ORIGINAL TO GENERAL FILES

# DEPARTMENT OF TRANSPORTATION
# STATE OF GEORGIA

## OFFICE OF DESIGN POLICY & SUPPORT
## INTERDEPARTMENTAL CORRESPONDENCE

**FILE** P.I. # 0000821
STP00-0000-00(821)
Charlton County
GDOT District 5 - Jesup
SR 40 from SR 40 Connector to 0.36 miles east of
CR 82/May Bluff Road

**OFFICE** Design Policy & Support

**DATE** 3/20/2013

Kim Phillips

**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
Tamaya Huff, State Pedestrian and Bicycle
Karon Ivery, District Engineer
Brad Saxon, District Preconstruction Engineer
Stephen Thomas, District Utilities Engineer
Robert Murphy, Project Manager
BOARD MEMBER - 1st Congressional District
FHWA – attn: Rodney Barry, Georgia Division Administrator

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

Project Type: Widening
GDOT District: 5-Jesup
Federal Route Number: N/A

P.I. Number: 0000821
County: Charlton
State Route Number: 40

*Project Description*
State Route (SR) 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. At mile post (MP) 0.63 near the SR 40 Connector intersection with SR 40 the project would widened SR-40 from a two-lane to a five-lane rural section and then 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 for total project length of 1.91 miles. One Box Bridge culvert identified as bridge # 049-0027-0 will be lengthened.

**Submitted for approval:**

Parsons Brinckerhoff Inc. / Geoffrey Donald, PE — 11-5-2012
Consultant Designer & Firm *or* GDOT Concept/Design Phase Office Head & Office — DATE

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

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

**Recommendation for approval:**

* Kathy Zahul /KLP — 12/26/2012
State Traffic Engineer — DATE

* Glenn Bowman/KLP — 12/11/2012
State Environmental Administrator *(recommendation required)* — DATE

* Lisa Myers /KLP — 12/3/2012
Project Review Engineer — DATE

* FOR Patrick Allen/KLP — 12/26/2012
State Utilities Engineer — DATE

* Karon Ivery/KLP — 11/30/2012
District Engineer — DATE

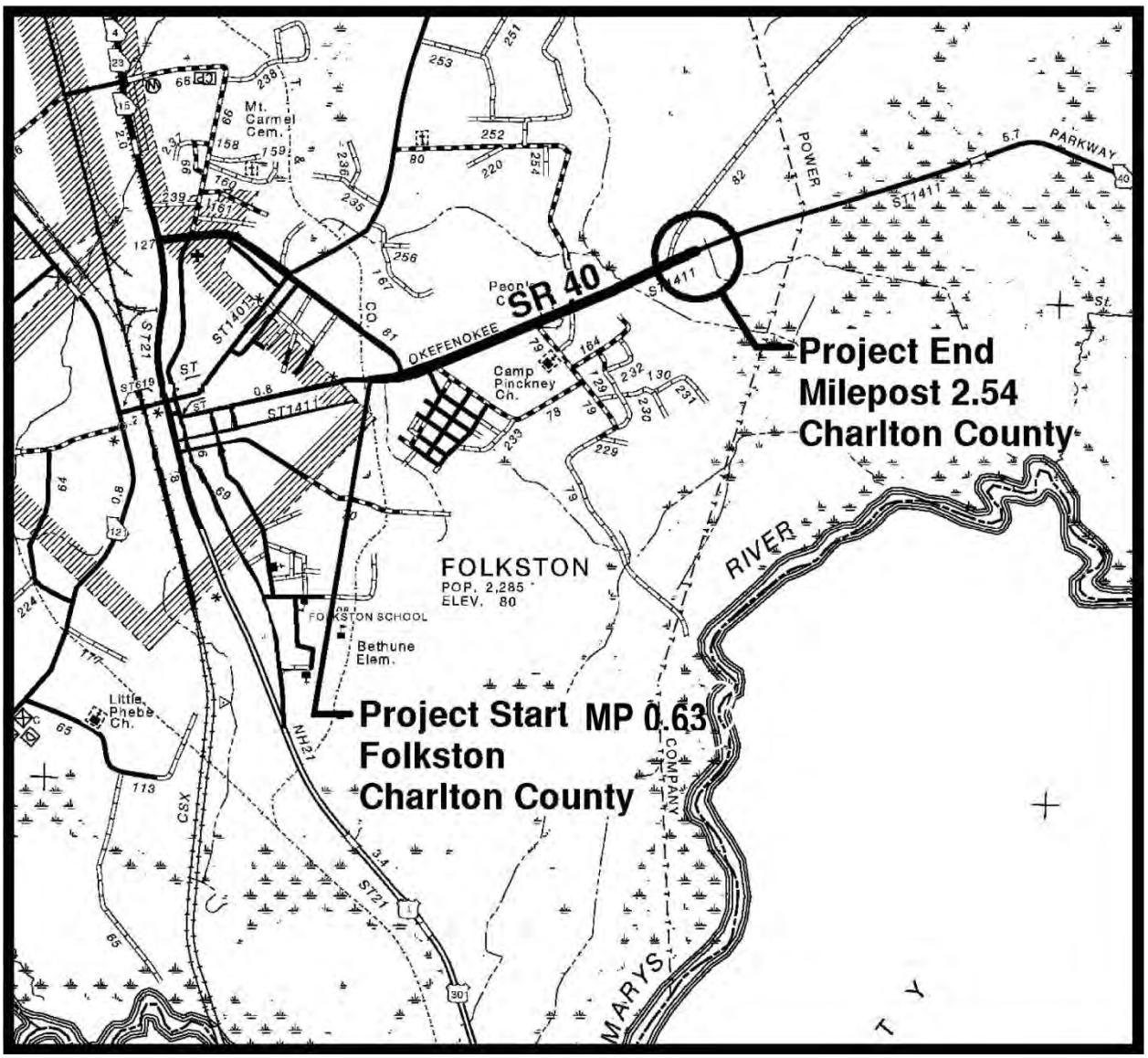
* Ben Rabun/KLP — 12/27/2012
State Bridge Engineer — DATE

* Recommendation on file

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

Cynthia K. VanPelt — 11-20-12
State Transportation **Planning Administrator** *(recommendation required)* — DATE

## PROJECT LOCATION




Scale: 1 inch =1 mile

**Location Map**
**Project:** STP00-0000-00(821), Charlton County **PI No.:** 0000821
**Description:** SR 40 from MP 0.63 to Just Northeast of CR-82 at MP 2.54

## PLANNING & BACKGROUND DATA

**Project Justification Statement:**

SR 40 is an east-west route in the southeastern Georgia counties of Camden and Charlton that has a western terminus in the city of Folkston. Between US 1/SR 15 in Folkston and milepost 2.54, the route is currently a two lane route functionally classified as a Rural Minor Arterial with a posted speed limit between 35 and 55 MPH and it is not listed as a designated bike route in the Statewide Bicycle Plan. The proposed widening of this route was added to the Department's Construction Work Program in April 2000. SR 40 is identified as a Governor's Road Improvement Program (GRIP) route to address the importance of stimulating economic growth throughout the state via an improved transportation network. In addition, SR 40 is a designated hurricane evacuation route. The project is currently listed in the approved FY 2012-2015 STIP with ROW funds programmed in FY 2015.

Based upon traffic data information approved by the Office of Planning, the 2011 Average Annual Daily Traffic (AADT) along SR 40 in the area of this project is 5,200 AADT, which represents a level-of-service "C". Projected traffic volumes show a traffic volume up to 7,640 AADT by the design year 2036 which also represents a LOS "C". LOS "C" is considered acceptable with regards to statewide LOS performance measures, as referenced in the 2005-2035 Statewide Transportation Plan (SWTP). Analysis of the last three years of available crash data in this area show that the crash rates for this section of SR 40 were below the comparable statewide average.

To the west, this widening project ties directly into US 1/SR 15 via the SR 301 Connector/IndianTrail. US 1/SR 15 is an existing 4-lane roadway and serves as a major north-south regional roadway through downtown Folkston. To the east, the project ties into an existing four lane section of SR 40 starting at MP 2.54 near Ma y Bluff Road (which was previously widened under the GRIP project PI 522350.)

**Description of the proposed project:** State Route (SR) 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. 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 GRIP would widen the 29-mile long SR 40 corridor to four lanes, most of it divided by a 32-foot wide grass median. Roadway widening and improvements are either completed or under construction along 13 miles (45 percent) of the SR 40 GRIP corridor. Project ID No. (PI) 0000821 would widen and improve SR 40 from State Route 40 Connector MP 0.63 to just northeast of CR-82/ Milepost (MP) 2.54 in Charlton County. The total project length of PI 0000821 is 1.91 miles. One Box Bridge culvert identified as bridge # 049-0027-0 will be lengthened.

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

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

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

**Congressional District(s):** 1

**Projected Traffic AADT:**
Current Year (2011); 5200 Open Year (2016): 5700 Design Year (2036): 7640

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

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

**Is this project on a designated bike route?** ☐ No ☒ YES - Southern GA RC Lists SR 40 as bike/ped route.

**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:** One resident on north side would be relocated if 32 foot median continues to the west.

**Context Sensitive Solutions:** A 5 lane urban section with rural shoulders and reduced speed is proposed from MP 1.51 to MP 0.82 to avoid the displacement.

## DESIGN AND STRUCTURAL DATA

**Mainline Design Features:** ***SR-40***

| Feature | Existing | Standard* | Proposed |
|---|---|---|---|
| **Typical Section** | | | |
| - **Number of Lanes** | **2** | **2** | **4** |
| - **Lane Width(s)** | **12'** | **11'-12'** | **12'** |
| - **Median Width & Type** | **N/A** | **44 depressed** | **32 depressed/ 14' Flush ( Two way center turn lane)** |
| - **Outside Shoulder Width & Type** | **10'-graded-2' paved** | **10' graded-2' paved** | **10' graded-6.5' paved** |
| - **Outside Shoulder Slope** | **4%** | **4%** | **6:%** |
| - **Inside Shoulder Width & Type** | **N/A** | **6' graded 2' paved** | **6' graded 2' paved** |
| - **Sidewalks** | **None** | **None** | **5' South Side** |
| - **Auxiliary Lanes** | **12'** | **11'-12'** | **12' Rt & LT turn lanes as Req'd. by traffic and Geometry** |
| - **Bike Lanes** | **None** | **None** | **4' on shoulder not marked** |
| **Posted Speed** | **55/45/35** | | **55/45/35** |
| **Design Speed** | **55** | **55** | **55/45/35** |

| | | | |
|---|---|---|---|
| **Min Horizontal Curve Radius** | **1660'** | **1480'** | **4982'** |
| **Superelevation Rate** | **8%** | **6%** | **4%** |
| **Grade** | **2%** | **3%** | **2%** |
| **Access Control** | **By Permit** | **By Permit** | **By Permit** |
| **Right-of-Way Width** | **100 ft typical** | **varies 100 ft typical** | **Varies 105' min 200' max** |
| **Maximum Grade – Crossroad** | **4%** | **10%** | **4%** |
| **Design Vehicle** | **SU** | **SU** | **SU** |

*According to current GDOT design policy if applicable

**Major Structures:**

| Structure | Existing | Proposed |
|---|---|---|
| **049-0027-0 MP 4.04 Cooner Branch** | **41' long triple 9'x4' RCB culvert Suff. Rat. 84.63, 2.5' shoulders, 23.5' travel lanes** | **To be extended 70 feet total length 111', 10' outside shoulders 6.5' paved 4 travel lanes width 12' total 48', 32' depressed median** |
| **Retaining Wall.** | **N/A** | **Type-2A side barrier along left and right outside shoulders to mitigate stream 7 impacts adjacent to bridge 049-0021-0 extension, max height 6 feet total length 370 feet.** |

**Major Interchanges/Intersections:** SR-40 at SR-40 Connector/Indian Trail existing flashing caution light with stop sign controlled on the minor road (Indian Trail). No signals are warranted based on projected traffic volumes.

**Utility Involvements:** Overhead power lines are present on the north and south side of S.R.40. Utility Companies involved: Georgia Power Distribution, Georgia Power Transmission, Okefenokee Rural EMC, TDS Telecom, Atlanta Light and Gas, AT&T/BellSouth.

**Public Interest Determination Policy and Procedure recommended (Utilities)?** ☐ YES ☐ NO
*The policy will be reviewed and addressed during the PFPR stage of the Project.*

**SUE Required:** ☐ Yes ☒ No

**Railroad Involvement:** *There are no railroads in the vicinity of the project.*

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

Warrants met: ☐ None ☒ Bicycle ☒ Pedestrian ☐ Transit

The Southern Georgia RC Greater Charlton County Comprehensive Plan has designated SR-40 as a Bicycle and Pedestrian Route see attached Map G-5 in the attachments section. Currently there are no planned public transportation systems in Charlton County. Bicycle lanes will be provided along the proposed shoulders, a pedestrian sidewalk should be considered on the south side of SR-40 from Indian Trail to Camp Pinckney Drive approximately 4200 feet. This area along SR-40 has commercial business, a church and several residential neighborhoods that front along the corridor. A sidewalk that is located outside the clearzone for the proposed rural shoulders would work best in

this corridor, like Figure 9.8 page 9-23 in the GDOT Complete Streets Design Policy Manual (attached).

**Right-of-Way:**

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

Easements anticipated: ☒ Temporary ☐ Permanent ☒ Utility ☐ Other

| | |
|---|---|
| Anticipated number of impacted parcels: | 6 |
| Anticipated number of displacements (Total): | 0 |
| Businesses: | 0 |
| Residences: | 0 |
| Mobile Homes | 0 |
| Other: | 0 |

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

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

**Transportation Management Plan Anticipated:** ☒ YES ☐ NO

*The roadway is classified as rural minor arterial and will have less than220 passenger cars per lane per normal working hour during construction, and thus would not be determined as a significant highway project, therefore at a minimum the project TMP will require a temporary traffic control plan and Special Provision Section 150 Traffic Control enforcement.*

**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 - | 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 - *(if applicable)* | DP&S | ☐ | | ☒ | ☐ |
| 11. Rumble Strips | DP&S | ☐ | | ☒ | ☐ |
| 12. Safety Edge | DP&S | ☐ | | ☒ | ☐ |

**VE Study anticipated:** ☐ No ☐ Yes ☒ Completed – Date: 6/8/2009

## 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
Is a Carbon Monoxide hotspot analysis required? ☒ No ☐ Yes

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

**Environmental Permits/Variances/Commitments/Coordination anticipated:** *List all anticipated permits, variances, commitments, and coordination needed –Section 404, TVA, Water Quality, etc.*

| 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:** The environmental document is currently in draft form and there are no significant NEPA issues or potential risks present nor are there any 4f resources impacted.

**Ecology:** Only one protected 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 eighteen gopher tortoise burrows near the western terminus of the proposed project corridor. Six jurisdictional Waters of the U.S. (two perennial streams, one intermittent stream, and three wetlands) were identified within the survey limits of the proposed project corridor. One non-jurisdictional channel was also identified within the survey limits of the proposed project corridor. The identified wetlands, intermittent stream, and perennial streams 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 streams if the 25-foot buffer associated with these resources were impacted by the proposed project.

**History**: There are no properties/structures considered eligible for the NRHP, within the area of potential effect.

**Archeology:** No archaeological resources were located within the proposed project corridor. It is concluded, therefore, that the project would not affect archaeological resources on or eligible for inclusion in the NRHP.

**Air & Noise:**
Traffic noise calculations were performed for the SR 40 widening and reconstruction project using the FHWA's Traffic Noise Model (TNM) Version 2.5 (2004). Based on the results of the noise analysis, there were no noise impacts identified as a result of the proposed SR 40 future design build alignment. A re-evaluation of the noise analysis will occur during final design. At this time there is no noise abatement warranted.

This project was evaluated for its consistency with state and federal air quality goals, including CO, ozone, PM 2.5 and MSAT. The result of this evaluation concludes that the project is consistent with the State Implementation Plan for the attainment of clean air quality in Georgia and is in compliance with both state and federal air quality standards. In addition, project construction-related air quality effects would be limited to short-term increases in fugitive dust and emissions from construction equipment.

**Public Involvement**: A public information meeting has been held a public hearing open house will be scheduled later in the project development stages, PIM was held February 21 2008 summary attached.

**Major stakeholders**: The major stakeholders for this project include:
King Bay Naval Submarine Base, Okefenokee National Wildlife Refuge, local business and business associations, chamber of commerce, tourism agencies, SE Georgia Regional Development Center, Coastal Georgia Regional Development Center, city and county officials, property owners, residents, , local churches ( Peoples Baptist Church, Camp Pinckney Baptist Church, Deliverance Church of Christ), identified environmental justice communities, resource agencies and the traveling public.

## CONSTRUCTION

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

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

## PROJECT RESPONSIBILITIES

**Project Activities:**

| Project Activity | Party Responsible for Performing Task(s) |
|---|---|
| Concept Development | *Parsons Brinckerhoff* |
| Design | *Parsons Brinckerhoff* |
| 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, and Permits | *Parsons Brinckerhoff* |
| Environmental Mitigation | *GDOT* |
| Construction Inspection & Materials Testing | *GDOT* |

**Lighting required:** ☒ No ☐ Yes

**Initial Concept Meeting** held on May 4th, 2004. Summary attached.

**Concept Meeting** held on Nov 1 2007 Summary attached.

**Other projects in the area:** : PI 0000820 will widen SR-40 to 4-lanes from MP 5.21 in Charlton County to County Route (CR) 66, Colerain Road MP 10.12 in Camden County, PI 008666 will widen Colerain RD CR 66 to 4-lanes from SR-40 to I-95.

**Other coordination to date:** *No other coordination.*

**Project Cost Estimate and Funding Responsibilities:**

| | PE | ROW | Utility | CST* | Environmental Mitigation | Total Cost |
|---|---|---|---|---|---|---|
| By Whom | State | Federal/State | Federal/State | Federal/State | Federal/State | |
| $ Amount | $874,000.00 | $267,000.00 | $144,000.00 | $5,538,999.31 | $226,434.00 | $7,050,433.31 |
| Date of Estimate | 2/1/2013 | 2/1/2013 | 2/1/2013 | 1/26/2013 | 2/4/2013 | |

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

## ALTERNATIVES DISCUSSION

**Alternative selection:**

| **Preferred Alternative:** Build a 4-lane variable divided section (2 additional lanes on the north side) that tapers back to a 2-lane section at SR-40 Connector/US-301 Bypass/Indian Trail. | | | |
|---|---|---|---|
| **Estimated Property Impacts:** | **0 displacements** | **Estimated Total Cost:** | **$7,050,433** |
| **Estimated ROW Cost:** | **$267,000.00** | **Estimated CST Time:** | **12 months** |
| **Rationale:** This alternative provides a 4-lane facility from an Interstate system to the City of Folkston, it ties to the all ready widening section of SR-40 on the north side of the road, and it avoids a displacement on parcel 54. | | | |

| **No-Build Alternative**: No build | | | |
|---|---|---|---|
| **Estimated Property Impacts:** | **None** | **Estimated Total Cost:** | **None** |
| **Estimated ROW Cost:** | **None** | **Estimated CST Time:** | **None** |
| **Rationale:** The no build alternative was eliminated due to a portion of SR 40, a GRIP route, is already widened to a 4-lane road, also the no-build alternate does not improve the connectivity to rural Georgia. | | | |

| **Alternative 1**: Build proposed additional two lanes on the south side of existing alignment | | | |
|---|---|---|---|
| **Estimated Property Impacts:** | **3 displacements** | **Estimated Total Cost:** | **$8,267,868** |
| **Estimated ROW Cost:** | **$1,289,000.00** | **Estimated CST Time:** | **18 months** |
| **Rationale:** Alternate (1) was eliminated due to the fact that the proposed alignment would be tying into widening already constructed on the north side of the existing SR-40. A southern alignment would displace 2 residents and 1 business, would have 700 feet of additional stream impacts, and additional utility impacts. | | | |

**Comments:** *No comments.*

**Attachments:**

1. Typical sections
2. Figure 9.8 Illustration of Pedestrian Facility Design (Source; "GDOT Design Policy Manual")
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. Executive Summary of TE Study, Signal Warrants Results, Capacity results, Crash Summaries
5. Traffic diagrams
6. Pavement studies *(e.g. Preliminary Pavement Type Selection Report, etc.)*
7. *Map G-5- Bike and Pedestrian Map( Source* Southern Georgia Regional Commission " Greater Charlton County 2030 Comprehensive Plan")
8. Minutes of Concept meetings
9. Minutes of *PIOH*
10. *Approved PAR Report*
11. *VE Implementation Letter*

