (4), vph								
	S (5), vph	**170**		**185**					
	SW (6), vph								
	W (7), vph								
	NW (8), vph								
Output	Total Vehicles	300	0	350	0	320	0	0	0

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	100%	100%	92%	100%	94%	100%	94%	100%
% Heavy Vehicles	0%	0%	**8%**	0%	**6%**	0%	**6%**	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_{HV}	1.000	1.000	0.929	1.000	0.943	1.000	1.000	1.000
F_{ped}	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	193	0	230	0	0	0
NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	141	0	0	0	138	0	0	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	185	0	216	0	0	0	0	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	0	0	0	0	0	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h	326	0	409	0	369	0	0	0
Conflicting flow, pcu/h	216	0	230	0	141	0	0	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	910	NA	834	NA	926	NA	NA	NA
Entry Flow Rates, vph	326	NA	380	NA	348	NA	NA	NA
V/C ratio	**0.36**		**0.46**		**0.38**			
Control Delay, s/veh	**8**		**10**		**8**			
LOS	A		B		A			
95th % Queue (ft)	**41**		**65**		**47**			
Calibrated Model (future)	**N**	**NE**	**E**	**SE**	**S**	**SW**	**W**	**NW**
Entry Capacity, vph	1121	NA	1030	NA	1123	NA	NA	NA
Entry Flow Rates, vph	326	NA	380	NA	348	NA	NA	NA
V/C ratio	**0.29**		**0.40**		**0.33**			
Control Delay, sec/pcu	**6**		**8**		**6**			
LOS	A		A		A			
95th % Queue (ft)	**30**		**52**		**38**			

Notes: v2.1

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

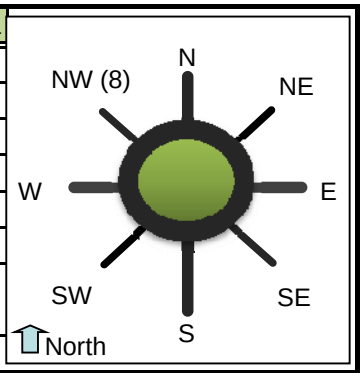
Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
Volumes						
Right Turn Volume removed from Entry Leg						
Volume Characteristics (for entry leg)						
PHF						
F_{HV}						
F_{ped}						
NOTE: Volume Characteristics for Exit Leg are already taken into account						
Entry/Conflicting Flows						
Entry Flow, pcu/hr						
Conflicting Flow, pcu/hr						
Bypass Lane Results (HCM 2010 Model)						
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						

General & Site Information

v2.1

Analyst:	William Ruhsam
Agency/Co:	Moreland Altobelli
Date:	3/6/2013
Project or PI#:	0008666
Year, Peak Hour:	2039 AM
County/District:	Camden
Intersection:	US 17 CONN at Colerain Road



Volumes

	Entry Legs (FROM)	N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Lane Designation		SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT
Exit Legs (TO)	N (1), vph								
	NE (2), vph								
	E (3), vph	**30**	**35**						
	SE (4), vph								
	S (5), vph								
	SW (6), vph								
	W (7), vph	**35**	**40**				**100**	**190**	
	NW (8), vph								
	Entry Volume, vph	65	75	0	0	0	100	190	0

		S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation		SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT
	N (1), vph						**110**		
	NE (2), vph								
	E (3), vph					**300**	**345**		
	SE (4), vph								
	S (5), vph								
	SW (6), vph								
	W (7), vph								
	NW (8), vph								
	Entry Volume, vph	0	0	0	0	300	455	0	0

	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	2	0	1	1	0	0	2	0
# of Conflict Flow Lanes	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	93%	100%	92%	100%	100%	100%	92%	100%
% Heavy Vehicles	7%	0%	8%	0%	0%	0%	8%	0%
% Bicycles	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_{hv}	0.935	1.000	0.926	1.000	1.000	1.000	0.926	1.000
F_{ped}	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	N (1), pcu/h	0	0	0	0	0	0	129	0

Leg #									
	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	76	0	0	0	0	0	757	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	0	0	0	0	0	0	0	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	87	0	117	207	0	0	0	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	163	0	117	207	0	0	886	0
	Entry flow Lane 1, pcu/h	76	0	0	207	0	0	352	0
	Entry flow Lane 2, pcu/h	87	0	117	0	0	0	534	0
	Conflicting flow, pcu/h	324	0	336	962	0	0	76	0

Results: Approach Measures of Effectiveness

HCM 2010 Model *(build yr)*	**N**		**E**		**S**		**W**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	828	842	NA	827	NA	NA	989	992
Entry Flow Rates, veh/h	71	82	NA	109	NA	NA	326	495
V/C ratio	**0.09**	**0.10**		**0.13**	#VALUE!	#VALUE!	**0.33**	**0.50**
Control Delay, s/veh	**5.2**	**5.2**		**5.7**	#VALUE!	#VALUE!	**7.1**	**9.7**
LOS	A	A		A	#VALUE!	#VALUE!	A	A
95th % Queue (ft)	**7**	**9**		**12**	#VALUE!	#VALUE!	**39**	**77**
Approach Delay, LOS	5.2 sec, LOS A		5.7 sec, LOS A		#VALUE!		8.6 sec, LOS A	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	576	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	207	NA	NA	NA	NA	NA
V/C ratio			**0.36**	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			**11.5**	#VALUE!			#VALUE!	#VALUE!
LOS			B	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			**40**	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			11.5 sec, LOS B				#VALUE!	

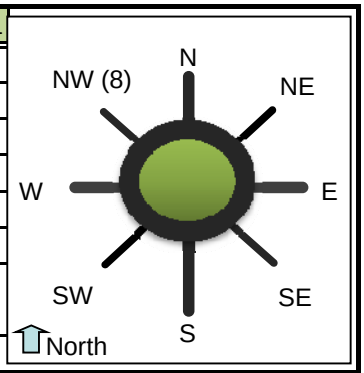
Calibrated Model *(future yr)*	**N**		**E**		**S**		**W**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	1109	1145	NA	1123	NA	NA	1408	1419
Entry Flow Rates, veh/h	71	82	NA	109	NA	NA	326	495
V/C ratio	**0.06**	**0.07**		**0.10**	#VALUE!	#VALUE!	**0.23**	**0.35**
Control Delay, s/veh	**3.8**	**3.7**		**4.0**	#VALUE!	#VALUE!	**4.5**	**5.6**
LOS	A	A		A	#VALUE!	#VALUE!	A	A
95th % Queue (ft)	**5**	**6**		**9**	#VALUE!	#VALUE!	**24**	**43**
Approach Delay, LOS	3.8 sec, LOS A		4 sec, LOS A		#VALUE!		5.2 sec, LOS A	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	690	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	207	NA	NA	NA	NA	NA
V/C ratio			**0.30**	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			**8.9**	#VALUE!			#VALUE!	#VALUE!
LOS			A	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			**31**	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#N/A				#N/A	

v2.1

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?						
# of Conflicting Exit Flow Lanes	**2**	**2**	**2**	**2**	**2**	**2**
Volumes						
Entry Leg: Insert Right Turn Volume						
Exit Leg: ***(Select Input Method)***						
*Lane Flow in Exit Leg****						
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
*Critical Lane Flow (Manual) in Exit Leg****						
Volume Characteristics						
PHF (Entry Leg)						
F_{HV} (Entry Leg)						
F_{ped}						
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F_{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.						
Entry/Conflicting Flows						
Entry Flow						
Conflicting Critical Flow						
Bypass Lane Results						
Entry Capacity of Bypass, veh/h						
Flow Rates of Exiting Traffic, veh/h						
V/C ratio						
Control Delay, sec/pcu						
LOS						
95th % Queue (ft)						

General & Site Information	v2.1
Analyst:	William Ruhsam
Agency/Co:	Moreland Altobelli
Date:	3/6/2013
Project or PI#:	0008666
Year, Peak Hour:	2039 AM
County/District:	Camden
Intersection:	SR 40 at Colerain Road



Volumes	Entry Legs (FROM)							
	N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Lane Designation	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT
Exit Legs (TO) N (1), vph								
NE (2), vph								
E (3), vph								
SE (4), vph								
S (5), vph						15		
SW (6), vph								
W (7), vph					60	75		
NW (8), vph								
Entry Volume, vph	0	0	0	0	60	90	0	0

	S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT
N (1), vph								
NE (2), vph								
E (3), vph		15			140	60		
SE (4), vph								
S (5), vph						265		
SW (6), vph								
W (7), vph	85	90						
NW (8), vph								
Entry Volume, vph	85	105	0	0	140	325	0	0

	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	0	0	2	0	2	0	2	0
# of Conflict Flow Lanes	2	2	2	2	2	2	2	2

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	100%	100%	92%	100%	94%	100%	94%	100%
% Heavy Vehicles	0%	0%	8%	0%	6%	0%	6%	0%
% Bicycles	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_{hv}	1.000	1.000	0.926	1.000	0.943	1.000	0.943	1.000
F_{ped}	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 N (1), pcu/h	0	0	0	0	0	0	0	0

Leg #									
	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	0	0	0	0	17	0	230	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	0	0	18	0	0	0	305	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	0	0	158	0	202	0	0	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	0	0	176	0	219	0	536	0
	Entry flow Lane 1, pcu/h	0	0	70	0	98	0	161	0
	Entry flow Lane 2, pcu/h	0	0	106	0	121	0	374	0
	Conflicting flow, pcu/h	0	0	202	0	230	0	18	0

Results: Approach Measures of Effectiveness

HCM 2010 Model *(build yr)*	**N**		**E**		**S**		**W**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	899	909	897	907	1052	1053
Entry Flow Rates, veh/h	NA	NA	65	98	92	114	152	353
V/C ratio	#VALUE!	#VALUE!	**0.07**	**0.11**	**0.10**	**0.13**	**0.14**	**0.34**
Control Delay, s/veh	#VALUE!	#VALUE!	**4.7**	**5.0**	**5.0**	**5.2**	**4.7**	**6.8**
LOS	#VALUE!	#VALUE!	A	A	A	A	A	A
95th % Queue (ft)	#VALUE!	#VALUE!	**6**	**10**	**9**	**11**	**13**	**39**
Approach Delay, LOS	#VALUE!		4.9 sec, LOS A		5.1 sec, LOS A		6.2 sec, LOS A	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#VALUE!				#VALUE!	

Calibrated Model *(future yr)*	**N**		**E**		**S**		**W**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	1241	1267	1229	1257	1520	1523
Entry Flow Rates, veh/h	NA	NA	65	98	92	114	152	353
V/C ratio	#VALUE!	#VALUE!	**0.05**	**0.08**	**0.08**	**0.09**	**0.10**	**0.23**
Control Delay, s/veh	#VALUE!	#VALUE!	**3.3**	**3.5**	**3.5**	**3.6**	**3.1**	**4.2**
LOS	#VALUE!	#VALUE!	A	A	A	A	A	A
95th % Queue (ft)	#VALUE!	#VALUE!	**4**	**7**	**6**	**8**	**9**	**24**
Approach Delay, LOS	#VALUE!		3.4 sec, LOS A		3.6 sec, LOS A		3.9 sec, LOS A	
	NE		**SE**		**SW**		**NW**	
Lane Designations	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*	*Lane 1*	*Lane 2*
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Control Delay, sec/pcu			#VALUE!	#VALUE!			#VALUE!	#VALUE!
LOS			#VALUE!	#VALUE!			#VALUE!	#VALUE!
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#N/A				#N/A	

v2.1

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?						
# of Conflicting Exit Flow Lanes	**2**	**2**	**2**	**2**	**2**	**2**
Volumes						
Entry Leg: Insert Right Turn Volume						
Exit Leg: ***(Select Input Method)***						
*Lane Flow in Exit Leg****						
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
*Critical Lane Flow (Manual) in Exit Leg****						
Volume Characteristics						
PHF (Entry Leg)						
F_{HV} (Entry Leg)						
F_{ped}						
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F_{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.						
Entry/Conflicting Flows						
Entry Flow						
Conflicting Critical Flow						
Bypass Lane Results						
Entry Capacity of Bypass, veh/h						
Flow Rates of Exiting Traffic, veh/h						
V/C ratio						
Control Delay, sec/pcu						
LOS						
95th % Queue (ft)						

Roundabout Analysis Tool

v 2.1
2/24/12

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:	William Ruhsam
Agency/Company:	Moreland Altobelli
Date:	3/6/2013
Project Name or PI#:	0008666
Year, Peak Period:	2039 AM
County/District:	Camden
Intersection:	Old Still Road at Colerain Road

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	9,840	90%
Minor Street	1,080	10%
Total volumes	10,920	

Proximity to Other Intersections

2 How close is the nearest signal (miles or feet)? 2 mi 0 '

3 Is the proposed intersection located within a coordinated signal network? No

Go up to next section...

