

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

OFFICE OF DESIGN POLICY & SUPPORT INTERDEPARTMENTAL CORRESPONDENCE

FILE P.I. # 0012880
Fulton County
GDOT District 7 - Metro Atlanta
City of Johns Creek
CS 107/Barnwell Road from SR 140 to
Barnwell Elementary School
Streetscape Improvements

OFFICE Design Policy & Support
DATE 4/23/2015

FROM  Brent Story, State Design Policy Engineer

TO SEE DISTRIBUTION

SUBJECT APPROVED CONCEPT REPORT

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

Attachment

DISTRIBUTION:

Glenn Bowman, Director of Engineering
Joe Carpenter, Director of P3/Program Delivery
Genetha Rice-Singleton, Assistant Director of P3/Program Delivery
Albert Shelby, State Program Delivery Engineer
Bobby Hilliard, Program Control Administrator
Cindy VanDyke, State Transportation Planning Administrator
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Angela Robinson, Financial Management Administrator
Lisa Myers, State Project Review Engineer
Charles "Chuck" Hasty, State Materials Engineer
Mike Bolden, State Utilities Engineer
Richard Cobb, Statewide Location Bureau Chief
Kathy Zahul, District Engineer
Scott Lee, District Preconstruction Engineer
Patrick Allen, District Utilities Engineer
Elaine Armster, Project Manager
BOARD MEMBER - 6th Congressional District

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

Project Type: Operational Improv. P.I. Number: 0012880
 GDOT District: 7th County: Fulton
 Federal Route Number: N/A State Route Number: N/A

Barnwell Road Enhanced Sidewalk and Intersection Improvements, including bike lanes and roundabouts, from SR 140/Holcomb Bridge Road to Barnwell Elementary School. Also a pedestrian walk along Rivermont Parkway from Barnwell Road to the community pool. Enhanced sidewalk and Boardwalk from community pool to Brumbelow Road.

Note: Updated report per management comments

Submitted for approval:

Development Planning & Engineering, Inc. *[Signature]* March 20, 2015
 Consultant Designer & Firm Date

[Signature] 3/25/2015
 Local Government Sponsor Date

* *Albert Shelby / KLP* 12-4-14
 State Program Delivery Engineer Date

* *Elaine Armster / KLP* 12-3-14
 GDOT Project Manager Date

Recommendation for approval:

* *Hiral Patel / KLP* 12-15-14
 Program Control Administrator Date

* *Kathy Zahul / KLP* 12-29-14
 State Environmental Administrator Date

* *Lisa Myers / KLP* 12-9-14
 State Traffic Engineer Date

* *Yulonda Pride-Foster / KLP* 12-10-14
 Project Review Engineer Date

* *Rachel Brown / KLP* 12-23-14
 State Utilities Engineer Date

* *Ben Rabun / KLP* 12-16-14
 District Engineer Date

* *Ben Rabun / KLP* 12-16-14
 State Bridge Engineer Date

State Transportation Financial Management Administrator Date

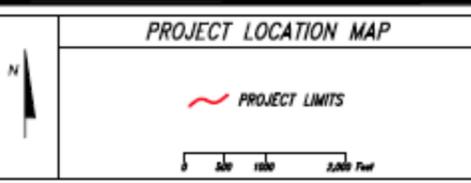
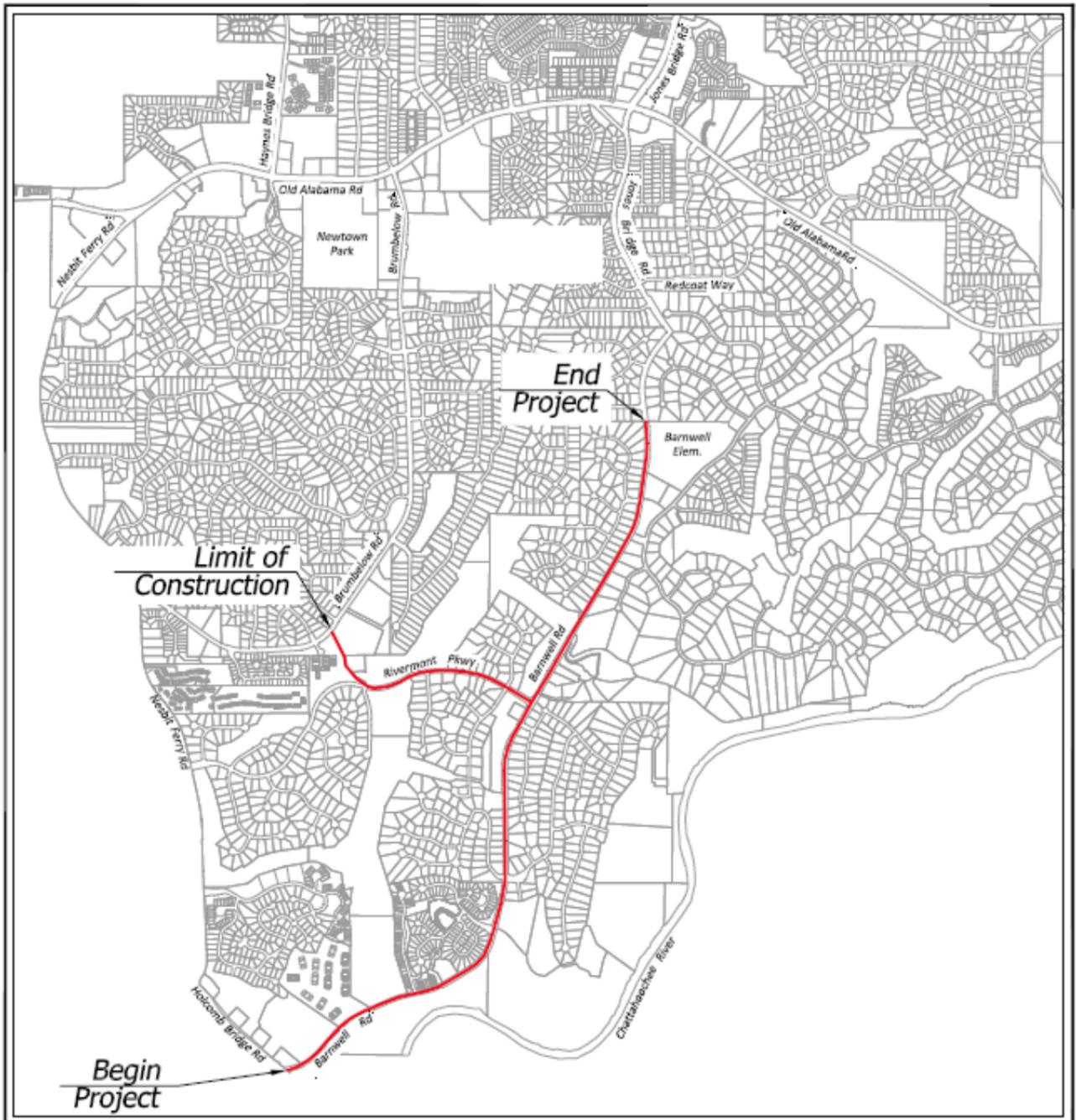
The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Plan (RTP) and/or the State Transportation Improvement Program (STIP).

* *Cynthia Van Dyke* 12-15-14
 State Transportation Planning Administrator Date

* *Original Signatures/recommendations on file*

County: Fulton

PROJECT LOCATION MAP



P.I. No. 0012880
BARNWELL ROAD ENHANCED SIDEWALK
AND INTERSECTION IMPROVEMENTS
CITY OF JOHNS CREEK, GEORGIA

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PLANNING AND BACKGROUND

Project Justification Statement: There are many walkers, runners, and cyclists along Barnwell Road who are looking for routes to Barnwell Elementary School, the Chattahoochee River National Recreation Area, the commercial nodes along Holcomb Bridge Road, and many of the adjoining residential neighborhoods. In addition, turn lanes and/or roundabouts are needed to improve the operations of Barnwell Road, correct substandard sight distance at many of the side street intersections, reduce traffic speeds, and allow pedestrians to cross Barnwell Road at designated locations.

At SR 140/Holcomb Bridge Road, the southern terminus of the project, pedestrian facilities are present that will allow for connectivity to commercial developments, trails, and neighborhoods within the City of Roswell. At the northern terminus, the project will connect to the City's existing trail system located at Barnwell Elementary School.

Addressing operational issues along Barnwell Road and providing improved connectivity to existing commercial areas, neighborhoods, parks, and schools was identified as a top priority by the citizens of Johns Creek and are the goals for this project. Also, by constructing this project it offers the potential to expand the trail system through the Cities of Roswell, Sandy Springs, Peachtree Corners and Gwinnett County and provide connectivity to Newtown Park within the City of Johns Creek, Garrard Landing Park within the City of Roswell, and Holcomb Bridge Park in Gwinnett County; thus creating multi-jurisdictional pedestrian connectivity.

Existing conditions: Barnwell Road is a two-lane collector roadway that connects SR 140/Holcomb Bridge Road to Jones Bridge Road. It contains dedicated left turn lanes at SR 140/Holcomb Bridge Road (signalized) and Old Southwick Pass. The corridor is completely developed with a high concentration of residential neighborhoods, some mixed commercial uses, a national and private park, a school, and a golf club. Existing sidewalks are present along the western side of Barnwell Road at SR 140/Holcomb Bridge Road; along the eastern side of Barnwell Road at the Chattahoochee River National Recreation Area access driveway; along the frontage of Barnwell Elementary School; and along the western side of Barnwell Road from North Peak Drive to Barnwell Elementary School and beyond. An existing two-lane single span bridge crosses over Hogan Creek, which is located approximately 0.3 miles north of the SR 140/Holcomb Bridge Road intersection. Major utilities consist of overhead power, cable and communication lines and underground water and gas lines. There is an existing cell tower outside the western right-of-way across from the Chattahoochee River National Recreation Area driveway.

Rivermont Parkway is a low speed local street (25 mph) that connects several neighborhoods within the Rivermont residential and golf community to Barnwell Road and Nesbit Ferry Road. It is an existing 36-foot wide two-lane roadway with curb and gutter and urban shoulders. Single Family residential homes and a golf country club front the roadway along its length.

Other projects in the area:

- PI 0006820 ATMS/ITS on SR 140/Holcomb Bridge Road from SR 9 to Barnwell Road
- PI 0009704 Operational Improvement Holcomb Bridge Road
- PI 0010328 SR 141, Jones Bridge Road, Old Alabama Road, McGinnis Ferry Road, and Haynes Bridge Road ITS
- PI 0013159 Widening Old Alabama Road from 0.47 Miles West of Nesbit Ferry Road to Buice Road

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- PI 731895 Sidewalks on SR 140 from Scott Road to Barnwell Road
- PI 752660 Widening Old Alabama Road from CR 111/Buice Road to SR 141/Medlock Bridge Road
- Old Alabama Road Widening from City Limits to Jones Bridge Road (City Project)
- Jones Bridge Road Widening from Old Alabama Road to Waters Road (City Project)
- Barnwell Road at Jones Bridge Road Enhanced Sidewalk and Intersection Improvement (City Project)

MPO: Atlanta TMA**TIP #:** FN-288**TIA Regional Commission:** Atlanta RC RC Project ID FN-288**Congressional District(s):** 6**Federal Oversight:** FOS/PoDI Exempt State Funded Other**Projected Traffic:** ADT

Current Year (2014): 12185 Open Year (2018): 12510 Design Year (2038): 14195

Traffic Projections Performed by: *Wolverton & Associates, Inc.***Functional Classification (Mainline):** Urban Collector Street**Complete Streets - Bicycle, Pedestrian, and/or Transit Warrants:**Warrants met: None Bicycle Pedestrian Transit

The project meets Pedestrian and Bicycle Warrants due to high concentration of residential neighborhoods, some mixed-use commercial areas, national and private parks, a golf club, and a school along the corridor. The project will incorporate 10-foot wide enhanced sidewalks (reduced to 8-feet in specific areas if needed to minimize impacts) along the western side of Barnwell Road from SR 140/Holcomb Bridge Road to North Peak Drive and along the eastern side of Barnwell Road from Old Southwick Pass to Barnwell Elementary School; providing a connection to existing sidewalks and trails adjacent to the project area. Bike lanes will be incorporated into the typical section, by widening, from just north of SR 140/Holcomb Bridge Road to Barnwell Elementary School.

In addition, a pedestrian walk will be provided along Rivermont Parkway from Barnwell Road to the Community Pool and from the Community Pool to Brumbelow Road.

Is this a 3R (Resurfacing, Restoration, & Rehabilitation) Project? No Yes**Pavement Evaluation and Recommendations**Preliminary Pavement Evaluation Summary Report Required? No YesPreliminary Pavement Type Selection Report Required? No YesFeasible Pavement Alternatives: HMA PCC HMA & PCC

Pavement specifications are provided as an attachment to this report.

DESIGN AND STRUCTURAL

Description of the proposed project: The Barnwell Road Enhanced Sidewalk and Intersection Improvements project will consist of the construction of a 10-foot wide enhanced sidewalk along the western side of Barnwell Road from SR 140/Holcomb Bridge Road (city limits) to Barnwell Elementary School. At or near Barnwell Elementary School, the enhanced sidewalk will shift to

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the eastern side of Barnwell Road, creating a crossing for pedestrians at the elementary school and allowing for connectivity to the proposed enhanced sidewalk (City Project) just to the north.

Bike lanes will be incorporated into the typical section, by widening, from just north of SR 140/Holcomb Bridge Road to Barnwell Elementary School. HAWK signal systems will be evaluated at locations along Barnwell Road to help pedestrians cross the roadway. Two areas for consideration will be the Chattahoochee River National Recreation Area driveway and Barnwell Elementary School. A pedestrian bridge and/or bridge widening at Hogan Creek is also proposed.

Intersection and sight distance improvements are proposed at the intersections listed below. These improvements include the addition of roundabouts (mini and single-lane), left turn lanes and bypass lanes.

1. Barnwell Road at SR 140/Holcomb Bridge Road
(Left and Right Turn Lanes, Upgrade Existing Signal)
2. Barnwell Road at Sandy Lane Drive
(Bypass Lane)
3. Barnwell Road at Niblick Drive
(Mini-Roundabout)
4. Barnwell Road at Olde Clubs Drive
(Left and Right Turn Lanes)
5. Barnwell Road at Glen Ferry Drive
(Mini-Roundabout)
6. Barnwell Road at River Ferry Drive/Rivermont Parkway/Citadella Court
(Left and Right Turn Lanes/Mini-Roundabout/Left Turn Lanes, Respectively)
7. Barnwell Road at the Chattahoochee River National Recreation Area Driveway
(Evaluate a HAWK Pedestrian Hybrid Beacon)
8. Barnwell Road at Old Southwick Pass
(Left Turn and Right Turn Lanes)
9. Barnwell Road at North Peak Drive
(Left and Right Turn Lanes)
10. Barnwell Road at Barnwell Elementary School
(Left Turn Lane. *A HAWK Pedestrian Hybrid Beacon is currently being evaluated by the City of Johns Creek*)

A protected pedestrian lane will be incorporated into the existing roadway section on Rivermont Parkway from Barnwell Road to the community pool. At the community pool, the pedestrian lane will end and an enhanced sidewalk will continue to its terminus at Brumbelow Road.

The total length of the project is approximately 2.3 miles along Barnwell Road and approximately 0.55 miles along Rivermont Parkway.