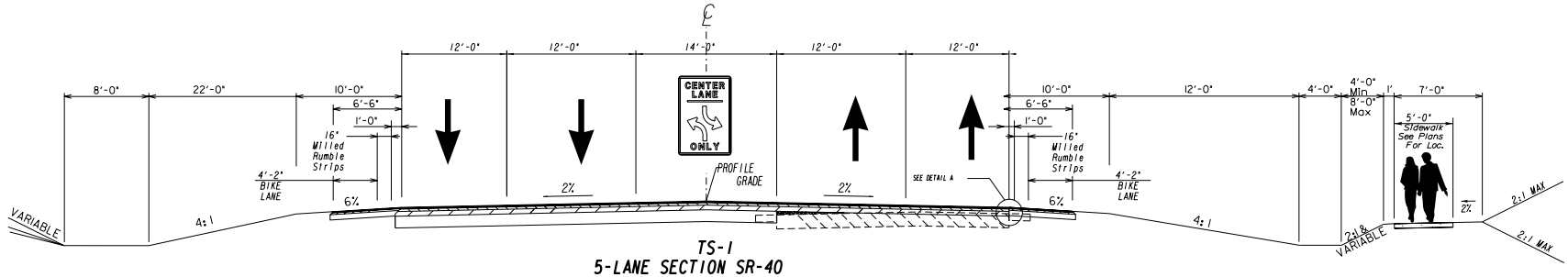
P.I. Number: 0000821

## APPROVALS

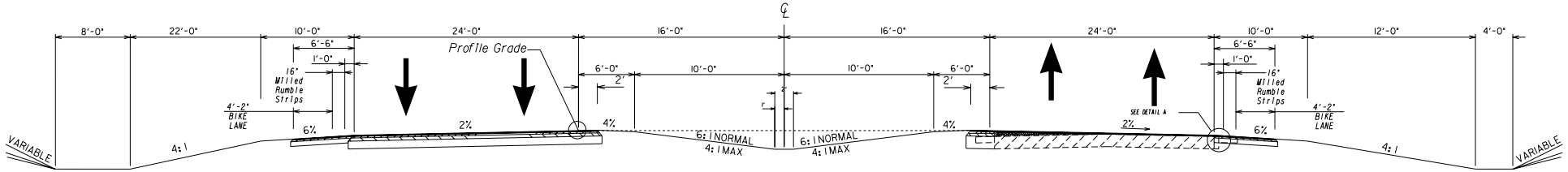
Concur: N/A
Director of Engineering

Approve: [signature]
Chief Engineer

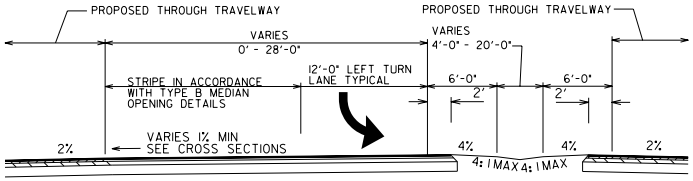
3/18/13
Date



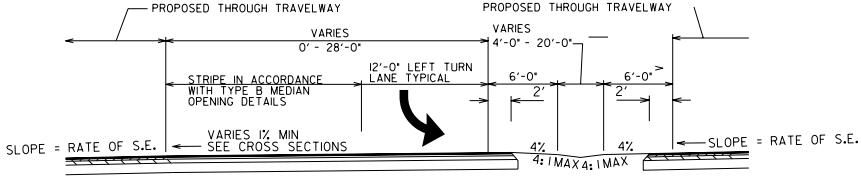

**TS-1**
**5-LANE SECTION SR-40**
STA. 65+00 TO STA. 93+60**




**TS-2**
**S.R. 40**
STA. 93+60 TO STA. 154+53




*DETAIL FOR LEFT TURN LANE*
*TYPE B MEDIAN OPENING*
*NORMAL CROWN SECTION*




*DETAIL FOR LEFT TURN LANE*
*TYPE B MEDIAN OPENING*
*SUPERELEVATED SECTION*

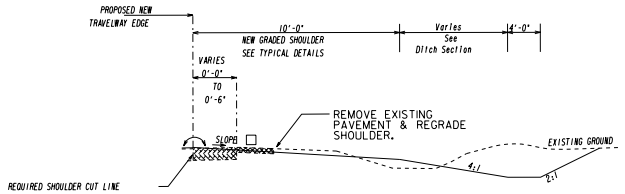
SLOPE CONTROLS

| SLOPE | CUT | FILL |
|---|---|---|
| 4:1 | ALL | 0-10' |
| 3:1 | -- | -- |
| 2:1 | -- | OVER 6'* |
| * USE GUARDRAIL | | |

△ SLOPE 6% OR RATE OF S.E. WHICHEVER IS GREATER

□ SLOPE AS FOLLOWS:
S.E. RATE OF 2% OR LESS, USE 6%
S.E. RATE OF 3%, USE 5%
S.E. RATE OF 4%, USE 4%
S.E. RATE OF 5%, USE 3%
S.E. RATE OF 7%, USE 1%

ALGEBRAIC DIFFERENCE IN PAVING AND SHOULDER SLOPES NOT TO EXCEED 8%




REQUIRED SHOULDER CUT LINE SAW CUT EXISTING PAVEMENT AT NEW INSIDE EDGE OF PROP. SHOULDER.

*DETAIL A*
*N.T.S.*

| REVISION DATES | | |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION

OFFICE:

**S.R. 40 - CHARLTON COUNTY**
**TYPICAL SECTIONS**

DRAWING No.

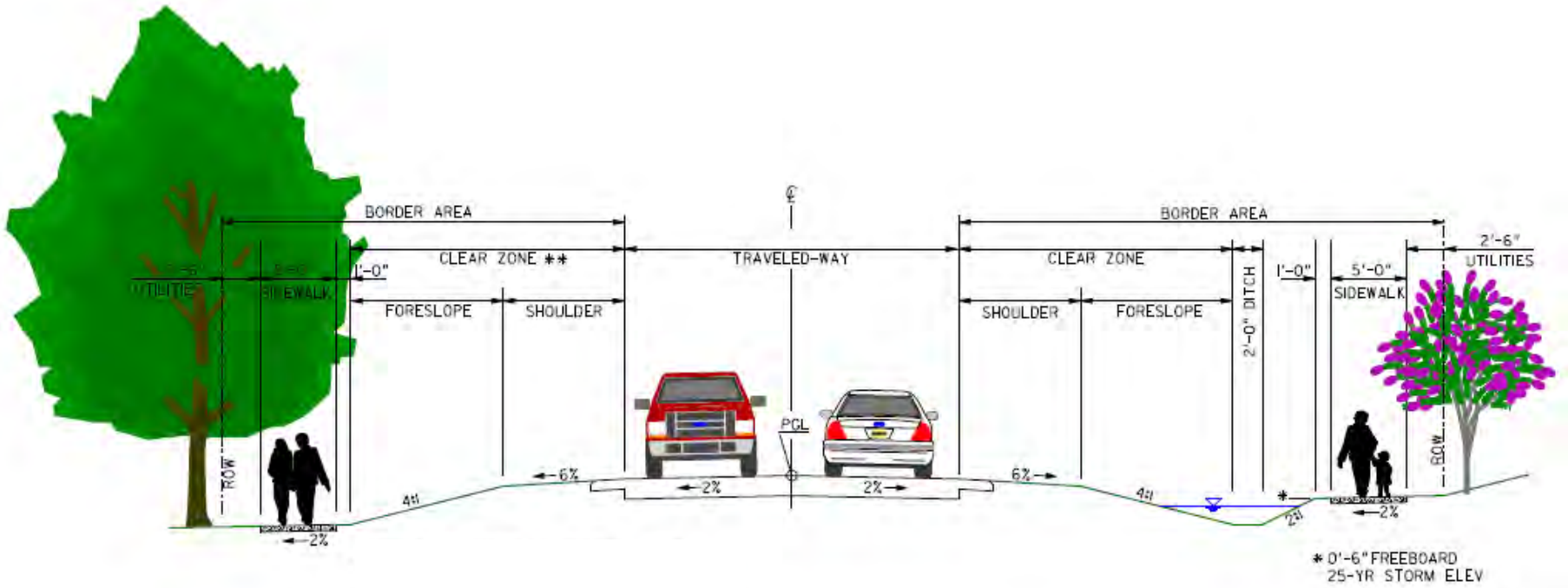



**Figure 9.8. Illustrations of Pedestrian Facility Design – Rural Border Area.**

JOB ESTIMATE REPORT

JOB NUMBER : PI0000821 SPEC YEAR: 01
DESCRIPTION: SR 40 FROM MP 0.63 SR-40 CONNECTOR TO SR-40 MP 2.54
BEGIN PROJECT AT INDIAN TRAIL - 5 LANE SECTION VE CHANGES

ITEMS FOR JOB PI0000821

| LINE | ITEM | ALT | UNITS | DESCRIPTION | QUANTITY | PRICE | AMOUNT |
|---|---|---|---|---|---|---|---|
| 0005 | 150-1000 | | LS | TRAFFIC CONTROL - STP00-0000-00(821) | 1.000 | 100000.00 | 100000.00 |
| 0010 | 153-1300 | | EA | FIELD ENGINEERS OFFICE TP 3 | 1.000 | 63016.25 | 63016.25 |
| 0015 | 205-0001 | | CY | UNCLASS EXCAV | 29700.000 | 4.47 | 132908.09 |
| 0020 | 206-0002 | | CY | BORROW EXCAV, INCL MATL | 134000.000 | 3.86 | 517390.08 |
| 0025 | 310-1101 | | TN | GR AGGR BASE CRS, INCL MATL | 30377.000 | 15.66 | 475797.08 |
| 0030 | 318-3000 | | TN | AGGR SURF CRS | 2000.000 | 21.88 | 43764.24 |
| 0035 | 402-1812 | | TN | RECYL AC LEVELING,INC BM&HL | 2214.000 | 81.42 | 180280.35 |
| 0040 | 402-3113 | | TN | RECYL AC 12.5MM SP,GP1/2,BM&HL | 7191.000 | 65.34 | 469859.94 |
| 0045 | 402-3121 | | TN | RECYL AC 25MM SP,GP1/2,BM&HL | 9448.000 | 69.84 | 659879.59 |
| 0050 | 402-3190 | | TN | RECYL AC 19 MM SP,GP 1 OR 2 ,INC BM&HL | 8861.000 | 71.54 | 633972.56 |
| 0055 | 413-1000 | | GL | BITUM TACK COAT | 6148.000 | 2.45 | 15093.09 |
| 0060 | 432-0214 | | SY | MILL ASPH CONC PVMT, 3.5" DPTH | 28404.000 | 2.09 | 59521.72 |
| 0065 | 436-1000 | | LF | ASPH CONC CURB - STP00-0000-00(821) | 8000.000 | 7.29 | 58372.08 |
| 0070 | 441-0018 | | SY | DRIVEWAY CONCRETE, 8 IN TK | 800.000 | 41.98 | 33585.81 |
| 0071 | 441-0104 | | SY | CONC SIDEWALK, 4 IN | 2100.000 | 37.29 | 78309.00 |
| 0075 | 441-0206 | | SY | PLAIN CONC DITCH PAVING, 6 IN | 3200.000 | 44.28 | 141696.00 |
| 0080 | 441-0740 | | SY | CONC MEDIAN, 4 IN | 439.000 | 25.53 | 11211.54 |
| 0085 | 446-1100 | | LF | PVMT REF FAB STRIPS, TP2,18 INCH WIDTH | 20790.000 | 1.96 | 40929.69 |
| 0090 | 621-4021 | | LF | CONCRETE SIDE BARRIER, TY 2A | 370.000 | 327.31 | 121108.28 |
| 0095 | 634-1200 | | EA | RIGHT OF WAY MARKERS | 15.000 | 106.30 | 1594.57 |
| 0100 | 641-5001 | | EA | GUARDRAIL ANCHORAGE, TP 1 | 6.000 | 634.20 | 3805.20 |
| 0105 | 641-5012 | | EA | GUARDRAIL ANCHORAGE, TP 12 | 6.000 | 1868.03 | 11208.18 |
| 0110 | 163-0232 | | AC | TEMPORARY GRASSING | 6.000 | 397.38 | 2384.33 |
| 0115 | 163-0240 | | TN | MULCH | 234.000 | 210.47 | 49251.45 |
| 0120 | 163-0300 | | EA | CONSTRUCTION EXIT | 8.000 | 985.84 | 7886.72 |
| 0125 | 163-0529 | | LF | CNST/REM TEMP SED BAR OR BLD STRW CK DM | 16000.000 | 4.08 | 65327.52 |
| 0130 | 163-0550 | | EA | CONS & REM INLET SEDIMENT TRAP | 32.000 | 230.37 | 7372.02 |
| 0135 | 165-0010 | | LF | MAINT OF TEMP SILT FENCE, TP A | 10000.000 | 1.02 | 10299.60 |
| 0140 | 165-0030 | | LF | MAINT OF TEMP SILT FENCE, TP C | 1650.000 | 1.11 | 1846.17 |
| 0145 | 165-0041 | | LF | MAINT OF CHECK DAMS - ALL TYPES | 8000.000 | 1.06 | 8508.56 |
| 0150 | 165-0101 | | EA | MAINT OF CONST EXIT | 8.000 | 451.97 | 3615.80 |
| 0155 | 165-0105 | | EA | MAINT OF INLET SEDIMENT TRAP | 32.000 | 66.01 | 2112.50 |
| 0160 | 167-1000 | | EA | WATER QUALITY MONITORING AND SAMPLING | 2.000 | 257.16 | 514.33 |
| 0165 | 167-1500 | | MO | WATER QUALITY INSPECTIONS | 24.000 | 752.79 | 18067.16 |
| 0170 | 171-0010 | | LF | TEMPORARY SILT FENCE, TYPE A | 20000.000 | 1.89 | 37974.60 |
| 0175 | 171-0030 | | LF | TEMPORARY SILT FENCE, TYPE C | 3300.000 | 2.99 | 9882.54 |
| 0180 | 201-1500 | | LS | CLEARING & GRUBBING - STP00-0000-00(821) | 1.000 | 135000.00 | 135000.00 |
| 0185 | 700-6910 | | AC | PERMANENT GRASSING | 12.000 | 732.56 | 8790.76 |
| 0190 | 700-7000 | | TN | AGRICULTURAL LIME | 30.000 | 63.67 | 1910.15 |

JOB ESTIMATE REPORT

| | | | | | | |
|---|---|---|---|---|---|---|
| 0200 | 700-8000 | TN | FERTILIZER MIXED GRADE | 409.570 | 427.02 | 174894.68 |
| 0205 | 700-8100 | LB | FERTILIZER NITROGEN CONTENT | 1200.000 | 2.49 | 2995.43 |
| 0210 | 716-2000 | SY | EROSION CONTROL MATS, SLOPES | 11000.000 | 1.38 | 15224.11 |
| 0215 | 207-2003 | CY | IMPERF TRENCH BKFILL MATL TP 3 | 192.000 | 33.31 | 6395.52 |
| 0220 | 500-3101 | CY | CLASS A CONCRETE | 278.000 | 527.46 | 146634.09 |
| 0225 | 500-3200 | CY | CL B CONC | 5.000 | 364.18 | 1820.93 |
| 0230 | 511-1000 | LB | BAR REINF STEEL | 33200.000 | 0.67 | 22323.02 |
| 0235 | 550-1180 | LF | STM DR PIPE 18",H 1-10 | 250.000 | 34.70 | 8675.89 |
| 0240 | 550-1240 | LF | STM DR PIPE 24",H 1-10 | 150.000 | 39.61 | 5942.03 |
| 0245 | 550-2180 | LF | SIDE DR PIPE 18",H 1-10 | 300.000 | 23.54 | 7064.26 |
| 0250 | 550-2420 | LF | SIDE DR PIPE 42",H 1-10 | 450.000 | 70.88 | 31896.00 |
| 0255 | 550-3342 | EA | SAFETY END SECTION 42",STD,4:1 | 10.000 | 2020.00 | 20200.00 |
| 0260 | 550-3518 | EA | SAFETY END SECTION 18",STD,6:1 | 12.000 | 685.35 | 8224.23 |
| 0265 | 550-4118 | EA | FLARED END SECT 18 IN, SIDE DR | 13.000 | 304.76 | 3961.98 |
| 0270 | 550-4224 | EA | FLARED END SECT 24 IN, ST DR | 3.000 | 532.00 | 1596.00 |
| 0274 | 603-2181 | SY | STN DUMPED RIP RAP, TP 3, 18" | 300.000 | 49.44 | 14833.33 |
| 0275 | 603-2182 | SY | STN DUMPED RIP RAP, TP 3, 24" | 180.000 | 59.36 | 10686.16 |
| 0280 | 603-7000 | SY | PLASTIC FILTER FABRIC | 480.000 | 3.14 | 1507.56 |
| 0285 | 610-9099 | LS | REM WINGWALLS/PARAPETS, STA - STA. | 1.000 | 5043.49 | 5043.49 |
| 0290 | 668-1100 | EA | CATCH BASIN, GP 1 | 12.000 | 1929.29 | 23151.49 |
| 0295 | 668-2100 | EA | DROP INLET, GP 1 | 13.000 | 1838.82 | 23904.67 |
| 0300 | 636-1029 | SF | HWY SGN,TP2 MATL,REFL SH TP 3 | 150.000 | 13.54 | 2032.06 |
| 0305 | 636-1033 | SF | HWY SIGNS, TP1MAT,REFL SH TP 9 | 200.000 | 17.78 | 3556.66 |
| 0310 | 636-2070 | LF | GALV STEEL POSTS, TP 7 | 1000.000 | 6.20 | 6201.41 |
| 0315 | 636-2090 | LF | GALV STEEL POSTS, TP 9 | 200.000 | 7.10 | 1421.25 |
| 0320 | 636-5010 | EA | DELINEATOR, TP 1 | 14.000 | 61.35 | 858.95 |
| 0325 | 653-0120 | EA | THERM PVMT MARK, ARROW, TP 2 | 52.000 | 69.45 | 3611.84 |
| 0330 | 653-0170 | EA | THERM PVMT MARK, ARROW, TP 7 | 5.000 | 84.75 | 423.76 |
| 0335 | 653-0210 | EA | THERM PVMT MARK, WORD , TP 1 | 3.000 | 104.71 | 314.14 |
| 0340 | 653-1501 | LF | THERMO SOLID TRAF ST 5 IN, WHI | 25000.000 | 0.32 | 8219.25 |
| 0345 | 653-1502 | LF | THERMO SOLID TRAF ST, 5 IN YEL | 22000.000 | 0.30 | 6800.42 |
| 0350 | 653-1704 | LF | THERM SOLID TRAF STRIPE,24",WH | 120.000 | 3.38 | 405.80 |
| 0355 | 653-3501 | GLF | THERMO SKIP TRAF ST, 5 IN, WHI | 21000.000 | 0.23 | 4991.49 |
| 0360 | 653-3502 | GLF | THERMO SKIP TRAF ST, 5 IN, YEL | 1000.000 | 0.30 | 304.63 |
| 0365 | 653-6004 | SY | THERM TRAF STRIPING, WHITE | 5400.000 | 2.54 | 13723.18 |
| 0370 | 653-6006 | SY | THERM TRAF STRIPING, YELLOW | 160.000 | 3.11 | 497.62 |
| 0375 | 654-1001 | EA | RAISED PVMT MARKERS TP 1 | 42.000 | 4.25 | 178.75 |
| 0380 | 654-1003 | EA | RAISED PVMT MARKERS TP 3 | 900.000 | 3.50 | 3151.37 |

| | |
|---|---|
| ITEM TOTAL | 4817715.00 |
| INFLATED ITEM TOTAL | 4817715.00 |

TOTALS FOR JOB PI0000821

| | |
|---|---|
| ESTIMATED COST: | 4817715.00 |
| CONTINGENCY PERCENT ( 0.0 ): | 0.00 |
| ESTIMATED TOTAL: | 4817715.00 |

| | |
|---|---|
| Eng. & Inspection @ 5% | $240,885.75 |
| Asphalt adjustment | $480,398.56 |
| Total Cost | $5,538,999.31 |

| | | |
|---|---|---|
| **PROJ. NO.** | STP00-0000-00(821) Charlton County | CALL NO. |
| P.I. NO. | 0000821 | |
| DATE | 1/26/2013 | |

| INDEX (TYPE) | DATE | INDEX |
|---|---|---|
| REG. UNLEADED | Jan-13 | $ 3.278 |
| DIESEL | | $ 3.938 |
| 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) | | | **471415.14** | **$ 471,415.14** |
| 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) | | | 1385.7 | |

| ASPHALT | Tons | %AC | AC ton |
|---|---|---|---|
| Leveling | 2214 | 5.0% | 110.7 |
| 12.5 OGFC | 7191 | 5.0% | 359.55 |
| 12.5 mm | | 5.0% | 0 |
| 9.5 mm SP | | 5.0% | 0 |
| 25 mm SP | 9448 | 5.0% | 472.4 |
| 19 mm SP | 8861 | 5.0% | 443.05 |
| | **27714** | | **1385.7** |