Roundabout Analysis Tool

v 2.1
2/24/12

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:	William Ruhsam
Agency/Company:	Moreland Altobelli
Date:	3/6/2013
Project Name or PI#:	0008666
Year, Peak Period:	2039 AM
County/District:	Camden
Intersection:	Old Colerain at Colerain Road

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	7,360	94%
Minor Street	500	6%
Total volumes	7,860	

Proximity to Other Intersections

2 How close is the nearest signal (miles or feet)? 2 mi 0 '

3 Is the proposed intersection located within a coordinated signal network? No

Go up to next section...

Roundabout Analysis Tool

v 2.1
2/24/12

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:	William Ruhsam
Agency/Company:	Moreland Altobelli
Date:	3/6/2013
Project Name or PI#:	0008666
Year, Peak Period:	2039 AM
County/District:	Camden
Intersection:	MLK at Colerain Road

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	15,040	91%
Minor Street	1,560	9%
Total volumes	16,600	

Proximity to Other Intersections

2 How close is the nearest signal (miles or feet)? 2 mi 0 '

3 Is the proposed intersection located within a coordinated signal network? No

Go up to next section...

Roundabout Analysis Tool

v 2.1
2/24/12

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:	William Ruhsam
Agency/Company:	Moreland Altobelli
Date:	3/6/2013
Project Name or PI#:	0008666
Year, Peak Period:	2039 AM
County/District:	Camden
Intersection:	Holly Haven at Colerain Road

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	5,880	98%
Minor Street	140	2%
Total volumes	6,020	

Proximity to Other Intersections

2 How close is the nearest signal (miles or feet)? 5 mi 0 '

3 Is the proposed intersection located within a coordinated signal network? No

Go up to next section...

Utility Risk Management Plan

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

DATE November 05, 2012

FROM **Stephen Thomas,** District Utilities Engineer

TO **Jeff Baker,** State Utilities Engineer

SUBJECT **Utility Risk Management Plan**

Project Number CSSTP-0008-00(666) PI Number 0008666

County Camden

☑ Recommendation from Concept Team Meeting

☐ Recommendation from Preliminary Field Plan Review Team Meeting

☐ Recommendation from the Final Field Plan Review Meeting
(Check the Recommendation that Applies)

From the above noted Team Meeting, the Subject Matter Experts have utilized the Public Interest Determination Policy on the referenced project and recommend the following Utility Risk Management Plan:
(Check the Recommendation that Applies)

☐ Through risk identification, analysis, and assessment, the Team has established that there is a high risk assessment associated with the project and 3rd Party involvement and recommends that, in the best interest of the public and in order to expedite the staging of the project, the Department participate in the costs associated with the relocation, removal, and adjustment of the utility facilities and to include the work in the construction project. The Team's recommended Utility Risk Management Plan is Risk Avoidance. **Therefore, please review and forward this request as a Public Interest Determination Recommendation to the Office of the Chief Engineer for its review and action.**

☐ Through risk identification, analysis, and assessment, the Team has established that there is a moderate risk assessment associated with the project and 3rd Party involvement and recommends that, in the best interest of the public and in order to expedite the staging of the project, the Department consider participating in the costs associated with the relocation, removal, and adjustment of the utility facilities and to consider including the work in the construction project. This recommendation may also include considerations for addressing certain utility facilities on the project that may present higher risks than other utility facilities. The Teams recommended Utility Risk Management Plan is Risk Avoidance. **Therefore, please review and forward this request as a Public Interest Determination Recommendation to the Office of the Chief Engineer for its review and action.**

☐ Through risk identification, analysis, and assessment, the Team has established that there is a moderate risk assessment associated with the project and 3rd Party involvement, and recommends that the Department accept the identified risks and not participate in the costs associated with the relocation, removal, and adjustment of the utility facilities and not include the work in the construction project. The Teams recommended Utility Risk Management Plan is Risk Acceptance.

☑ Through risk identification, analysis, and assessment, the Team has established that there is a low risk assessment associated with the project and 3rd Party involvement, and recommends that the Department accept the identified risks and not participate in the cost associated with the relocation, removal, and adjustment of the utility facilities and not to include the work in the construction project. The Team's recommended Utility Risk Management Plan is Risk Acceptance.

Attachment - Utility Risk Management Plan

UTILITY RISK MANAGEMENT PLAN

*Project Information: CSSTP-0008-00(666), Camden County, PI # 0008666

*(*Proj No, County, PI No.)*

1. Risk Identification	Risk Analysis and Assessment: 2. Risk Frequency (Remote - Near Certainty)	3. Risk Severity (Very Low - Very High)	4. Risk Assessment (High, Moderate, or Low)	Team Comments to Support Assessment
Project Scope - 10% (Consider Specific Risks to the Project's Scope if the 3rd Party Performs the Utility Relocation Work)				
Delay in Project Feature Implementation (i.e. Typical Section, Drainage, Structures)	C	c	Moderate	.36 miles of curb and gutter with sidewalk and 10 foot wide multiuse path
Delay in Change Order Implementation				
Project Location (Urban or Rural)	C	c	Moderate	Urban shoulders approx .36 miles; Rural sho approx 4.94 mi: Total 5.30 miles
Utility Scope of Work (incl number and type of utilities)	C	c	Moderate	7 Utility Companies
Other Risks:				
Project Schedule - 20% (Consider Specific Risks to the Project's Schedule if the 3rd Party Performs the Utility Relocation Work)				
Delays to Construction Schedule (Overall and Intermediate Completion Dates)	B	c	Low	
Delay Claim by Contractor	B	c	Low	
Delay in 3rd Party Material/Equipment/Labor	B	c	Low	
3rd Party Responsibility during Force Majeure Events	B	c	Low	Weather conditions are always a possibility
Different, or Change in, Site Conditions	B	c	Low	Alternate route to relieve SR 40 traffic
Past History of 3rd Party (Delays to Past GDOT Projects?)				
Other Risks:				
	B	c	Low	# of utils & work required to include in contract has a poor cost per benefit ratio
Project Budget - 20% (Consider Specific Risks to the Project's Budget if the 3rd Party Performs the Utility Relocation Work)				
Damage or Delay Costs to GDOT or Contractor	B	c	Low	GDOT only gives time. No monetary payments for delays
Delay Claim by Contractor	B	c	Low	
Delay in 3rd Party Material/Equipment/Labor and Force Majeure	B	c	Low	Few utilities on this project will require lead times on ordering materials
Different, or Change in, Site Conditions	B	c	Low	Could be used for hurricane evacuations
Past History of 3rd Party (Overruns to Past GDOT Projects?)	B	c	Low	
Other Risks:				
Project Staging - 50% (Consider Specific Risks to the Project's Staging if the 3rd Party Performs the Utility Relocation Work - Consider Scope/Complexity of the Project)				
Delay to Staging Implementation	B	c	Low	Utilities can relocate in one move
3rd Party Delays due to Force Majeure and Material/Equipment/Labor Availability	B	c	Low	
Other Risks:				
	B	c	Low	

5. UTILITY RISK MANAGEMENT PLAN: RISK AVOIDANCE OR RISK ACCEPTANCE

Risk Acceptance	

Practical Alternatives Report

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF ENVIRONMENTAL SERVICES

PRACTICAL ALTERNATIVES REPORT

State Route 40 Widening and West Kingsland Bypass
STP00-0000-00(820), STP00-0000-00(821), and CSSTP-0008-00(666)
PI # 0000820, 0000821, and 0008666
Charlton and Camden Counties
October 2012

General Project Descriptions

The Georgia Department of Transportation (GDOT) is in the beginning stages of project development for the above noted project. The State Route (SR) 40 corridor is identified for widening as part of the Governor's Road Improvement Program (GRIP) and is designated a hurricane evacuation route. The project begins on the east side of the City of Folkston at the intersection of SR 40 with SR 40 Connector/Indian Trail/US 301 Connector and extends to the I-95 Interchange at Exit 6 in Camden County. The project is comprised of three P.I. sections between the City of Folkston (Charlton County) and the City of Kingsland (Camden County). This report consists of STP00-0000-00(820) in Charlton and Camden Counties, STP00-0000-00(821) in Charlton County, and CSSTP-0008-00(666) in Camden County. State Route 40 is a major east-west corridor in southeast Georgia, connecting Folkston on the west with Kingsland, Interstate 95, and St. Mary's on the east. Projects STP00-0000-00(820) and STP00-0000-00(821), both propose to widen State Route (SR) 40 from a two-lane rural section to a four-lane divided highway and a rural five-lane typical section. Project CSSTP-0008-00(666) proposes to widen and improve Colerain Road (County Road (CR) 61). Each section is described below.

- Project STP-0000-00(821), P.I. No. 0000821 begins on the east side of Folkston at the SR 40 and the SR 40 Connector/Indian Trail/US 301 Connector intersection and extends eastward approximately 1.91 miles to mile post 2.54 (south of County Road [CR] 82), where it will tie into the existing four-lane project STP-141-1(10) P.I. Number 522350, which was widened previously by GDOT.
- Project STP-0000-00(820), P.I. No. 0000820 begins at mile post 5.21, at the end of the existing four-lane project STP-141-1(10), P.I. Number 522350, which was widened previously by GDOT, and extends eastward approximately 11.47 miles to mile post 10.12, Colerain Road (CR 66), in Camden County.
- CSSTP-0008-00(666), P.I. No. 0008666 would begin at the intersection of SR 40 and CR 66 and extend 5.07 miles eastward along Colerain Road to its' interchange (Exit 6) with I-95.

The overall project length for all three segments is approximately 18.45 miles. Right-of-Way (ROW) acquisition will be required for the proposed project. Construction activities will occur within the proposed ROW. The project is located within USGS Hydrologic Unit Code 03070204 (St. Marys River River Basin).

Need and Purpose

State Route 40 is a major east-west corridor in southeast Georgia, connecting the City of Folkston on the west with the City of Kingsland, Interstate 95 (I-95), and the City of St. Marys on the east. The SR 40 corridor is identified for widening as part of the Governor's Road Improvement Program (GRIP), and it is a designated hurricane evacuation route. The West Kingsland Bypass would also function as a hurricane evacuation route. In addition to providing a hurricane evacuation route, the widening and improvements to SR 40 and the West Kingsland Bypass would have the following purposes under the GRIP:

(1) Improving connectivity to the Interstate System in rural Georgia;

(2) Providing opportunities for the growth of commerce;

(3) Providing effective and efficient transportation; and

(4) Providing safer travel via a four-lane divided highway.

Distribution:

Georgia Environmental Protection Division
US Federal Highway Administration
US Army Corps of Engineers
US Fish & Wildlife Service
US Environmental Protection Agency

EXISTING ROADWAY DESCRIPTION

STP00-0000-00(821)		
Current Posted Speed	**Existing Typical Section**	**Existing R/W Width**
Varies 35 to 55 MPH	Two 12 ft. wide travel lanes, with 10 ft. shoulders (2 ft. paved)	Varies 100 to 185 ft.