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Major Structures: Barnwell Road Bridge over Hogan Creek

Structure	Existing	Proposed
121-0290-0 Barnwell Road over Hogan Creek	38-foot single span two-lane steel bridge, 33 degree skew angle, with 12-foot lane widths. The bridge was constructed in 1956, reconstructed in 1970 and rehabilitated in 2010. The bridge has a deck width of 25.6 feet and a roadway width of 24.3 feet between curbs. The October 22, 2012 bridge sufficiency rating was 75.08.	Value engineering will determine if the existing bridge should be replaced or widened. The proposed bridge typical section will be two 12-foot travel lanes with 4-foot bicycle lanes in each direction. A separate pedestrian bridge will be constructed along the western side of Barnwell Road.

Mainline Design Features: Barnwell Road – Collector Roadway

Feature	Existing	Standard*	Proposed
Typical Section			
- Number of Lanes	2	2	2
- Lane Width(s)	10'-12'	11'-12'	11' Desirable 10' Minimum
- Median Width & Type	N/A	N/A	N/A
- Outside Shoulder or Border Area Width	Mixed 24" Curb and Gutter and rural shoulders	N/A	Mixed 24" Curb and Gutter with 11'-13' urban shoulders and rural shoulders
- Outside Shoulder Slope	Varies	2:1/4:1	4:1 with 2:1 Max.
- Inside Shoulder Width	N/A	N/A	N/A
- Sidewalks	5'	5'	10' enhanced (desirable) 5' minimum
- Auxiliary Lanes	Lt and Rt turn lanes	Lt and Rt turn lanes	Lt and Rt turn lanes
- Bike Lanes	None	None	4' bike lanes
Posted Speed	40 mph		40 mph
Design Speed	40 mph	40 mph	40 mph
Min Horizontal Curve Radius	730'	533'	Maint. Exist.
Maximum Superelevation Rate	8%	4%	Maintain Exist.
Maximum Grade	8%	10%	Maintain Exist.
Access Control	Permit	Permit	Permit
Design Vehicle	BUS-40	BUS-40	WB-40 ⁽¹⁾
Pavement Type	Asphalt	Asphalt	Asphalt

*According to current GDOT design policy if applicable

(1) BUS-40 and City Fire Trucks will also be verified.

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Side Street Design Features: Rivermont Parkway – Local Street

Feature	Existing	Standard*	Proposed
Typical Section			
- Number of Lanes	2	2	2
- Lane Width(s)	18'	11'-12'	12'
- Median Width & Type	N/A	N/A	N/A
- Outside Shoulder or Border Area Width	24" Curb and Gutter with urban shoulders	N/A	24" Curb and Gutter with urban shoulders
- Outside Shoulder Slope	Varies	2:1/4:1	Maintain Existing
- Inside Shoulder Width	N/A	N/A	N/A
- Sidewalks	None	5'	10' pedestrian lane with 2' striped buffer
- Auxiliary Lanes	None	None	None
- Bike Lanes	None	None	None
Posted Speed	25 mph		25 mph
Design Speed	25 mph	25 mph	25 mph
Min Horizontal Curve Radius	500'	154'	Maintain Exist.
Maximum Superelevation Rate	NC	NC	NC
Maximum Grade	12%	12%	Maintain Exist.
Access Control	Permit	Permit	Permit
Design Vehicle	SU	SU	SU
Pavement Type	Asphalt	Asphalt	Asphalt

*According to current GDOT design policy if applicable

Major Interchanges/Intersections:

Existing signalized intersection at SR 140/Holcomb Bridge Road and Barnwell Road.

Lighting required: No Yes

Off-site Detours Anticipated: No Undetermined Yes

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

Design Exceptions to FHWA/AASHTO controlling criteria anticipated:

FHWA/AASHTO Controlling Criteria	No	Undetermined	Yes	Appvl Date (if applicable)
1. Design Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Lane Width	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Shoulder Width	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Bridge Width	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Horizontal Alignment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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6. Superelevation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Vertical Alignment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Grade	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Stopping Sight Distance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. Cross Slope	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. Vertical Clearance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. Lateral Offset to Obstruction	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. Bridge Structural Capacity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Design Variances to GDOT Standard Criteria anticipated:

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

A Design Variance for a lateral offset to obstruction will be reviewed during the Preliminary Design Phase. It cannot be verified at this time if existing utility poles or other items will require this variance.

VE Study anticipated: No Yes Completed – Date:

UTILITY AND PROPERTY

Temporary State Route needed: No Yes Undetermined

Railroad Involvement: None

Utility Involvements:

- Power – Sawnee EMC
- Gas – AGL
- Communications – AT&T, MCI/Verizon, TW Telecom
- Cable – Comcast
- Water and Sewer – Fulton County Water and Sewer

SUE Required: No Yes Undetermined

Public Interest Determination Policy and Procedure recommended? No Yes

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Right-of-Way (ROW): Existing width: 80 ft Proposed width: 80-85 ftRequired Right-of-Way anticipated: None Yes UndeterminedEasements anticipated: None Temporary Permanent Utility Other

It is the intent to minimize right-of-way impacts for this project. Construction easements will be used to reduce project costs and impacts to adjacent properties.

Anticipated total number of impacted parcels:	52
Displacements anticipated:	
Businesses:	0
Residences:	0
Other:	0
Total Displacements:	0

Location and Design approval: Not Required Required

ROUNDBABOUTS

Roundabout Lighting Agreement/Commitment Letter received: No Yes

Roundabout Planning Level Assessment: The Barnwell Road corridor is in need of traffic calming, operational improvements at existing side streets, and designated locations for pedestrians to cross the roadway to access adjoining neighborhoods, commercial areas, parks, and schools. To alleviate these needs, the City of Johns Creek is planning to add single-lane (mini) roundabouts at strategic locations along Barnwell Road. Not only will this reduce traffic speeds, but will also correct substandard intersection sight distance at the side streets and provide a place for pedestrians to cross the roadway.

Single-lane (Mini) Roundabouts are proposed at the following locations:

1. Barnwell Road at Niblick Drive
2. Barnwell Road at Glen Ferry Drive
3. Barnwell Road at Rivermont Parkway

The use of mini-roundabouts at the side streets will take advantage of existing pavement areas associated with acceleration and deceleration lanes. This will reduce right-of-way and utility impacts, disturbances to adjoining property owners, and disturbances to environmental resources. In addition, it will increase the operational efficiency of the intersections where left turn lanes do not currently exist.

Proposed roundabouts at Barnwell Elementary School and Old Southwick Pass were removed due to citizen feedback during the PIOH and concerns with separation.

The inscribed diameter and geometry of the mini-roundabout will be determined during preliminary design. The design will consider the relatively high design speed within the corridor (40 mph), fastest paths, and review ongoing research by FHWA (“Field and Safety Evaluation of Mini-Roundabouts”).

Copies of the Roundabout Analysis Tool for the proposed roundabout locations are included as an attachment to this report.

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Roundabout Peer Review Required: No Yes Completed – Date:

CONTEXT SENSITIVE SOLUTIONS

Issues of Concern:

- Impacts to existing neighborhoods and surrounding properties
- Impacts to the Chattahoochee River National Recreation Area
- Impacts to Barnwell Elementary School
- Impacts to existing state waters
- Impacts to existing storm water management facilities along the corridor
- Impacts to existing utilities

Context Sensitive Solutions Proposed: The project team has individuals from multiple disciplines who are working together to develop context sensitive solutions within the project corridor. Detailed field reviews have been performed by the design team to verify the proposed roadway template can be constructed under traffic and reduce impacts to adjacent properties. Meetings with neighborhood groups and stakeholders have taken place to understand their concerns with the Barnwell Road corridor and obtain early feedback on the use of roundabouts to calm traffic, provide additional intersection sight distance and efficient left turning movements at side street intersections, and incorporate pedestrian and bicycle facilities to allow travel to existing commercial nodes, adjacent neighborhoods, parks, and Barnwell Elementary School.

An environmental screening, ecology, and history special studies were started early to identify potential impacts to the community and environmental resources.

Access to the Chattahoochee River National Recreation Area and Barnwell Elementary School is very important to the residents and adding enhanced sidewalks and bicycle lanes is a direct result of their input. In addition, left turning movements into and out of the commercial node located at SR 140/Holcomb Bridge is a major concern and was voiced by many at the stakeholder meetings. These concerns have been incorporated into the conceptual design of the SR 140/Holcomb Bridge Road intersection.

To minimize impacts to adjacent residential properties, retaining walls will be used where there are challenges with the existing topography. Impacts to side street monument signage and landscaping will be reduced by the use of mini-roundabouts; which will also serve to calm traffic. There are widened pavement sections where mini-roundabouts are proposed. This will reduce impacts to stormwater, right-of-way, utilities, and adjacent properties.

ENVIRONMENTAL & PERMITS

Anticipated Environmental Document:

GEPA: NEPA: CE EA/FONSI EIS

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

Please reference the Concept Level Hydrology Study for MS4 Permit (attached).

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Environmental Permits/Variations/Commitments/Coordination anticipated:

Permit/Variance/Commitment/Coordination Anticipated	No	Yes	Remarks
1. U.S. Coast Guard Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2. Forest Service/Corps Land	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3. CWA Section 404 Permit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Bridge Widening, Pedestrian Bridge, Culvert Extension
4. Tennessee Valley Authority Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5. Buffer Variance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Storm Water Management Facility
6. Coastal Zone Management Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7. NPDES	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Disturbed Area > 1 Acre
8. FEMA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9. Cemetery Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
10. Other Permits	<input type="checkbox"/>	<input type="checkbox"/>	
11. Other Commitments	<input type="checkbox"/>	<input type="checkbox"/>	

Is a PAR required? No Yes Completed – Date:

Environmental Comments and Information:

NEPA/GEPA: Please note: It is the intent of this project to avoid impacts to the Chattahoochee River National Recreation Area and the Chattahoochee River Environmental Education Center parcels, thus eliminating Section 4(f) review.

The document is expected to be a Categorical Exclusion. Several community resources exist within the project corridor and include:

- Chattahoochee River National Recreation Area (CRNRA), Jones Bridge Section
- Chattahoochee River Environmental Education Center
- Rivermont Park (Private park)
- Barnwell Elementary School
- Rivermont Golf & Country Club (Private facility)
- Pool & Tennis Club for Rivermont Subdivision (Private facility)
- Preservation Oaks Sanctuary (Private park)

Impacts to public park entities would require review under Section 4(f) of the U.S. Department of Transportation Act. Based on research from the environmental screening, the CRNRA and Chattahoochee River Environmental Education Center qualify as Section 4(f) public recreation resources in the project area. Minor impacts, from the proposed project implementation, to the Section 4(f) resources may qualify for a de minimis determination by Federal Highway Administration (FHWA) and in consultation with the park’s officials with jurisdiction. Major impacts to the Section 4(f) recreation resources would require a full Section 4(f) Evaluation and intensive alternatives analysis.

Ecology: The ecological survey identified the following waters along the project corridor.

- 7 perennial streams
- 6 intermittent streams
- 8 ephemeral channels
- 3 wetlands

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- 2 open waters, which include one mostly dry detention pond and one golf course pond that is partially within the 100-foot survey area.

No protected species were observed onsite; however, a protected crawfish species could be present at the cross-drain just north of the Chattahoochee River National Recreation Area driveway. A detailed review for this species will be conducted as each individual project is funded.

Also, a survey for Georgia aster will be conducted during the survey period beginning in late September.

A Section 404 Permit would be required if USACE-jurisdictional waters were impacted by the proposed project. Mitigation credits would be required to be purchased if the impacts exceeded 100 linear feet for streams or 0.1 acre for wetlands. A stream buffer variance would be required for any impacts within 25-foot of top of bank at USACE-jurisdictional streams or state buffered waters. The Chattahoochee River has been classified as a trout stream and will require a 50-foot stream buffer. Other Chattahoochee River tributaries may also require a 50-foot stream buffer; however, further research is needed. Stream buffer credits may be required based on the type of impact. A National Pollutant Discharge Elimination System (NPDES) permit is required for greater than 1.0 acre of disturbance; therefore, a NPDES permit will be needed for this project.

Overall, ecology impacts associated with this project are expected to be minimal; however, we do anticipate the following: (1) Impacts to a tributary to the Chattahoochee River (north of the CRNRA driveway) are anticipated due to a short (<100-feet) extension of a small roadway cross-drain; (2) Impacts to wetland areas are not expected to exceed 0.1 acre; and (3) due to the close proximity of existing streams near Sandy Lane Drive and the existing detention pond to the north, a stream buffer variance is anticipated.

The Ecology Resource Survey Report was approved by GDOT on January 16, 2015.

History: Two properties 50 years of age or older were identified within the project corridor; however, neither has been recommended eligible for inclusion in the National Register of Historic Places. The project report has been approved by the State Historic Preservation Officer (SHPO).

Archaeology: No cemeteries are located within the project corridor. A total of 24 previously recorded archaeological sites are located within a 1-kilometer radius of the project corridor. Three of the 24 sites are recommended eligible for the National Register of Historic Places (NRHP); however, no archaeological sites fall within the Area of Potential Effect (APE). A full Phase I archaeological survey would need to be conducted for completion of the Section 106 process and the Categorical Exclusion.

Air Quality:

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

An Air Quality Assessment is expected, and a Letter of Determination for PM2.5 would be required for the project. A CO hotspot analysis is expected.

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Noise Effects: A Type III Noise Analysis is expected.

Public Involvement: Stakeholder meetings held (4) – River Glen Homeowners Association (06/26/14), Rivermont Homeowners Association (07/21/14), Country Club of the South Homeowners Association (08/12/14), and River Ridge Homeowners Association (08/18/14).

Meeting with Barnwell Elementary School to be scheduled in the future

Meeting with the National Park Service will be requested

PIOH held November 6, 2014. Approximately 60 people in attendance (Sign-In Sheets and Comment Forms located in the Attachments)

Major stakeholders: Chattahoochee River National Recreation Area (CRNRA) – Jones Bridge Section, Chattahoochee River Environmental Education Center, City of Johns Creek, Traveling Public, Barnwell Elementary School (Fulton County Public Schools), Rivermont Homeowners Association, River Ridge Homeowners Association, River Glen Homeowners Association, Country Club of the South Homeowners Association, Commercial Business Owners, and Residential Neighborhoods

CONSTRUCTION

Issues potentially affecting constructability/construction schedule: The existing corridor has high traffic volumes during the AM and PM peak hours, especially at Barnwell Elementary School and SR 140/Holcomb Bridge Road. Restricted work hours during peak times are recommended during construction. Maintenance of traffic through the project corridor will be necessary; therefore, detailed staging plans will be prepared.

Early Completion Incentives recommended for consideration: No Yes

COORDINATION, ACTIVITIES, RESPONSIBILITIES, AND COSTS

Initial Concept Meeting: Meeting held on May 7, 2014 (minutes attached).

Concept Meeting: Meeting held on October 2, 2014 (minutes attached).

Other coordination to date: Stakeholder meetings, see attached Meeting Minutes.