**BITUMINOUS TACK COAT**

| | | | | |
|---|---|---|---|---|
| Price Adjustment (PA) | | | **$ 8,983.42** | **$ 8,983.42** |
| 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) | | | 26.40628047 | |

| Bitum Tack Gals | gals/ton | tons |
|---|---|---|
| 6148 | 232.8234 | 26.4062805 |

| | | | |
|---|---|---|---|
| **PROJ. NO.** | STP00-0000-00(821) Charlton County | | CALL NO. |
| P.I. NO. | 0000821 | | |
| DATE | 1/26/2013 | | |

**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. | | 0.20 | 0 | 232.8234 | 0 |
| Double Surf.Trmt. | | 0.44 | 0 | 232.8234 | 0 |
| Triple Surf. Trmt | | 0.71 | 0 | 232.8234 | 0 |
| | | | | | 0 |

| | | |
|---|---|---|
| **TOTAL LIQUID AC ADJUSTMENT** | **$** | **480,398.56** |

GEORGIA DEPARTMENT OF TRANSPORTATION
PRELIMINARY ROW COST ESTIMATE SUMMARY

Date: 3/28/2012 Project: STP00-0000-00(821)
Revised: County: Charlton
PI: "0000821"
Description: Widen SR-40 from 2-lanes to 5-lane rural section and to 4-lanes w/ 32' median
Project Termini: from SR-40 Connector/Indian Trail to Mile Post 2.54 Southeast of CR 82
Existing ROW: 100'
Parcels: 6 Required ROW: 190' & Varies

| | | |
|---|---|---|
| Land and Improvements | | $145,787.29 |
| *Proximity Damage* | *$20,000.00* | |
| *Consequential Damage* | *$0.00* | |
| *Cost to Cures* | *$40,000.00* | |
| *Trade Fixtures* | *$0.00* | |
| *Improvements* | *$0.00* | |
| Valuation Services | | $15,437.50 |
| Legal Services | | $41,550.00 |
| Relocation | | $12,000.00 |
| Demolition | | $0.00 |
| Administrative | | $52,000.00 |
| TOTAL ESTIMATED COSTS | | $266,774.79 |
| ***TOTAL ESTIMATED COSTS (ROUNDED)*** | | ***$267,000.00*** |

| Preparation Credits | Hours | Signature |
|---|---|---|
| | | |

Prepared By: CG#: 3-28-2012
Approved By: CG#: 2816999 03/(DATE)/2012

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

allsop

D.O.T. 66

# DEPARTMENT OF TRANSPORTATION
# STATE OF GEORGIA

## INTERDEPARTMENTAL CORRESPONDENCE

FILE: STP-000-00(821) CHARLTON PI # 0000821 OFFICE: Utilities

DATE: February 01, 2013

FROM: Stephen Thomas, District Utilities Engineer

TO: Tim Mathews; Project Manager

ATTENTION: PARSONS, BRINCKERHOFF, QUADE & DOUGLAS, INC. DESIGN FIRM

SUBJECT: Utility Cost Estimate- SR 40 Camden County

Per a request received April 4, 2012, a field visit and review of the preliminary plans was made by this office and the following utilities were found to be located within the project limits:

| | |
|---|---|
| **Telephone** | **AT&T** |
| | **Windstream** |
| **Water** | **City of Folkston** |
| **Sewer** | **City of Folkston** |
| **CATV** | **Comcast** |
| **Power** | **Georgia Power Company-Distribution** |
| | **Okefenoke REMC** |
| **Gas** | **Atlanta Gas Light** |

This project consists of the widening SR 40 from MP 0.63 near the SR 40 Connector intersection with SR 40 the project would widen SR-40 from a two-lane to a five-lane rural section and then 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 for total project length of 1.91 miles.

This estimate is based upon a field visit and preliminary layout plans.

Continued……

## TELEPHONE

The existing telecommunication facilities that may be in conflict belong to **AT&T and Windstream.**

**AT&T** has facilities at the following location;

At STA 55+63 LT **AT&T** has a major crossing and should not be in conflict.

**Windstream** has facilities at the following locations;

From the beginning of the project west of SR 40 Spur to existing divided hwy section, **Windstream** has approximately 20,000 LF of buried phone cable, including handholes and pedestals all of which are on existing R/W. If these need to be relocated the estimated cost to **Windstream** is $200,000.00.

These are the known facilities belonging to **Windstream**, the estimated non-reimbursable cost amounts to $200,000.00.

## Water **City of Folkston**

**City of Folkston** has facilities at the following locations;

From the beginning of the project west of SR 40 Spur to existing divided hwy section, **City of Folkston** has approximately 1,750 LF of water main including valves and fire hydrants all of which are on existing R/W. If these need to be relocated the estimated cost to **City of Folkston** is $86,250.00.

These are the known facilities belonging to **City of Folkston**, the estimated non-reimbursable cost amounts to $86,250.00.

## Sewer

**City of Folkston has** facilities at the following locations;

From the beginning of the project west of SR 40 Spur to existing divided hwy section, **City of Folkston** has approximately 1,200 LF of gravity sanitary sewer main including manholes all of which are on existing R/W, a lift station, which is located STA 58+90 RT off of existing R/W; none of these facility appear to be in conflict.

Continued……

## Cable TV

**Comcast** has facilities at the following locations;

From the beginning of the project west of SR 40 Spur to existing divided hwy section, **Comcast** has approximately 2,150 LF of aerial cable, all of which is on existing R/W. If these need to be relocated the estimated cost to **Comcast** is $21,500.00.
These are the known facilities belonging to **Comcast**, the estimated non-reimbursable cost amounts to $21,500.00.

## POWER

The existing power facilities that may be in conflict on this project belong to **Georgia Power Company-Distribution and Okefenoke REMC**

**Georgia Power Company-Distribution** has facilities at the following locations;
At the beginning of the project **GPC-D** has 1 distribution pole and 1 guy pole. These poles do not appear to be in conflict.

**Okefenoke REMC** has facilities at the following locations;

From the beginning of the project west of SR 40 Spur to existing divided hwy section, **Okefenoke REMC** has 10,000 LF of 3 phase aerial distribution with a total of 35 poles of which 16 poles appear to be off of our existing right of way and will be reimbursable to them; and19 poles appear to be on our existing right of way and are not reimbursable to them.

These are the known facilities belonging to **Okefenoke REMC** on this project; the estimated non-reimbursable cost is $171,000.00, the estimated reimbursable cost is $144,000.00. The total estimated cost to **Okefenoke REMC** is $315,000.00.

## Gas

**Atlanta Gas Light Resources** has facilities at the following locations;

From the beginning of the project west of SR 40 Spur to existing divided hwy section, **Atlanta Gas Light Resources** has 10,000 LF of buried gas pipeline and valves that appear to be on existing right of way and are not reimbursable to them. A regulator station located at STA 55+00 LT that is off existing R/W, on an easement, does not appear to be in conflict.

Continued……

**FILE:** STP-000-00(821) CHARLTON PI # 0000821 continued

These are the known facilities belonging to **Atlanta Gas Light Resources** on this project; the estimated non-reimbursable cost is $500,000.00. The total estimated cost to **Atlanta Gas Light Resources** is $500,000.00.

The total estimated non-reimbursable cost for this project is $978,750.00.
The total estimated reimbursable cost for this project is $144,000.00.
The total estimated non-reimbursable and reimbursable cost for this project is $1,122,750.00.

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

Copy:
Patrick Allen, State Utilities Preconstruction Engineer (via e-mail)
Vahid Munshi, Utilities Preconstruction Engineer (via e-mail)
Robert Murphy, Project Manager
District Office files
Utility Office Files

D.O.T. 66

# DEPARTMENT OF TRANSPORTATION
# STATE OF GEORGIA

## INTERDEPARTMENT CORRESPONDENCE

**FILE** STP00-0000-00(821) Charlton County
PI No. 0000821

**OFFICE** Environmental Services

**DATE** February 4, 2013

**FROM** Travis Garnto, Consultant Ecologist

**TO** Geoffrey Donald, Consultant Design Engineer

**SUBJECT** PRELIMINARY ENVIRONMENTAL MITIGATION COST (ESTIMATE)

As required by the PDP process, we are furnishing you with a Preliminary Stream Mitigation cost estimate for current cost of linear stream impacts, acres of disturbed wetlands, and any other potential IP or Stream BV costs.

| Environmental Impacts | Total/Units | Estimated Cost |
|---|---|---|
| Linear Stream Impacts | 1,562 lf | $196,194.00 |
| Acres of Disturbed Wetland | 2.02 acres | $30,240.00 |
| | | $0.00 |
| | | $0.00 |
| | | $0.00 |
| | | $0.00 |
| | | $0.00 |
| **Totals** | | **$226,434.00** |

**Total Mitigation Cost:** **$226,434.00**

**Total Preliminary Mitigation Cost Estimate $226,434.00**

If you have any questions, please contact Travis Garnto at (404)364-8193.

**cc:** Mitch Stone, District Materials Engineer
Brad Cleveland, Area Engineer
Eugene Hopkins, ECB
File

D.O.T. 66

# DEPARTMENT OF TRANSPORTATION
# STATE OF GEORGIA

## INTERDEPARTMENT CORRESPONDENCE

**FILE** STP00-0000-00(820), (821) Charlton & Camden Counties
PI No. 0000820, 0000821

**OFFICE** Traffic Engineering

**DATE** February 1, 2013

**FROM** Geoffrey Donald, Consultant Design Engineer

**TO** Project Files

**SUBJECT** Traffic Analysis Executive Summary

ADT & TMC counts were conducted in August 2011 at the locations listed below:

A. Intersection Turning Movement Counts at the following eight (8) locations (See Figure 1, 2 & 3 below)
1. SR 40/Main Street @ US 301 Bypass/SR 40 Connector/Indian Trail Road
2. SR 40/Main Street@ CR 78/Pinkney Drive
3. SR 40/Main Street@ CR 79/Camp Pinkney Road
4. SR 40/Main Street@ CR 80/Reynolds Road
5. SR 40/Okefenokee Parkway @ SR 110
6. SR 40/Okefenokee Parkway @ CR 58/Browntown Road
7. SR 40/Okefenokee Parkway @ CR 61/Vacunna Ruhamah Road
8. SR 40/Okefenokee Parkway @ CR 66/Colerain Road

B. 24 Hour ADT Counts at the following three (3) locations (See Figure 1, 2 & 3 below):
1. US 301 Bypass/SR 40 Connector/Indian Trail Road
2. SR 40/Main Street east of US 301 Bypass/SR 40 Connector/Indian Trail Road
3. SR 40/Okefenokee Parkway east of CR 66/Colerain Road

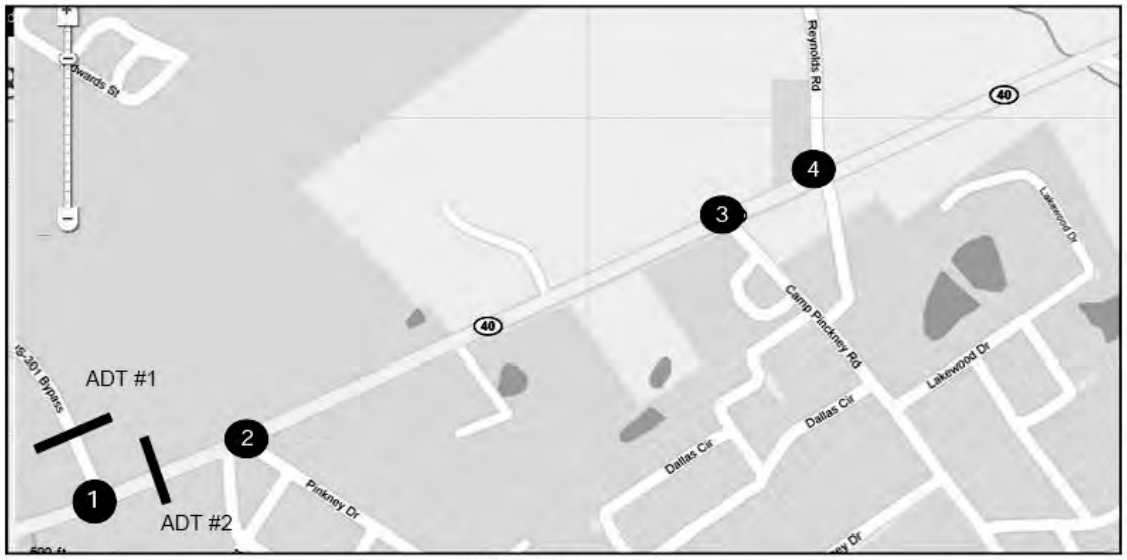


Figure 1

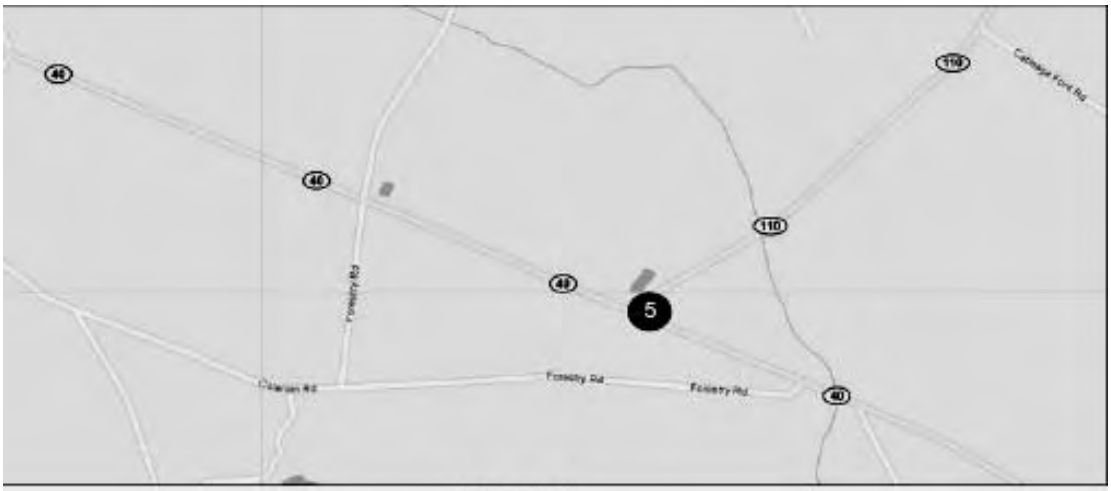


Figure 2

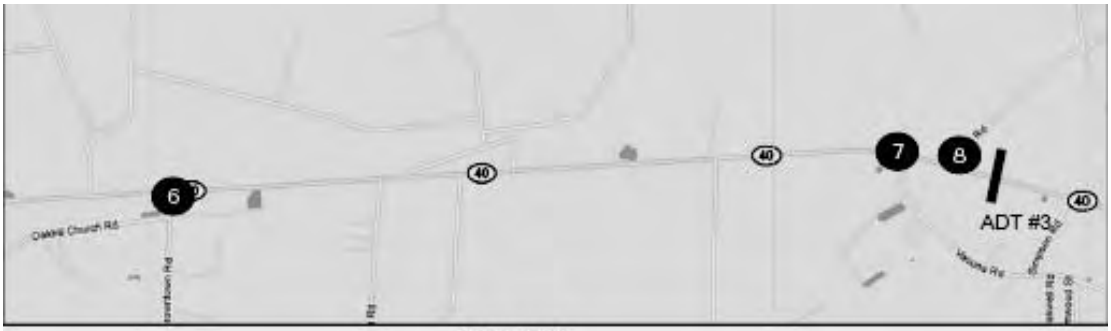


Figure 3

The above listed intersections are all existing unsignalized intersections. Raw counts were rounded and balanced throughout the corridor. Existing 2011 ADT's are shown in the attached Traffic Diagrams Figure 1 and the existing 2011 Peak Hour traffic are shown in attached Traffic Diagrams Figure 4. The ten study intersections within project limits are the same as 2007 GDOT study. The volumes for a couple of minor intersections are taken from the previous study and were balanced accordingly. The estimated ADT and DHV traffic projections for the existing year 2011, opening year 2016, and the design year 2036 are attached in Figures 1 through 10.

**Estimated Growth Rates**

The opening year for this project is 2016 and the design year is 2036. Based on historic volumes from Georgia's State Traffic and Report Statistics (GASTARS) an average growth rate of 1.88% (for both ADT & Peak Hour Volumes) was determined to be appropriate for future year traffic projections see Table 1 below.

**Estimated Peak Traffic Volume Results**

**2011 ADT = 5200**
**2016 ADT = 5700**
**2036 ADT = 7640**
**K = 1.88%**
**D = 50%**
**T = 7.5%**
**24 HOUR T. = 14%**
**S.U. = 5%**
**COMB. = 9%**

**Table-1: Growth Rate on SR 40 West of Colerain Road**

| | Total AADT | Type of Count | Annual Growth Rate |
|---|---|---|---|
| **2005** | 3,090 | *Actual* | |
| **2006** | 3,800 | *Actual* | 22.98% |
| **2007** | 3,590 | *Actual* | -5.53% |
| **2008** | 2,820 | *Actual* | -21.45% |
| **2009** | 2,850 | *Estimate* | 1.06% |
| **2010** | 3,380 | *Actual* | 18.60% |
| Average Growth Rate | | | 3.13% |
| 2005 to 2010 Growth Rate | | | 1.88% |

Source: Georgia's State Traffic and Report Statistics (GASTARS)
Traffic Counter 0134 located on SR 40 West of SR 110

## Signal Warrant Analysis Results

This study to justify whether a Traffic Control Signal is needed for the three major intersections 1, 5 and 8 listed above along SR-40 in Charlton and Camden County, GA. The Manual on Uniform Traffic Control Devices (MUTCD) is used as a reference. Chapter 4C of MUTCD deals with the traffic control signal studies. The traffic data was counted for 2011 conditions and later projected for the years 2016 (Opening Year) and 2036 (Design Year)
The major intersections 1, 5 and 8 listed above or SR-40 Connector, SR-110 and CR-66 Colerain Rd respectively are the three largest existing T-intersections and are stop sign controlled on the minor roads. SR-40Connector/Indian Trail in addition has an existing flashing caution light. Based on MUTCD signal warrant diagrams 1, 2, and 3 (attached) no signals are warranted at the three intersections for the projected 2036 design hourly traffic volumes.

## Capacity Analysis Results

| Location | Existing Year (2011) | | Build Year* No-Build (2016) | Build Year* Proposed Project (2016) | Design Year** No-Build (2036) | | Design Year** Proposed Project (2036) | |
|---|---|---|---|---|---|---|---|---|
| | ADT<br>DHV | V/C<br>(LOS) | ADT<br>DHV | ADT<br>DHV | ADT<br>DHV | V/C<br>(LOS) | ADT<br>DHV | V/C<br>(LOS) |
| ***Roadway Links Beyond Proposed Termini*** | | | | | | | | |
| SR 40 west of Indian Trail/SR 40 Connector | 3300<br>140 | 0.09<br>(A) | 3620<br>150 | 3620<br>150 | 4860<br>200 | 0.13<br>(B) | 4860<br>200 | 0.06<br>(A) |
| SR 40 east of Indian Trail/SR 40 Connector | 5200<br>230 | 0.15<br>(B) | 5700<br>250 | 5700<br>250 | 7640<br>330 | 0.28<br>(C) | 7640<br>330 | 0.11<br>(A) |
| SR 40 west of SR 110 | 3800<br>170 | 0.11<br>(A) | 4160<br>190 | 4160<br>190 | 5600<br>250 | 0.16<br>(B) | 5600<br>250 | 0.08<br>(A) |
| Middle of SR 40 Corridor: at CR 57 Temple Church Rd | 4900<br>240 | 0.16<br>(B) | 5360<br>260 | 5360<br>260 | 7200<br>350 | 0.23<br>(C) | 7200<br>350 | 0.11<br>(A) |
| SR 40 west of Colerain Road | 4700<br>230 | 0.15<br>(B) | 5160<br>250 | 5160<br>250 | 6920<br>330 | 0.22<br>(C) | 6920<br>330 | 0.11<br>(A) |
| SR 40 east of Colerain Road | 3840<br>180 | 0.12<br>(A) | 4200<br>200 | 4200<br>200 | 5640<br>270 | 0.18<br>(B) | 5640<br>270 | 0.09<br>(A) |

| *Intersections at or near Proposed End of Project* | AM LOS | PM LOS | AM LOS | PM LOS | AM LOS | PM LOS | AM LOS | PM LOS | AM LOS | PM LOS |
|---|---|---|---|---|---|---|---|---|---|---|
| Western: SR 40 at SR 40 Connector | A | A | A | A | A | A | A | A | A | A |
| Eastern: SR 40 at Colerain Road | A | A | A | A | A | A | A | A | A | A |

Notes:
* Build Year (2012) denotes when the project corridor will be open to traffic.
**Design Year (2032) denotes the twenty year projection from when the project was open to traffic.
LOS= Level of Service

## Crash Data Analysis Results

Crash information for SR 40 in the proposed project area was analyzed using the latest available data (2007-2009). During this period, there were a total of 175 crashes with a total of 86 injuries and 1 fatality.