STP00-0000-00(820)		
Current Posted Speed	**Existing Typical Section**	**Existing R/W Width**
55 MPH	Two 12 ft. wide travel lanes, with 10 ft. shoulders (2 ft. paved)	100 ft.

CSSTP-0008-00(666)		
Current Posted Speed	**Existing Typical Section**	**Existing R/W Width**
45 mph	Two 12 ft. wide travel lanes with 4 ft. wide grassed shoulders	Varies 80 to 100 ft.

EXISTING MAJOR STRUCTURES

STP00-0000-00(821)			
Features Intersected/Type	**Length**	**Width**	**Suff. Rating**
· Single Barrel Box Culvert at Station 99+96	48 ft.	3 ft.	N/A
· Triple Barrel Box Culvert at Station 125+00	41 ft.	27 ft.	N/A

STP00-0000-00(820)			
Features Intersected/Type	**Length**	**Width**	**Suff. Rating**
· Double Barrel Box Culvert at Station 294+55	78 ft.	16 ft.	N/A
· Single Barrel Box Culvert at Station 301+40.3	76 ft.	4 ft.	N/A
· Single Barrel Box Culvert at Station 315+37.79	70 ft.	3 ft.	N/A
· Single Barrel Box Culvert at Station 351+40.47	65 ft.	5 ft.	N/A
· Triple Barrel Box Culvert at Station 434+28.37	69 ft.	21 ft.	N/A
· Single Barrel Box Culvert at Station 488+19.2	56 ft.	3 ft.	N/A
· Double Barrel Box Culvert at Station 502+08	55 ft.	16 ft.	N/A
· Double Barrel Box Culvert at Station 544+89	54 ft.	20 ft.	N/A
· Triple Barrel Box Culvert at Station 570+94.87	67 ft.	21 ft.	N/A
· Single Barrel Box Culvert at Station 589+89.59	64 ft.	3 ft.	N/A
· Single Barrel Box Culvert at Station 602+69.37	63 ft.	6 ft.	N/A
· Triple Barrel Box Culvert at Station 652+65.13	67 ft.	24 ft.	N/A
· Triple Barrel Box Culvert at Station 742+70	68 ft.	24 ft.	N/A
· Single Barrel Box Culvert at Station 783+91.5	54 ft.	5 ft.	N/A

· Single Barrel Box Culvert at Station 863+00	69 ft.	6 ft.	N/A
· Single Barrel Box Culvert at Station 869+00	63 ft.	4.5 ft.	N/A

CSSTP-0008-00(666)			
Features Intersected/Type	**Length**	**Width**	**Suff. Rating**
N/A	N/A	N/A	N/A

EXISTING MAJOR INTERCHANGES or INTERSECTIONS

STP00-0000-00(821)	
Features Intersected/Type	**Existing R/W Width**
Interchanges – N/A	N/A
Intersection – · SR 40 at SR 40 Connector/Indian Trail – T-intersection with existing flashing caution light with stop sign controlled on the minor road (Indian Trail).	100 ft.

STP00-0000-00(820)	
Features Intersected/Type	**Existing R/W Width**
Interchanges – N/A	N/A
Intersection – · SR 40 at SR 110 - T-intersection that is stop sign controlled on the minor road. · SR 40 at CR 66 (Colerain Road) - T-intersection that is stop sign controlled on the minor road.	100 ft. 100 ft

CSSTP-0008-00(666)	
Features Intersected/Type	**Existing R/W Width**
Interchanges – N/A	N/A
Intersection – · SR 17 at Laurel Island Parkway	SR 17 – 100 ft. Laurel Island Pkwy – 70 ft.

PROPOSED ROADWAY

STP00-0000-00(821)		
Proposed Design Speed	**Proposed Typical Section**	**Proposed R/W Width**
Varies 35 to 55 MPH	Five-lane rural section with 12 ft lanes before transitioning into a four-lane divided highway with a variable 14- to 32-foot grassed median at MP 1.51	105 to 200 ft

STP00-0000-00(820)		
Proposed Design Speed	**Proposed Typical Section**	**Proposed R/W Width**
Varies 45 to 55 MPH	Four lanes varying in width from 11 to 12 ft, with a 32-ft. depressed median, 10-ft outside shoulders, and 6-ft. inside shoulders.	194 to 234 ft

CSSTP-0008-00(666)		
Proposed Design Speed	**Proposed Typical Section**	**Proposed R/W Width**
Varies 35 to 55 MPH	Four lanes varying in width from 11 to 12 ft., with a 32-ft depressed median from the beginning of the project to Old Still Road, and with a 20-ft. raised median from Old Still Road to the end of the project	160 ft.

PROPOSED ROADWAY – MAJOR INTERSECTIONS

STP00-0000-00(821)		
SR 40 at SR 40 Connector/Indian Trail		
Proposed Design Speed	**Proposed Typical Section**	**Proposed R/W Width**
35 MPH	Four 12 ft lanes with 14 ft flush median, left turn lane, outside lane becomes right turn lane at intersection, and shoulder drainage ditches	152 ft.

STP00-0000-00(820)		
SR 40 at SR 110		
Proposed Design Speed	**Proposed Typical Section**	**Proposed R/W Width**
55MPH	Two 12 ft outside lanes, two 11 ft inside lanes with 20 ft depressed median, left and right turn lanes, median and shoulder drainage ditches	194 ft.
SR 40 at CR 66 (Colerain Road)		
Proposed Design Speed	**Proposed Typical Section**	**Proposed R/W Width**
55 MPH	Two 12 ft outside lanes, two 11 ft inside lanes with 20 ft depressed median, left and right turn lanes, median and shoulder drainage ditches	200 ft.

CSSTP-0008-00(666)		
Laurel Island Parkway and SR 17		
Proposed Design Speed	**Proposed Typical Section**	**Proposed R/W Width**
55 MPH	The existing intersection of Laurel Island Parkway and SR 17 will be eliminated. The proposed roadway will be elevated over SR 17 and a Jug Handle ramp will be constructed to connect the two roadways.	SR 17 – 100 ft. Laurel Island Pkwy – 70 ft.

PROPOSED MAJOR STRUCTURES

STP00-0000-00(821)		
Features Intersected Type	**Length (ft)**	**Width (ft)**
N/A	N/A	N/A

NOTE: Existing culverts and pipes are to be widened and/or lengthened as necessary

STP00-0000-00(820)		
Features Intersected Type	**Length (ft)**	**Width (ft)**
N/A	N/A	N/A

NOTE: Existing culverts and pipes are to be widened and/or lengthened as necessary

CSSTP-0008-00(666)		
Features Intersected Type	**Length (ft)**	**Width (ft)**
A bridge with two 12 ft travel lanes in each direction and a 20 ft raised median will be constructed over SR17 and the CSX Railroad. The existing CSX/Laurel Island Parkway railroad crossing will be closed.	520 ft	62.5 ft

NOTE: Existing culverts and pipes are to be widened and/or lengthened as necessary

ALTERNATIVES CONSIDERED

Preferred "Best Fit/Wetlands Minimization" Alternatives / All Criteria Considered Alternative

STP00-0000-00(821) – Alternative 2

The preferred alternative, STP00-0000-00(821) – Alternative 2, is located approximately 0.3 miles on the east side of Folkston at the intersection of SR 40 with the SR 40 Connector/Indian Trail/US 301 Connector, and extends eastward to Mile Post 2.54 in Charlton County. Project STP00-0000-00(821) proposes to widen SR 40 located in Charlton County, Georgia. The total length of this project is approximately 1.91 miles.

The existing SR 40 section to be widened is a rural two-lane section. The proposed project consists of the construction of two-additional travel lanes on the north side with a median width of 32 feet. At the SR 40 Connector intersection SR 40 would be widened from a two-lane to a five-lane rural section and transition to a four-lane divided highway with a 32-foot grassed median at mile post 1.51. The four-lane section would extend eastward to mile post 2.54 (northeast of CR 82) in Charlton County. Travel lanes would vary between 11 to 12 feet. The roadway would contain ten-foot outside shoulders (6.5 feet paved) and six-foot inside shoulders (two feet paved). The existing variable 100 to 185 foot right-of-way would be widened to a variable width from 105 feet minimum to 200 feet maximum. The end of this project would tie into the existing four-lane project STP-141-1(10), P.I. 522350 in Charlton County, which is in operation. The preferred alternative would follow the existing SR 40 travel corridor, and incorporate the existing SR 40 travel lanes into the concept design as the two-eastward travel lanes of the proposed project. This use of existing corridor allows for the reduction of required right-of-way.

To identify potential impacts to natural resources, pedestrian surveys were conducted from September 13th to September 14th, 2011 to identify Waters of the U.S., absence/presence of federally protected species, and absence/presence of federally protected species habitat. Before pedestrian surveys were conducted, the proposed corridor was examined using wetland inventory maps, U.S. Geological Survey (USGS) quadrangle maps, county soil surveys, and floodplain maps. A review of the Georgia Department of Natural Resources (GDNR) lists of special concern species and community locations by county was conducted to identify any federally protected species that may occur within Charlton County. Also, coordination was conducted with the GDNR Natural Heritage Program (GNHP) to identify any state and federally protected species that may occur within three miles of the proposed project.

Six jurisdictional Waters of the U.S. (two perennial streams, one intermittent stream, and three wetlands) occur within the proposed right-of-way limits and would be impacted by the proposed alternative. Impacts created by the preferred alternative to these six resources would total 715 linear feet of stream impacts and 1.72 acres of wetland impacts. Since design plans have not been completed for the STP00-0000-00(821) – Alternative 2 preferred alternative, impacts to Waters of the U.S. are based on a worse-case scenario for comparison purposes between the preferred alternative and the alternative no longer under consideration. To avoid and minimize impacts to jurisdictional Waters of the U.S. created by the proposed project the existing SR 40 travel lanes would remain, resulting in a reduction of the footprint of the proposed project by only adding two additional travel lanes instead of the addition of four travel lanes for a relocation project. The preferred alternative is also being designed to limit impacts to jurisdictional Waters of the U.S. by reducing cut and fill limits; adjusting slope ratio; reducing the amount of required right-of-way wherever possible; and crossing streams perpendicularly when possible. Bridge structures and bottomless culverts were also evaluated to reduce impacts to

Waters of the U.S. However, bottomless culverts or bridges would not be implemented in the proposed design, because all the existing culverts would be extended and not replaced by the proposed project.

Only one federal species, gopher tortoise (*Gopherus polyphemus*), was observed during the September 2011 survey. However, habitat was also observed (including habitat for the gopher tortoise) for the eastern indigo snake (*Drymarchon corais couperi*). Habitat for the gopher tortoise included the observation of twenty gopher tortoise burrows near the western terminus of the proposed project corridor. On March 7, 2012 a visual encounter survey for the eastern indigo snake and gopher tortoise was conducted by pedestrian survey, as well as, an interior inspection of the gopher tortoise burrows within the study area. No eastern indigo snakes were observed during this March 2012 survey. Of the 20 gopher tortoise burrows located within the study area, 13 were located within the proposed right-of-way, and would likely be impacted by the proposed project. Because these 13 burrows are located within the existing right-of-way, the STP00-0000-00(821) – Alternative 2 would impact the same amount of gopher tortoise burrows as the alternative no longer under consideration, due to utility construction and roadway construction activities.

To identify potential impacts to cultural resources, pedestrian surveys were conducted on July 18th, 2012 to identify the absence/presence of any historic cultural resources. Also, prior to the pedestrian survey the Georgia Natural, Archaeological, and Historic Resources GIS (GNAHRGIS) database was used to see if any previous archaeological sites had been recorded within the proposed project corridor. No archaeological sites or isolated finds were documented within the proposed project limits.

Efforts have been made to identify and avoid adverse effects to historic properties (i.e. properties listed in or eligible for the National Register of Historic Places) within the area of potential effects (APE) for GDOT Project STP00-0000-00(821) – Alternative 2. To identify historic properties, field surveys and historic resources survey reports were completed for the project in 2008. As a result of these identification efforts and consultation with the State Historic Preservation Officer (SHPO), no historic properties were identified within the APE for STP00-0000-00(821) – Alternative 2; this finding was concurred with by the SHPO through correspondence dated May 5, 2008 and September 29, 2008.