Project Activity	Party Responsible for Performing Task(s)
Concept Development	City of Johns Creek/Development Planning & Eng., Inc.
Design	City of Johns Creek/Development Planning & Eng., Inc.
Right-of-Way Acquisition	City of Johns Creek
Utility Relocation	City of Johns Creek
Letting to Contract	City of Johns Creek
Construction Supervision	City of Johns Creek
Providing Material Pits	Contractor
Providing Detours	N/A
Environmental Studies, Documents, & Permits	City of Johns Creek/Edwards-Pitman Environmental, Inc.
Environmental Mitigation	City of Johns Creek/Edwards-Pitman Environmental, Inc.
Construction Inspection & Materials Testing	City of Johns Creek

County: Fulton

Project Cost Estimate Summary and Funding Responsibilities:

TOTAL PROJECT SUMMARY						
(Includes Individual Projects A-I, L, M, N and O)						
	Breakdown of PE	ROW	Utility*	CST**	Mitigation	Total Cost
Funded By	City/GDOT	City/GDOT	City	City/GDOT	City/GDOT	
\$ Amount	1,085,000	\$1,592,931	\$0.00	\$7,253,193.33	\$70,000	\$10,001,124.33
Date of Estimate	3/20/2015	3/20/2015	3/20/2015	3/20/2015	3/20/2015	

*Reimbursable Utility Costs only

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

County: Fulton

The City of Johns Creek requested a table showing a breakdown of the individual projects as shown below.

PROJECT COST ESTIMATE SUMMARY TABLE (Individual Projects A-I, M, N, and O)						
	Breakdown of PE	ROW	Utility*	CST**	Mitigation	Total Cost
LOCATION A: Barnwell Road at SR 140/Holcomb Bridge Road (Left and Right Turn Lanes, Signalized)						
\$ Amount	\$90,000.00	\$257,431.00	\$0.00	\$488,765.85	\$0.00	\$836,196.85
LOCATION B: Barnwell Road at Sandy Lane Drive (Bypass Lane)						
\$ Amount	\$15,000.00	\$8,000.00	\$0.00	\$99,913.70	\$0.00	\$122,913.70
LOCATION C: Barnwell Road at Niblick Drive (Mini-Roundabout)						
\$ Amount	\$55,000.00	\$72,500.00	\$0.00	\$384,160.85	\$0.00	\$511,660.85
LOCATION D: Barnwell Road at Olde Clubs Drive (Left Turn Lanes)						
\$ Amount	\$65,000.00	\$80,000.00	\$0.00	\$443,091.55	\$0.00	\$588,091.55
LOCATION E: Barnwell Road at Glen Ferry Drive (Mini-Roundabout)						
\$ Amount	\$55,000.00	\$60,000.00	\$0.00	\$372,648.75	\$0.00	\$487,648.75
LOCATION F: Barnwell Road at River Ferry Drive/Rivermont Parkway/Citadella Court (Left Turn Lanes and Mini-Roundabout)						
\$ Amount	\$80,000.00	\$95,000.00	\$0.00	\$564,371.66	\$0.00	\$739,371.66
LOCATION G: Barnwell Road at Old Southwick Pass (Left and Right Turn Lanes)						
\$ Amount	\$35,000.00	\$55,000.00	\$0.00	\$233,754.89	\$0.00	\$323,754.89
LOCATION H: Barnwell Road at North Peak Drive (Left Turn Lanes)						
\$ Amount	\$40,000.00	\$80,000.00	\$0.00	\$255,971.72	\$0.00	\$375,971.72
LOCATION I: Barnwell Road at Barnwell Elementary School (Left Turn Lane)						
\$ Amount	\$80,000.00	\$50,000.00	\$0.00	\$441,551.00	\$0.00	\$571,551.00
LOCATION M: Barnwell Road Enhanced Sidewalk ⁽¹⁾						
\$ Amount	\$490,000.00	\$725,000.00	\$0.00	\$3,431,604.68	\$50,000.00	\$4,696,604.68
LOCATION N: Rivermont Parkway from Barnwell Road to the Community Pool (Pedestrian Lane)						
\$ Amount	\$20,000.00	\$0.00	\$0.00	\$161,843.80	\$0.00	\$181,843.80
LOCATION O: Enhanced Sidewalk and Boardwalk (Community Pool to Brumbelow Road)						
\$ Amount	\$60,000.00	\$110,000.00	\$0.00	\$375,514.88	\$20,000.00	\$565,514.88

*Reimbursable Utility Costs only

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

(1) This estimate includes enhanced sidewalk areas outside the limits of the proposed intersection improvements.

County: Fulton

ALTERNATIVES DISCUSSION

Alternative selection:

Preferred Alternative: Incorporate 4-foot bicycle lanes by widening Barnwell Road along its existing alignment utilizing the existing pavement from SR 140/Holcomb Bridge Road to Barnwell Elementary School. Construct a 10-foot enhanced sidewalk along the western side of Barnwell Road from SR 140/Holcomb Bridge Road to the existing sidewalk at North Peak Drive. At or near Barnwell Elementary School, the enhanced sidewalk will shift to the eastern side of Barnwell Road, creating a crossing for pedestrians at the elementary school and allowing for connectivity to the proposed enhanced sidewalk (City Project) just to the north. Improve the following intersections for operational improvements: SR 140/Holcomb Bridge Road (left and right turn lanes, upgrade existing signal); Sandy Lane Drive (construct a Bypass Lane); Niblick Drive (mini-roundabout); Olde Clubs Drive (left and right turn lanes); Glen Ferry Drive (mini-roundabout); River Ferry Drive/Rivermont Parkway/Citadella Court (left and right turn lanes/mini-roundabout/left turn lanes, respectively); Chattahoochee River National Recreation Area Driveway (HAWK pedestrian hybrid beacon); Old Southwick Pass (left and right turn lanes); North Peak Drive (left and right turn lanes); and Barnwell Elementary School (left turn lane with HAWK pedestrian hybrid beacon). Widen existing bridge over Hogan Creek and/or add pedestrian bridge to the western side of Barnwell Road. 11-foot lanes will be used throughout the corridor with 24-inch curb and gutter and 11-foot to 13-foot urban shoulders where enhanced sidewalk is proposed. Where no improvements are proposed, rural shoulders will remain along eastern side of Barnwell Road.

In addition, a protected 10-foot pedestrian walk, separated from the mainline by a 2-foot striped buffer, will be incorporated within the existing pavement along Rivermont Parkway from Barnwell Road to the community pool. At the community pool, the pedestrian walk will connect to a separate enhanced sidewalk, which continues to Brumbelow Road.

Estimated Property Impacts:	52	Estimated Total Cost:	\$10,001,124.33
Estimated ROW Cost:	\$1,592,931.00	Estimated CST Time:	12 months

Rationale: This alternative was selected as it provides operational improvements and traffic calming, reduces right-of-way and utility impacts, and maximizes the use of the existing pavement, which will reduce construction time and costs. The enhanced sidewalks, bicycle lanes and HAWK signal will provide much needed pedestrian and bicycle connectivity and access throughout the corridor.

No-Build Alternative: Sidewalk has been added along the western shoulder at the northern end of Barnwell Road as part of a previous project. Sections of sidewalk exist at SR 140/Holcomb Bridge Road and the Chattahoochee River National Recreation Area driveway. Bicycle lanes are not available and the rolling topography, traffic speeding, narrow lanes, and narrow shoulders result in difficult bicycle and pedestrian travel. The existing bridge over Hogan Creek is too narrow for pedestrian use. Traffic delays are observed at SR 140/Holcomb Bridge Road and Barnwell Elementary School during peak hours. In addition, left turns into and out of the driveway at the commercial node at SR 140/Holcomb Bridge Road is a major concern. Substandard intersection sight distance is a major concern at many side street intersections. Barnwell Elementary School employs police officers during peak hours to aid in access, causing frustration for the through traffic.

Estimated Property Impacts:	0	Estimated Total Cost:	\$0
Estimated ROW Cost:	\$0	Estimated CST Time:	N/A

Rationale: With substandard intersection sight distance, traffic speeds, and the lack of pedestrian connectivity to existing resources (commercial areas, neighborhoods, parks, and schools), this alternative does not meet the operational and connectivity needs of the corridor.

County: Fulton

Alternative 1: Incorporate 4-foot bicycle lanes by widening Barnwell Road along its existing alignment utilizing the existing pavement from SR 140/Holcomb Bridge Road to Barnwell Elementary School. Construct a 10-foot enhanced sidewalk along the western side of Barnwell Road from SR 140/Holcomb Bridge Road to the existing sidewalk at North Peak Drive. At or near Barnwell Elementary School, the enhanced sidewalk will shift to the eastern side of Barnwell Road, creating a crossing for pedestrians at the elementary school and allowing for connectivity to the proposed enhanced sidewalk (City Project) just to the north. Improve the following intersections for operational improvements: SR 140/Holcomb Bridge Road (left and right turn lanes, upgrade existing signal); Sandy Lane Drive (construct a Bypass Lane); Niblick Drive (left turn lanes); Olde Clubs Drive (left and right turn lanes); Glen Ferry Drive (left and right turn lanes); River Ferry Drive/Rivermont Parkway/Citadella Court (left and right turn lanes/mini-roundabout/left turn lanes, respectively); Chattahoochee River National Recreation Area Driveway (HAWK pedestrian hybrid beacon); Old Southwick Pass (maintain existing intersection); North Peak Drive (left and right turn lanes); and Barnwell Elementary School (left turn lane with HAWK pedestrian hybrid beacon). Widen existing bridge over Hogan Creek and/or add pedestrian bridge to the western side of Barnwell Road. 11-foot lanes will be used throughout the corridor with 24-inch curb and gutter and 11-foot to 13-foot urban shoulders where enhanced sidewalk is proposed. Where no improvements are proposed, rural shoulders will remain along eastern side of Barnwell Road.

In addition, a protected 10-foot pedestrian walk, separated from the mainline by a 2-foot striped buffer, will be incorporated within the existing pavement along Rivermont Parkway from Barnwell Road to the community pool. At the community pool, the pedestrian walk will connect to a separate enhanced sidewalk, which continues to Brumbelow Road.

Estimated Property Impacts:	75	Estimated Total Cost:	\$10,677,691.30
Estimated ROW Cost:	\$1,962,931.00	Estimated CST Time:	12 months

Rationale: Additional construction and right-of-way costs, additional impacts to adjacent properties and utilities, and impacts to existing storm water management facilities will be required to construct this alternative.

Comments:

County: Fulton

LIST OF ATTACHMENTS/SUPPORTING DATA

1. Concept Layout
2. Typical Sections
3. Detailed Cost Estimates:
 - a. Construction including Engineering and Inspection and Right-of-Way
 - b. Completed Liquid AC Cost Adjustment forms
 - c. Utilities
4. Crash summaries
5. Traffic diagrams
6. Traffic Engineering Report Summary Information
7. Roundabout Data
 - a. Planning level assessment
 - b. Lighting agreement or commitment letter
8. S I & A Report
9. Concept Level Hydrology Study for MS4 Permit
10. Pavement Design Criteria (City of Johns Creek)
11. Initial Concept Meeting Minutes
12. Stakeholder Meeting Minutes
13. Concept Meeting Minutes
14. Project Framework Agreement
15. PIOH Sign-In Sheets and Comment Forms
16. Concept Report Review Comments and Responses

APPROVALS

Concur: 
Director of Engineering

Approve: 
Chief Engineer

4.20.15
Date

CITY OF JOHNS CREEK

BARNWELL ROAD

ENHANCED SIDEWALK AND INTERSECTION IMPROVEMENTS (PREFERRED ALTERNATIVE)



LEGEND	
EXISTING INFORMATION	PROPOSED INFORMATION

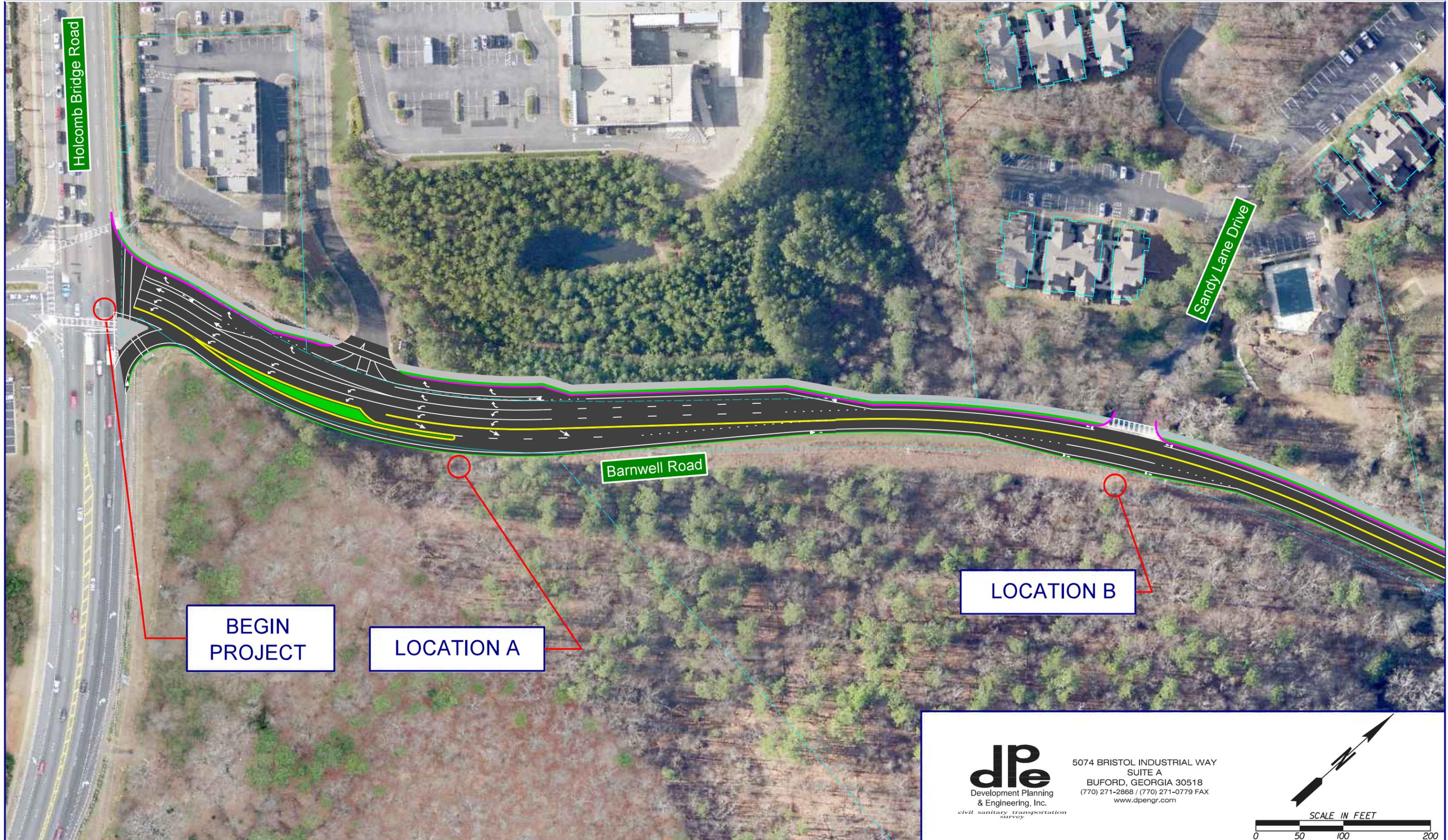
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 www.dpeinc.com