Crash, injury and fatality rates for the proposed project were compared to statewide rates for similar roadway facilities. The crash rate for the section of the project from west of Indian Trail to east of Colerain Road did not exceed the statewide crash rate from 2007 to 2009. This section of the project exceeded the statewide injury rate and fatality rate in 2009. The crash and injury rates for the section of the project from east of Colerain Road to I-95 exceeded the statewide rates for the period between 2007 and 2009. Refer to Table 4 for the crash, injury and fatality figures for the project for 2007-2009. Refer to Table 4A and 4B for the statewide versus project crash, injury and fatality rates. The statewide crash, injury and fatality averages are determined by functional classification. The two project segments are divided into two tables since each segment has a different functional classification.

Approximately 52 percent of the crashes on SR 40 from west of Indian Trail to east of Colerain Road were rear-end and angle crashes. Approximately 65 percent of the crashes from east of Colerain Road to I-95 were rear-end and angle crashes. Table 5 shows the crash types on the existing facility for the project area for the period 2007 to 2009.

**Table 4: 2007-2009 Crashes, Injuries and Fatalities**

| | 2007 | | 2008 | | 2009 | | Total 2007-2009 | |
|---|---|---|---|---|---|---|---|---|
| | SR 40 west of Indian Trail to east of Colerain Road | East of Colerain Road to I-95 | SR 40 west of Indian Trail to east of Colerain Road | East of Colerain Road to I-95 | SR 40 west of Indian Trail to east of Colerain Road | East of Colerain Road to I-95 | SR 40 west of Indian Trail to east of Colerain Road | East of Colerain Road to I-95 |
| **Crashes** | 37 | 29 | 29 | 27 | 34 | 19 | 100 | 75 |
| **Injuries** | 15 | 13 | 19 | 9 | 21 | 9 | 55 | 31 |
| **Fatalities** | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |

Source: GDOT, Office of Traffic Safety and Design

**Table 4A: Statewide vs Project Crash, Injury and Fatality Rates-SR 40 west of Indian Trail to east of Colerain Road**

*Functional Classification: Rural Minor Arterial*

| Year | Crash Rate | | Injury Rate | | Fatalities | |
|---|---|---|---|---|---|---|
| | SR 40 | Statewide Average | SR 40 | Statewide Average | SR 40 | Statewide Average |
| **2007** | 184 | 194 | 75 | 106 | 0.00 | 2.76 |
| **2008** | 144 | 186 | 94 | 100 | 0.00 | 2.65 |
| **2009** | 174 | 187 | **108** | 98 | **5.13** | 2.35 |
| ***Totals*** | 167 | 189 | 92 | 101 | 1.71 | 2.59 |

Source: GDOT, Office of Traffic Safety and Design
Note: All rates are crashes, injuries or fatalities per 100 million travel miles.

**Table 4B: Statewide vs Project Crash, Injury and Fatality Rates-Colerain Road to I-95**

*Functional Classification: Rural Major Collector*

| Year | Crash Rate | | Injury Rate | | Fatalities | |
|---|---|---|---|---|---|---|
| | Colerain Road | Statewide Average | Colerain Road | Statewide Average | Colerain Road | Statewide Average |
| **2007** | **564** | 203 | **253** | 109 | 0.00 | 3.55 |
| **2008** | **525** | 194 | **175** | 100 | 0.00 | 3.39 |
| **2009** | **381** | 191 | **180** | 99 | 0.00 | 2.72 |
| ***Totals*** | **490** | 196 | **203** | 103 | 0.00 | 3.22 |

Source: GDOT, Office of Traffic Safety and Design
Note: All rates are crashes, injuries or fatalities per 100 million travel miles.

**Table 5: Crash Type for Existing Facilities (2007-2009)**

| | SR 40 | | Colerain Road | |
|---|---|---|---|---|
| | Total Crashes 2007-2009 | Percentage of Total | Total Crashes 2007-2009 | Percentage of Total |
| **Angle** | 23 | 23.0% | 26 | 34.7% |
| **Rear-end** | 29 | 29.0% | 23 | 30.7% |
| **Sideswipe same direction** | 4 | 4.0% | 4 | 5.3% |
| **Sideswipe opposite direction** | 3 | 3.0% | 3 | 4.0% |
| **Head-on** | 1 | 1.0% | 0 | 0.0% |
| **Not a collision with a vehicle** | 40 | 40.0% | 19 | 25.3% |
| **TOTAL** | 100 | 100% | 75 | 100% |

Source: GDOT, Office of Traffic Safety and Design

**Standard:**

04 **The need for a traffic control signal shall be considered if an engineering study finds that one of the following conditions exist for each of any 8 hours of an average day:**

**A. The vehicles per hour given in both of the 100 percent columns of Condition A in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection; or**

**B. The vehicles per hour given in both of the 100 percent columns of Condition B in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.**

**In applying each condition the major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of these 8 hours.**

Option:

05 If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the traffic volumes in the 70 percent columns in Table 4C-1 may be used in place of the 100 percent columns.

*Guidance:*

06 *The combination of Conditions A and B is intended for application at locations where Condition A is not satisfied and Condition B is not satisfied and should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.*

**Standard:**

07 **The need for a traffic control signal shall be considered if an engineering study finds that both of the following conditions exist for each of any 8 hours of an average day:**

**A. The vehicles per hour given in both of the 80 percent columns of Condition A in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection; and**

**B. The vehicles per hour given in both of the 80 percent columns of Condition B in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.**

**These major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied in Condition A shall not be required to be the same 8 hours satisfied in Condition B. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.**

2036 PEAK HOUR • INDIAN TRAIL
X SR-110
* COLERAIN RD

## Table 4C-1. Warrant 1, Eight-Hour Vehicular Volume

### Condition A—Minimum Vehicular Volume

| Number of lanes for moving traffic on each approach | | Vehicles per hour on major street (total of both approaches) | | | | Vehicles per hour on higher-volume minor-street approach (one direction only) | | | |
|---|---|---|---|---|---|---|---|---|---|
| Major Street | Minor Street | 100%[a] | 80%[b] | 70%[c] | 56%[d] | 100%[a] | 80%[b] | 70%[c] | 56%[d] |
| 1 | 1 | 500 | 400 | 350 | 280 | 150 | 120 | 105 | 84 |
| 2 or more | 1 | 600 | 480 | 420 | 336 | 150 | 120 | 105 | 84 |
| 2 or more | 2 or more | 600 | 480 | 420 | 336 | 200 | 160 | 140 | 112 |
| 1 | 2 or more | 500 | 400 | 350 | 280 | 200 | 160 | 140 | 112 |

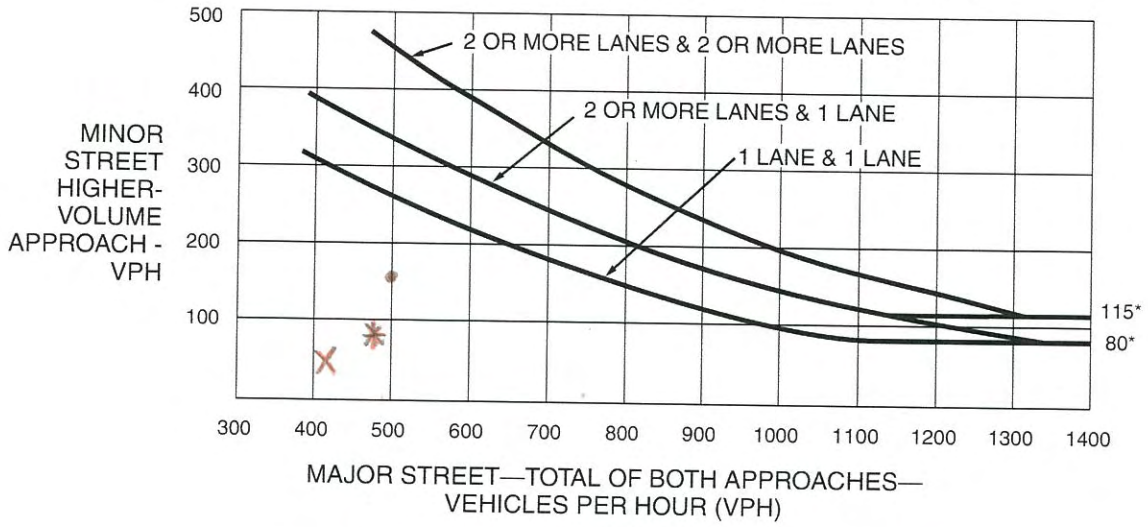
MAJOR MINOR
• 500 150
X 410 40
* 480 80

### Condition B—Interruption of Continuous Traffic

| Number of lanes for moving traffic on each approach | | Vehicles per hour on major street (total of both approaches) | | | | Vehicles per hour on higher-volume minor-street approach (one direction only) | | | |
|---|---|---|---|---|---|---|---|---|---|
| Major Street | Minor Street | 100%[a] | 80%[b] | 70%[c] | 56%[d] | 100%[a] | 80%[b] | 70%[c] | 56%[d] |
| 1 | 1 | 750 | 600 | 525 | 420 | 75 | 60 | 53 | 42 |
| 2 or more | 1 | 900 | 720 | 630 | 504 | 75 | 60 | 53 | 42 |
| 2 or more | 2 or more | 900 | 720 | 630 | 504 | 100 | 80 | 70 | 56 |
| 1 | 2 or more | 750 | 600 | 525 | 420 | 100 | 80 | 70 | 56 |

[a] Basic minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000
[d] May be used for combination of Conditions A and B after adequate trial of other remedial measures when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

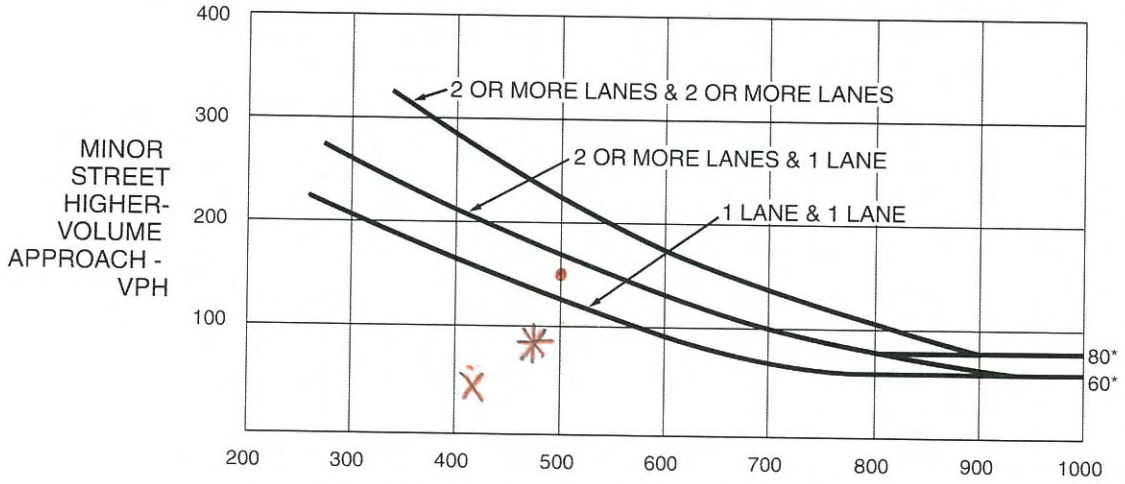
## Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume




*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

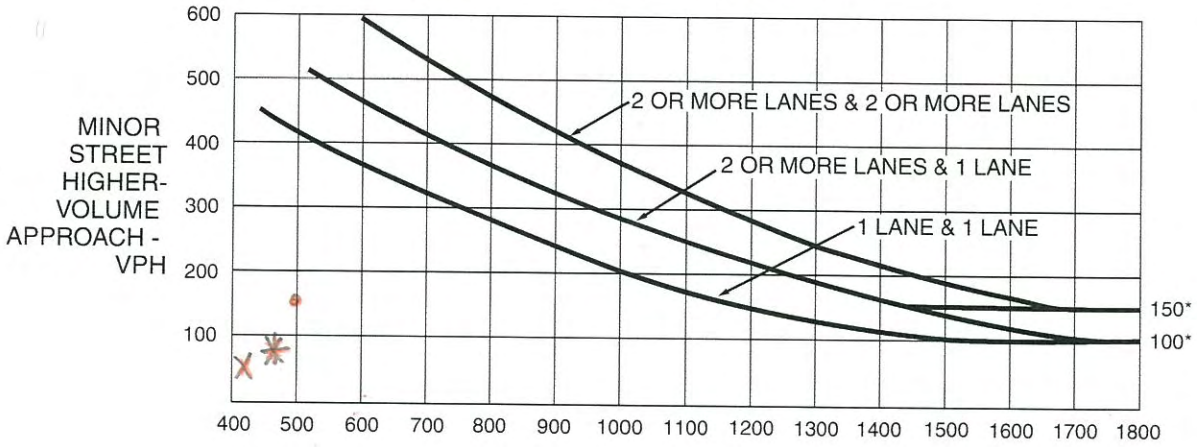
## Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

**(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)**




*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

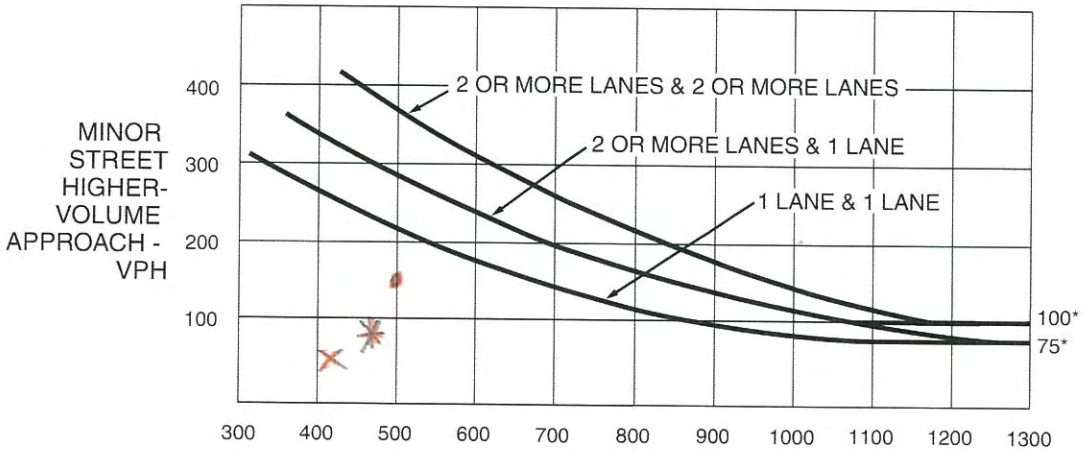
## Figure 4C-3. Warrant 3, Peak Hour



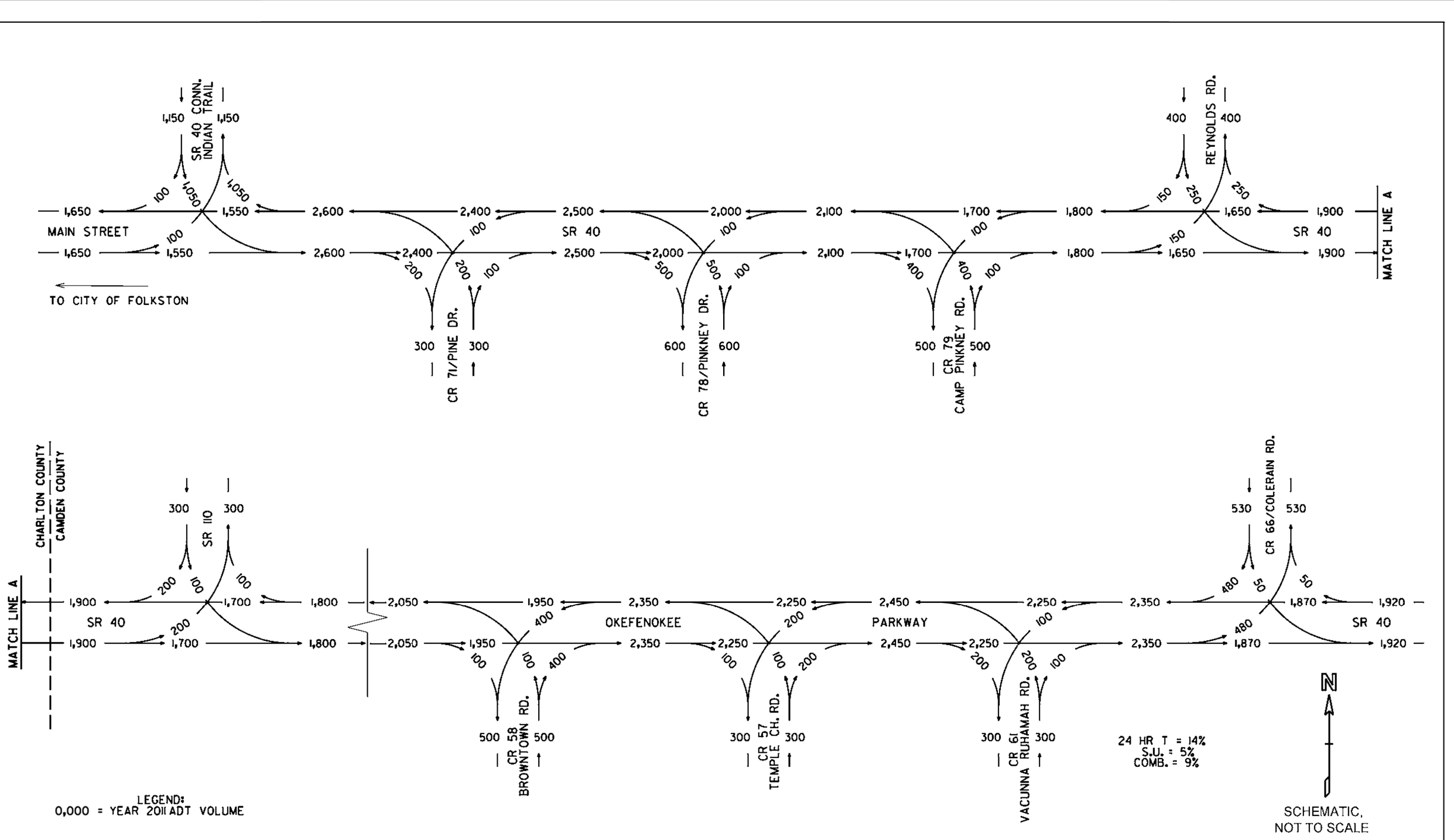

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

## Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

**(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)**




*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.