Because of the age of the previous historic resources surveys and SHPO concurrences, the APE for the project corridor will be resurveyed and reevaluated for properties that may have reached 50 years of age since the original surveys were conducted. Preliminary reconnaissance surveys in 2012 indicate that additional properties will require evaluation but that these properties do not appear to be intact or historically significant. Additional research, documentation, and consultation with the SHPO will be required to confirm these findings.

Surveys using proposed right-of-way plans and aerial photography were conducted in office to determine the number of property displacements the proposed preferred alternative would create. After reviewing the available data, it was determined that the proposed project would not displace any residential, business, or institutional properties along the corridor.

<u>STP00-0000-00(820) – Alternative 2</u>
The preferred alternative, STP00-0000-00(820) – Alternative 2, is located along SR 40 between Folkston, in Charlton County, and Kingsland, in Camden County. The proposed project begins at mile post 5.21, at the end of the existing four-lane project STP-141-1(10) P.I. Number 522350, which was widened previously by GDOT. GDOT widened this section to four 12-foot travel lanes divided by a 32-foot median with 10-foot rural shoulders. This section of SR 40 was improved to correct a low point on

the corridor, which was periodically inundated, rendering the corridor an ineffective hurricane evacuation route. Project STP00-0000-00(820) would extend eastward from the widened section approximately 11.47 miles to mile post 10.12, Colerain Road (CR 66), in Camden County.

The existing SR 40 section to be widened is a rural two-lane section. Except for a 0.59-mile section of roadway near Brown Town Road, the existing two-lane rural section would be widened to a four-lane divided highway with a 32-foot depressed median. The 0.59 mile-section in the vicinity of Brown Town Road would be widened to a rural five-lane typical section with shoulders, a portion of which would contain curb and gutter and five-foot sidewalks on both sides. Travel lanes would vary between 11 to 12 feet. The roadway would contain ten-foot outside shoulders (6.5 feet paved) and six-foot inside shoulders (two feet paved). The existing 100-foot right-of-way would be widened to a variable width from 194 feet minimum to 234 feet maximum. The preferred alternative would follow the existing SR 40 travel corridor, and incorporate the existing SR 40 travel lanes into the concept design as the two-eastward travel lanes of the proposed project. This use of existing corridor allows for the reduction of required right-of-way.

To identify potential impacts to natural resources, pedestrian surveys were conducted from September 14th to September 21st, 2011 to identify Waters of the U.S., absence/presence of federally protected species, and absence/presence of federally protected species habitat. Before pedestrian surveys were conducted, the proposed corridor was examined using wetland inventory maps, USGS quadrangle maps, county soil surveys, and floodplain maps. A review of the GDNR lists of special concern species and community locations by county was conducted to identify any federally protected species that may occur within Charlton and Camden counties. Also, coordination was conducted with the GNHP to identify any state and federally protected species that may occur within three miles of the proposed project.

Thirty five jurisdictional Waters of the U.S. (four perennial streams, two intermittent streams, one ephemeral channel, and 28 wetlands) occur within the proposed right-of-way limits and would be impacted by the proposed alternative. Impacts created by the preferred alternative to these 35 jurisdictional resources would total 1,465 linear feet of stream impacts and 15.55 acres of wetland impacts. Since design plans have not been completed for STP00-0000-00(820) – Alternative 2, impacts to Waters of the U.S. are based on a worse-case scenario for comparison purposes between the preferred alternative and the alternative no longer under consideration. To avoid and minimize impacts to jurisdictional Waters of the U.S. created by the proposed project the existing SR 40 travel lanes would be incorporated into the proposed design. This incorporation would reduce the footprint of the proposed project by only adding two additional travel lanes instead of the addition of four travel lanes for a relocation project. The preferred alternative is also being designed to limit impacts to jurisdictional Waters of the U.S. by reducing cut and fill limits; adjusting slope ratio; reducing the amount of required right-of-way wherever possible; and crossing streams perpendicularly when possible. Bridge structures and bottomless culverts were also evaluated to reduce impacts to Waters of the U.S. However, bottomless culverts or bridges would not be implemented in the proposed design, because all the existing culverts would be extended and not replaced by the proposed project.

No federally protected species were observed during the September 2011 survey. However, habitat was observed during the September 2011 survey for the federally protected frosted flatwoods salamander (*Ambystoma cingulatum*), striped newt (*Notophthalmus perstriatus*), eastern indigo snake, gopher tortoise, red-cockaded woodpecker (*Picoides borealis*), and wood stork (*Mycteria americana*). To avoid and minimize impacts to habitat associated with these six federally protected species the existing

SR 40 travel lanes would be incorporated into the proposed design. This incorporation would reduce the overall footprint of the proposed project by only adding two additional travel lanes instead of the addition of four travel lanes for a relocation project.

To identify potential impacts to cultural resources, pedestrian surveys were conducted on July 18th, 2012 to identify the absence/presence of any historic cultural resources. Also, prior to the pedestrian survey the GNAHRGIS database was used to see if any previous archaeological sites had been recorded within the proposed project corridor. No archaeological sites or isolated finds were documented within the proposed project limits.

Efforts have been made to identify and avoid adverse effects to historic properties (i.e. properties listed in or eligible for the National Register of Historic Places) within the APE for GDOT Project STP00-0000-00(820) – Alternative 2. To identify historic properties, field surveys and historic resources survey reports were completed for each project in 2008.

As a result of these identification efforts and consultation with the SHPO, two historic properties, the Temple Baptist Church and Cemetery and the Marr Family Cemetery, were identified within or near the APE for STP00-0000-00(820) – Alternative 2. These findings were concurred with by the SHPO through correspondence dated February 28, 2008 and April 25, 2008. Because of its' distance from the project corridor of the preferred alternative, the Marr Family Cemetery was determined to be outside of the APE for STP00-0000-00(820) – Alternative 2 and was not further evaluated for project effects.

Project STP00-0000-00(820) was determined to have no adverse effect to the Temple Baptist Church and Cemetery; no direct effects to the property were identified. The Assessment of Effects document was transmitted to the SHPO on September 9, 2008. Generally, the alignment and additional proposed lanes were maintained north of the existing SR 40 roadway in the area of the historic properties to avoid potential impacts to both Temple Baptist Church and Cemetery (immediately south of current SR 40 alignment) and the Marr Family Cemetery (approximately 700 feet south of current SR 40 alignment).

Because of the age of the previous historic resources surveys and SHPO concurrences, the APE for the project corridor will be resurveyed and reevaluated for properties that may have reached 50 years of age since the original surveys were conducted. Preliminary reconnaissance surveys in 2012 indicate that additional properties will require evaluation but that these properties do not appear to be intact or historically significant. Additional research, documentation, and consultation with the SHPO will be required to confirm these findings.

Surveys using proposed right-of-way plans and aerial photography were conducted in office to determine the number of property displacements the proposed preferred alternative would create. After reviewing the available data, it was determined that the proposed project would displace seven residences, zero businesses, and zero institutional properties along the corridor.

<u>CSSTP-0008-00(666) – Alternative 3</u>

The preferred alternative, CSSTP-0008-00(666) – Alternative 3, would widen and improve Colerain Road from SR 40, west of Kingsland, to the I-95 interchange to facilitate the Kingsland Bypass, a coastal evacuation route. The existing two-lane roadway would be widened to provide a four-lane divided highway with a 32-foot depressed grass median, ten-foot rural outside shoulders (6.5-foot paved) and six-foot inside shoulders (two-foot) paved. At the western terminus of the project, Colerain Road would be aligned with the western leg of SR 40, which is proposed to be widened under Project

STP00-0000-00(820). The two-lane eastern leg of SR 40 would be relocated to form a T-intersection with the realigned Colerain Road. CSSTP-0008-00(666) – Alternative 3 would also involve the relocation of a 1.9 mile section of Colerain Road north of the existing roadway beginning approximately 1.3 miles west of US 17 to 0.6 mile east of US 17. The new location section would be bridged over the First Coast Railroad and US 17/SR 25 (Ocean Highway). A two-lane, two-way ramp would be constructed on the northeast quadrant of the bridge to provide local access to and from US 17. The relocated section of Colerain Road and the section between Martin Luther King Boulevard and I-95 would have 16-foot urban shoulders with curb and gutter and five-foot sidewalks on both sides. The existing right-of-way on Colerain Road varies from 80 feet to 120 feet. The proposed right-of-way on Colerain Road varies from 105 feet to 160 feet in the urban section and varies from 194 feet to 234 feet in the rural section. The US 17 access ramp would have a proposed right-of-way of 80 feet. The total length of the project would be approximately 5.07 miles. The US 17 access ramp would have a proposed right-of-way of 80 feet.

To identify potential impacts to natural resources, pedestrian surveys were conducted from September 12th to September 22nd, 2011 to identify Waters of the U.S., absence/presence of federally protected species, and absence/presence of federally protected species habitat. Before pedestrian surveys were conducted, the proposed corridor was examined using wetland inventory maps, USGS quadrangle maps, county soil surveys, and floodplain maps. A review of the GDNR lists of special concern species and community locations by county was conducted to identify any federally protected species that may occur within Camden County. Also, coordination was conducted with the GNHP to identify any state and federally protected species that may occur within three miles of the proposed project.

Twenty four jurisdictional Waters of the U.S. (one perennial stream, one intermittent stream, six ephemeral channels, one open water, and 15 wetlands) occur within the proposed right-of-way limits and would be impacted by the proposed alternative. Impacts created by the preferred alternative to these 24 jurisdictional resources would total 440 linear feet of stream impacts and 8.32 acres of wetland/open water/ephemeral impacts. Since design plans have not been completed for CSSTP-0008-00(666) – Alternative 3, impacts to Waters of the U.S. are based on a worse-case scenario for comparison purposes between the preferred alternative and the alternatives no longer under consideration. To avoid and minimize impacts to jurisdictional Waters of the U.S. created by the proposed project the existing SR 40 travel lanes would be incorporated into the proposed design where feasible. This incorporation would reduce the footprint of the proposed project by only adding two additional travel lanes. The preferred alternative is also being designed to limit impacts to jurisdictional Waters of the U.S. by reducing cut and fill limits; adjusting slope ratio; reducing the amount of required right-of-way wherever possible; and crossing streams perpendicularly when possible. Bottomless culverts would be used at stream crossings where new culverts would be constructed, and all existing culverts would be extended and not replaced by the proposed project.

No federally protected species were observed during the September 2011 survey. However, potential habitat was observed for the following protected species: wood stork, Bachmann's warbler (*Vermivora bachmanii*), eastern indigo snake, gopher tortoise, and striped newt. To avoid and minimize impacts to habitat associated with these protected species the existing SR 40 travel lanes would be incorporated into the proposed design where feasible and reduced slopes and bridges will be implemented where possible to reduce the footprint of the project.

Archaeological surveys for the absence/presence of cultural resources have not been conducted at the present time. However, efforts have been made to identify and avoid adverse effects to historic

properties (i.e. properties listed in or eligible for the National Register of Historic Places) within the APE for GDOT Project CSSTP-0008-00(666) – Alternative 3.

In-house reviews were also conducted using existing information on previously identified historic properties. These reviews revealed that no National Register listed properties, proposed National Register nominations, National Historic Landmarks, or bridges determined eligible for inclusion in the National Register in the updated Georgia Historic Bridge Survey (GHBS) were identified within the APE of CSSTP-0008-00(666) – Alternative 3. In addition, no properties 50 years old or older were identified within the APE in the 2000 and 2002 GDNR Camden County surveys.