LOCATION INDEX	
LOCATION A	HOLCOMB BRIDGE ROAD
LOCATION B	SANDY LANE DRIVE
LOCATION C	NIBLICK DRIVE
LOCATION D	OLDE CLUBS DRIVE
LOCATION E	GLEN FERRY DRIVE
LOCATION F	RIVER FERRY DRIVE / RIVERMONT PARKWAY / CITADELLA COURT
LOCATION G	OLD SOUTHWICK PASS
LOCATION H	NORTH PEAK DRIVE
LOCATION I	ENTRANCE TO BARNWELL ELEMENTARY SCHOOL
LOCATION M	ENHANCED SIDEWALK - HOLCOMB BRIDGE RD TO BARNWELL ELEM.
LOCATION N	RIVERMONT PARKWAY - BARNWELL ROAD TO COMMUNITY POOL
LOCATION O	TRAIL AND BOARDWALK - COMMUNITY POOL TO BRUMBELOW ROAD
LOCATION P	ENHANCED SIDEWALK - EAST OF PARK CHASE TO STONEY RIDGE DRIVE
LOCATION Q	BRUMBELOW ROAD AT STONEY RIDGE DRIVE

LOCATIONS A & B

BARNWELL ROAD AT SR 140/HOLCOMB BRIDGE ROAD

BARNWELL ROAD AT SANDY LANE DRIVE



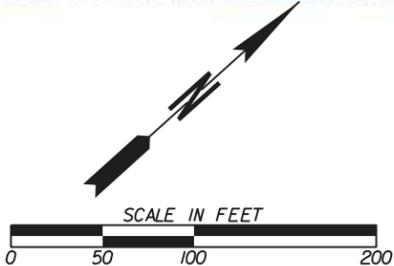
BEGIN PROJECT

LOCATION A

LOCATION B

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& Engineering, Inc.
*civil sanitary transportation
survey*

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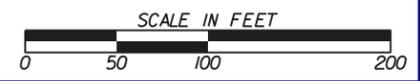


LOCATION C

BARNWELL ROAD AT NIBLICK DRIVE
PEDESTRIAN BRIDGE AT HOGAN CREEK



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LOCATIONS D & E

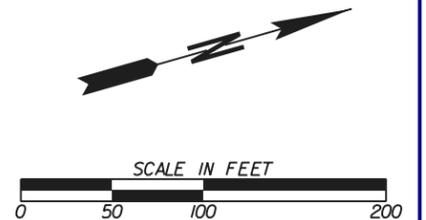
BARNWELL ROAD AT OLDE CLUBS DRIVE

BARNWELL ROAD AT GLEN FERRY DRIVE



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LOCATION M

BARNELL ROAD ENHANCED SIDEWALK



Fairway Ridge Drive

LOCATION M
(TRAIL)

Barnwell Road

River Ferry Drive

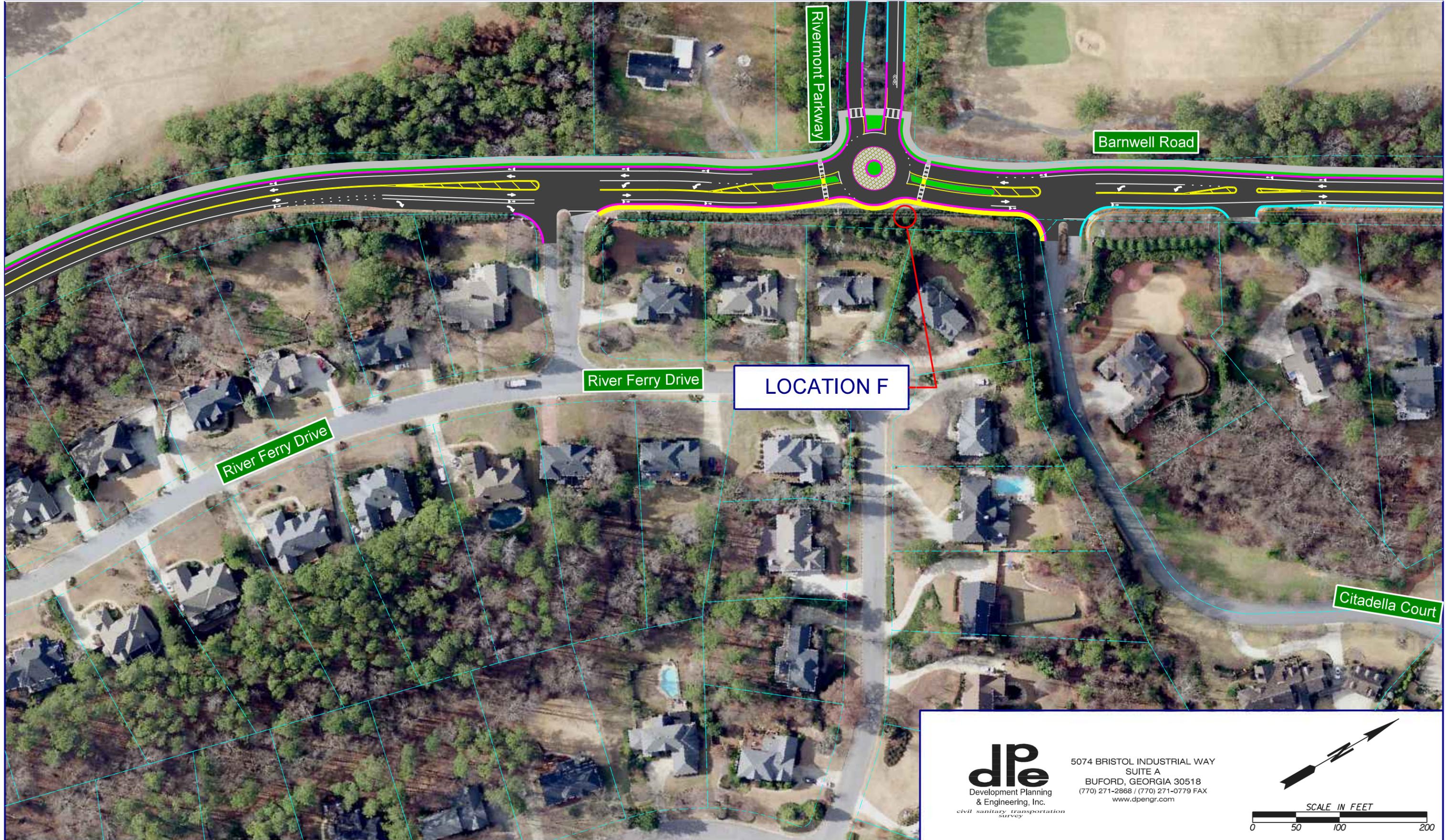
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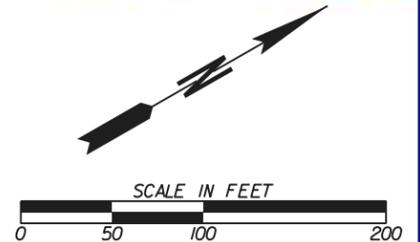
LOCATION F

BARNWELL ROAD AT RIVER FERRY DRIVE,
RIVERMONT PARKWAY, & CITADELLA COURT



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survey*

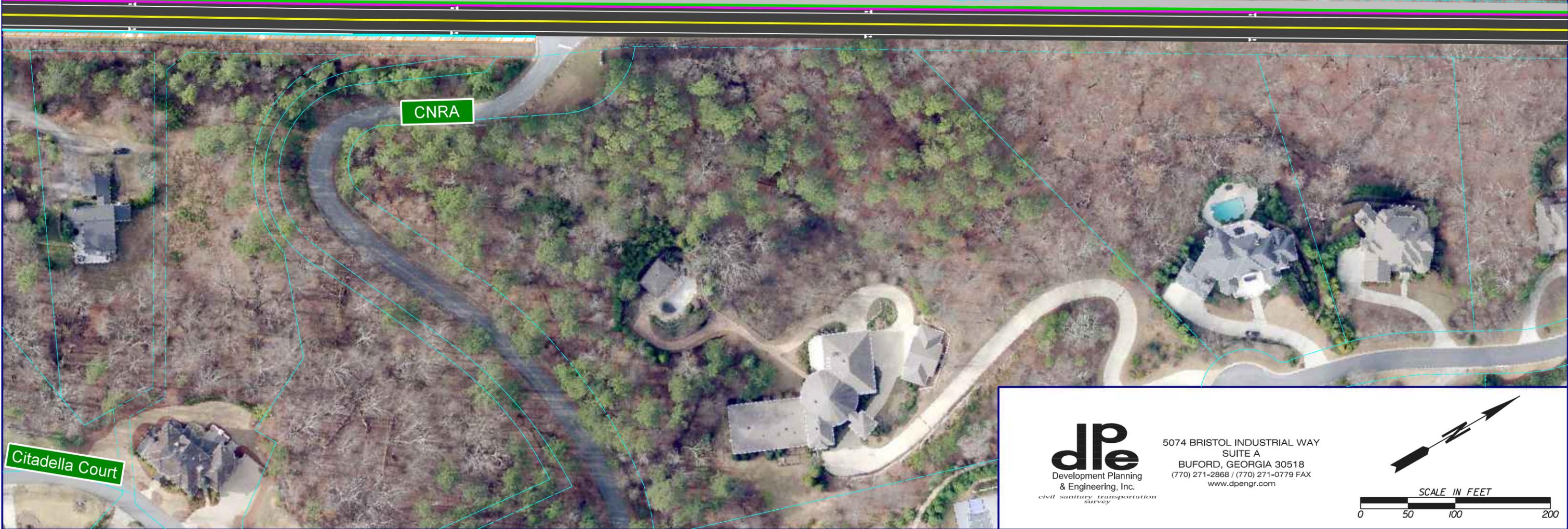
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LOCATION M

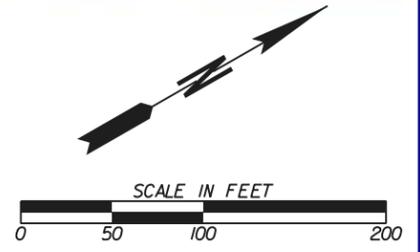
BARNELL ROAD ENHANCED SIDEWALK

Continuation



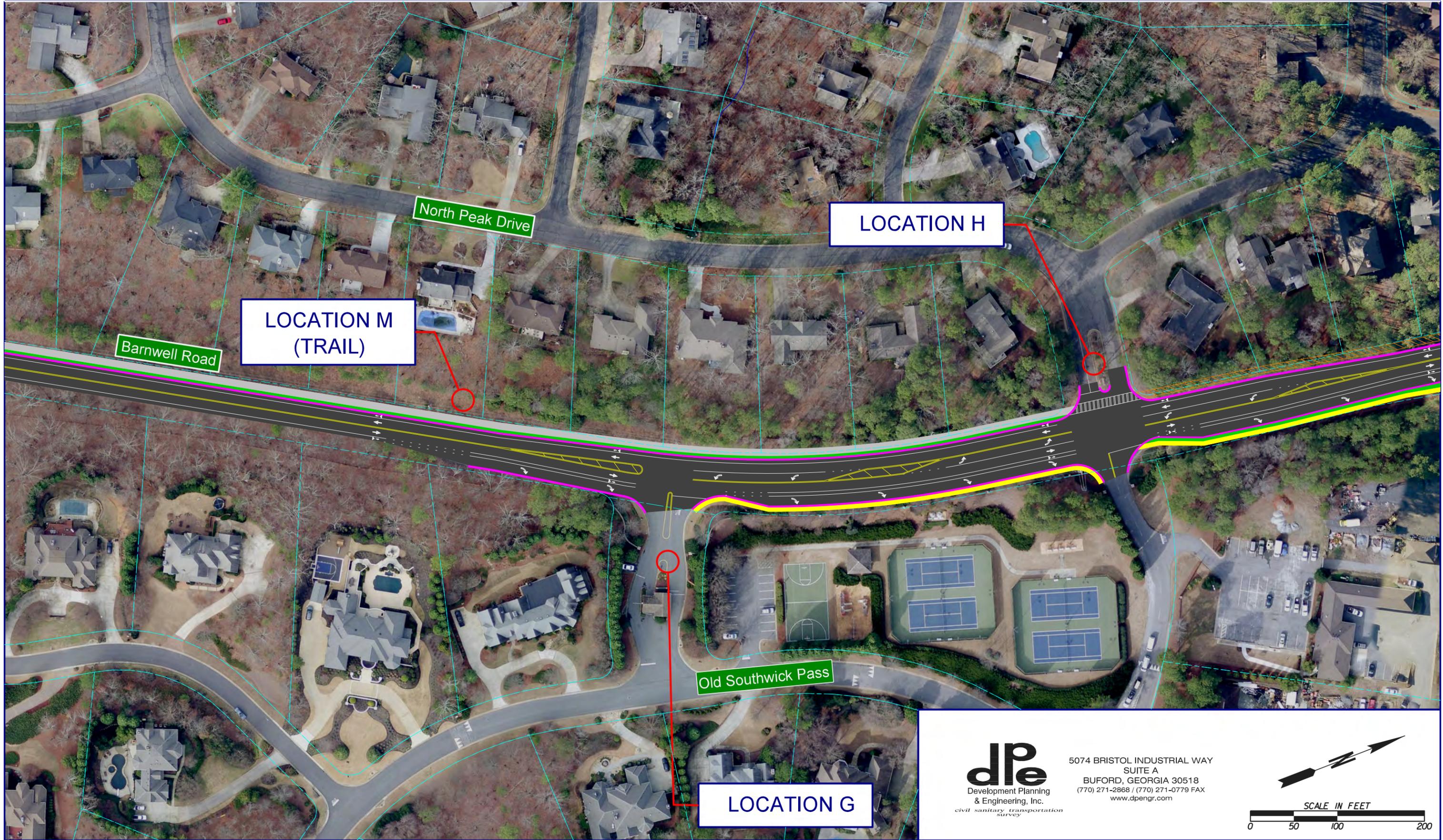
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LOCATIONS G & H

BARNWELL ROAD AT OLD SOUTHWICK PASS
BARNWELL ROAD AT NORTH PEAK DRIVE



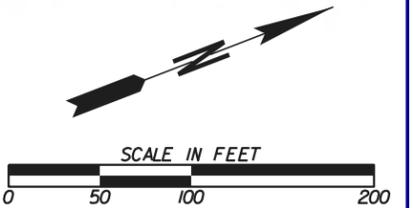
LOCATION M
(TRAIL)

LOCATION H

LOCATION G

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LOCATION I

BARNWELL ROAD AT BARNWELL ELEMENTARY SCHOOL



Aubusson Trace

Barnwell Road

END PROJECT

LOCATION I

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civil sanitary transportation survey

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SCALE IN FEET
0 50 100 200

LOCATION N
RIVERMONT PARKWAY
BARNWELL ROAD TO THE COMMUNITY POOL



LOCATION N

Rivermont Parkway

N. Mt. Dr.

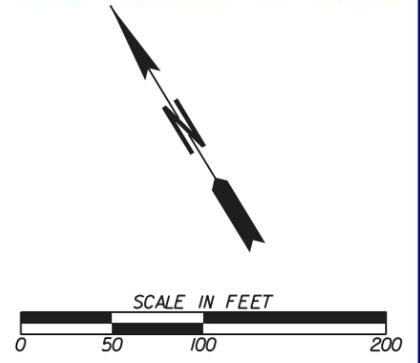
S. Mt. Dr.

Mt. Rushmore Dr.