PREPARED BY:

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**DEPARTMENT OF TRANSPORTATION**
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**P.I. 0000820 & 0000821**
**CAMDEN/CHARLTON COUNTIES**
**SR 40 FROM SR 40 CONNECTOR/CHARLTON COUNTY TO CR 66/CAMDEN COUNTY**

**FIGURE 1**
**2011 EXISTING ADT VOLUMES**

OCTOBER 19, 2011

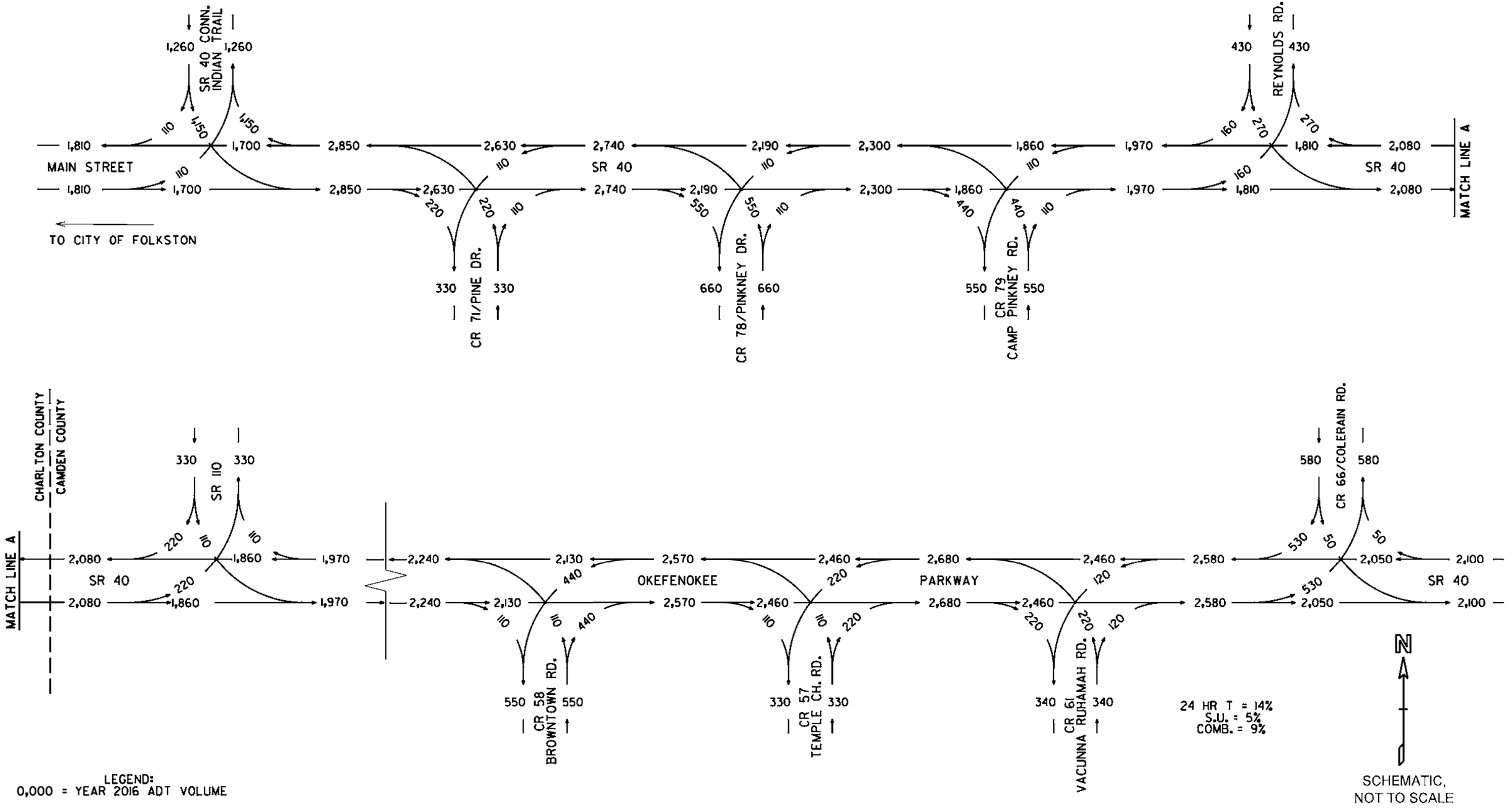


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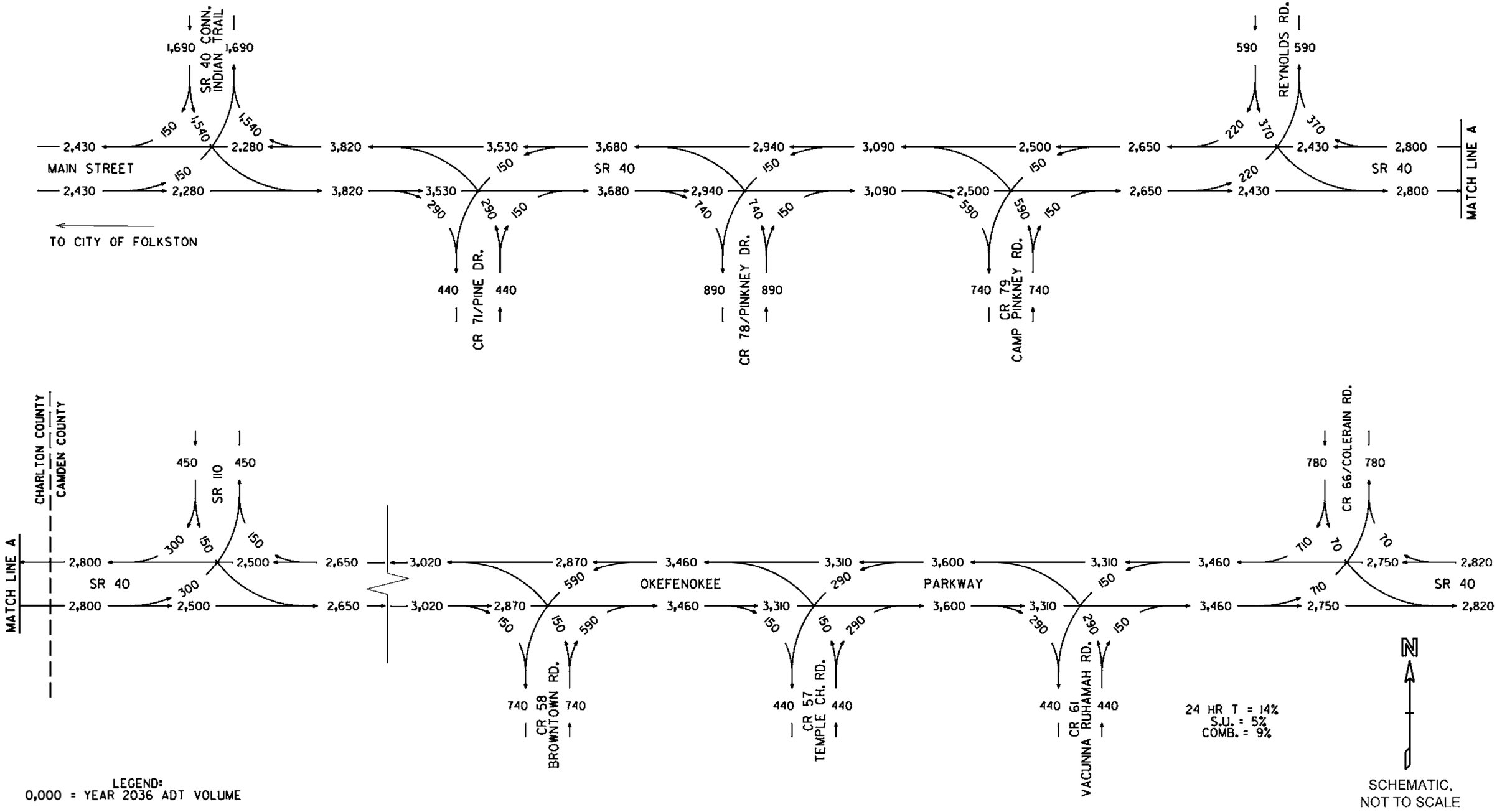
**FIGURE 2**
**2016 NO-BUILD ADT VOLUMES**

OCTOBER 19, 2011

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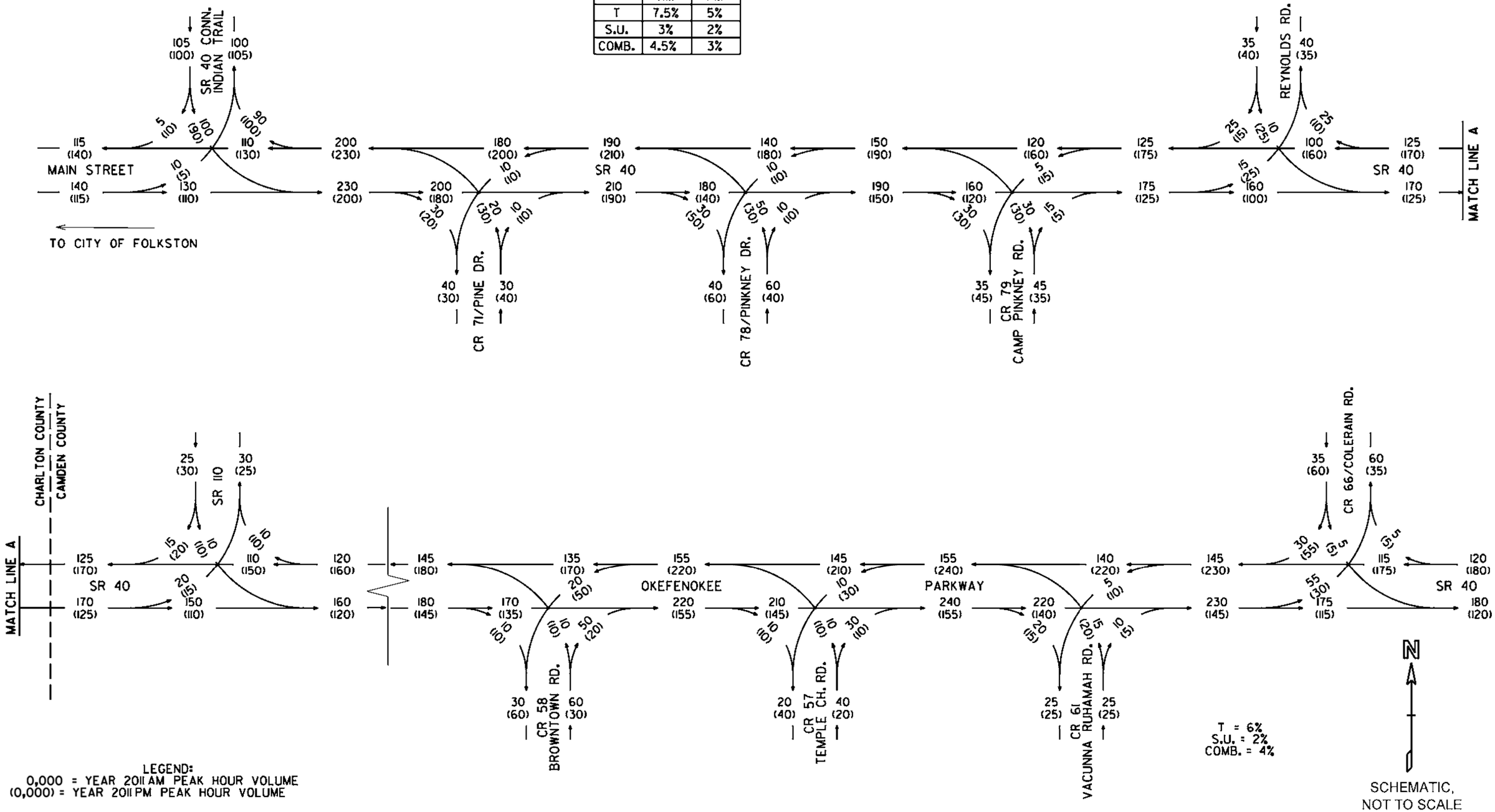
**SR 40 FROM SR 40 CONNECTOR/CHARLTON COUNTY TO CR 66/CAMDEN COUNTY**

**FIGURE 3**
**2036 NO-BUILD ADT VOLUMES**

OCTOBER 19, 2011

| | AM | PM |
|---|---|---|
| T | 7.5% | 5% |
| S.U. | 3% | 2% |
| COMB. | 4.5% | 3% |




LEGEND:
0,000 = YEAR 2011 AM PEAK HOUR VOLUME
(0,000) = YEAR 2011 PM PEAK HOUR VOLUME

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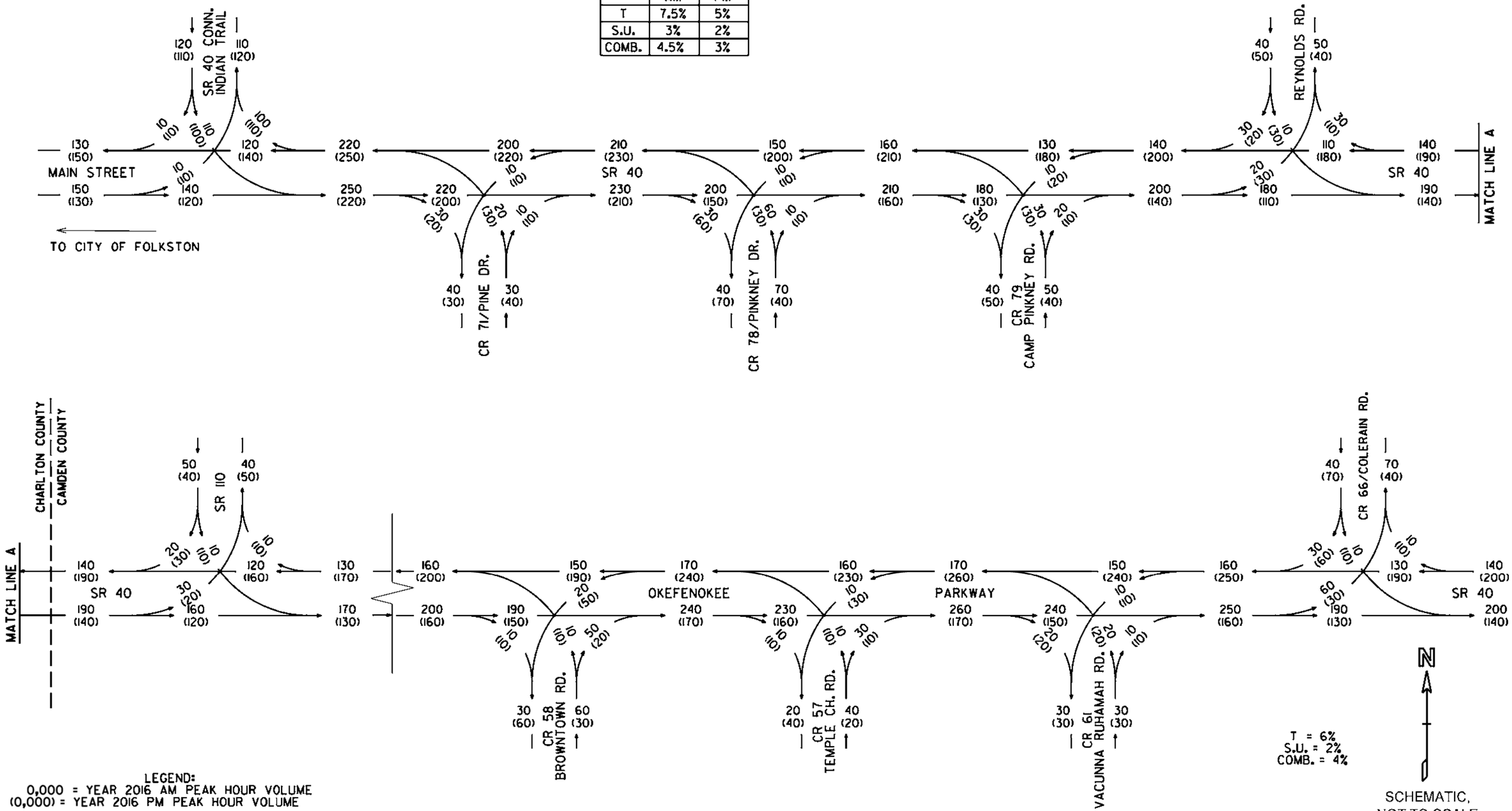
**SR 40 FROM SR 40 CONNECTOR/CHARLTON COUNTY TO CR 66/CAMDEN COUNTY**

**FIGURE 4**
**2011 EXISTING PEAK HOUR VOLUMES**

OCTOBER 19, 2011

| | AM | PM |
|---|---|---|
| T | 7.5% | 5% |
| S.U. | 3% | 2% |
| COMB. | 4.5% | 3% |




LEGEND:
0,000 = YEAR 2016 AM PEAK HOUR VOLUME
(0,000) = YEAR 2016 PM PEAK HOUR VOLUME

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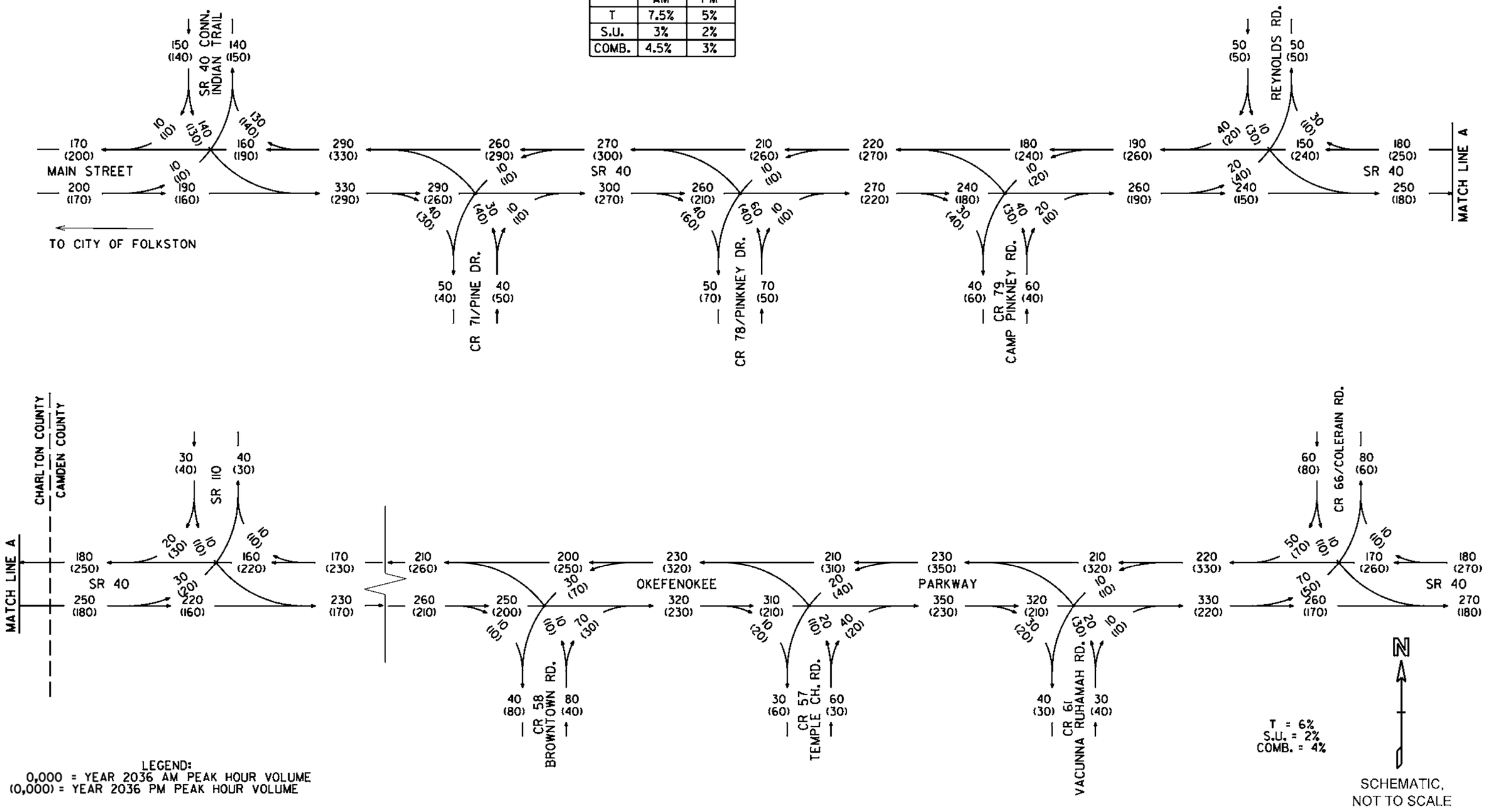
**SR 40 FROM SR 40 CONNECTOR/CHARLTON COUNTY TO CR 66/CAMDEN COUNTY**

**FIGURE 5**
**2016 NO-BUILD**
**PEAK HOUR VOLUMES**

OCTOBER 19, 2011

| | AM | PM |
|---|---|---|
| T | 7.5% | 5% |
| S.U. | 3% | 2% |
| COMB. | 4.5% | 3% |




LEGEND:
0,000 = YEAR 2036 AM PEAK HOUR VOLUME
(0,000) = YEAR 2036 PM PEAK HOUR VOLUME

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**SR 40 FROM SR 40 CONNECTOR/CHARLTON COUNTY TO CR 66/CAMDEN COUNTY**