To identify historic properties, field surveys were completed for Alternative 3 in 2011. Of all the properties surveyed within the proposed right-of-way for Alternative 3, two properties, the First Coast Railroad and the Tomochichi Restaurant, were determined by SHPO to be eligible for National Register listing. Because of the nature and scope of the undertaking, the area of potential direct effects to these two properties consists of the project viewshed and the proposed right-of-way of the proposed project. Because all construction and ground disturbing activity would be confined within the right-of-way of the proposed project, no potential for indirect effects is anticipated.

Surveys using proposed right-of-way plans and aerial photography were conducted in office to determine the number of property displacements the proposed preferred alternative would create. After reviewing the available data, it was determined that the proposed project would displace zero residences, one business, and zero institutional properties along the corridor.

Alternatives No Longer Under Consideration

STP00-0000-00(821) – Alternative 1

Alternative 1 for STP00-0000-00(821) is located approximately 0.3 miles on the east side of Folkston at the intersection of SR 40 with the SR 40 Connector/Indian Trail/US 301 Connector, and extends eastward to mile post 2.54 in Charlton County. The total length of this alternative is approximately 1.91 miles. Alternative 1 proposed to widen SR 40 to the south of the existing rural two-lane section of SR 40. The proposed project consists of the construction of two-additional travel lanes on the south side with a median width of 32 feet. At the SR 40 Connector intersection SR 40 would be widened from a two-lane to a five-lane rural section and transition to a four-lane divided highway with a 32-foot grassed median at mile post 1.51. The four-lane section would extend eastward to mile post 2.54 (northeast of CR 82) in Charlton County. Travel lanes would be 12 feet in width. The roadway would contain ten-foot outside shoulders (6.5 feet paved) and six-foot inside shoulders (two feet paved). The existing variable 100 to 185 foot right-of-way would be widened to a variable width of 105 feet minimum to 200 feet maximum. The end of this project would not tie into the existing four-lane project STP-141-1(10), P.I. 522350 in Charlton County, which is in operation, and would require the redesign, relocation and reconstruction of project STP-141-1(10).

To identify potential impacts to natural resources, pedestrian surveys were conducted from September 13th to September 14th, 2011 to identify Waters of the U.S., absence/presence of federally protected species, and absence/presence of federally protected species habitat. Before pedestrian surveys were conducted, the proposed corridor was examined using wetland inventory maps, USGS quadrangle maps, county soil surveys, and floodplain maps. A review of the GDNR lists of special concern species and community locations by county was conducted to identify any federally protected species that may

occur within Charlton County. Also, coordination was conducted with the GNHP to identify any state and federally protected species that may occur within three miles of the proposed project.

Seven jurisdictional Waters of the U.S. (three perennial streams, one intermittent stream, and three wetlands) occur within the proposed right-of-way limits and would be impacted by the proposed alternative. Impacts created by the preferred alternative to these seven resources would total 1,125 linear feet of stream impacts and 2.23 acres of wetland impacts. Since design plans have not been completed for STP00-0000-00(821) - Alternative 1, impacts to Waters of the U.S. are based on a worse-case scenario for comparison purposes between the preferred alternative and the alternative no longer under consideration. To avoid and minimize impacts to jurisdictional Waters of the U.S. created by the proposed project the existing SR 40 travel lanes would be incorporated into the proposed design. This incorporation would reduce the footprint of the proposed project by only adding two additional travel lanes instead of the addition of four travel lanes for a relocation project.

Only one federal species, gopher tortoise, was observed during the September 2011 survey. However, habitat was also observed (including habitat for the gopher tortoise) for the eastern indigo snake. Habitat for the gopher tortoise included the observation of twenty gopher tortoise burrows near the western terminus of the proposed project corridor. On March 7, 2012 a visual encounter survey for the eastern indigo snake and gopher tortoise was conducted by pedestrian survey, as well as, an interior inspection of the gopher tortoise burrows within the study area. No eastern indigo snakes were observed during this March 2012 survey. Of the 20 gopher tortoise burrows located within the study area, 13 would be located within the proposed right-of-way, and would likely be impacted by the proposed project.

To identify potential impacts to cultural resources, pedestrian surveys were conducted on July 18th, 2012 to identify the absence/presence of any historic cultural resources. Also, prior to the pedestrian survey the GNAHRGIS database was used to determine if any previous archaeological sites had been recorded within the proposed project corridor. No archaeological sites or isolated finds were documented within the proposed project limits.

Efforts have been made to identify and avoid adverse effects to historic properties (i.e. properties listed in or eligible for the National Register of Historic Places) within the APE for GDOT Project STP00-0000-00(821) - Alternative 1. To identify historic properties, field surveys and historic resources survey reports were completed for the project in 2008. As a result of these identification efforts and consultation with the State SHPO, no historic properties were identified within the APE for STP00-0000-00(821) - Alternative 1.

Surveys using potential right-of-way footprints and aerial photography were conducted in office to determine the number of property displacements that GDOT Project STP00-0000-00(821) - Alternative 1 would create. After reviewing the available data, it was determined that Alternative 1 would displace seven residences, one business, and zero institutional properties along the corridor.

<u>STP00-0000-00(820) – Alternative 1</u>
Alternative 1 for STP00-0000-00(820) is located along SR 40 between Folkston, in Charlton County, and Kingsland, in Camden County. The proposed project begins at mile post 5.21, at the end of the existing four-lane project STP-141-1(10) P.I. Number 522350, which was widened previously by GDOT. GDOT widened this section to four 12-foot travel lanes divided by a 32-foot median with ten-foot rural shoulders. This section of SR 40 was improved to correct a low point on the corridor, which

was periodically inundated, rendering the corridor an ineffective hurricane evacuation route. Project STP00-0000-00(820) would extend eastward from project STP-141-1(10) approximately 11.47 miles to mile post 10.12, Colerain Road (CR 66), in Camden County. Alternative 1 proposed to widen SR 40 to the south of the existing rural two-lane section of SR 40. Except for a 0.59-mile section of roadway near Brown Town Road, the existing two-lane rural section would be widened to a four-lane divided highway with a 32-foot depressed median. The 0.59 mile-section in the vicinity of Brown Town Road would be widened to a rural five-lane typical section with shoulders, with a portion containing curb and gutter and five-foot sidewalks on both sides. Travel lanes would vary between 11 to 12 feet. The roadway would contain ten-foot outside shoulders (6.5 feet paved) and six-foot inside shoulders (two feet paved). The existing 100-foot right-of-way would be widened to a variable width from 194 feet minimum to 234 feet maximum. Construction of Alternative 1 to the south of the existing SR 40 roadway would not line up with the existing four-lane project STP-141-1(10), and would require the redesign, relocation and reconstruction of project STP-141-1(10).

To identify potential impacts to natural resources, pedestrian surveys were conducted from September 14th to September 21st, 2011 to identify Waters of the U.S., absence/presence of federally protected species, and absence/presence of federally protected species habitat. Before pedestrian surveys were conducted, the proposed corridor was examined using wetland inventory maps, USGS quadrangle maps, county soil surveys, and floodplain maps. A review of the GDNR lists of special concern species and community locations by county was conducted to identify any federally protected species that may occur within Charlton and Camden counties. Also, coordination was conducted with the GNHP to identify any state and federally protected species that may occur within three miles of the proposed project.

Forty jurisdictional Waters of the U.S. (four perennial streams, two intermittent streams, one ephemeral channel, and 33 wetlands) occur within the proposed right-of-way limits and would be impacted by the proposed alternative. Impacts created by Alternative 1 to these 40 jurisdictional resources would total 1,550 linear feet of stream impacts and 33.83 acres of wetland/ephemeral impacts. Since design plans have not been completed for STP00-0000-00(820) – Alternative 1, impacts to Waters of the U.S. are based on a worse-case scenario for comparison purposes between the preferred alternative and the alternative no longer under consideration. To avoid and minimize impacts to jurisdictional Waters of the U.S. created by the proposed project the existing SR 40 travel lanes would be incorporated into the proposed design. This incorporation would reduce the footprint of the proposed project by only adding two additional travel lanes instead of the addition of four travel lanes for a relocation project. Adding the two additional lanes to the south creates an additional 85 linear feet of stream impacts and an additional 18.28 acres of wetland impacts when compared with the preferred alternative.

No federally protected species were observed during the September 2011 survey. However, habitat was observed during the September 2011 survey for the federally protected frosted flatwoods salamander, striped newt, eastern indigo snake, gopher tortoise, red-cockaded woodpecker, and wood stork. To avoid and minimize impacts to habitat associated with these six federally protected species the existing SR 40 travel lanes would be incorporated into the proposed design. This incorporation would reduce the overall footprint of the proposed project by only adding two additional travel lanes instead of the addition of four travel lanes for a relocation project.

To identify potential impacts to cultural resources, pedestrian surveys were conducted on July 18th, 2012 to identify the absence/presence of any historic cultural resources. Also, prior to the pedestrian survey the GNAHRGIS database was used to determine if any previous archaeological sites had been recorded

within the proposed project corridor. No archaeological sites or isolated finds were documented within the proposed project limits.

Efforts have been made to identify and avoid adverse effects to historic properties (i.e. properties listed in or eligible for the National Register of Historic Places) within the APE for GDOT Project STP00-0000-00(820) - Alternative 1. To identify historic properties, field surveys and historic resources survey reports were completed for the project in 2008.

As a result of these identification efforts and consultation with the SHPO, two historic properties, the Temple Baptist Church and Cemetery and the Marr Family Cemetery, were identified within or near the APE for STP00-0000-00(820) – Alternative 1; these findings were concurred with by the SHPO through correspondence dated February 28, 2008 and April 25, 2008. Alternative 1 proposes a shift of the alignment and additional proposed lanes southward in the area of the Temple Baptist Church Cemetery and the Marr Family Cemetery, and would require reevaluation of project effects to these properties and the potential for direct and/or indirect adverse effects to these properties through physical destruction and/or adverse visual impacts to the properties' historic setting.

Surveys using potential right-of-way footprints and aerial photography were conducted in office to determine the number of property displacements that STP00-0000-00(820) – Alternative 1 would create. After reviewing the available data, it was determined that the proposed project would displace four residences, zero businesses, and one institutional property along the corridor.

<u>CSSTP-0008-00(666) – Alternative 2</u>
Alternative 2 would widen and improve Colerain Road from SR 40, west of Kingsland, to the I-95 interchange to facilitate the Kingsland Bypass, a coastal evacuation route. The existing two-lane roadway would be widened to provide a four-lane divided highway with a 32-foot depressed grass median, ten-foot rural outside shoulders (6.5-foot paved) and six-foot inside shoulders (two-foot paved). At the projects western terminus, Colerain Road would be aligned with the western leg of SR 40, which is proposed to be widened under Project STP00-0000-00(820) from mile point 5.21 in Charlton County to mile point 10.12 in Camden County. The two-lane eastern leg of SR 40 would be relocated to form a T-intersection with the realigned Colerain Road.

The project would also involve bridging over the First Coast Railroad and US 17/SR 25 (Ocean Highway) and constructing a two-lane, two-way ramp on the northeast quadrant of the bridge to provide local access to and from US 17. The total length of the project would be approximately 5.07 miles. The existing right-of-way on Colerain Road varies from 80 to 120 feet. The proposed right-of-way on Colerain Road varies from 194 to 234 feet. The US 17 access ramp would have a proposed right-of-way of 80 feet.

To identify potential impacts to natural resources, pedestrian surveys were conducted from September 12th to September 22nd, 2011 to identify Waters of the U.S., absence/presence of federally protected species, and absence/presence of federally protected species habitat. Before pedestrian surveys were conducted, the proposed corridor was examined using wetland inventory maps, USGS quadrangle maps, county soil surveys, and floodplain maps. A review of the GDNR lists of special concern species and community locations by county was conducted to identify any federally protected species that may occur within Camden County. Also, coordination was conducted with the GNHP to identify any state and federally protected species that may occur within three miles of the proposed project.