Barnwell Road

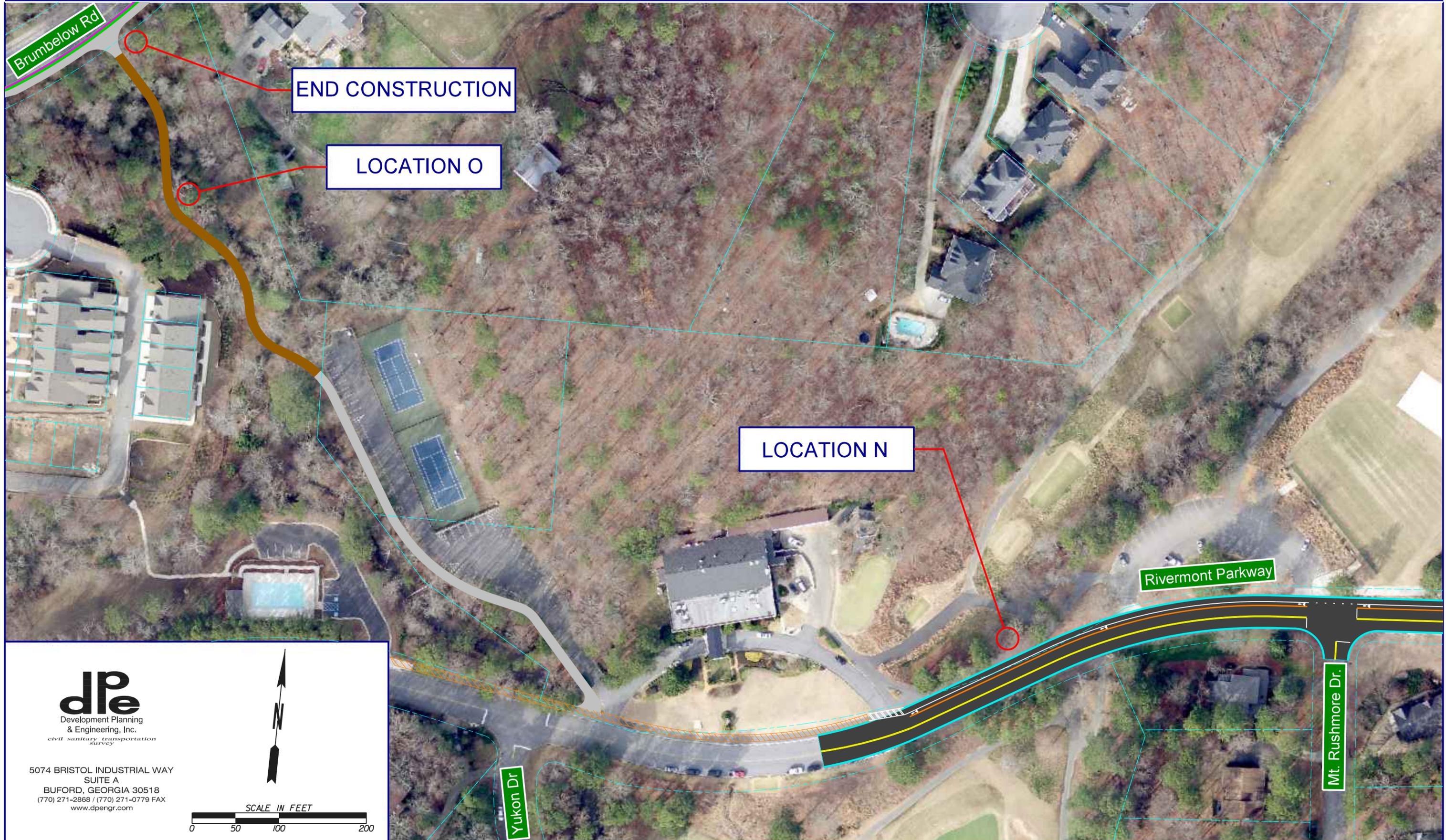
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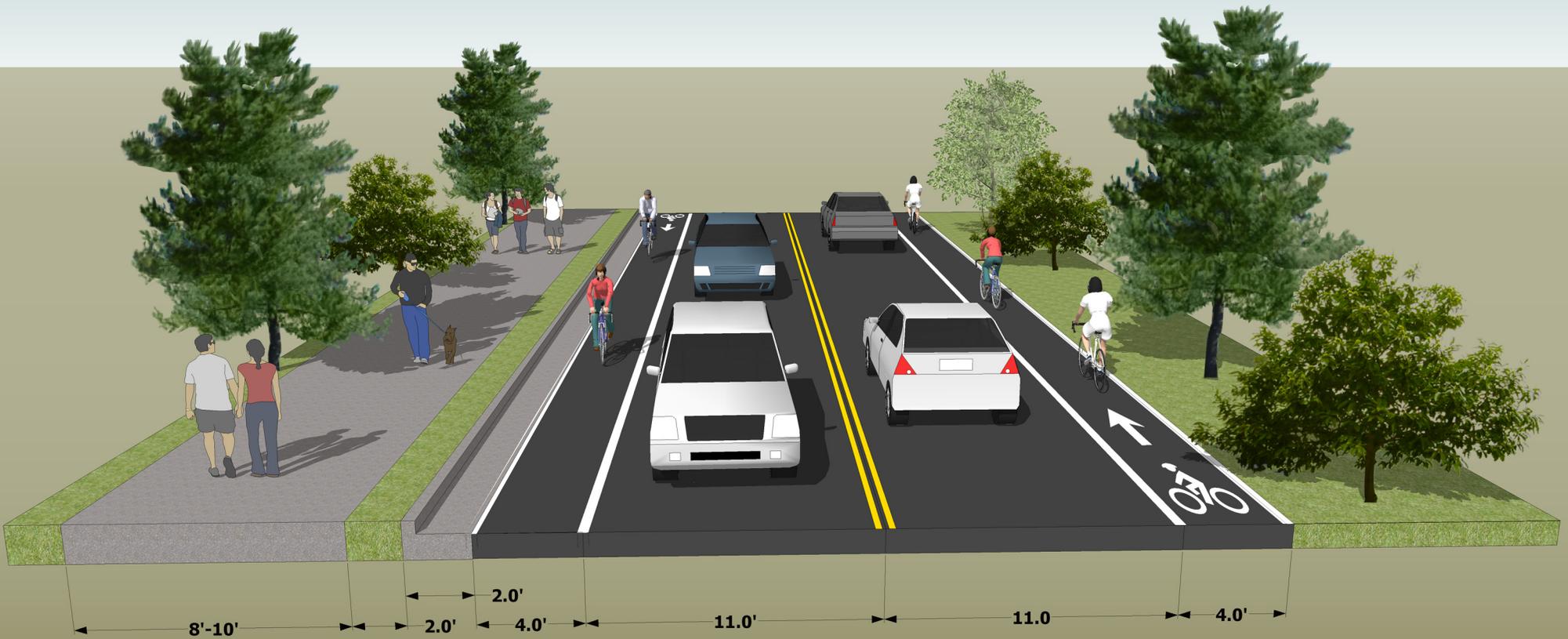
LOCATIONS N & O

RIVERMONT PARKWAY BARNWELL ROAD TO THE COMMUNITY POOL
COMMUNITY POOL TO BRUMBELOW ROAD



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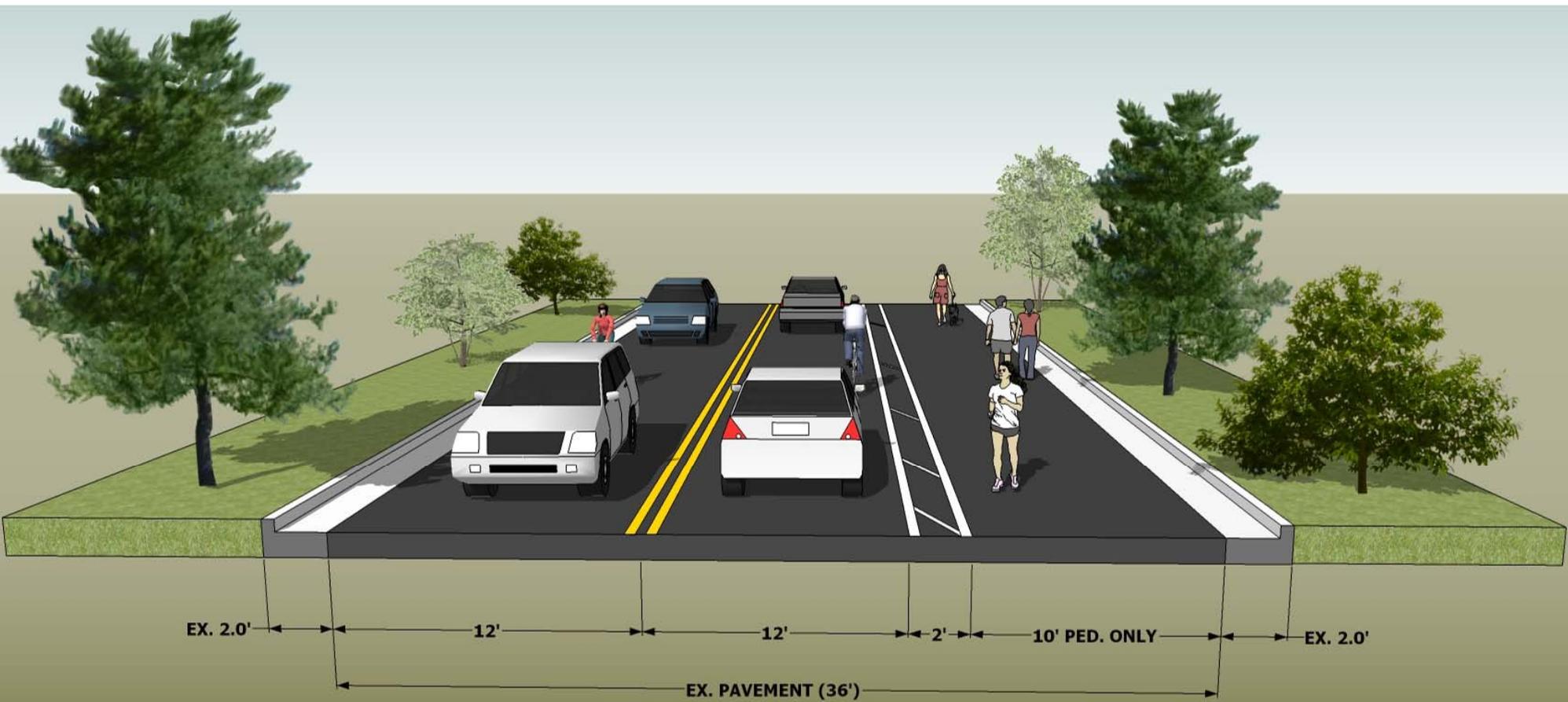
BARNWELL ROAD

SR 140/HOLCOMB BRIDGE ROAD TO BARNWELL ELEMENTARY SCHOOL



BARNWELL ROAD

BARNWELL ELEMENTARY SCHOOL TO JONES BRIDGE ROAD



RIVERMONT PARKWAY (LOCAL STREET 25 MPH)

BARNWELL ROAD TO COMMUNITY POOL

STATE HIGHWAY AGENCY

JOB ESTIMATE REPORT

JOB NUMBER : 0012880_LOC_A SPEC YEAR: 01
 DESCRIPTION: BARNWELL ROAD ENHANCED SIDEWALK AND INTERSECTION IMPROVEMENTS

COST GROUPS FOR JOB 0012880_LOC_A

COST GROUP	DESCRIPTION	QUANTITY	PRICE	AMOUNT	ACTIVE?
UDEF	USER-DEFINED (LUMP SUM) ADJUST ELECTRIC POWER POLES	1.000	10000.00000	10000.00	Y
ACTIVE COST GROUP TOTAL				10000.00	
INFLATED COST GROUP TOTAL				10000.00	

ITEMS FOR JOB 0012880_LOC_A

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	150-1000		LS	TRAFFIC CONTROL - LOCATION A	1.000	30000.00	30000.00
0010	163-0001		LS	EROSION CONTROL, NON-REFUNDABLE DEDUCT	1.000	30000.00	30000.00
0015	210-0100		LS	GRADING COMPLETE - LOCATION A	1.000	50000.00	50000.00
0020	310-1101		TN	GR AGGR BASE CRS, INCL MATL	2070.000	19.53	40444.51
0025	318-3000		TN	AGGR SURF CRS	100.000	16.82	1682.38
0030	402-1812		TN	RECYL AC LEVELING, INC BM&HL	240.000	72.61	17428.00
0035	402-3121		TN	RECYL AC 25MM SP, GP1/2, BM&HL	470.000	70.63	33199.43
0040	402-3130		TN	RECYL AC 12.5MM SP, GP2, BM&HL	580.000	73.84	42832.44
0045	402-3190		TN	RECYL AC 19 MM SP, GP 1 OR 2 , INC BM&HL	310.000	74.79	23186.03
0050	413-1000		GL	BITUM TACK COAT	840.000	2.60	2186.35
0055	432-0206		SY	MILL ASPH CONC PVMT/ 1.50" DEP	140.000	9.89	1384.74
0060	441-0106		SY	CONC SIDEWALK, 6 IN	730.000	36.40	26578.60
0065	441-0748		SY	CONC MEDIAN, 6 IN	250.000	43.72	10931.14
0070	441-6222		LF	CONC CURB & GUTTER/ 8"X30"TP2	880.000	18.70	16461.21
0075	446-1100		LF	PVMT REF FAB STRIPS, TP2, 18 INCH WIDTH	1570.000	5.26	8268.83
0080	500-9999		CY	CL B CONC, BASE OR PVMT WIDEN	13.000	191.79	2493.36
0085	550-1240		LF	STM DR PIPE 24", H 1-10	500.000	37.43	18719.32
0090	550-3324		EA	SAFETY END SECTION 24", STD, 4:1	2.000	927.47	1854.96
0095	641-1200		LF	GUARDRAIL, TP W	150.000	20.30	3045.29
0100	641-5001		EA	GUARDRAIL ANCHORAGE, TP 1	1.000	647.48	647.49
0105	668-1100		EA	CATCH BASIN, GP 1	2.000	2368.92	4737.86
0110	611-5551		EA	RESET SIGN	16.000	384.69	6155.08
0115	647-1000		LS	TRAF SIGNAL INSTALLATION NO - LOCATION A	1.000	25000.00	25000.00
0120	653-0110		EA	THERM PVMT MARK, ARROW, TP 1	5.000	67.80	339.00
0125	653-0120		EA	THERM PVMT MARK, ARROW, TP 2	19.000	70.95	1348.11
0130	653-0140		EA	THERM PVMT MARK, ARROW, TP 4	5.000	94.63	473.15
0135	653-1501		LF	THERMO SOLID TRAF ST 5 IN, WHI	2800.000	0.43	1228.19
0140	653-1502		LF	THERMO SOLID TRAF ST, 5 IN YEL	2490.000	0.50	1251.55
0145	653-1704		LF	THERM SOLID TRAF STRIPE, 24", WH	90.000	3.91	352.70
0150	653-1804		LF	THERM SOLID TRAF STRIPE, 8", WH	500.000	1.89	949.35

STATE HIGHWAY AGENCY

DATE : 09/05/2014
 PAGE : 2

JOB ESTIMATE REPORT

0155	653-3501	GLF	THERMO SKIP TRAF ST, 5 IN, WHI	1300.000	0.41	543.83
0160	653-6004	SY	THERM TRAF STRIPING, WHITE	280.000	3.08	863.53
0165	611-8120	EA	ADJUST WATER METER BX TO GRADE	2.000	120.45	240.90
0170	670-9710	EA	RELOCATE EXIST FIRE HYDRANT	1.000	1151.66	1151.67
ITEM TOTAL						405978.97
INFLATED ITEM TOTAL						405978.97
TOTALS FOR JOB 0012880_LOC_A						
ESTIMATED COST:						415979.00
CONTINGENCY PERCENT (0.0):						0.00
ESTIMATED TOTAL:						415979.00

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No. 12880

OFFICE Office of Program Delivery

PROJECT DESCRIPTION

Location A - Barnwell Road at Holcomb Bridge Road

DATE September 5, 2014

From: Chris Haggard, City of Johns Creek

To: Lisa L. Myers, State Project Review Engineer

Subject: REVISIONS TO PROGRAMMED COSTS

PROJECT MANAGER Elaine Armster

MGMT LET DATE

MGMT ROW DATE

PROGRAMMED COSTS (TPro W/OUT INFLATION)

LAST ESTIMATE UPDATE

CONSTRUCTION \$ -

DATE 9/5/2014

RIGHT OF WAY \$ -

DATE 9/5/2014

UTILITIES \$ -

DATE 9/5/2014

REVISED COST ESTIMATES

CONSTRUCTION* \$ 488,765.85

RIGHT OF WAY \$ 257,431.00

UTILITIES \$ -

*Cost Contains 5 % Contingency

REASONS FOR COST INCREASE AND CONTINGENCY JUSTIFICATION:

Contingency set at 5% due to enhancements/bicycle/pedestrian/facility/safety.