**FIGURE 6**
**2036 NO-BUILD**
**PEAK HOUR VOLUMES**

OCTOBER 19, 2011

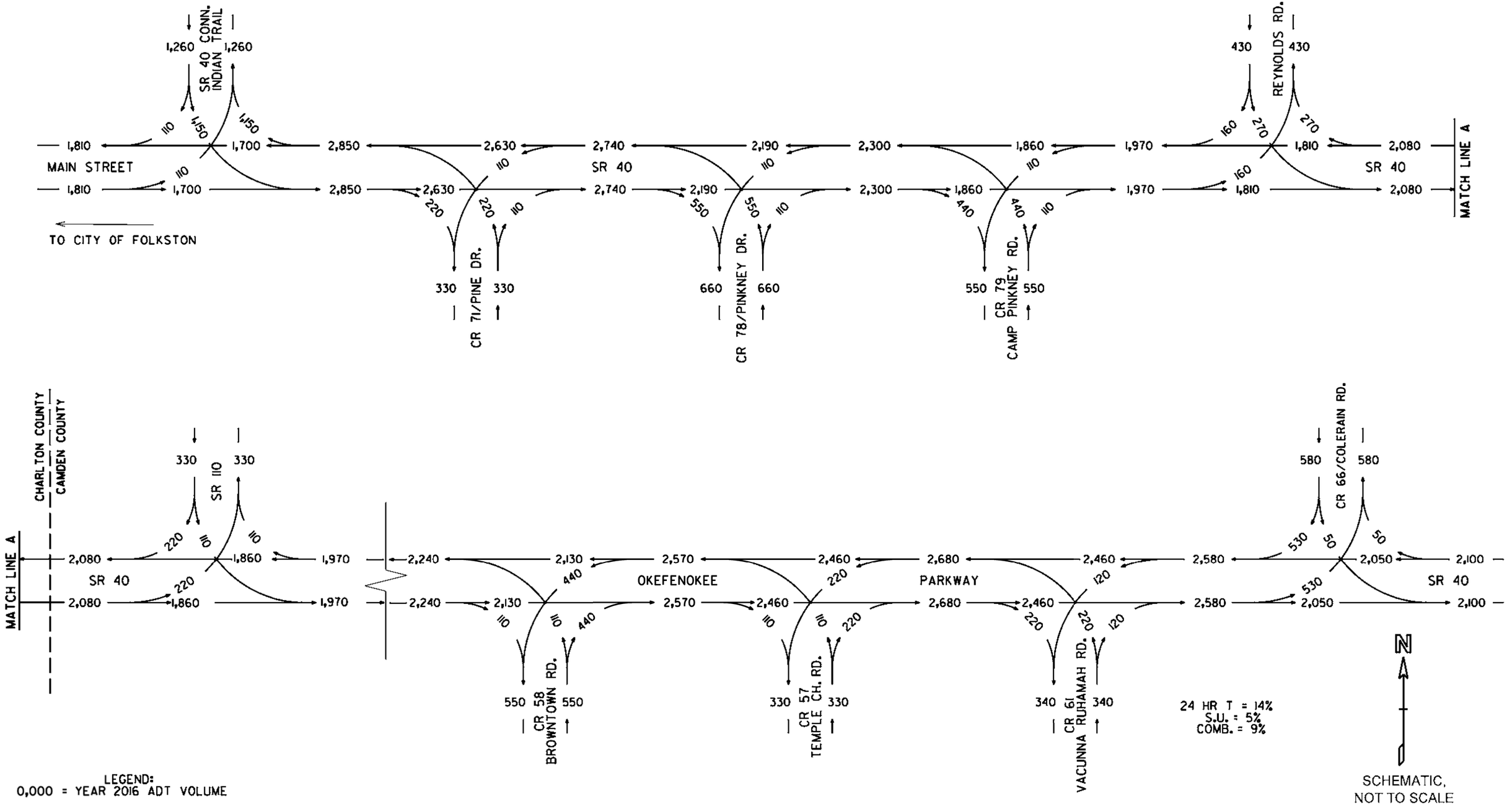


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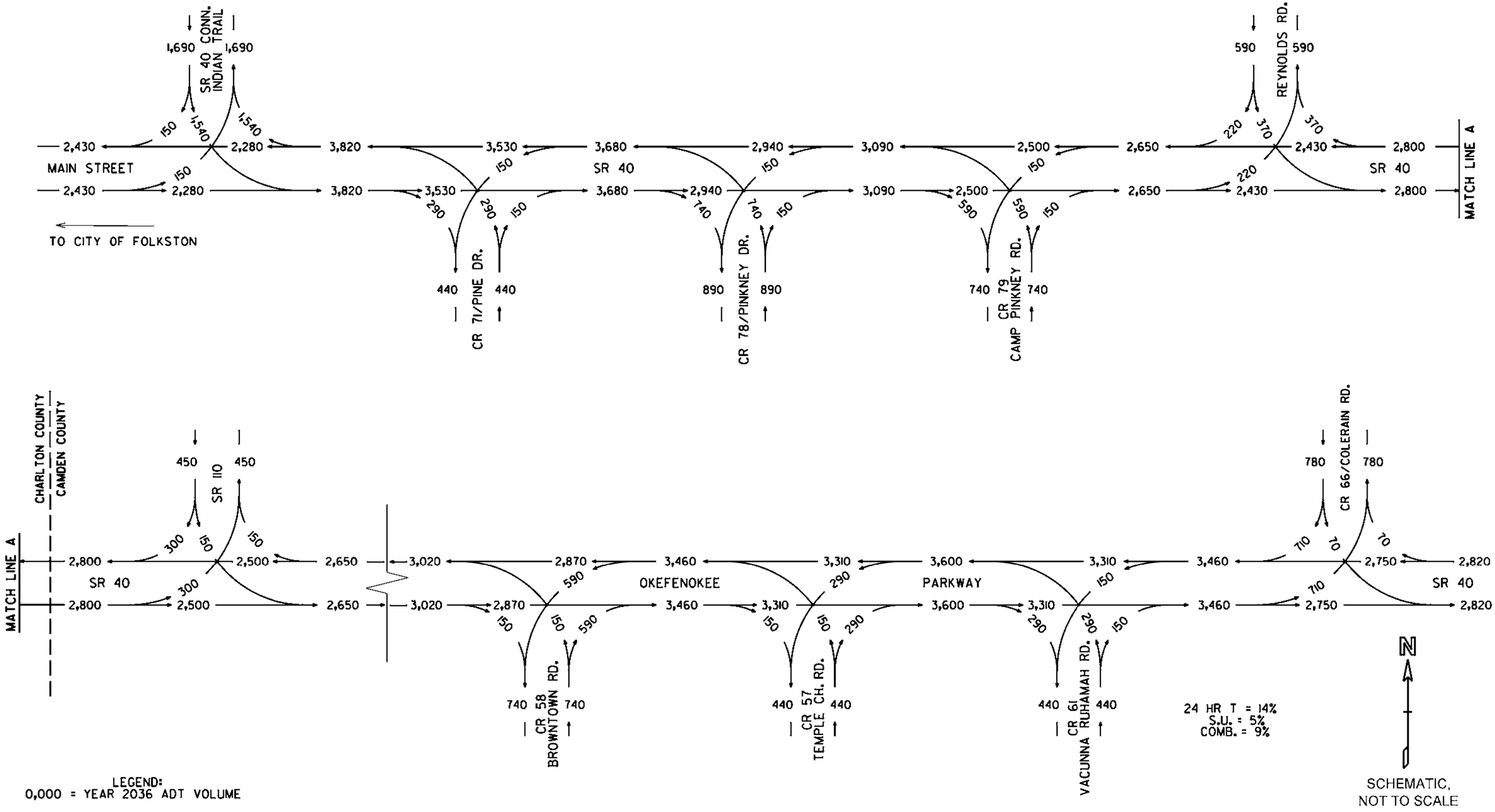
**FIGURE 7**
**2016 BUILD ADT VOLUMES**

OCTOBER 19, 2011

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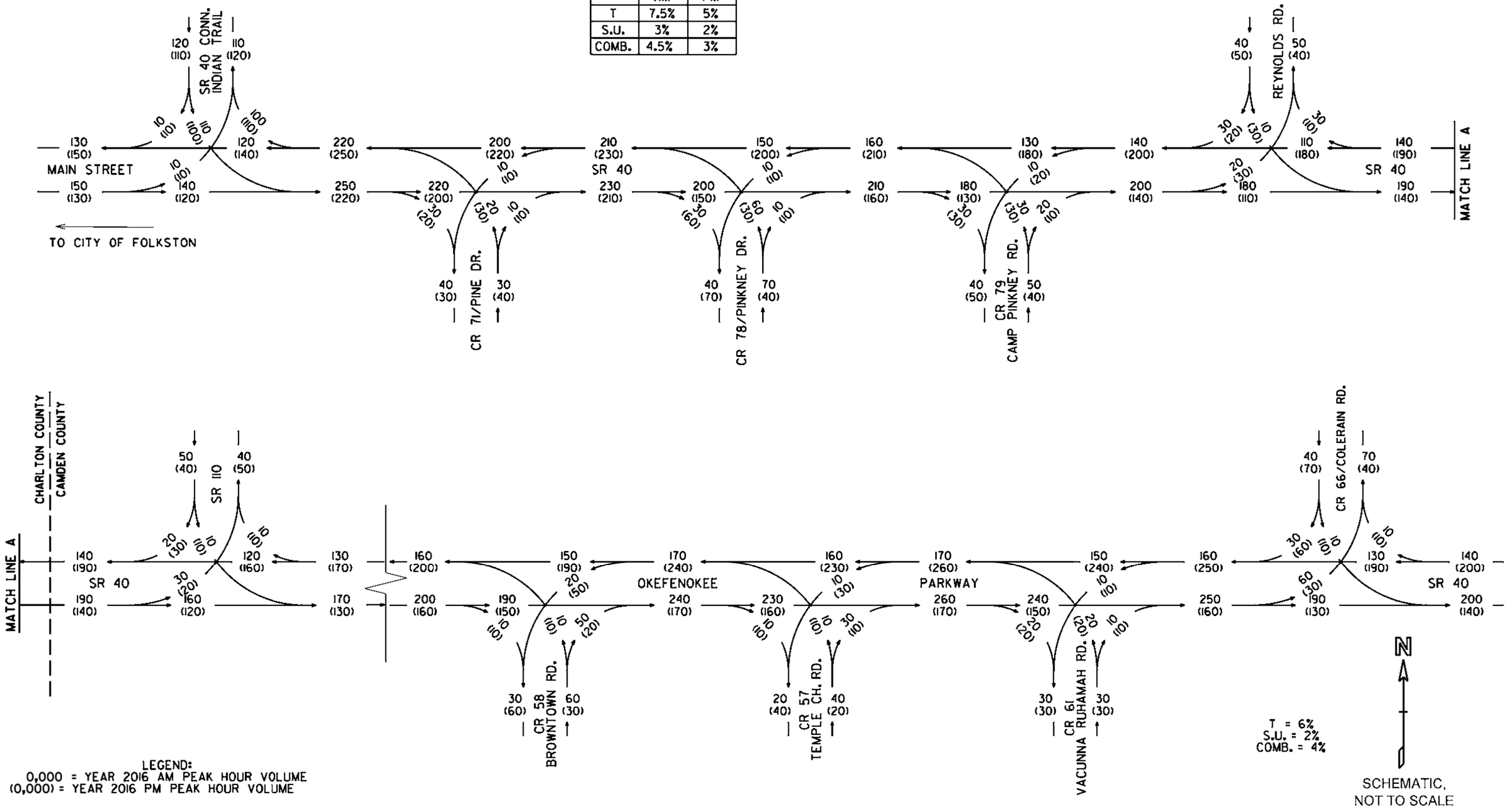
**CAMDEN/CHARLTON COUNTIES**
**SR 40 FROM SR 40 CONNECTOR/CHARLTON COUNTY TO CR 66/CAMDEN COUNTY**

**FIGURE 8**
**2036 BUILD ADT VOLUMES**

OCTOBER 19, 2011

| | AM | PM |
|---|---|---|
| T | 7.5% | 5% |
| S.U. | 3% | 2% |
| COMB. | 4.5% | 3% |




LEGEND:
0,000 = YEAR 2016 AM PEAK HOUR VOLUME
(0,000) = YEAR 2016 PM PEAK HOUR VOLUME

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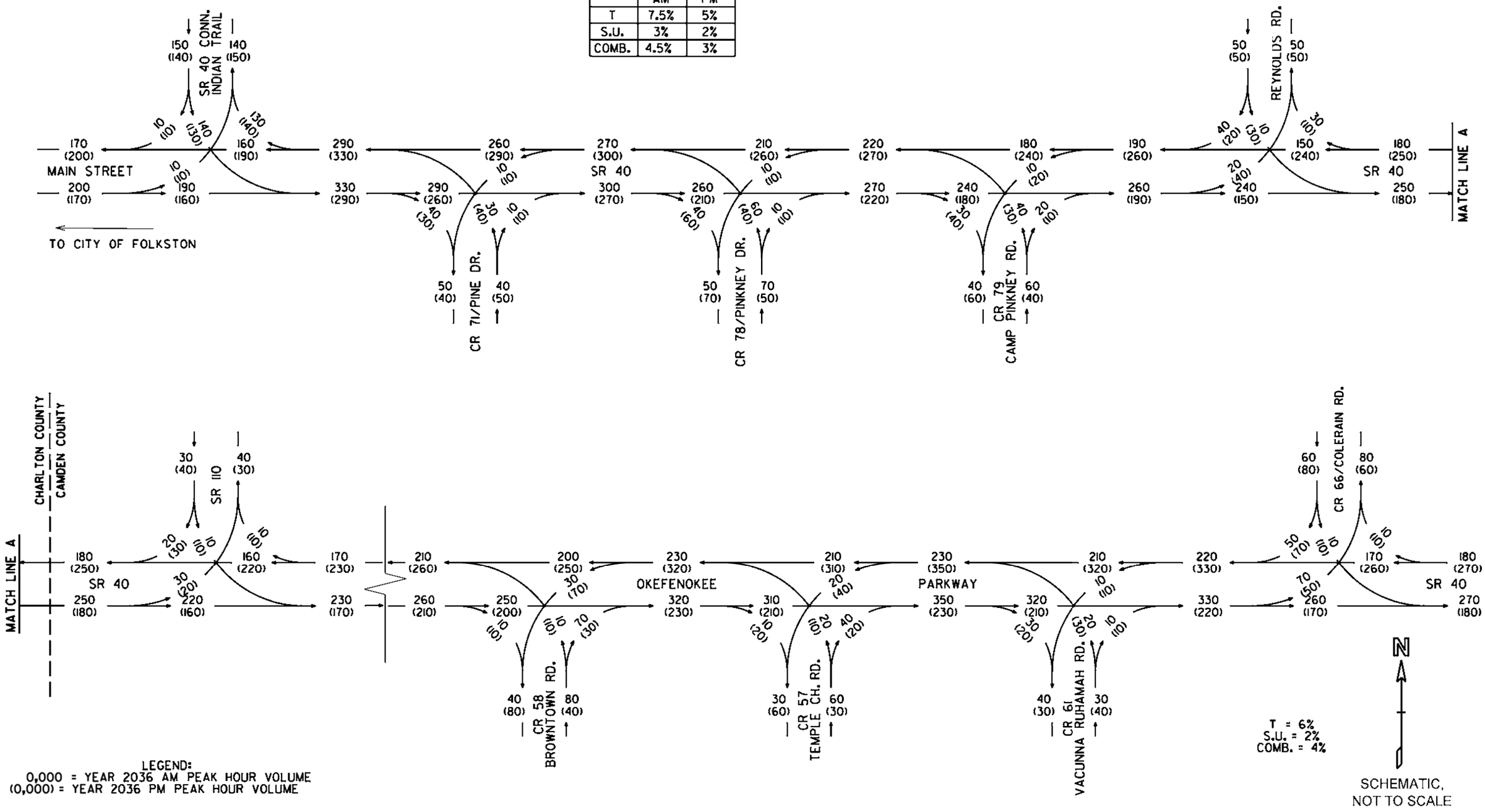
**SR 40 FROM SR 40 CONNECTOR/CHARLTON COUNTY TO CR 66/CAMDEN COUNTY**

**FIGURE 9**
**2016 BUILD PEAK HOUR VOLUMES**

OCTOBER 19, 2011

| | AM | PM |
|---|---|---|
| T | 7.5% | 5% |
| S.U. | 3% | 2% |
| COMB. | 4.5% | 3% |




LEGEND:
0,000 = YEAR 2036 AM PEAK HOUR VOLUME
(0,000) = YEAR 2036 PM PEAK HOUR VOLUME

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**SR 40 FROM SR 40 CONNECTOR/CHARLTON COUNTY TO CR 66/CAMDEN COUNTY**

**FIGURE 10**
**2036 BUILD PEAK HOUR VOLUMES**

OCTOBER 19, 2011

# FLEXIBLE PAVEMENT DESIGN ANALYSIS

**Project:** STP00-0000-00(821) **County:** Charlton
**P.I. no.:** 000821
**Description:** Widen SR-40 32' Median MP .67 to 2.54

**Traffic Data** (NOTE: AADTs are one-way)
24-hour Truck Percentage: 14.00%
AADT initial year of design period: 2,850 vpd (2016)
AADT final year of design period: 3,820 vpd (2036)
Mean AADT (one-way): 3,335 vpd

**Design Loading**

| Mean AADT | | LDF | | Trucks | | 18-K ESAL | | Total Daily Loads |
|---|---|---|---|---|---|---|---|---|
| 3,335 | * | 0.85 | * | 0.140 | * | 1.40 | = | 557 |

Total predicted design period loading = 557 * 20 * 365 = 4,066,100

**Design Data**
Terminal Serviceability Index: 2.50
Soil Support: 4.00
Regional Factor: 1.70

**PROPOSED FLEXIBLE PAVEMENT STRUCTURE**

| Material | Thickness mm | Thickness (in.) | Structural Coefficient | Structural Value |
|---|---|---|---|---|
| 12.5 mm Superpave | 38 | (1.50) | 0.0173 | 0.66 |
| 19 mm Superpave | 51 | (2.01) | 0.0173 | 0.88 |
| 25 mm Superpave | 25 | (0.98) | 0.0173 | 0.43 |
| | 52 | (2.05) | 0.0118 | 0.61 |
| Graded Aggregate Base | 254 | (10.00) | 0.0063 | 1.60 |

Required SN = 4.66 Proposed SN = 4.18

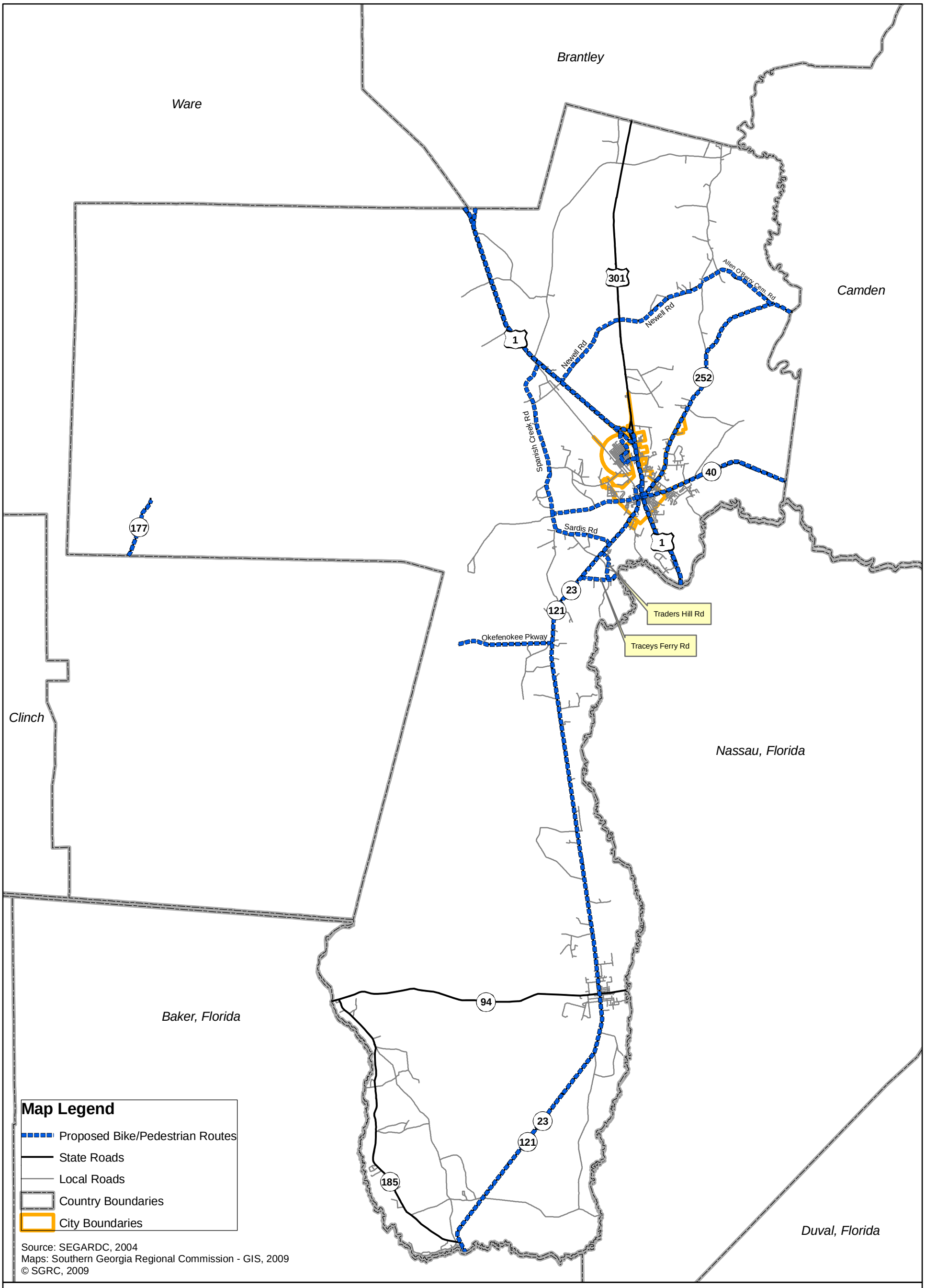
**>>> Proposed pavement is 10.3% Underdesign <<<**

**Remarks:** Preliminary Pavement Type Selection Design

**Prepared by** Geoffrey Donald PM April 5, 2012
**Date**

**Recommended** _____
**State Road Design Engineer** **Date**

**Approved** _____
**Chief Engineer** **Date**




Source: SEGARDC, 2004
Maps: Southern Georgia Regional Commission - GIS, 2009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# MAP G-5 CHARLTON COUNTY BICYCLE AND PEDESTRIAN ROUTES GREATER CHARLTON COUNTY COMPREHENSIVE PLAN

Southern Georgia Regional Commission

# MINUTES OF THE INITIAL CONCEPT MEETING
# STP00-0000-00(821), STP00-000-00(820), CHARLTON,CAMDEN COUNTIES
# P.I. NUMBERS 0000821, 0000820
# DATE: MAY 4, 2004

**Those in attendance:**

| | |
|---|---|
| Cory Knox | Waycross Area Engineer, GDOT |
| Steve Nance | Charlton County Administrator |
| Larry Griffin | Engineer O.R.E.M.C., Nahunta |
| C.L. Nazworth | County Const., Folkston |
| Bud Morris | Executive Director Dev. Authority, Folkston/Charlton Co. |
| Ronnie Branton | Right of Way Consultant, Acquisition Consultants Inc. |
| Larry Lampe | Camden County Road Superintendent |
| Marcus McClain | MGR Network, TDS Telecom |
| Monroe Derse | Sp. Network Associate, TDS Telecom |
| Carol Newsom | Survey Residency Engineer, GDOT |
| Michael Carmicheal | Assitant Area Engineer Construction, Waycross GDOT |
| Christy Lovett | District Design Squad Leader, Jesup GDOT |
| Willie Deloach | District Right of Way Team Manager, Jesup GDOT |
| Stephen Thomas | Utilities Engineer, Jesup GDOT |
| John Wentworth | District Access Mgmt Engineer, Jesup GDOT |
| Toney Collins | District Preconstruction Engineer, Jesup GDOT |
| Dennis Odom | District Design Engineer, Jesup GDOT |

STP00-0000-00(821)
The meeting for project STP-000-00(821) began at 9:00 A.M. at the Charlton County Courthouse. All in attendance introduce themselves. A description of the project was given by Christy Lovett, who also directed the meeting. A sign in sheet was passed around for those in attendance to sign.