Twenty one jurisdictional Waters of the U.S. (one perennial stream, six ephemeral channels, one open water, and 13 wetlands) occur within the proposed right-of-way limits and would be impacted by the proposed alternative. Impacts created by the preferred alternative to these 21 jurisdictional resources would total 237 linear feet of stream impacts and 4.47 acres of wetland/open water/ephemeral impacts. Since design plans have not be completed for the CSSTP-0008-00(666) - Alternative 2, impacts to Waters of the U.S. are based on a worse-case scenario for comparison purposes between the preferred alternative and Alternative 2. To avoid and minimize impacts to jurisdictional Waters of the U.S. created by the proposed project the existing SR 40 travel lanes would be incorporated into the proposed design where feasible. This incorporation would reduce the footprint of the proposed project by only adding two additional travel lanes. The preferred alternative is also being designed to limit impacts to jurisdictional Waters of the U.S. by reducing cut and fill limits; adjusting slope ratio; reducing the amount of required right-of-way wherever possible; and crossing streams perpendicularly when possible. Bottomless culverts would be used at stream crossings where new culverts would be constructed, and all existing culverts would be extended and not replaced by the proposed project.

No federally protected species were observed during the September 2011 survey. However, potential habitat was observed for the following protected species: wood stork, Bachmann's warbler, eastern indigo snake, gopher tortoise, and striped newt. To avoid and minimize impacts to habitat associated with these protected species the existing SR 40 travel lanes would be incorporated into the proposed design where feasible and reduced slopes, as well as bridges would be implemented where possible to reduce the footprint of the project.

Archaeological surveys for the absence/presence of cultural resources have not been conducted at the present time. However, efforts have been made to identify and avoid adverse effects to historic properties (i.e. properties listed in or eligible for the National Register of Historic Places) within the APE for GDOT Project CSSTP-0008-00(666) - Alternative 2.

In-house reviews were conducted using existing information on previously identified historic properties. These reviews revealed that no National Register listed properties, proposed National Register nominations, National Historic Landmarks, or bridges determined eligible for inclusion in the National Register in the updated GHBS were identified within the Alternative 2's APE. In addition, no properties 50 years old or older were identified within the APE in the 2000 and 2002 GDNR Camden County surveys.

To identify historic properties, field surveys were completed for Alternative 2 in 2011. Of all the properties surveyed within the proposed right-of-way for Alternative 2, two properties, the First Coast Railroad and the Tomochichi Restaurant, were determined by SHPO to be eligible for National Register listing. Due to the nature and scope of the undertaking, the area of potential direct effects consists of the project viewshed and the proposed right-of-way of the proposed project. Because all construction and ground disturbing activity would be confined within the right-of-way of the proposed project, no potential for indirect effects is anticipated.

Surveys using potential right-of-way footprints and aerial photography were conducted in office to determine the number of property displacements that GDOT Project CSSTP-0008-00(666) - Alternative 2 would create. After reviewing the available data, it was determined that Alternative 2 would displace 15 residences, three businesses, and zero institutional properties along the corridor.

CSSTP-0008-00(666) – Alternative 4

Alternative 4 would reconstruct Colerain Road and construct a new location roadway from SR 40 at Colerain Road, west of Kingsland, to Colerain Road at the I-95 interchange to facilitate the Kingsland Bypass, a coastal evacuation route. The proposed roadway would consist of a four-lane divided highway with a 32-foot depressed grass median, ten-foot rural outside shoulders (6.5-foot paved) and six-foot inside shoulders (two-foot paved). At the western terminus of the project, the new alignment would follow Colerain Road 800 feet from SR 40 where the new location roadway would begin. The improved Colerain Road would be aligned with the western leg of SR 40, which is proposed to be widened under Project STP00-0000-00(820) from mile point 5.21 in Charlton County to mile point 10.12 in Camden County. The two-lane eastern leg of SR 40 would be relocated to form a T-intersection with the realigned Colerain Road.

This new location roadway project would be constructed approximately 1,200 feet north and parallel to the existing Colerain Road. The new location roadway would also be bridged over the First Coast Railroad and US 17/SR 25 (Ocean Highway). A two-lane, two-way ramp would be constructed on the southeast quadrant of the bridge to provide local access to and from US 17. The total length of the project is 5.19 miles. The proposed right-of-way for the new parallel route would be 200 feet. The US 17 access ramp would have a proposed right-of-way of 80 feet.

To identify potential impacts to natural resources, pedestrian surveys were conducted from September 12th to September 22nd, 2011 to identify Waters of the U.S., absence/presence of federally protected species, and absence/presence of federally protected species habitat. Before pedestrian surveys were conducted, the proposed corridor was examined using wetland inventory maps, USGS quadrangle maps, county soil surveys, and floodplain maps. A review of the GDNR lists of special concern species and community locations by county was conducted to identify any federally protected species that may occur within Camden County. Also, coordination was conducted with the GNHP to identify any state and federally protected species that may occur within three miles of the proposed project.

Thirty two jurisdictional Waters of the U.S. (one perennial stream, one intermittent stream, 11 ephemeral channels, four open water, and 15 wetlands) occur within the proposed right-of-way limits and would be impacted by the proposed alternative. Impacts created by the preferred alternative to these 32 jurisdictional resources would total 1,235 linear feet of stream impacts and 23.75 acres of wetland/open water/ephemeral impacts. Since design plans have not been completed for CSSTP-0008-00(666) – Alternative 4, impacts to Waters of the U.S. are based on a worse-case scenario for comparison purposes between the preferred alternative and Alternative 4. To avoid and minimize impacts to jurisdictional Waters of the U.S. created by the proposed project the existing SR 40 travel lanes would be incorporated into the proposed design where feasible. This incorporation would reduce the footprint of the proposed project by only adding two additional travel lanes. The preferred alternative is also being designed to limit impacts to jurisdictional Waters of the U.S. by reducing cut and fill limits; adjusting slope ratio; reducing the amount of required right-of-way wherever possible; and crossing streams perpendicularly when possible. Bottomless culverts would be used at stream crossings where new culverts would be constructed, and all existing culverts would be extended and not replaced by the proposed project.

No federally protected species were observed during the September 2011 survey. However, potential habitat was observed for the following protected species: wood stork, Bachmann's warbler, eastern indigo snake, gopher tortoise, and striped newt. To avoid and minimize impacts to habitat associated with these protected species the existing SR 40 travel lanes would be incorporated into the proposed

design where feasible and reduced slopes and bridges will be implemented where possible to reduce the footprint of the project.

Archaeological surveys for the absence/presence of cultural resources have not been conducted at the present time. However, efforts have been made to identify and avoid adverse effects to historic properties (i.e. properties listed in or eligible for the National Register of Historic Places) within the APE for GDOT Project CSSTP-0008-00(666) – Alternative 4.

In-house reviews were also conducted using existing information on previously identified historic properties. These reviews revealed that no National Register listed properties, proposed National Register nominations, National Historic Landmarks, or bridges determined eligible for inclusion in the National Register in the updated GHBS were identified within the APE of Alternative 4. In addition, no properties 50 years old or older were identified within the APE in the 2000 and 2002 GDNR Camden County surveys.

To identify historic properties, field surveys were completed for Alternative 4 in 2011. Of all the properties surveyed within the proposed right-of-way for Alternative 4, two properties, the First Coast Railroad and the Tomochichi Restaurant, were determined by SHPO to be eligible for National Register listing. Because of the nature and scope of the undertaking, the area of potential direct effects to these two properties consists of the project viewshed and the proposed right-of-way of the proposed project. Because all construction and ground disturbing activity would be confined within the right-of-way of the proposed project, no potential for indirect effects is anticipated.

Surveys using potential right-of-way footprints and aerial photography were conducted in office to determine the number of property displacements that GDOT Project CSSTP-0008-00(666) – Alternative 4 would create. After reviewing the available data, it was determined that Alternative 4 would displace four residences, zero businesses, and zero institutional properties along the corridor.

These alternatives no longer under consideration would not significantly reduce impacts to Jurisdictional Waters of the U.S. (Table 1).

Table 1: ALTERNATIVE IMPACTS SUMMARY TABLE		
Preferred Alternatives		
STP00-0000-00(821) – Alternative 2		
Length		STP00-0000-00(821), P.I. No. 0000821 is approximately 3.55 miles
Typical Section & Design Speed		Five-lane rural section with 12 ft lanes before transitioning into a four-lane divided highway with a variable 14- to 32-foot grassed median at mile point 1.91
Displacements		
	Residential	0 (approx.)
	Businesses	0 (approx.)
	Institutional	0 (approx.)
Streams		
	# of Impacts	3 (approx.)
	Total Length Impacted	715 linear feet (approx.)
Wetlands		
	# of Impacts	3 (approx.)
	Total Area Impacted	1.72 acres (approx.)
Open Waters		
	# of Impacts	0 (approx.)
	Total Area Impacted	0.0 acres (approx.)
Required Mitigation Credits		
	Total # of Stream Credits	3440.5
	Total # of WTL/OW Credits	12.73
Estimated Mitigation Cost		
	Cost for Stream Impacts	$154,823.00
	Cost for WTL/OW Impacts	$44,555.00
	Total Mitigation Cost of Project	$199,378.00
Federally Protected Species		
	Gopher Tortoise (*Gopherus polyphemus*)	14 gopher tortoise burrows are located within the right-of-way for STP00-0000-00(821) – Alternative 2. Four of the burrows were determined to be active. Of the remaining ten burrows within the right-of-way, six are considered abandoned, and four are considered inactive. Gopher tortoises were observed inhabiting two of the four active burrows within the proposed right-of-way.
	Eastern Indigo Snake (*Drymarchon couperi*)	Although, no eastern indigo snakes have been observed along the proposed corridor, the 14 gopher tortoise burrows located within the proposed right-of-way provide refugia habitat for the eastern indigo snake, and the wetlands and stream to the east of the gopher tortoise burrows provide foraging habitat for the eastern indigo snake.

STP00-0000-00(820) – Alternative 2	
Length	STP00-0000-00(820), P.I. No. 0000820 is approximately 11.47 miles
Typical Section & Design Speed	Five-lane rural section with 12 ft lanes before transitioning into a four-lane divided highway with a variable 14- to 32-foot grassed median at mile point 1.91
Displacements	
Residential	7 (approx.)
Businesses	0 (approx.)
Institutional	0 (approx.)
Streams	
# of Impacts	7 (approx.)
Total Length Impacted	1,515 linear feet (approx.)
Wetlands	
# of Impacts	28 (approx.)
Total Area Impacted	15.53 acres (approx.)
Open Waters	
# of Impacts	0 (approx.)
Total Area Impacted	0.0 acres (approx.)
Required Mitigation Credits	
Total # of Stream Credits	7071
Total # of WTL/OW Credits	111.6
Estimated Mitigation Cost	
Cost for Stream Impacts	$318,195.00
Cost for WTL/OW Impacts	$390,600.00
Total Mitigation Cost of Project	$708,795.00
Federally Protected Species	
No federally protected species were observed during the September 2011 survey. However, habitat was observed during the September 2011 survey for the federally protected frosted flatwoods salamander, striped newt, eastern indigo snake, gopher tortoise, red-cockaded woodpecker, and wood stork.	
CSSTP-0008-00(666) – Alternative 3	
Length	CSSTP-0008-00(666), P.I. No. 0008666 is approximately 5.07 miles
Typical Section & Design Speed	Four lanes varying in width from 11 to 12 ft., with a 32-ft depressed median from the beginning of the project to Old Still Road, and with a 20-ft. raised median from Old Still Road to the end of the project
Displacements	
Residential	0 (approx.)
Businesses	1 (approx.)
Institutional	0 (approx.)
Streams	
# of Impacts	8 (approx.)
Total Length Impacted	1,335 linear feet (approx.)
Wetlands	
# of Impacts	15 (approx.)
Total Area Impacted	8 acres (approx.)
Open Waters	
# of Impacts	1 (approx.)
Total Area Impacted	0.1 acres (approx.)