CONTINGENCY SUMMARY

A. CONSTRUCTION COST ESTIMATE:	\$	415,979.00	Base Estimate From CES	
B. ENGINEERING AND INSPECTION (E & I):	\$	20,798.95	Base Estimate (A) x	5 %
C. CONTINGENCY:	\$	21,838.90	Base Estimate (A) + E & I (B) x	5 %
			See % Table in "Risk Based Cost Estimation" Memo	
D. TOTAL LIQUID AC ADJUSTMENT:	\$	30,149.00	Total From Liquid AC Spreadsheet	
E. CONSTRUCTION TOTAL:	\$	488,765.85	(A + B + C + D = E)	

REIMBURSABLE UTILITY COSTS

UTILITY OWNER	REIMBURSABLE COST
TOTAL	\$ -

ATTACHMENTS:

Detailed Cost Estimate Printout From TRAQS Liquid AC Adjustment Spreadsheet
--

PROJ. NO. 13054A
P.I. NO. 12880
DATE 9/5/2014

CALL NO. 9/29/2009

INDEX (TYPE)	DATE	INDEX
REG. UNLEADED	Sep-14	\$ 3.335
DIESEL		\$ 3.765
LIQUID AC		\$ 601.00

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)				28848	\$	28,848.00
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60		
Monthly Asphalt Cement Price month project let (APL)			\$	601.00		
Total Monthly Tonnage of asphalt cement (TMT)				80		

ASPHALT	Tons	%AC	AC ton
Leveling	240	5.0%	12
12.5 OGFC		5.0%	0
12.5 mm	580	5.0%	29
9.5 mm SP		5.0%	0
25 mm SP	470	5.0%	23.5
19 mm SP	310	5.0%	15.5
	1600		80

BITUMINOUS TACK COAT

Price Adjustment (PA)				\$	1,301.00	\$	1,301.00
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60			
Monthly Asphalt Cement Price month project let (APL)			\$	601.00			
Total Monthly Tonnage of asphalt cement (TMT)				3.607884774			

Bitum Tack

Gals	gals/ton	tons
840	232.8234	3.60788477

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)					\$	0	\$	-
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60				
Monthly Asphalt Cement Price month project let (APL)			\$	601.00				
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

TOTAL LIQUID AC ADJUSTMENT \$ 30,149.00

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No.

OFFICE

PROJECT DESCRIPTION

DATE

From:

To: Lisa L. Myers, State Project Review Engineer

Subject: REVISIONS TO PROGRAMMED COSTS

PROJECT MANAGER

MGMT LET DATE

MGMT ROW DATE

PROGRAMMED COSTS (TPro W/OUT INFLATION)

LAST ESTIMATE UPDATE

CONSTRUCTION \$

DATE

RIGHT OF WAY \$

DATE

UTILITIES \$

DATE

REVISED COST ESTIMATES

CONSTRUCTION* \$

RIGHT OF WAY \$

UTILITIES \$

*Cost Contains % Contingency

REASONS FOR COST INCREASE AND CONTINGENCY JUSTIFICATION:

CONTINGENCY SUMMARY

A. CONSTRUCTION COST ESTIMATE:	\$	85,483.04	Base Estimate From CES
B. ENGINEERING AND INSPECTION (E & I):	\$	4,274.15	Base Estimate (A) x 5 %
C. CONTINGENCY:	\$	4,487.86	Base Estimate (A) + E & I (B) x 5 % See % Table in "Risk Based Cost Estimation" Memo
D. TOTAL LIQUID AC ADJUSTMENT:	\$	5,668.64	Total From Liquid AC Spreadsheet
E. CONSTRUCTION TOTAL:	\$	99,913.70	(A + B + C + D = E)

REIMBURSABLE UTILITY COSTS

UTILITY OWNER	REIMBURSABLE COST
TOTAL	\$ -

ATTACHMENTS:

Detailed Cost Estimate Printout From TRAQS
Liquid AC Adjustment Spreadsheet

PROJ. NO. 13054A
P.I. NO. 0012880
DATE 9/5/2014

CALL NO. 9/29/2009

INDEX (TYPE)	DATE	INDEX
REG. UNLEADED	Sep-14	\$ 3.335
DIESEL		\$ 3.765
LIQUID AC		\$ 601.00

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)				5427.03	\$	5,427.03
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60		
Monthly Asphalt Cement Price month project let (APL)			\$	601.00		
Total Monthly Tonnage of asphalt cement (TMT)				15.05		

ASPHALT	Tons	%AC	AC ton
Leveling	50	5.0%	2.5
12.5 OGFC		5.0%	0
12.5 mm		5.0%	0
9.5 mm SP	106	5.0%	5.3
25 mm SP	97	5.0%	4.85
19 mm SP	48	5.0%	2.4
	301		15.05

BITUMINOUS TACK COAT

Price Adjustment (PA)				\$	241.61	\$	241.61
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60			
Monthly Asphalt Cement Price month project let (APL)			\$	601.00			
Total Monthly Tonnage of asphalt cement (TMT)				0.670035744			

Bitum Tack

Gals	gals/ton	tons
156	232.8234	0.67003574

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)					\$	0	\$	-
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60				
Monthly Asphalt Cement Price month project let (APL)			\$	601.00				
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

TOTAL LIQUID AC ADJUSTMENT \$ **5,668.64**

STATE HIGHWAY AGENCY

JOB ESTIMATE REPORT

JOB NUMBER : 0012880_LOC_C SPEC YEAR: 01
 DESCRIPTION: BARNWELL ROAD ENHANCED SIDEWALK AND INTERSECTION IMPROVEMENTS

COST GROUPS FOR JOB 0012880_LOC_C

COST GROUP	DESCRIPTION	QUANTITY	PRICE	AMOUNT	ACTIVE?
UDEF	USER-DEFINED (LUMP SUM) MS4 COMPLIANCE	1.000	23700.00000	23700.00	Y
UDEF	USER-DEFINED (LUMP SUM) LANDSCAPING	1.000	25000.00000	25000.00	Y
UDEF	USER-DEFINED (LUMP SUM) STORM DRAINAGE	1.000	15000.00000	15000.00	Y
LSYM	LARGE PAVEMENT MARKING SYMBOLS - BIKE LANE SYMBOL	4.000	100.00000	400.00	Y
UDEF	USER-DEFINED (LUMP SUM) TRAFFIC SIGNS	1.000	5000.00000	5000.00	Y
ACTIVE COST GROUP TOTAL				69100.00	
INFLATED COST GROUP TOTAL				69100.00	

ITEMS FOR JOB 0012880_LOC_C

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	150-1000		LS	TRAFFIC CONTROL - LOCATION C	1.000	25000.00	25000.00
0010	163-0001		LS	EROSION CONTROL, NON-REFUNDABLE DEDUCT	1.000	20000.00	20000.00
0015	210-0100		LS	GRADING COMPLETE - LOCATION C	1.000	40000.00	40000.00
0020	310-1101		TN	GR AGGR BASE CRS, INCL MATL	611.000	21.45	13109.84
0025	402-1812		TN	RECYL AC LEVELING, INC BM&HL	50.000	77.81	3890.77
0030	402-3103		TN	REC AC 9.5 MM SP, TPII, GP2, INCL BM & HL	176.000	75.58	13303.80
0035	402-3190		TN	RECYL AC 19 MM SP, GP 1 OR 2, INC BM&HL	82.000	81.85	6712.37
0040	402-3121		TN	RECYL AC 25MM SP, GP1/2, BM&HL	165.000	75.71	12493.67
0045	413-1000		GL	BITUM TACK COAT	262.000	2.91	763.89
0050	432-5010		SY	MILL ASPH CONC PVMT, VARB DEPTH	1384.000	4.86	6737.23
0055	441-0104		SY	CONC SIDEWALK, 4 IN	421.000	33.01	13901.21
0060	441-0740		SY	CONC MEDIAN, 4 IN	24.000	35.99	863.98
0065	441-5025		LF	CONC HEADER CURB, 4", TP 9	157.000	12.00	1884.00
0070	441-6012		LF	CONC CURB & GUTTER/ 6"X24"TP2	998.000	12.45	12427.13
0075	500-3107		CY	CL A CONC, RET WALL	200.000	477.51	95503.11
0080	500-9999		CY	CL B CONC, BASE OR PVMT WIDEN	10.000	194.66	1946.68
0085	700-9300		SY	SOD	166.000	4.49	746.99
0090	653-1501		LF	THERMO SOLID TRAF ST 5 IN, WHI	1600.000	0.48	774.94
0095	653-1502		LF	THERMO SOLID TRAF ST, 5 IN YEL	860.000	0.60	520.83
0100	653-1704		LF	THERM SOLID TRAF STRIPE, 24", WH	15.000	4.41	66.30
0105	653-1804		LF	THERM SOLID TRAF STRIPE, 8", WH	140.000	1.98	277.29
0110	653-3501		GLF	THERMO SKIP TRAF ST, 5 IN, WHI	160.000	0.57	92.41
0115	653-6006		SY	THERM TRAF STRIPING, YELLOW	69.000	3.26	225.39
ITEM TOTAL							271241.84
INFLATED ITEM TOTAL							271241.84

STATE HIGHWAY AGENCY

JOB ESTIMATE REPORT

TOTALS FOR JOB 0012880_LOC_C

ESTIMATED COST:	340341.83
CONTINGENCY PERCENT (0.0):	0.00
ESTIMATED TOTAL:	340341.83

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No.

OFFICE

PROJECT DESCRIPTION

DATE

From:

To: Lisa L. Myers, State Project Review Engineer

Subject: **REVISIONS TO PROGRAMMED COSTS**

PROJECT MANAGER

MGMT LET DATE

MGMT ROW DATE

PROGRAMMED COSTS (TPro W/OUT INFLATION)

LAST ESTIMATE UPDATE

CONSTRUCTION \$

DATE

RIGHT OF WAY \$

DATE

UTILITIES \$

DATE

REVISED COST ESTIMATES

CONSTRUCTION* \$

RIGHT OF WAY \$

UTILITIES \$

*Cost Contains % Contingency

REASONS FOR COST INCREASE AND CONTINGENCY JUSTIFICATION:

CONTINGENCY SUMMARY

A. CONSTRUCTION COST ESTIMATE:	\$	340,341.83	Base Estimate From CES
B. ENGINEERING AND INSPECTION (E & I):	\$	17,017.09	Base Estimate (A) x 5 %
C. CONTINGENCY:	\$	17,867.95	Base Estimate (A) + E & I (B) x 5 % See % Table in "Risk Based Cost Estimation" Memo
D. TOTAL LIQUID AC ADJUSTMENT:	\$	8,933.98	Total From Liquid AC Spreadsheet
E. CONSTRUCTION TOTAL:	\$	384,160.85	(A + B + C + D = E)

REIMBURSABLE UTILITY COSTS

UTILITY OWNER	REIMBURSABLE COST
TOTAL	\$ -

ATTACHMENTS:

Detailed Cost Estimate Printout From TRAQS
Liquid AC Adjustment Spreadsheet

PROJ. NO. 13054A
P.I. NO. 12880
DATE 9/5/2014

CALL NO. 9/29/2009

INDEX (TYPE)	DATE	INDEX
REG. UNLEADED	Sep-14	\$ 3.335
DIESEL		\$ 3.765
LIQUID AC		\$ 601.00

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)				8528.19	\$	8,528.19
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60		
Monthly Asphalt Cement Price month project let (APL)			\$	601.00		
Total Monthly Tonnage of asphalt cement (TMT)				23.65		

ASPHALT	Tons	%AC	AC ton
Leveling	50	5.0%	2.5
12.5 OGFC		5.0%	0
12.5 mm		5.0%	0
9.5 mm SP	176	5.0%	8.8
25 mm SP	165	5.0%	8.25
19 mm SP	82	5.0%	4.1
	473		23.65

BITUMINOUS TACK COAT

Price Adjustment (PA)				\$	405.79	\$	405.79
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60			
Monthly Asphalt Cement Price month project let (APL)			\$	601.00			
Total Monthly Tonnage of asphalt cement (TMT)				1.125316442			

Bitum Tack

Gals	gals/ton	tons
262	232.8234	1.12531644

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)					\$	-
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60		
Monthly Asphalt Cement Price month project let (APL)			\$	601.00		
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

TOTAL LIQUID AC ADJUSTMENT \$ **8,933.98**

STATE HIGHWAY AGENCY

JOB ESTIMATE REPORT

JOB NUMBER : 0012880_LOC_D SPEC YEAR: 01
 DESCRIPTION: BARNWELL ROAD ENHANCED SIDEWALK AND INTERSECTION IMPROVEMENTS

COST GROUPS FOR JOB 0012880_LOC_D

COST GROUP	DESCRIPTION	QUANTITY	PRICE	AMOUNT	ACTIVE?
UDEF	USER-DEFINED (LUMP SUM) MS4 COMPLIANCE	1.000	27300.00000	27300.00	Y
UDEF	USER-DEFINED (LUMP SUM) STORM DRAINAGE	1.000	20000.00000	20000.00	Y
UDEF	USER-DEFINED (LUMP SUM) TRAFFIC SIGNS	1.000	2500.00000	2500.00	Y
LSYM	LARGE PAVEMENT MARKING SYMBOLS - BIKE LANE SYMBOL	8.000	100.00000	800.00	Y
ACTIVE COST GROUP TOTAL				50600.00	
INFLATED COST GROUP TOTAL				50600.00	

ITEMS FOR JOB 0012880_LOC_D

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	150-1000		LS	TRAFFIC CONTROL - LOCATION D	1.000	25000.00	25000.00
0010	163-0001		LS	EROSION CONTROL, NON-REFUNDABLE DEDUCT	1.000	14000.00	14000.00
0015	210-0100		LS	GRADING COMPLETE - LOCATION D	1.000	40000.00	40000.00
0020	310-1101		TN	GR AGGR BASE CRS, INCL MATL	740.000	21.14	15646.02
0025	402-1812		TN	RECYL AC LEVELING, INC BM&HL	50.000	77.81	3890.77
0030	402-3103		TN	REC AC 9.5 MM SP, TPII, GP2, INCL BM & HL	240.000	74.32	17838.48
0035	402-3190		TN	RECYL AC 19 MM SP, GP 1 OR 2, INC BM&HL	112.000	80.14	8976.16
0040	402-3121		TN	RECYL AC 25MM SP, GP1/2, BM&HL	225.000	74.17	16689.70
0045	413-1000		GL	BITUM TACK COAT	358.000	2.82	1012.52
0050	432-5010		SY	MILL ASPH CONC PVMT, VARB DEPTH	1883.000	4.41	8313.11
0055	441-0104		SY	CONC SIDEWALK, 4 IN	106.000	38.00	4028.28
0060	441-6012		LF	CONC CURB & GUTTER/ 6"X24"TP2	557.000	13.32	7421.10
0065	500-3107		CY	CL A CONC, RET WALL	300.000	578.93	173681.02
0070	700-9300		SY	SOD	100.000	4.62	462.50
0075	653-0120		EA	THERM PVMT MARK, ARROW, TP 2	5.000	73.96	369.82
0080	653-1501		LF	THERMO SOLID TRAF ST 5 IN, WHI	2300.000	0.45	1044.64
0085	653-1502		LF	THERMO SOLID TRAF ST, 5 IN YEL	1571.000	0.54	856.04
0090	653-1704		LF	THERM SOLID TRAF STRIPE, 24", WH	25.000	4.27	106.77
0095	653-1804		LF	THERM SOLID TRAF STRIPE, 8", WH	370.000	1.91	709.57
0100	653-3501		GLF	THERMO SKIP TRAF ST, 5 IN, WHI	200.000	0.51	102.36
0105	653-6006		SY	THERM TRAF STRIPING, YELLOW	124.000	3.15	391.52
ITEM TOTAL							340540.37
INFLATED ITEM TOTAL							340540.37

TOTALS FOR JOB 0012880_LOC_D

STATE HIGHWAY AGENCY

JOB ESTIMATE REPORT

ESTIMATED COST:	391140.38
CONTINGENCY PERCENT (0.0):	0.00
ESTIMATED TOTAL:	391140.38

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No.