Christy said a suggestion had been made to extend the project from where it now begins, at the SR 40 connector, to the beginning of SR 40 @ US 1. Michael Carmichael suggested widening the connector in order to keep most of the traffic from the center of town, especially in the case of a hurricane evacuation. The local officials thought the project should stay on SR 40. There would be impacts from widening the connector. There were several comments concerning problems with widening through the streets beside of and in front of the Courthouse. Several ideas were exchanged on how to continue the widening on these streets. The Courthouse would be considered as historic property, but the buildings on the north side of SR 40 beside the Courthouse are not part of the original Courthouse property and could possibly be removed.

A gas line is located on the north side of SR 40. This would have to be relocated, as it was on the current project being constructed (STP-141-1(10)). A fiber optic cable is located on the south side about 2` beyond the existing right of way.

Potential maintenance problems were discussed. There is currently a problem with drainage where the connector ties into SR 40. The county is currently opening up and existing ditch which will

improve the drainage for the connector and the section of town between the connector and the Courthouse.

No accidents were reported from 1998 to 2002. One of the local officials noted an accident since 2002 which was a fatality.

A question was raised concerning evacuation due to nuclear emergency at Kings Bay Navel Base. This was considered in the Comprehensive Transportation Plan on Camden County. The direction of evacuation would depend on wind direction, so it could be north or south, rater than on SR 40.

We looked at the record plans to determine the existing right of way. It was 60` to the beginning of the first curve where it widened to 100`. The record plans did not show the streets around the Courthouse.

The meeting for this project concluded.

**PB Americas Inc.**

*3340 Peachtree Road, NE*
*Suite 2400, Tower Place*
*Atlanta, GA 30326-1001*
*404-237-2115*

# Memorandum of Meeting

**Date:** November 13, 2007

**Date of Meeting:** November 1, 2007

**Projects :** STP00-000-00(820) (821), PI 0000820, 0000821 Charlton, Camden Counties
SR 40/SR-40 Connector, Folkston to Kingsland
CSBRG-0007-00(162) PI 0007162 Charlton County
SR-185 Over Joaquin Creek

**Purpose of Meeting:** Concept Plan Team Meeting,

**Meeting Location:** Jesup District 5 Office Conference Room

**Those in attendance:**

| | |
|---|---|
| Mercy Thompson | City of Kingsland |
| Gwen Mungin | City of Kingsland |
| Steve Nance | Charlton County Administrator |
| Pander Lloyd | City Manager City of Folkston |
| Bud Morris | Executive Director Dev. Authority, Folkston/Charlton Co. |
| James D Crews | Development. Authority, Folkston/Charlton Co |
| Steve Howard | Camden County |
| Scott Brazell | Camden County |
| Cory Knox | Waycross Area Engineer, GDOT |
| Bryan Czech | Brunswick Area Engineer GDOT |
| George Shenk | Utilities Engineer, Jesup GDOT |
| Paul O. Williams | Utilities Engineer, Jesup GDOT |
| Billy T Smith | District Access Mgmt Engineer, Jesup GDOT |
| Cynthia Phillips | Traffic Operations, Jesup GDOT |
| Rebecca Thigpen | District Design Squad Leader, Jesup GDOT |
| Dennis Odom | District Design Engineer, Jesup GDOT |
| Mary Best | PB |
| Geoffrey Donald | PB |

**Distribution:** Attendees
File 15947

**Discussion:**

1. Dennis Odom opened the meeting with a brief project introduction, after which the meeting attendees introduced themselves. A sign in sheet was passed around for those in attendance to sign.

PI 0000820

2. Geoff Donald began discussion on the need and purpose of the project identifying the project as a GRIP corridor and an emergency and hurricane evacuation route. The projected traffic and accident history was discussed along with the logical termini for the project

3. The concept plans were laid out along the walls and were described in detail, Geoff went over the alignment layout pointing out the constraints and impacts and the natural progression of the alignment from the west end of the project to the east end. Comments on the layout received from Bryan Czech expressed his concerns for the church (structure use to be confirmed) impacted at Station 627+00 right and that the driveway across from Brown Town Road to be realigned, this will avoid cut thru's across the intersection to get to the gas station. PB suggested that a flatter curve can be looked at to avoid the structure at station 627+00 although there is an intersection at the beginning of the curve which will need to be reviewed further during the preliminary design phase. The driveway location will also be reviewed during the preliminary design phase.

4. Kingsland City officials pointed out that some of the property along the corridor may be annexed into the city limits; there are also plans for subdivisions along the corridor. A city map was handed out to the attendees.

5. Mary Best briefly went over the environmental process describing the early scoping meeting held with FHWA, and that as a result of that meeting, the environmental assessments for Units 821 and 820 will be combined into one document because of the logical termini for the projects. Mary also mentioned that the new Colerain Road widening project will need to be coordinated since it is just coming onboard as a planned project, and it is part of the logical termini for the SR 40 corridor's need and purpose. Mary also briefly described the environmental concerns along the 820 corridor. She pointed out the 27 acres of wetland impacts and 889 linear feet of stream impacts, and that GDOT would mitigate these by purchasing 207 wetland credits and 3,177 stream credits from a mitigation bank. No unavoidable historical or archeological impacts would be expected in the 820 corridors. There is one graveyard along the corridor and impacts have been avoided. Noise measurements are being conducted next week along the project corridor, and modeling will be performed to determine the potential noise impacts. Air quality impacts will also be assessed. T&E species are recorded in the area, and suitable habitat was found along the project corridor for flatwoods salamander, eastern indigo snake, gopher tortoise, and two plant species. The eastern indigo snake also occupies gopher tortoise burrows during the winter. The protected plants were not found in the project corridor during field surveys in October. No gopher tortoise burrows were found, but surveys will be conducted in January - February, and for the flatwoods salamander in March - April. Foraging habitat (but no nesting habitat) was found for the red-cockaded woodpecker and the wood stork. No migratory bird habitat was present.

Culverts will be inspected for bird nests prior to construction, and if they are found, construction will be scheduled to avoid disturbing them during the nesting season. Dennis Odom asked if a PAR meeting had been held yet; it has not, but a PAR report will be submitted shortly, and a meeting will be scheduled if requested by one or more of the coordinating agencies.

6. Denis Odom pointed out that the median may need to be reduced to 32 feet to get the project approved; this would be for an avoidance measure for wetlands impacts. The completed 4 lane project to the west was approved with a 32 foot median.

6. Geoff mentioned the utilities found in the corridor, George Shenk said we need to add TDS Telecom to the list they have a fiber optic line 2 feet outside the right of way on the south side, also to add Atlanta Gas and Light it's on the north side, and Okefenokee Rural EMC has facilities in the area.

7. Other comments received: During a storm event, flows from the St Marys River and the Satilla River combined and flooded the SR 40 roadway; it was pointed out that the flooding occurred in the section of roadway already raised and widened to 4 lanes. Also, the City of Kingsland officials mentioned that a portion of SR 40 was under water and closed near Spring Hill Road during Hurricane Francis. PB will need to investigate this concern.

PI 0000821

8. Geoff Donald began discussion with the need and purpose of the project identifying the project as a GRIP corridor and an emergency and hurricane evacuation route. The projected traffic and accident history was discussed along with the logical termini for the project

9. From the concept plans laid out along the walls, Geoff went over the alignment layout pointing out the constraints and impacts and the natural progression of the alignment from the west end of the project to the east end. The west end will tie to US-1/SR-15 an existing 4 lane roadway which is currently undergoing an intersection improvement to install type B medians. There is a hospital. a library, a doctors office, a high school, school fields and a city park located on the west end of the project. The east end will tie back in to the existing 4 lane project.

10. Mary briefly described the environmental concerns along the corridor. She pointed out the 2 acres of potential wetland impacts and 687 feet of potential stream impacts, which would be mitigated by purchasing 16 wetland credits and 3,305 stream credits from a mitigation bank. Two gopher tortoise burrows were found near the project corridor, and a field survey will be conducted in January – February for this species (and for the eastern indigo snake, which also uses the tortoise burrows in winter). There was no migratory bird habitat along Unit 821. Culverts will be inspected before construction,

and if any bird nests are found, the work will be scheduled to avoid impacts to these birds. No bald eagles or bald eagle habitat were observed along the corridor. Air and noise studies are underway. No historical or archeological impacts are expected along the 821 corridor. There may be potential environmental justice and community impact issues along the SR 40 Connector.

11. Geoff mentioned the utilities found in the corridor, George Shenk said we need to add Comcast Cable TV, Okefenokee Rural EMC, Southern Natural Gas, Alltel to the list, he also stated they will need additional right of way to relocate the water and sewer GDOT will not allow utilities under the pavement.

12. City officials were concerned with having two lanes of emergency traffic passing by the Hospital entrance and would rather have the bottle neck of traffic further east, they also suggested pushing the bypass further north of the City. It was finally agreed that blocking one of the West bound lanes for emergency vehicles only during an emergency event would be ok. City officials were also concerned with traffic on 3 Rd Street crossing Indian Trail; PB will review the traffic model in that area and review the signal warrants. City officials commented that there is a drainage problem along the connector and the intersection at US-1/SR-15 frequently floods, drainage problems will be reviewed during preliminary design phase.

PI 0007162

13. Geoff Donald began discussion with the need and purpose of the project identifying the project as a bridge replacement project for a bridge over Joaquin Creek with a sufficiency rating of 74.3 the main reasons for the replacement is spalling concrete from the support columns and substandard shoulder widths. The projected traffic and accident history was discussed.

14. From the concept plans laid out along the walls, Geoff went over the alignment layout pointing out that the bridge will be replaced with a concrete box culvert. The concrete box culvert will be staged constructed, a section to the west will be built first and a detour road will be built across that section, the bridge will be removed and the culvert and road construction will be completed.

15. Mary briefly described the environmental concerns along the corridor and pointed out there will be 0.07 acres wetland impacts and 140 linear feet of stream impacts. No historical or archeological sites were found in the corridor, although there is a church and cemetery nearby. For T& E species, gopher tortoise burrows were observed, but they were outside the project area. Field surveys will be performed in January – February to identify any gopher tortoises (and eastern indigo snakes using their burrows) in or near the project area.

16. Geoff mentioned the utilities found in the corridor, George Shenk said we need to add, Okefenokee Rural EMC, Atlanta Gas and Light, and Alltel to the list.

**Action Items:**

1. PB to schedule PAR meeting.
2. PB to begin concept report revision.
3. PB to investigate location of PIM and determine logistics of meeting.

The foregoing is my understanding of the topics discussed. If you have any corrections or comments, please let me know immediately.

Sincerely,

**PB AMERICAS INC.**

Geoffrey Donald
Project Manager

# DEPARTMENT OF TRANSPORTATION
## STATE OF GEORGIA

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## INTERDEPARTMENT CORRESPONDENCE

**FILE:** P. I. Nos. 0000820 & 0000821 **OFFICE:** Environment/Location
**DATE:** May 9, 2008

**FROM:** Glenn Bowman, P.E., State Environmental/Location Engineer

**TO:** Distribution Below

**SUBJECT:** Project STP-0000-00(820) & STP-0000-00(821), Camden and Charlton Counties
Summary of Comments Received During the Public Comment Period –

COMMENT TOTALS:

Two Public Information Open Houses (PIOH) were held for the proposed project:

**February 21, 2008**

A total of 94 people attended the PIOH held for the subject project on February 21, 2008. From those attending, 36 comment forms, 0 letters and one verbal statement were received. An additional 21 comments were received during the ten-day comment period following the PIOH, for a total of 58 comments. They are summarized as follows:

| No. Opposed | No. In Support | Uncommitted | Conditional |
|---|---|---|---|
| 34 | 13 | 1 | 10 |

**March 27, 2008**

A total of 78 people attended the PIOH held for the subject project on February 21, 2008. From those attending, 41 comment forms, 0 letters and one verbal statement were received. Two additional comments were received during the ten-day comment period following the PIOH, for a total of 44 comments. They are summarized as follows:

| No. Opposed | No. In Support | Uncommitted | Conditional |
|---|---|---|---|
| 4 | 9 | 2 | 29 |

MAJOR CONCERNS:

**February 21, 2008**

1. I prefer Alternative A. I do not like Alternative B.

2. Choose Alternative B. The project should go through downtown Folkston.
3. Please consider a new alternative that bypasses Folkston to the north.
4. Those that are being displaced along Indian Trail are widows, elderly, or disabled. Relocating these people will be a hardship. Please consider another alternative.
5. I do not want to be displaced. There are too many displacements along Indian Trail.

**March 27, 2008**

1. Change the typical section through Browntown to five-lanes (Alternative B).
2. Please extend the five-lane section to Station 780+00 in Browntown for safety and convenience.

OFFICIALS IN ATTENDANCE:

**February 21, 2008**

Officials attending included the following:

David Rainer – Camden County Board of Commissioners, Chairman

Lee Gowen – City of Folkston, Council Member

Leonard H. Lloyd – Charlton County Board of Education

**March 27, 2008**

Officials attending included the following:

David Rainer – Camden County Board of Commissioners, Chairman

Katherine “Nisi” Zell – Camden County Tax Commissioners

Beth Soles – Camden County Tax Commissioners

Larry Griffin – OREMC

Terry Temples – OREMC

Henry Thompson – City of Kingsland

Lynn Golding – Camden-Browntown

Gordon Hurt – Camden County Commissioners

DISPOSITION OF COMMENTS:

The following represents a breakdown of a review of comments by the offices to which they pertain. Under the “Comment Number” heading, numbers correspond to comments made at the February 21, 2008 PIOH and letters correspond to comments made at the March 27, 2008 PIOH.

| RESPONSIBLE OFFICE | COMMENT # | NATURE OF COMMENT |
|---|---|---|
| Design | 1, 2, 7, 9, 10, 13, 14, 19, 38, 40, 41, 44, 53 | I prefer Alternative A. I do not like Alternative B. |
| | 22, 23, 25, 26, 30, 32, 43, 45 | Choose Alternative B. The project should go through downtown Folkston. |
| | 10, 12, 57 | I do not like Alternative A because it will cause congestion. |
| | 57 | I do not like Alternative B because it will cause congestion. |
| | 2, 39, 42, 43, A, B, E, F, G, H, M, CC, DD, FF, GG, HH, II, JJ, LL, PP, QQ | Change the typical section through Browntown to five lanes (Alternative B). |
| | 39 | On Project STP-0000-00(821), change Alternative B to make Main Street one-way (west) and Martin Street one-way (east). |
| | 4, 42, F | Buy more right-of-way north of the proposed project from Highway 110 to Ruhamah Baptist Church. |
| | 10, 18, 21, 24, 36, 47, 48, 51, 56, 57 | Please consider a new alternative that bypasses Folkston to the north. |
| | 56 | Consider another alternative in Folkston that does not widen SR 40, but installs three traffic lights along SR 252 at Third Street, the High School, and US 1. |
| | 12 | GDOT needs to work with the locals on developing alternatives that accommodate the city of Folkston. |
| | 14 | Please include a bike lane. |
| | 42 | Don't install sidewalks in a rural setting. |
| | 16 | There needs to be access from both roads for logging trucks. The pavement widening along SR 40 should be extended past the level area (not just the property line) to prevent erosion. |
| | 16 | Please include fire breaks/fire protection. |
| | 17, 33, 35, 48 | Do not widen Indian Trail. This will increase the traffic through a residential and school area. |
| | 20, 32 | During evacuations, divert all traffic to the west. |
| | 15, 28 | Speeding is bad along Indian Trail. Widening Indian Trail will make it worse. |
| | 55 | I do not see enough traffic on Indian Trail to justify widening the roadway to four travel lanes. What is the need for the project? Why not just widen in front of the school? |
| | 58 | Extend the five-lane section to Colerain Road. |
| | A | The four-lane highway should be extended to I- |

| | | |
|---|---|---|
| | | 95 at Exit 1 or Exit 3, not Exit 6 or 7. |
| | B, C, F, G, I, J, K, L N, O, P, Q, R, S, T, U, V, W, X, Y, DD | Please extend the five-lane section to Station 780+00 in Browntown for safety and convenience. |
| | D, H | Extend the five-lane section in Browntown to Station 580+00, past the North Shores. |
| | H | I have a driveway on SR 40 and would like to be able to turn left and right. Please include a median break if a five-lane section in Browntown is not chosen. |
| | FF, NN, OO, QQ | Do not install a median through Browntown. It is not safe. It will not let us access our homes and would create problems for police/fire in emergency situations. |
| | QQ | Use a five-lane section near Ruhamah Church so that the church can keep more parking. |
| | RR | We currently have no drainage problems along SR 40. Will the proposed design include drainage along the roadway? |

| **RESPONSIBLE OFFICE** | **COMMENT #** | **NATURE OF COMMENT** |
|---|---|---|
| Traffic Operations & Safety Issues | D | Reduce the speed along SR 40 to 35 MPH and have GDOT enforce the speed limit through Browntown to improve the safety. |
| | D, FF | Install a traffic light in Browntown at SR 40 and Brown Town Road. |

| **RESPONSIBLE OFFICE** | **COMMENT #** | **NATURE OF COMMENT** |
|---|---|---|
| Environment | 16 | Ensure there is adequate silt fencing to control erosion during seasonal floods. |
| | AA | Build bridges over the wetlands to avoid impacting the shallow wells. |

| RESPONSIBLE OFFICE | COMMENT # | NATURE OF COMMENT |
|---|---|---|
| Right-of-Way | 17, 23, 24, 26, 27, 30, 32, 47, 48, 49, 52, 54 | Those that are being displaced along Indian Trail are widows, elderly, or disabled. Relocating these people will be a hardship. Please consider another alternative. |
| | 28, 31 | My house will be close to the widened roadway. How close is too close? |
| | 34, 35, 45, 46, 51, 55, 56 | I do not want to be displaced. There are too many displacements along Indian Trail. |
| | Z | We want to start a business, but we are currently shown as a displacement. We want to be relocated now so that we do not have to relocate our business down the road. |
| | MM | Mr. Elmo's Brown Store and House will be displaced. Please do not take this store. It should be a historical marker. |

| RESPONSIBLE OFFICE | COMMENT # | NATURE OF COMMENT |
|---|---|---|
| Public Involvement | 14, 43 | Please hold continued town hall style meetings to inform the public. |
| | 17, 49 | Were all the landowners notified of the PIOH, including the elderly? |
| | 22, 25, 32 | The PIOH should have a question and answer session. |
| | 42, 43 | Hold a PIOH in Browntown. |

| RESPONSIBLE OFFICE | COMMENT # | NATURE OF COMMENT |
|---|---|---|
| OEL | All Letters | Thank you for your input regarding the PIOH for the proposed project. Your interest in this meeting and your comments are appreciated. Your comments will be made a part of the official record of the project.<br><br>The attendees of the open house and those persons sending in comments afterwards raised the following questions and concerns. The GDOT has prepared one response to all comments so that everyone can be aware of the concerns raised and the responses given. Please find the comments, concerns, and questions listed below along with their response. |

Attached is a complete transcript of the comments received during the comment period and a copy of the PIOH handout.