Required Mitigation Credits	
Total # of Stream Credits	1998.4
Total # of WTL/OW Credits	42.27
Estimated Mitigation Cost	
Cost for Stream Impacts	$89,928.00
Cost for WTL/OW Impacts	$147,945.00
Total Mitigation Cost of Project	$237,973.00
Federally Protected Species	
No federally protected species were observed during the September 2011 survey. However, potential habitat was observed for the following protected species: wood stork, Bachmann's warbler, eastern indigo snake, gopher tortoise, and striped newt.	
Total Overall Impacts for All 3 Preferred Alternatives	
Length	The overall project length for all three segments is approximately 18.45 miles.
Displacements	
Residential	7 (approx.)
Businesses	1 (approx.)
Institutional	0 (approx.)
Streams	
# of Impacts	18 (approx.)
Total Length Impacted	3,565 linear feet (approx.)
Wetlands	
# of Impacts	46 (approx.)
Total Area Impacted	25.25 acres (approx.)
Open Waters	
# of Impacts	1 (approx.)
Total Area Impacted	0.1 acres (approx.)
Required Mitigation Credits	
Total # of Stream Credits	5,498.9
Total # of WTL/OW Credits	166.6
Estimated Mitigation Cost	
Cost for Stream Impacts	$562,946.00
Cost for WTL/OW Impacts	$583,100.00
Total Mitigation Cost	$1,146,046.00
Alternatives No Longer Under Consideration	
STP00-0000-00(821) – Alternative1	
Displacements	
Residential	2 (approx.)
Businesses	1 (approx.)
Institutional	0 (approx.)
Streams	
# of Impacts	4
Total Length Impacted	1,125 linear feet
Wetlands	
# of Impacts	3
Total Area Impacted	2.23 acres

Open Waters		
	# of Impacts	0
	Total Area Impacted	0.0 acres
Required Mitigation Credits		
	Total # of Stream Credits	5442
	Total # of WTL/OW Credits	16.84
Estimated Mitigation Cost		
	Cost for Stream Impacts	$244,890.00
	Cost for WTL/OW Impacts	$58,940.00
	Total Mitigation Cost of Project	$303,830.00
Federally Protected Species		
	Gopher Tortoise (*Gopherus polyphemus*)	14 gopher tortoise burrows are located within the right-of-way for STP00-0000-00(821) – Alternative 2. Four of the burrows were determined to be active. Of the remaining ten burrows within the right-of-way, six are considered abandoned, and four are considered inactive. Gopher tortoises were observed inhabiting two of the four active burrows within the proposed right-of-way.
	Eastern Indigo Snake (*Drymarchon couperi*)	Although, no eastern indigo snakes have been observed along the proposed corridor, the 14 gopher tortoise burrows located within the proposed right-of-way provide refugia habitat for the eastern indigo snake, and the wetlands and stream to the east of the gopher tortoise burrows provide foraging habitat for the eastern indigo snake.
STP00-0000-00(820) – Alternative1		
Displacements		
	Residential	4 (approx.)
	Businesses	0 (approx.)
	Institutional	1 (approx.)
Streams		
	# of Impacts	7 (approx.)
	Total Length Impacted	1,550 linear feet (approx.)
Wetlands		
	# of Impacts	33 (approx.)
	Total Area Impacted	33.83 acres (approx.)
Open Waters		
	# of Impacts	0 (approx.)
	Total Area Impacted	0.0 acres (approx.)
Required Mitigation Credits		
	Total # of Stream Credits	8116.5
	Total # of WTL/OW Credits	205.2
Estimated Mitigation Cost		
	Cost for Stream Impacts	$365,242.5.00
	Cost for WTL/OW Impacts	$718,200.00
	Total Mitigation Cost of Project	$1,083,442.50

Federally Protected Species	
No federally protected species were observed during the September 2011 survey. However, habitat was observed during the September 2011 survey for the federally protected frosted flatwoods salamander, striped newt, eastern indigo snake, gopher tortoise, red-cockaded woodpecker, and wood stork.	
CSSTP-0008-00(666) – Alternative 2	
Displacements	
Residential	15 (approx.)
Businesses	3 (approx.)
Institutional	0 (approx.)
Streams	
# of Impacts	7 (approx.)
Total Length Impacted	1,186 linear feet (approx.)
Wetlands	
# of Impacts	13 (approx.)
Total Area Impacted	4.4 acres (approx.)
Open Waters	
# of Impacts	1 (approx.)
Total Area Impacted	0.1 acres (approx.)
Required Mitigation Credits	
Total # of Stream Credits	1,113.9
Total # of WTL/OW Credits	23.21
Estimated Mitigation Cost	
Cost for Stream Impacts	$50,125.50
Cost for WTL/OW Impacts	$81,235.00
Total Mitigation Cost of Project	$131,360.50
Federally Protected Species	
No federally protected species were observed during the September 2011 survey. However, potential habitat was observed for the following protected species: wood stork, Bachmann's warbler, eastern indigo snake, gopher tortoise, and striped newt.	
CSSTP-0008-00(666) – Alternative 4	
Displacements	
Residential	4 (approx.)
Businesses	0 (approx.)
Institutional	0 (approx.)
Streams	
# of Impacts	13 (approx.)
Total Length Impacted	3,223 linear feet (approx.)
Wetlands	
# of Impacts	15 (approx.)
Total Area Impacted	23.1 acres (approx.)
Open Waters	
# of Impacts	4 (approx.)
Total Area Impacted	0.4 acres (approx.)

Required Mitigation Credits	
Total # of Stream Credits	6,114.1
Total # of WTL/OW Credits	130.55
Estimated Mitigation Cost	
Cost for Stream Impacts	$275,134.50
Cost for WTL/OW Impacts	$459,925.00
Total Mitigation Cost of Project	$732,059.50
Federally Protected Species	
No federally protected species were observed during the September 2011 survey. However, potential habitat was observed for the following protected species: wood stork, Bachmann's warbler, eastern indigo snake, gopher tortoise, and striped newt.	

RECOMMENDATIONS: The Currently Proposed "Preferred" Alternative is recommended because it provides for a safe, efficient roadway while minimizing impacts to water resources, residences, businesses and the overall environment.

ATTACHMENTS: Project Location Maps, Concept Reports, Concept Layouts, Typical Sections, and Mitigation

PREPARED BY: Travis Garnto, Ecologist

*** NOTE: PB, in its representations of preliminary concepts, strives to show as nearly as possible the route and right-of-way requirements of projects. Because of the preliminary nature of these location studies, certain information cannot be finalized until completion of the design stage of GDOT's project development process. In areas where existing facilities are to be improved and are in need of vertical and/or horizontal realignment, the Department tries to present a "worst case" of impacts, in anticipation of a reduction of these impacts and right-of-way requirements at the detailed design stage.**

Concept Team Meeting Agenda and Minutes

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
CONCEPT TEAM MEETING NOTES

Project Type:	Exempt	P.I. Number:	0008666
GDOT District:	District 5	County:	Camden
Federal Route Number:	N/A	State Route Number:	40

Date: August 29, 2012

Attendees:

Name	Agency	Position	Contact No.	E-mail
Tim Mathews	GDOT	Project Manager	404-631-1568	tmathews@dot.ga.gov
Scott Brazell	Camden County	Public Works Director	912-552-3768	sbrazell@co.camden.ga.us
Jerry Brinson	MAAI	Liason	478-278-6505	jerrybrinson@bellsouth.net
Conn Cole	Camden County	ROW Coordinator	912-576-2907	ccole@co.camden.ga.us
Brian Scarbrough	GDOT	Area Engineer	912-264-7247	bscarbrough@dot.ga.gov
John Koptic	GDOT	Engineering Services	912-262-2397	jkoptic@dot.ga.gov
Steve Price	GDOT	Dist. Environmental	912-427-5756	sprice@dot.ga.gov
Brad Saxon	GDOT	District Pre-Construction	912-427-5715	bsaxon@dot.ga.gov
Ron Knox	Kingsland	Ass. Public Works Director	912-729-8236	rknox@kingslandgeorgia.com
Charles Laurens	Georgia Power	TMC Supervisor	912-267-4893	jclauren@southernco.com
George Shenk	GDOT	District Utilities	912-427-5779	gshenk@dot.ga.gov
John Royal	GDOT	District Utilities	912-427-5859	jroyal@dot.ga.gov
Paul Teague	AGL	Engineer	404-693-5986	pteague@aglresources.com

1. Tim Mathews opened the meeting and introductions were made.
2. William Dial presented the project and presented a project history, project justification and logical termini were discussed.
3. All items on the attached agenda were discussed. The following items were discussed in detail:
    a. The speed limit of the rural section of the project should be changed to 55 mph per Brad Saxon.
    b. The Project Justification statement should be modified to remove the sentence “This route is on the Camden County bike route system.” This route is not on the bike route system.
    c. Tim Mathews confirmed that the Federal Oversight status of the project is exempt.
    d. William Dial will coordinate with the railroad to determine if additional room is required under the proposed bridge for future track expansion.
    e. District 5 utilities provided an updated utility cost estimate.
    f. No design variances or exceptions are expected.

g. Under Project Responsibilities, Utility Relocation will be changed to GDOT/Utility Companies.
h. Under Other projects in the area, PI#0007104 was changed to 0007414.
i. Alt 3 in PAR will be added to the description of the preferred alternative.
j. Georgia Power expressed concern with the close proximity of the project to the existing substation. The plans were modified to move away from the substation. The substation will now be accessed from the west side.
k. AGL agreed to supply GDOT and MAAI with updated locations for their facilities.
l. Written comments were received from the Multi-model Group and the State Conceptual Design Group.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
CONCEPT TEAM MEETING AGENDA

Project Type:	Exempt	P.I. Number:	0008666
GDOT District:	District 5	County:	Camden
Federal Route Number:	N/A	State Route Number:	40

1. Tim Mathews -- Open the meeting.
2. William Dial (Moreland Altobelli Project Manager) – Present Project
3. Participants will discuss the following aspects of the project:
    - Project Justification
    - Logical Termini
    - Project Background
    - Location of Environmental Resources:
        - Wetland, open waters, streams and all buffers
        - Park Lands
        - Historic Properties
        - Cemeteries
        - Potential Hazardous Waste Sites
        - UST's
        - Threatened and Endangered Species
    - Public Involvement
    - Alternatives considered to date
    - Proposed Design Criteria
    - Horizontal and Vertical Alignment criteria
    - Typical Sections
    - IMR report requirements
    - Access Control
    - Intersection control additions that require permitting (signals)
    - Practical Alternatives Report
    - Type of environmental document anticipated
    - Environmental Permits Required.
    - Project Framework Agreement
    - Right of Way Requirements
        - Potential number of parcels
        - Number of Relocates
        - Estimated Right of Way Cost
        - Who will be responsible for purchasing the right of way
    - Preliminary Bridge Assessments
    - Accident history
    - Potential Soil Conditions Along the project
    - Construction Limits
    - Maintenance of Traffic

- Existing Maintenance Problems
- Preliminary Capacity Analysis
- Constructability
- Workzone Safety and Mobility Requirements
- Preliminary Cost Estimates
- Project Assignments
- Project Schedule
- ITS Concept of Operations
- Maintenance issues with ITS system
- Utilities
    i. Public Interest Determination
    ii. SUE requirements

PFA

Vance C. Smith, Jr., Commissioner

GEORGIA DEPARTMENT OF TRANSPORTATION

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

April 13, 2011

The Honorable David Rainer
Commission Chairman
P.O. Box 99
Woodbine, Georgia 31569

Dear Chairman Rainer:

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

PROJECT#: CSSTP-0008-00(666) Camden County, P.I. #0008666

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 Tim Matthews at (404)631-1568.

Sincerely,

Angela Robinson,
Financial Management Administrator

AR: rm

Enclosure

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

AGREEMENT

BETWEEN

DEPARTMENT OF TRANSPORTATION

STATE OF GEORGIA

AND

CAMDEN COUNTY

FOR

TRANSPORTATION FACILITY IMPROVEMENTS

This Framework Agreement is made and entered into this 12th day of April, 2011, by and between the DEPARTMENT OF TRANSPORTATION, an agency of the State of Georgia, hereinafter called the "DEPARTMENT", and the **CAMDEN COUNTY,** acting by and through its Board of Commissioners, hereinafter called the "LOCAL GOVERNMENT".