OFFICE

PROJECT DESCRIPTION

DATE

From:

To: Lisa L. Myers, State Project Review Engineer

Subject: REVISIONS TO PROGRAMMED COSTS

PROJECT MANAGER

MGMT LET DATE

MGMT ROW DATE

PROGRAMMED COSTS (TPro W/OUT INFLATION)

LAST ESTIMATE UPDATE

CONSTRUCTION \$

DATE

RIGHT OF WAY \$

DATE

UTILITIES \$

DATE

REVISED COST ESTIMATES

CONSTRUCTION* \$

RIGHT OF WAY \$

UTILITIES \$

*Cost Contains % Contingency

REASONS FOR COST INCREASE AND CONTINGENCY JUSTIFICATION:

CONTINGENCY SUMMARY

A. CONSTRUCTION COST ESTIMATE:	\$	391,140.38	Base Estimate From CES	
B. ENGINEERING AND INSPECTION (E & I):	\$	19,557.02	Base Estimate (A) x	5 %
C. CONTINGENCY:	\$	20,534.87	Base Estimate (A) + E & I (B) x	5 %
			See % Table in "Risk Based Cost Estimation" Memo	
D. TOTAL LIQUID AC ADJUSTMENT:	\$	11,859.29	Total From Liquid AC Spreadsheet	
E. CONSTRUCTION TOTAL:	\$	443,091.55	(A + B + C + D = E)	

REIMBURSABLE UTILITY COSTS

UTILITY OWNER	REIMBURSABLE COST
TOTAL	\$ -

ATTACHMENTS:

Detailed Cost Estimate Printout From TRAQS Liquid AC Adjustment Spreadsheet
--

PROJ. NO. 13054A
P.I. NO. 12880
DATE 9/5/2014

CALL NO. 9/29/2009

INDEX (TYPE)	DATE	INDEX
REG. UNLEADED	Sep-14	\$ 3.335
DIESEL		\$ 3.765
LIQUID AC		\$ 601.00

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)				11304.81	\$	11,304.81
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60		
Monthly Asphalt Cement Price month project let (APL)			\$	601.00		
Total Monthly Tonnage of asphalt cement (TMT)				31.35		

ASPHALT	Tons	%AC	AC ton
Leveling	50	5.0%	2.5
12.5 OGFC		5.0%	0
12.5 mm		5.0%	0
9.5 mm SP	240	5.0%	12
25 mm SP	225	5.0%	11.25
19 mm SP	112	5.0%	5.6
	627		31.35

BITUMINOUS TACK COAT

Price Adjustment (PA)				\$	554.48	\$	554.48
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60			
Monthly Asphalt Cement Price month project let (APL)			\$	601.00			
Total Monthly Tonnage of asphalt cement (TMT)				1.53764613			

Bitum Tack

Gals	gals/ton	tons
358	232.8234	1.53764613

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)					\$	0	\$	-
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60				
Monthly Asphalt Cement Price month project let (APL)			\$	601.00				
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

TOTAL LIQUID AC ADJUSTMENT \$ **11,859.29**

STATE HIGHWAY AGENCY

JOB ESTIMATE REPORT

JOB NUMBER : 0012880_LOC_E SPEC YEAR: 01
 DESCRIPTION: BARNWELL ROAD ENHANCED SIDEWALK AND INTERSECTION IMPROVEMENTS

COST GROUPS FOR JOB 0012880_LOC_E

COST GROUP	DESCRIPTION	QUANTITY	PRICE	AMOUNT	ACTIVE?
UDEF	USER-DEFINED (LUMP SUM) MS4 COMPLIANCE	1.000	23000.00000	23000.00	Y
UDEF	USER-DEFINED (LUMP SUM) STORM DRAINAGE	1.000	20000.00000	20000.00	Y
UDEF	USER-DEFINED (LUMP SUM) LANDSCAPING	1.000	25000.00000	25000.00	Y
UDEF	USER-DEFINED (LUMP SUM) TRAFFIC SIGNS	1.000	5000.00000	5000.00	Y
LSYM	LARGE PAVEMENT MARKING SYMBOLS - BIKE LANE SYMBOL	4.000	100.00000	400.00	Y
ACTIVE COST GROUP TOTAL				73400.00	
INFLATED COST GROUP TOTAL				73400.00	

ITEMS FOR JOB 0012880_LOC_E

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	150-1000		LS	TRAFFIC CONTROL - LOCATION E	1.000	25000.00	25000.00
0010	163-0001		LS	EROSION CONTROL, NON-REFUNDABLE DEDUCT	1.000	16000.00	16000.00
0015	210-0100		LS	GRADING COMPLETE - LOCATION E	1.000	40000.00	40000.00
0020	310-1101		TN	GR AGGR BASE CRS, INCL MATL	826.000	20.96	17317.61
0025	402-1812		TN	RECYL AC LEVELING, INC BM&HL	50.000	77.81	3890.77
0030	402-3103		TN	REC AC 9.5 MM SP, TPII, GP2, INCL BM & HL	230.000	74.49	17134.77
0035	402-3190		TN	RECYL AC 19 MM SP, GP 1 OR 2, INC BM&HL	77.000	82.20	6330.05
0040	402-3121		TN	RECYL AC 25MM SP, GP1/2, BM&HL	155.000	76.03	11785.29
0045	413-1000		GL	BITUM TACK COAT	293.000	2.88	845.01
0050	432-5010		SY	MILL ASPH CONC PVMT, VARB DEPTH	2079.000	4.27	8894.48
0055	441-0104		SY	CONC SIDEWALK, 4 IN	630.000	31.69	19965.04
0060	441-0740		SY	CONC MEDIAN, 4 IN	321.000	31.18	10010.29
0065	441-5025		LF	CONC HEADER CURB, 4", TP 9	245.000	12.00	2940.00
0070	441-6012		LF	CONC CURB & GUTTER/ 6"X24"TP2	1836.000	11.60	21301.49
0075	500-3107		CY	CL A CONC, RET WALL	100.000	489.78	48978.20
0080	700-9300		SY	SOD	742.000	4.14	3079.16
0085	653-1501		LF	THERMO SOLID TRAF ST 5 IN, WHI	2000.000	0.46	931.14
0090	653-1502		LF	THERMO SOLID TRAF ST, 5 IN YEL	420.000	0.68	288.41
0095	653-1804		LF	THERM SOLID TRAF STRIPE, 8", WH	340.000	1.92	653.87
0100	653-3501		GLF	THERMO SKIP TRAF ST, 5 IN, WHI	200.000	0.51	102.36
0105	653-6004		SY	THERM TRAF STRIPING, WHITE	56.000	3.31	185.57
0110	653-6006		SY	THERM TRAF STRIPING, YELLOW	56.000	3.30	185.16
ITEM TOTAL							255818.69
INFLATED ITEM TOTAL							255818.69

STATE HIGHWAY AGENCY

JOB ESTIMATE REPORT

TOTALS FOR JOB 0012880_LOC_E

ESTIMATED COST:	329218.67
CONTINGENCY PERCENT (0.0):	0.00
ESTIMATED TOTAL:	329218.67

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No.

OFFICE

PROJECT DESCRIPTION

DATE

From:

To: Lisa L. Myers, State Project Review Engineer

Subject: REVISIONS TO PROGRAMMED COSTS

PROJECT MANAGER

MGMT LET DATE

MGMT ROW DATE

PROGRAMMED COSTS (TPro W/OUT INFLATION)

LAST ESTIMATE UPDATE

CONSTRUCTION \$

DATE

RIGHT OF WAY \$

DATE

UTILITIES \$

DATE

REVISED COST ESTIMATES

CONSTRUCTION* \$

RIGHT OF WAY \$

UTILITIES \$

*Cost Contains % Contingency

REASONS FOR COST INCREASE AND CONTINGENCY JUSTIFICATION:

CONTINGENCY SUMMARY

A. CONSTRUCTION COST ESTIMATE:	\$	329,218.67	Base Estimate From CES	
B. ENGINEERING AND INSPECTION (E & I):	\$	16,460.93	Base Estimate (A) x	5 %
C. CONTINGENCY:	\$	17,283.98	Base Estimate (A) + E & I (B) x	5 %
			See % Table in "Risk Based Cost Estimation" Memo	
D. TOTAL LIQUID AC ADJUSTMENT:	\$	9,685.16	Total From Liquid AC Spreadsheet	
E. CONSTRUCTION TOTAL:	\$	372,648.75	(A + B + C + D = E)	

REIMBURSABLE UTILITY COSTS

UTILITY OWNER	REIMBURSABLE COST
TOTAL	\$ -

ATTACHMENTS:

Detailed Cost Estimate Printout From TRAQS
Liquid AC Adjustment Spreadsheet

PROJ. NO. 13054A
P.I. NO. 12880
DATE 9/5/2014

CALL NO. 9/29/2009

INDEX (TYPE)	DATE	INDEX
REG. UNLEADED	Sep-14	\$ 3.335
DIESEL		\$ 3.765
LIQUID AC		\$ 601.00

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)				9231.36	\$	9,231.36
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60		
Monthly Asphalt Cement Price month project let (APL)			\$	601.00		
Total Monthly Tonnage of asphalt cement (TMT)				25.6		

ASPHALT	Tons	%AC	AC ton
Leveling	50	5.0%	2.5
12.5 OGFC		5.0%	0
12.5 mm		5.0%	0
9.5 mm SP	230	5.0%	11.5
25 mm SP	155	5.0%	7.75
19 mm SP	77	5.0%	3.85
	512		25.6

BITUMINOUS TACK COAT

Price Adjustment (PA)				\$	453.80	\$	453.80
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60			
Monthly Asphalt Cement Price month project let (APL)			\$	601.00			
Total Monthly Tonnage of asphalt cement (TMT)				1.25846457			

Bitum Tack

Gals	gals/ton	tons
293	232.8234	1.25846457

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)				\$	0	\$	-
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60			
Monthly Asphalt Cement Price month project let (APL)			\$	601.00			
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

TOTAL LIQUID AC ADJUSTMENT \$ **9,685.16**

STATE HIGHWAY AGENCY

JOB ESTIMATE REPORT

JOB NUMBER : 0012880_LOC_F SPEC YEAR: 01
 DESCRIPTION: BARNWELL ROAD ENHANCED SIDEWALK AND INTERSECTION IMPROVEMENTS

COST GROUPS FOR JOB 0012880_LOC_F

COST GROUP	DESCRIPTION	QUANTITY	PRICE	AMOUNT	ACTIVE?
UDEF	USER-DEFINED (LUMP SUM) MS4 COMPLIANCE	1.000	34800.00000	34800.00	Y
UDEF	USER-DEFINED (LUMP SUM) STORM DRAINAGE	1.000	25000.00000	25000.00	Y
UDEF	USER-DEFINED (LUMP SUM) LANDSCAPING	1.000	40000.00000	40000.00	Y
UDEF	USER-DEFINED (LUMP SUM) TRAFFIC SIGNS	1.000	7500.00000	7500.00	Y
LSYM	LARGE PAVEMENT MARKING SYMBOLS - BIKE LANE SYMBOL	12.000	100.00000	1200.00	Y
ACTIVE COST GROUP TOTAL				108500.00	
INFLATED COST GROUP TOTAL				108500.00	

ITEMS FOR JOB 0012880_LOC_F

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	150-1000		LS	TRAFFIC CONTROL - LOCATION F	1.000	35000.00	35000.00
0010	163-0001		LS	EROSION CONTROL, NON-REFUNDABLE DEDUCT	1.000	27000.00	27000.00
0015	210-0100		LS	GRADING COMPLETE - LOCATION F	1.000	50000.00	50000.00
0020	310-1101		TN	GR AGGR BASE CRS, INCL MATL	888.000	20.84	18514.36
0025	402-1812		TN	RECYL AC LEVELING, INC BM&HL	50.000	77.81	3890.77
0030	402-3103		TN	REC AC 9.5 MM SP, TPII, GP2, INCL BM & HL	460.000	71.74	33003.27
0035	402-3190		TN	RECYL AC 19 MM SP, GP 1 OR 2, INC BM&HL	90.000	81.34	7320.84
0040	402-3121		TN	RECYL AC 25MM SP, GP1/2, BM&HL	180.000	75.28	13550.98
0045	413-1000		GL	BITUM TACK COAT	481.000	2.74	1321.82
0050	432-5010		SY	MILL ASPH CONC PVMT, VARB DEPTH	4739.000	3.29	15609.93
0055	441-0016		SY	DRIVEWAY CONCRETE, 6 IN TK	88.000	36.53	3214.87
0060	441-0104		SY	CONC SIDEWALK, 4 IN	1386.000	29.24	40531.75
0065	441-0740		SY	CONC MEDIAN, 4 IN	175.000	32.24	5643.72
0070	441-5025		LF	CONC HEADER CURB, 4", TP 9	154.000	12.00	1848.00
0075	441-6012		LF	CONC CURB & GUTTER/ 6"X24"TP2	2526.000	11.18	28242.40
0080	500-3107		CY	CL A CONC, RET WALL	150.000	482.56	72385.33
0085	500-9999		CY	CL B CONC, BASE OR PVMT WIDEN	150.000	166.99	25049.16
0090	700-9300		SY	SOD	700.000	4.16	2914.04
0095	653-0120		EA	THERM PVMT MARK, ARROW, TP 2	6.000	73.54	441.27
0100	653-1501		LF	THERMO SOLID TRAF ST 5 IN, WHI	3580.000	0.41	1503.46
0105	653-1502		LF	THERMO SOLID TRAF ST, 5 IN YEL	2540.000	0.50	1272.24
0110	653-1704		LF	THERM SOLID TRAF STRIPE, 24", WH	55.000	4.05	222.78
0115	653-1804		LF	THERM SOLID TRAF STRIPE, 8", WH	328.000	1.92	631.55
0120	653-3501		GLF	THERMO SKIP TRAF ST, 5 IN, WHI	345.000	0.51	177.03
0125	653-6006		SY	THERM TRAF STRIPING, YELLOW	223.000	3.05	680.53
ITEM TOTAL							389970.10

DATE : 09/05/2014
PAGE : 2

STATE HIGHWAY AGENCY

JOB ESTIMATE REPORT

=====	
INFLATED ITEM TOTAL	389970.10

TOTALS FOR JOB 0012880_LOC_F	

ESTIMATED COST:	498470.10
CONTINGENCY PERCENT (0.0):	0.00
ESTIMATED TOTAL:	498470.10

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No.