If you have any questions about the comments, please either email or call Sheree Smart at (912) 427-5700.

GB/SS/pb-jd

Attachments

DISTRIBUTION:
Todd Long, P.E.
Project Manager (Attn: Rebecca Thigpen)
District 5 (Attn:Glenn Durrence )
Gena Abraham, PhD., GDOT

**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<br>• Single Barrel Box Culvert at Station 869+00 | 69 ft.<br>63 ft. | 6 ft.<br>4.5 ft. | N/A<br>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** –<br>• 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** –<br>• SR 40 at SR 110 - T-intersection that is stop sign controlled on the minor road.<br>• SR 40 at CR 66 (Colerain Road) - T-intersection that is stop sign controlled on the minor road. | 100 ft.<br>100 ft |

| CSSTP-0008-00(666) | |
|---|---|
| **Features Intersected/Type** | **Existing R/W Width** |
| **Interchanges – N/A** | N/A |
| **Intersection** –<br>• SR 17 at Laurel Island Parkway | SR 17 – 100 ft.<br>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.<br>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 12$^{th}$ to September 22$^{nd}$, 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.) |

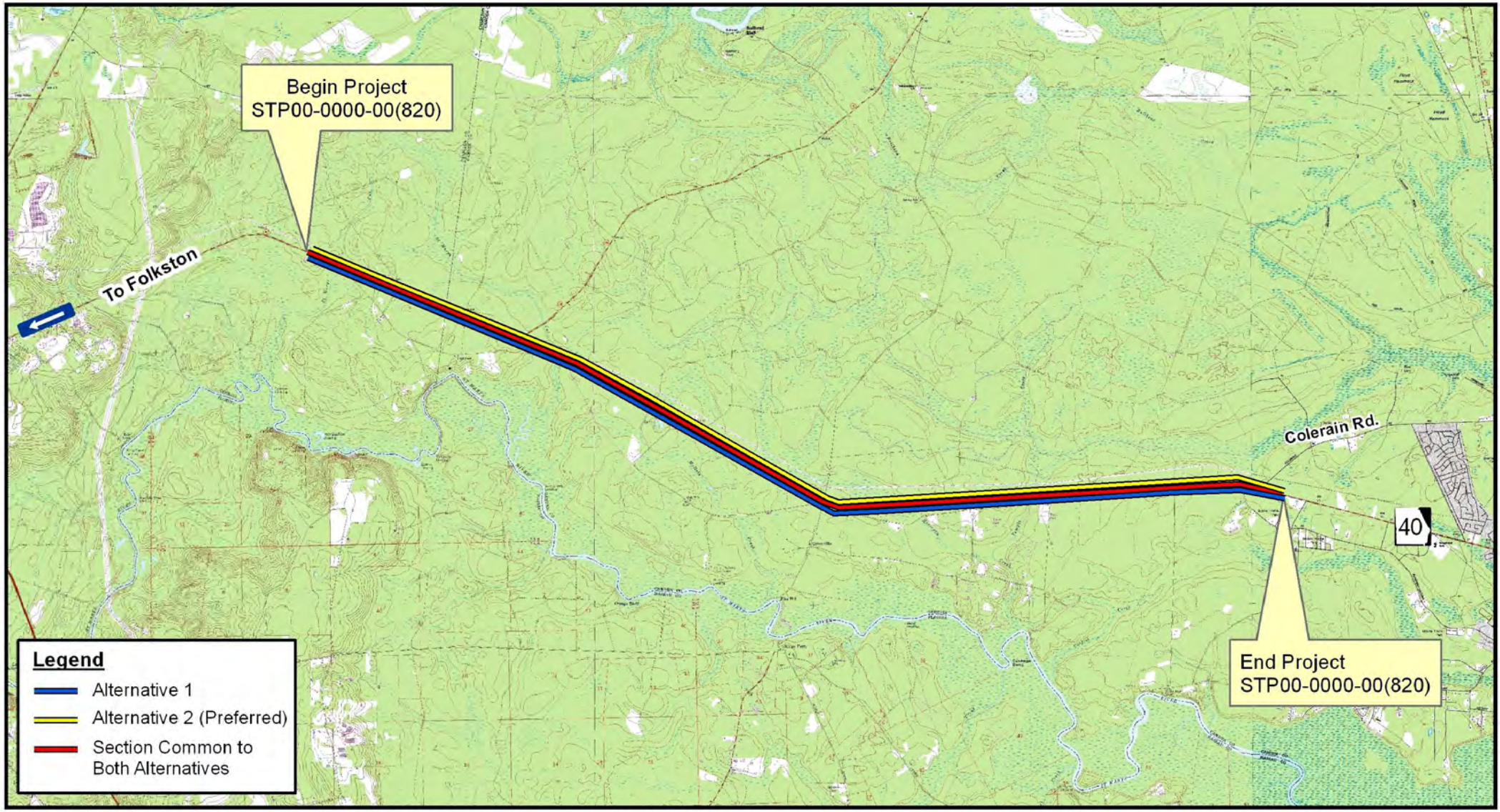
| | |
|---|---|
| **Required Mitigation Credits** | |
| Total # of Stream Credits | 6,114.1 |
| Total # of WTL/OW Credits | 130.55 |
| **Estimated Mitigation Cost** | |
| Cost for Stream Impacts | $275,134.50 |
| Cost for WTL/OW Impacts | $459,925.00 |
| Total Mitigation Cost of Project | $732,059.50 |
| **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.**



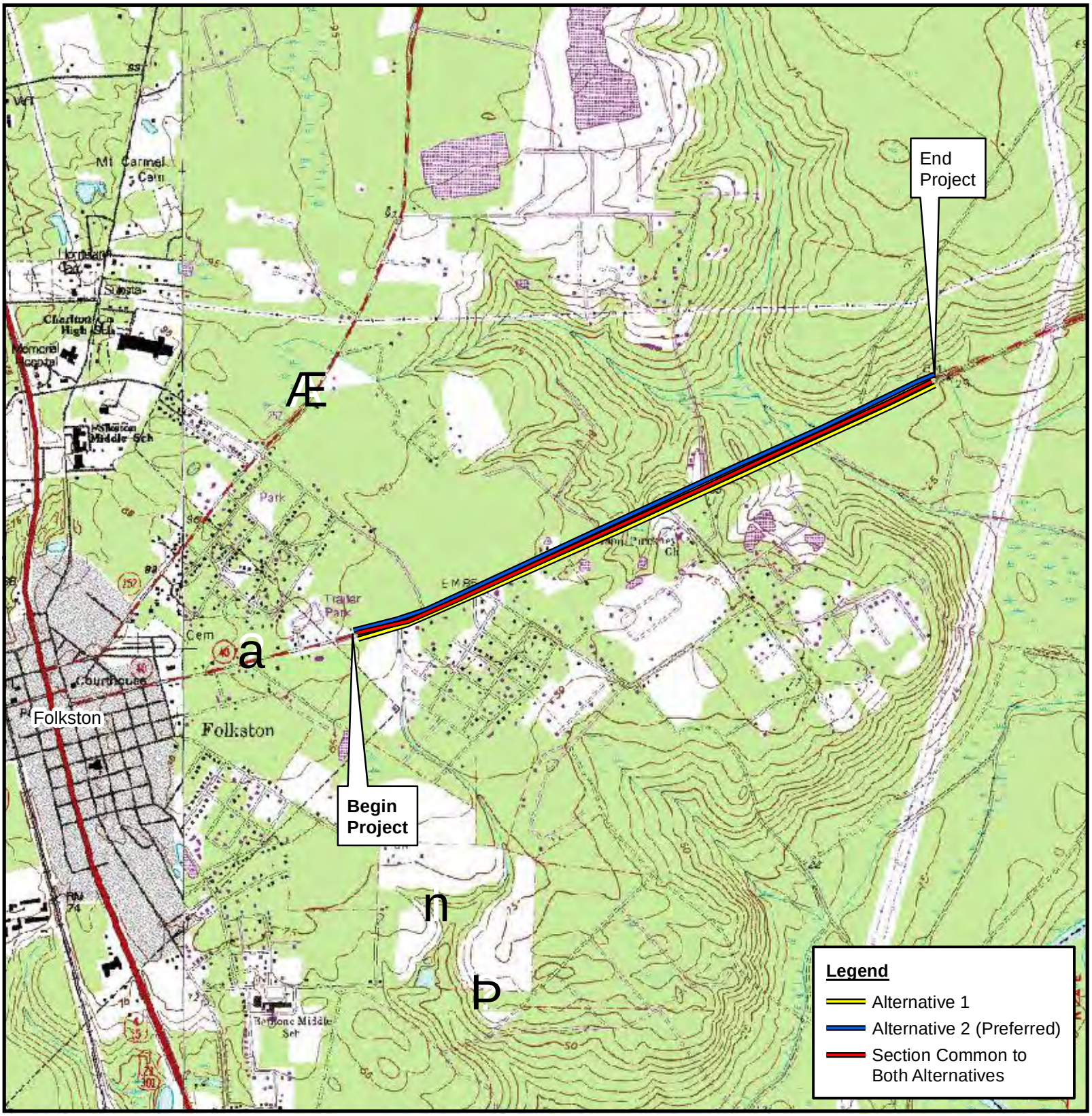

Source: Folkston, Boulogne, Kings Ferry, & Kingsland, GA 7.5 series USGS Topographic Quadrangles

**SR 40 Widening and Reconstruction**
**GDOT Project No.**
**STP00-0000-00(820)**
**P.I. 0000820**
**Charlton and Camden Counties**

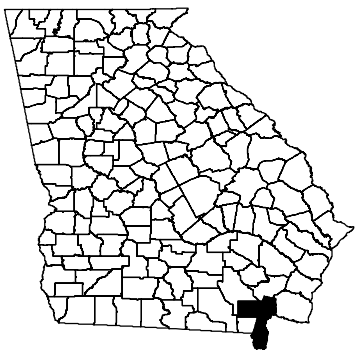
**Project Location Map**
**with USGS 7.5 min. Topographic Imagery**

0 5,000 10,000 20,000
Feet

N
W E
S




Source: USGS 7.5 Minute Topographic Map; Boulogne



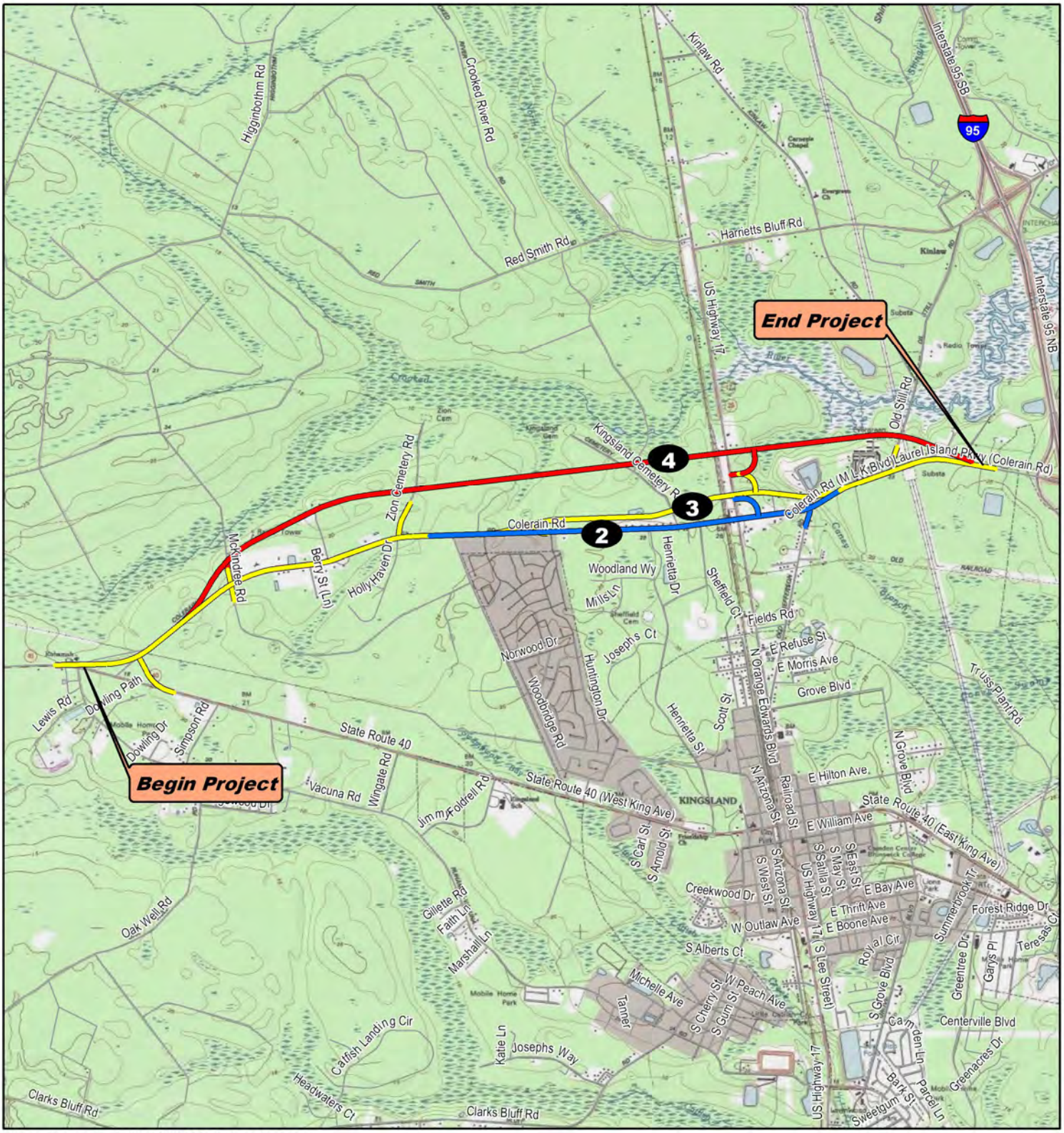
**Project Location Map with USGS Topographic Background**

0 1,000 2,000 3,000 4,000 Feet

0 0.1 0.2 0.3 0.4 Miles

3

**Proposed SR 40**
**Widening and Reconstruction**
**GDOT Project:**
**STP00-0000-00(821)**
**P.I. Number: 0000821**
**Charlton County**




Source: Camden County GIS & USGS Kingsland and Kings Ferry

9-11-12


## Project Alternatives

ALT2

ALT3

ALT4

0 0.5 1 Miles

CSSTP-0008-00 (666)
P.I. No. 0008666

West Kingsland Bypass

Camden County, Georgia

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# DEPARTMENT OF TRANSPORTATION
# STATE OF GEORGIA

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**INTERDEPARTMENT CORRESPONDENCE**

**FILE:** STP00-0000-00(820)(821) Camden Charlton
P.I. Nos.: 0000820 & 0000821
SR 40 Widening

**OFFICE:** Engineering Services

**DATE:** July 8, 2009

**FROM:** Ronald E. Wishon, Project Review Engineer REW

**TO:** Brad Saxon, PE, District Preconstruction Engineer, Jesup
Attn.: Rebecca Thigpen

**SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES**

The VE Study for the above projects was held April 14-17, 2009. Responses were received on July 1, 2009. Recommendations for implementation of Value Engineering Study Alternatives are indicated in the table below. The Project Manager shall incorporate the VE alternatives recommended for implementation to the extent reasonable in the design of the project.

| ALT # | Description | Potential Savings/LCC | Implement | Comments |
|---|---|---|---|---|
| A-1 | Construct 11 foot lanes in the 5 lane urban section between Sta. 690+00 and Sta. 721+00 | $92,000 | Yes | This will be done. |
| A-2 | Reduce the length of the tapers and right turn lanes throughout the project | $86,000 | Yes | This will be done. |
| A-3 | Reduce tapers and left turn storage lanes | Proposed = $226,000<br><br>Actual = $113,000 | Yes | This will be partially implemented. The storage length will be reduced, but the taper length will not. |
| A-4 | Reduce the full depth asphalt pavement thickness due to low traffic volumes | $1,345,000 | Yes | OMR has indicated it is very likely the pavement thickness can be reduced. |
| A-12 | Eliminate alignment shift at cemetery | $745,000 | No | The Temple Baptist Church property, including the cemetery, is eligible for listing in the National Register of Historic Places. The proposed alignment was set to facilitate approval from SHPO. |

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| A-14 | Shift the roadway north and transition back to a two-lane roadway between Sta. 845+00 and Sta. 865+00 on the east end of the project (0000820) | $1,521,000 | No | This would impact the logical termini at the east end of the project. |
| A-15 | Shift the start of the 45 mph speed zone on the west end of the project (0000821) from Sta. 75+00 to Sta. 87+00 to eliminate ROW relocation/acquisition. Construct a 5 lane section with rural shoulders through this area. | $620,000 | Yes | The proposed change from 4 lane divided to 5 lane section with rural shoulders will reduce ROW impacts. It may be possible for the speed limit to be reduced. |
| A-16 | Shift Willies Loop Road/SR 40 intersection about 200 feet west to eliminate ROW relocation/acquisition | $496,000 | Yes | This will be done. |
| A-18 | Eliminate the dual 3 foot bike lane from the 5-lane urban roadway section between Sta. 690+00 and Sta. 721+00 | Proposed = $141,000<br><br>Actual = $94,000 | Yes | The 5-lane section shoulders will change to a rural section from Sta. 690+00 to Sta. 702+00 and from Sta. 712+00 to Sta. 721+00. This area will have room for bikes on the shoulder behind the rumble strips. The urban shoulder will remain from Sta. 702+00 to Sta. 712+00 due to tight ROW constraints. Sidewalks will be removed, but the 3 foot bike lane will remain in this area. |
| A-19 | Construct four 12 foot travel lanes (separated with a 4 foot striped median) with rural shoulders in lieu of the 5-lane urban roadway section between Sta. 690+00 and Sta. 721+00 | $891,000 | No | The proposed 4 foot striped median would cause confusion with vehicles making left turns from the roadway. This would introduce unsafe conditions leading to increases in rear end collisions. This typical section is more conducive for use in a controlled access highway than in an urban corridor. |

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| A-19.1 | Construct four 12-foot travel lanes (separated with a 4 foot striped median) with urban shoulders in lieu of the 5-lane urban roadway section between Sta. 690+00 and Sta. 721+00 | $321,000 | No | The proposed 4 foot striped median would cause confusion with vehicles making left turns from the roadway. This would introduce unsafe conditions leading to increases in rear end collisions. This typical section is more conducive for use in a controlled access highway than in an urban corridor. |
| B-1 | Buy ROW only out to the shoulder break point and obtain any additional property as permanent easement | $355,000 | No | This is usually done in tight urbanized areas. In this rural area ROW is relatively inexpensive. By changing the proposed shoulders to rural shoulders (A-18) ROW will be needed to maintain the drainage ditches. |
| G-1 | Maintain the standard roadway crown on the existing roadway in lieu of building up the pavement to add reverse crown | $1,002,000 | Yes | This will be done. |
| J-1 | Eliminate the 2 foot inside widening by shifting all widening to the outside | $300,000 | No | Since G-1 will be done, J-1 cannot be done. |
| R-1 | Eliminate asphalt curb from under the guardrail | $369,000 | No | Future costs associated with maintenance and repair of slope erosion problems behind guardrail with no asphalt curbs would negate the proposed cost savings. |
| U-1 | Eliminate both sidewalks along the 5-lane urban roadway section | Proposed = $136,000<br>Actual = $91,000 | Yes | This will be done in some areas due to the changes in typical sections. See attached Typical Section Sheet. |

The Office of Engineering Services concurs with the Project Manager's responses.

**Approved:** _____ **Date:** 7/10/09

**Gerald M. Ross, PE, Chief Engineer**

REW/LLM
Attachments
c: Genetha Rice Singleton
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Sheree Smart
Will Murphy/Cory Knox/Michael Carmichael/Brian Scarbrough
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