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

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

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

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

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

1. The LOCAL GOVERNMENT has applied for and received "Qualification Certification" to administer federal-aid projects. The GDOT Certification Committee has reviewed, confirmed and approved the certification for the Local Government to develop federal project(s) within the scope of its certification using the DEPARTMENT'S Local Administered Project Manual procedures. The Local Government shall contribute to the PROJECT by funding all or certain portions of the PROJECT costs for the preconstruction engineering (design) activities, hereinafter referred to as "PE", all reimburseable utility relocations, all non-reimburseable utilities owned by the LOCAL GOVERNMENT, railroad costs, right of way acquisitions and construction, as specified in Attachment A, attached hereto and incorporated herein by reference. Expenditures incurred by the LOCAL GOVERNMENT prior to the execution of this AGREEMENT or subsequent funding agreements shall not be considered for reimbursement by the DEPARTMENT. PE expenditures incurred by the LOCAL GOVERNMENT after execution of this

AGREEMENT shall be reimbursed by the DEPARTMENT once a written notice to proceed is given by the DEPARTMENT.

2. The DEPARTMENT shall contribute to the PROJECT by funding all or certain portions of the PROJECT costs for the PE, right of way acquisitions, reimbursable utility relocations, railroad costs, or construction as specified in Attachment A.

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

Further, the LOCAL GOVERNMENT shall be responsible for repayment of any expended federal funds if the PROJECT does not proceed forward to completion due to a lack of available funding in future PROJECT phases, changes in local priorities or cancellation of the PROJECT by the LOCAL GOVERNMENT without concurrence by the DEPARTMENT.

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

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

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

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

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

a. Prepare the PROJECT Concept Report and Design Data Book in accordance with the format used by the DEPARTMENT. The concept for the PROJECT shall be developed to accommodate the future traffic volumes as generated by the LOCAL GOVERNMENT as provided for in paragraph 7b and approved by the DEPARTMENT. The concept report shall be approved by the DEPARTMENT prior to the LOCAL GOVERNMENT beginning further development of the PROJECT plans. It is recognized by the parties that the approved concept may be updated or modified by the LOCAL GOVERNMENT as required by the DEPARTMENT and re-approved by the DEPARTMENT during the course of PE due to updated guidelines, public input, environmental requirements, Value Engineering recommendations,

Public Interest Determination (PID) for utilities, utility/railroad conflicts, or right of way considerations.

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

c. Prepare environmental studies, documentation, reports and complete Environmental Document for the PROJECT along with all environmental re-evaluations required that show the PROJECT is in compliance with the provisions of the National Environmental Policy Act or the Georgia Environmental Policy Act as per the DEPARTMENT's Environmental Procedures Manual, as appropriate to the PROJECT funding. This shall include any and all archaeological, historical, ecological, air, noise, community involvement, environmental justice, flood plains, underground storage tanks, and hazardous waste site studies required. The completed Environmental Document approval shall occur prior to Right of Way funding authorization. A re-evaluation is required for any design change as described in Chapter 7 of the Environmental Procedures Manual. In addition, a re-

evaluation document approval shall occur prior to any Federal funding authorizations if the latest approved document is more than 6 months old. The LOCAL GOVERNMENT shall submit to the DEPARTMENT all studies, documents and reports for review and approval by the DEPARTMENT, the FHWA and other environmental resource agencies. The LOCAL GOVERNMENT shall provide Environmental staff to attend all PROJECT related meetings where Environmental issues are discussed. Meetings include, but are not limited to, concept, field plan reviews and value engineering studies.

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

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

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

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

h. Prepare utility relocation plans for the PROJECT following the DEPARTMENT's policies and procedures for identification, coordination and conflict resolution of existing and proposed utility facilities on the PROJECT. These policies and procedures, in part, require the Local Government to submit all requests for existing, proposed, and relocated facilities to each utility owner within the project area. Copies of all such correspondence, including executed agreements for reimbursable utility/railroad relocations, shall be forwarded to the DEPARTMENT's Project Manager and the District Utilities Engineer and require that any conflicts with the PROJECT be resolved by the LOCAL GOVERNMENT. If it is determined that the PROJECT is located on an on-system route or is a DEPARTMENT LET PROJECT, the LOCAL GOVERNMENT and the District Utilities Engineer shall ensure that permit applications are approved for each utility company in conflict with the project. If it is determined through the DEPARTMENT's Project Manager and State Utilities Office during the concept or design phases the need to utilize Overhead/Subsurface Utility Engineering, hereinafter referred to as "SUE", to obtain the existing utilities, the LOCAL GOVERNMENT shall be responsible for acquiring those services. SUE costs are considered PE costs.

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

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

k. Provide certification, by a Georgia Registered Professional Engineer, that the Design and Construction plans have been prepared under

the guidance of the professional engineer and are in accordance with AASHTO and DEPARTMENT Design Policies.

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

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

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

9. The DEPARTMENT shall review and has approval authority for all aspects of the PROJECT provided however this review and approval does not relieve the

LOCAL GOVERNMENT of its responsibilities under the terms of this agreement. The DEPARTMENT will work with the FHWA to obtain all needed approvals as deemed necessary with information furnished by the LOCAL GOVERNMENT.

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

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

executed. Further, this certification letter shall state that the LOCAL GOVERNMENT understands that it is responsible for the costs of any additional reimbursable utility/railroad confilcts that arise on construction.

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

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

14. The LOCAL GOVERNMENT, unless shown otherwise on Attachment A, shall acquire the Right of way in accordance with the law and the rules and regulations of the FHWA including, but not limited to, Title 23, United States Code; 23 CFR 710, et. Seq., and 49 CFR Part 24 and the rules and regulations of the DEPARTMENT. Upon the DEPARTMENT's approval of the PROJECT right of way plans, verification that the approved environmental document is valid and current, a written notice to proceed will be provided by the DEPARTMENT for the LOCAL GOVERNMENT to stake the right of way and proceed with all pre-acquisition right of way activities. The LOCAL GOVERNEMENT shall not proceed to property negotiation and acquisition whether or not the right of way funding is Federal, State or Local, until the right of way agreement named "Contract for the Acquisition of Right of Way" prepared by the DEPARTMENT's Office of Right of Way is executed between the LOCAL GOVERNMENT and the DEPARTMENT. Failure of the LOCAL GOVERNMENT to adhere to the provisions and requirements specified in the acquisition contract may result in the loss of Federal funding for the PROJECT and it will be the responsibility of the LOCAL GOVERNMENT to make up the loss of that funding. Right of way costs eligible for reimbursement include land and improvement costs, property damage values, relocation assistance expenses and contracted property management costs. Non reimbursable right of way costs include administrative expenses such as appraisal, consultant, attorney fees and any in-house property management or staff expenses. The LOCAL GOVERNMENT shall certify that all required right of way is obtained and cleared of obstructions, including underground storage tanks, 3 months prior to advertising the PROJECT for bids.

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

a. Submittal of acceptable PROJECT PE activity deliverables noted in this agreement.

b. Certification that all needed rights of way have been obtained and cleared of obstructions.

c. Certification that the environmental document is current and all needed permits and mitigation for the PROJECT have been obtained.

d. Certification that all Utility/Railroad facilities, existing and proposed, within the PROJECT limits are shown, any conflicts have been resolved and reimbursable agreements, if applicable, are executed.

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

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

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

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

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

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

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

DEPARTMENT OF TRANSPORTATION

BY: _____
Commissioner

ATTEST: _____
Treasurer

CAMDEN COUNTY

BY: _____
David Rainer
Chairman

Signed, sealed and delivered this 8 day of March, 2011, in the presence of:

_____
Witness

_____
Notary Public
[illegible] Public, Camden County, Georgia
[illegible] Commission Expires May 6, 2011

This Agreement approved by Local Government, the 8 day of March, 2011.

Attest

_____
Name and Title Assistant Director of Finance

FEIN: 58-6000792

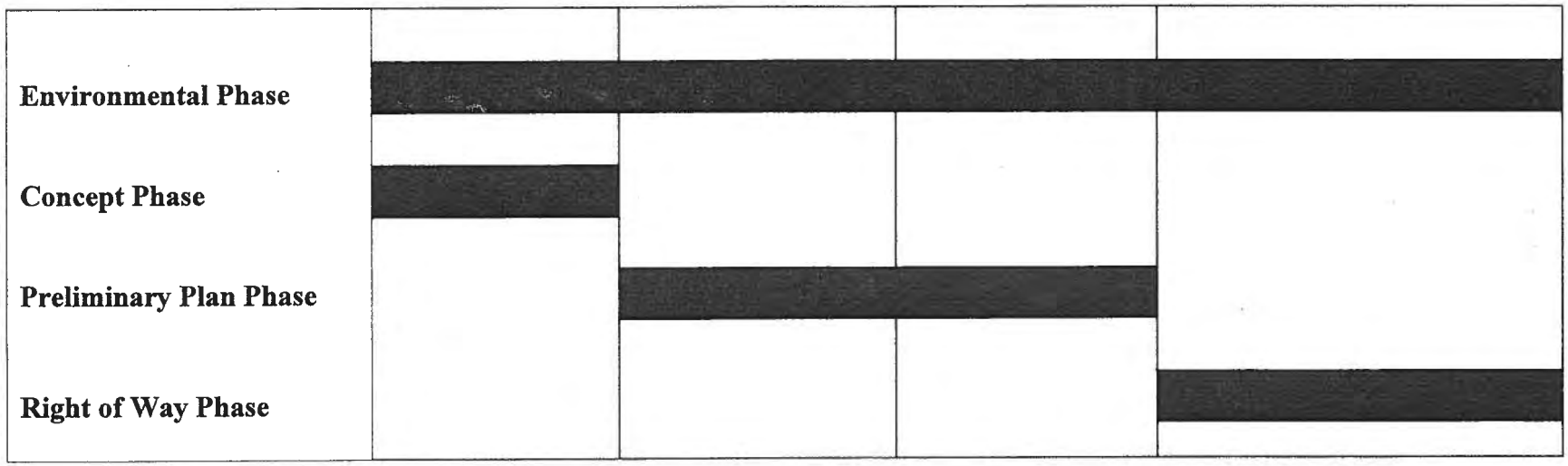
ATTACHMENT "A"
CSSTP-0008-00(666), Camden County

Project	Preliminary Engineering		Right of Way			Construction		Utility Relocation	
(PI#, Project #, Description)	Funding	PE Activity by	*Funding of Real Property	Acq. by	Acq. Fund by	*Funding	Letting by	Utility Funding by	Railroad Funding by
PI 0008666 CSSTP-0008-00(666) Kingsland Bypass from CR 61 to I-95	(80%)Federal ($1,453,322.32) (20%) State ($363,330.58) Reimburse LCL GOV ($1,634,424.00) (Remaining $182,228.90 to be used for Oversight)	Local Gov.	(80%) Federal($3,200,000) (20%) State ($800,000) (0%) LCL GOV ($0.00)	GDOT	GDOT	(80%) Federal ($17,357,386.25) (20%)State ($4,339,346.56) (0%) LCL GOV ($0.00)	GDOT	GDOT	GDOT

Note: Maximum allowable GDOT participating amounts for PE category shall be shown above. Local Government will only be reimbursed the percentage of the accrued invoiced amounts up to but not to exceed the maximum amount indicated. *R/W and Construction amounts shown are estimates for budget planning purposes only.

ATTACHMENT "B"
CSSTP-0008-00(666), Camden County

Proposed Project Schedule



Deadlines for Responsible Parties	**Execute Agreement**	**Nov/2011** (Approve Concept)	**Nov/2013** (Approve Env. Document)	**May/2014** (Authorize Right of Way funds)	**May/2015** (Authorize Const. funds)

Annual Reporting Requirements

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