OFFICE

PROJECT DESCRIPTION

DATE

From:

To: Lisa L. Myers, State Project Review Engineer

Subject: REVISIONS TO PROGRAMMED COSTS

PROJECT MANAGER

MGMT LET DATE

MGMT ROW DATE

PROGRAMMED COSTS (TPro W/OUT INFLATION)

LAST ESTIMATE UPDATE

CONSTRUCTION \$

DATE

RIGHT OF WAY \$

DATE

UTILITIES \$

DATE

REVISED COST ESTIMATES

CONSTRUCTION* \$

RIGHT OF WAY \$

UTILITIES \$

*Cost Contains % Contingency

REASONS FOR COST INCREASE AND CONTINGENCY JUSTIFICATION:

CONTINGENCY SUMMARY

A. CONSTRUCTION COST ESTIMATE:	\$	498,470.10	Base Estimate From CES	
B. ENGINEERING AND INSPECTION (E & I):	\$	24,923.51	Base Estimate (A) x	5 %
C. CONTINGENCY:	\$	26,169.68	Base Estimate (A) + E & I (B) x	5 %
			See % Table in "Risk Based Cost Estimation" Memo	
D. TOTAL LIQUID AC ADJUSTMENT:	\$	14,808.38	Total From Liquid AC Spreadsheet	
E. CONSTRUCTION TOTAL:	\$	564,371.66	(A + B + C + D = E)	

REIMBURSABLE UTILITY COSTS

UTILITY OWNER	REIMBURSABLE COST
TOTAL	\$ -

ATTACHMENTS:

Detailed Cost Estimate Printout From TRAQS Liquid AC Adjustment Spreadsheet
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PROJ. NO. 13054A
P.I. NO. 12880
DATE 9/5/2014

CALL NO. 9/29/2009

INDEX (TYPE)	DATE	INDEX
REG. UNLEADED	Sep-14	\$ 3.335
DIESEL		\$ 3.765
LIQUID AC		\$ 601.00

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)				14063.4	\$	14,063.40
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60		
Monthly Asphalt Cement Price month project let (APL)			\$	601.00		
Total Monthly Tonnage of asphalt cement (TMT)				39		

ASPHALT	Tons	%AC	AC ton
Leveling	50	5.0%	2.5
12.5 OGFC		5.0%	0
12.5 mm		5.0%	0
9.5 mm SP	460	5.0%	23
25 mm SP	180	5.0%	9
19 mm SP	90	5.0%	4.5
	780		39

BITUMINOUS TACK COAT

Price Adjustment (PA)				\$	744.98	\$	744.98
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60			
Monthly Asphalt Cement Price month project let (APL)			\$	601.00			
Total Monthly Tonnage of asphalt cement (TMT)				2.065943543			

Bitum Tack

Gals	gals/ton	tons
481	232.8234	2.06594354

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)					\$	0	\$	-
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60				
Monthly Asphalt Cement Price month project let (APL)			\$	601.00				
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

TOTAL LIQUID AC ADJUSTMENT \$ 14,808.38

STATE HIGHWAY AGENCY

JOB ESTIMATE REPORT

JOB NUMBER : 0012880_LOC_G SPEC YEAR: 01
 DESCRIPTION: BARNWELL ROAD ENHANCED SIDEWALK AND INTERSECTION IMPROVEMENTS

COST GROUPS FOR JOB 0012880_LOC_G

COST GROUP	DESCRIPTION	QUANTITY	PRICE	AMOUNT	ACTIVE?
UDEF	USER-DEFINED (LUMP SUM) MS4 COMPLIANCE	1.000	14500.00000	14500.00	Y
UDEF	USER-DEFINED (LUMP SUM) STORM DRAINAGE	1.000	10000.00000	10000.00	Y
UDEF	USER-DEFINED (LUMP SUM) LANDSCAPING	1.000	25000.00000	25000.00	Y
UDEF	USER-DEFINED (LUMP SUM) TRAFFIC SIGNS	1.000	5000.00000	5000.00	Y
LSYM	LARGE PAVEMENT MARKING SYMBOLS - BIKE LANE SYMBOL	4.000	100.00000	400.00	Y
ACTIVE COST GROUP TOTAL				54900.00	
INFLATED COST GROUP TOTAL				54900.00	

ITEMS FOR JOB 0012880_LOC_G

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	150-1000		LS	TRAFFIC CONTROL - LOCATION G	1.000	25000.00	25000.00
0010	163-0001		LS	EROSION CONTROL, NON-REFUNDABLE DEDUCT	1.000	10000.00	10000.00
0015	210-0100		LS	GRADING COMPLETE - LOCATION G	1.000	35000.00	35000.00
0020	310-1101		TN	GR AGGR BASE CRS, INCL MATL	268.000	22.85	6125.72
0025	402-1812		TN	RECYL AC LEVELING, INC BM&HL	50.000	77.81	3890.77
0030	402-3103		TN	REC AC 9.5 MM SP, TPII, GP2, INCL BM & HL	167.000	75.80	12659.54
0035	402-3190		TN	RECYL AC 19 MM SP, GP 1 OR 2, INC BM&HL	19.000	90.39	1717.58
0040	402-3121		TN	RECYL AC 25MM SP, GP1/2, BM&HL	38.000	83.47	3171.87
0045	413-1000		GL	BITUM TACK COAT	152.000	3.07	467.31
0050	432-5010		SY	MILL ASPH CONC PVMT, VARB DEPTH	1843.000	4.44	8192.14
0055	441-0104		SY	CONC SIDEWALK, 4 IN	589.000	31.90	18794.18
0060	441-0740		SY	CONC MEDIAN, 4 IN	24.000	35.99	863.98
0065	441-5025		LF	CONC HEADER CURB, 4", TP 9	157.000	12.00	1884.00
0070	441-6012		LF	CONC CURB & GUTTER/ 6"X24"TP2	1455.000	11.91	17342.63
0075	500-9999		CY	CL B CONC, BASE OR PVMT WIDEN	26.000	184.41	4794.80
0080	700-9300		SY	SOD	193.000	4.46	861.44
0085	653-0120		EA	THERM PVMT MARK, ARROW, TP 2	2.000	76.10	152.21
0090	653-1501		LF	THERMO SOLID TRAF ST 5 IN, WHI	1750.000	0.47	834.26
0095	653-1502		LF	THERMO SOLID TRAF ST, 5 IN YEL	350.000	0.70	248.15
0100	653-1704		LF	THERM SOLID TRAF STRIPE, 24", WH	12.000	4.48	53.84
0105	653-1804		LF	THERM SOLID TRAF STRIPE, 8", WH	120.000	1.99	238.89
0110	653-3501		GLF	THERMO SKIP TRAF ST, 5 IN, WHI	250.000	0.53	134.81
ITEM TOTAL							152428.10
INFLATED ITEM TOTAL							152428.10

STATE HIGHWAY AGENCY

JOB ESTIMATE REPORT

TOTALS FOR JOB 0012880_LOC_G

ESTIMATED COST:	207328.12
CONTINGENCY PERCENT (0.0):	0.00
ESTIMATED TOTAL:	207328.12

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No. 12880

OFFICE Office of Program Delivery

PROJECT DESCRIPTION

Location G - Old Southwick Pass

DATE September 5, 2014

From: Chris Haggard, City of Johns Creek

To: Lisa L. Myers, State Project Review Engineer

Subject: **REVISIONS TO PROGRAMMED COSTS**

PROJECT MANAGER Elaine Armster

MGMT LET DATE

MGMT ROW DATE

PROGRAMMED COSTS (TPro W/OUT INFLATION)

LAST ESTIMATE UPDATE

CONSTRUCTION \$ -

DATE 9/5/2014

RIGHT OF WAY \$ -

DATE 9/5/2014

UTILITIES \$ -

DATE 9/5/2014

REVISED COST ESTIMATES

CONSTRUCTION* \$ 233,754.89

RIGHT OF WAY \$ 55,000.00

UTILITIES \$ -

*Cost Contains 5 % Contingency

REASONS FOR COST INCREASE AND CONTINGENCY JUSTIFICATION:

Contingency set at 5% due to enhancements/bicycle/pedestrian/facility/safety.

CONTINGENCY SUMMARY

A. CONSTRUCTION COST ESTIMATE:	\$	207,328.12	Base Estimate From CES
B. ENGINEERING AND INSPECTION (E & I):	\$	10,366.41	Base Estimate (A) x 5 %
C. CONTINGENCY:	\$	10,884.73	Base Estimate (A) + E & I (B) x 5 % See % Table in "Risk Based Cost Estimation" Memo
D. TOTAL LIQUID AC ADJUSTMENT:	\$	5,175.64	Total From Liquid AC Spreadsheet
E. CONSTRUCTION TOTAL:	\$	233,754.89	(A + B + C + D = E)

REIMBURSABLE UTILITY COSTS

UTILITY OWNER	REIMBURSABLE COST
TOTAL	\$ -

ATTACHMENTS:

Detailed Cost Estimate Printout From TRAQS
Liquid AC Adjustment Spreadsheet

PROJ. NO. 13054A
P.I. NO. 12880
DATE 9/5/2014

CALL NO. 9/29/2009

INDEX (TYPE)	DATE	INDEX
REG. UNLEADED	Sep-14	\$ 3.335
DIESEL		\$ 3.765
LIQUID AC		\$ 601.00

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)				4940.22	\$	4,940.22
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60		
Monthly Asphalt Cement Price month project let (APL)			\$	601.00		
Total Monthly Tonnage of asphalt cement (TMT)				13.7		

ASPHALT	Tons	%AC	AC ton
Leveling	50	5.0%	2.5
12.5 OGFC		5.0%	0
12.5 mm		5.0%	0
9.5 mm SP	167	5.0%	8.35
25 mm SP	38	5.0%	1.9
19 mm SP	19	5.0%	0.95
	274		13.7

BITUMINOUS TACK COAT

Price Adjustment (PA)				\$	235.42	\$	235.42
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60			
Monthly Asphalt Cement Price month project let (APL)			\$	601.00			
Total Monthly Tonnage of asphalt cement (TMT)				0.65285534			

Bitum Tack

Gals	gals/ton	tons
152	232.8234	0.65285534

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)					\$	0	\$	-
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60				
Monthly Asphalt Cement Price month project let (APL)			\$	601.00				
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

TOTAL LIQUID AC ADJUSTMENT \$ **5,175.64**

STATE HIGHWAY AGENCY

JOB ESTIMATE REPORT

JOB NUMBER : 0012880_LOC_H SPEC YEAR: 01
 DESCRIPTION: BARNWELL ROAD ENHANCED SIDEWALK AND INTERSECTION IMPROVEMENTS

COST GROUPS FOR JOB 0012880_LOC_H

COST GROUP	DESCRIPTION	QUANTITY	PRICE	AMOUNT	ACTIVE?
UDEF	USER-DEFINED (LUMP SUM) MS4 COMPLIANCE	1.000	15900.00000	15900.00	Y
UDEF	USER-DEFINED (LUMP SUM) STORM DRAINAGE	1.000	10000.00000	10000.00	Y
UDEF	USER-DEFINED (LUMP SUM) TRAFFIC SIGNS	1.000	2500.00000	2500.00	Y
LSYM	LARGE PAVEMENT MARKING SYMBOLS - BIKE LANE SYMBOL	4.000	100.00000	400.00	Y
ACTIVE COST GROUP TOTAL				28800.00	
INFLATED COST GROUP TOTAL				28800.00	

ITEMS FOR JOB 0012880_LOC_H

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	150-1000		LS	TRAFFIC CONTROL - LOCATION H	1.000	25000.00	25000.00
0010	163-0001		LS	EROSION CONTROL, NON-REFUNDABLE DEDUCT	1.000	18000.00	18000.00
0015	210-0100		LS	GRADING COMPLETE - LOCATION H	1.000	40000.00	40000.00
0020	310-1101		TN	GR AGGR BASE CRS, INCL MATL	388.000	22.21	8620.29
0025	402-1812		TN	RECYL AC LEVELING, INC BM&HL	50.000	77.81	3890.77
0030	402-3103		TN	REC AC 9.5 MM SP, TPII, GP2, INCL BM & HL	58.000	80.28	4656.69
0035	402-3190		TN	RECYL AC 19 MM SP, GP 1 OR 2, INC BM&HL	47.000	85.00	3995.45
0040	402-3121		TN	RECYL AC 25MM SP, GP1/2, BM&HL	94.000	78.60	7388.43
0045	413-1000		GL	BITUM TACK COAT	119.000	3.14	374.68
0050	432-5010		SY	MILL ASPH CONC PVMT, VARB DEPTH	272.000	8.15	2218.87
0055	441-0104		SY	CONC SIDEWALK, 4 IN	452.000	32.78	14817.13
0060	441-6012		LF	CONC CURB & GUTTER/ 6"X24"TP2	1057.000	12.36	13074.41
0065	500-3107		CY	CL A CONC, RET WALL	100.000	489.78	48978.20
0070	500-9999		CY	CL B CONC, BASE OR PVMT WIDEN	19.000	187.71	3566.68
0075	700-9300		SY	SOD	109.000	4.60	501.78
0080	653-0120		EA	THERM PVMT MARK, ARROW, TP 2	6.000	73.54	441.27
0085	653-1501		LF	THERMO SOLID TRAF ST 5 IN, WHI	2380.000	0.45	1074.45
0090	653-1502		LF	THERMO SOLID TRAF ST, 5 IN YEL	1376.000	0.55	767.41
0095	653-1704		LF	THERM SOLID TRAF STRIPE, 24", WH	65.000	4.00	260.35
0100	653-1804		LF	THERM SOLID TRAF STRIPE, 8", WH	665.000	1.88	1250.74
0105	653-3501		GLF	THERMO SKIP TRAF ST, 5 IN, WHI	150.000	0.58	87.50
0110	653-6006		SY	THERM TRAF STRIPING, YELLOW	51.000	3.32	169.54
ITEM TOTAL							199134.65
INFLATED ITEM TOTAL							199134.65

TOTALS FOR JOB 0012880_LOC_H

STATE HIGHWAY AGENCY

JOB ESTIMATE REPORT

ESTIMATED COST:	227934.64
CONTINGENCY PERCENT (0.0):	0.00
ESTIMATED TOTAL:	227934.64

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No. 12880

OFFICE Office of Program Delivery

PROJECT DESCRIPTION

Location H - North Peak Drive

DATE September 5, 2014

From: Chris Haggard, City of Johns Creek

To: Lisa L. Myers, State Project Review Engineer

Subject: **REVISIONS TO PROGRAMMED COSTS**

PROJECT MANAGER Elaine Armster

MGMT LET DATE

MGMT ROW DATE

PROGRAMMED COSTS (TPro W/OUT INFLATION)

LAST ESTIMATE UPDATE

CONSTRUCTION \$ -

DATE 9/5/2014

RIGHT OF WAY \$ -

DATE 9/5/2014

UTILITIES \$ -

DATE 9/5/2014

REVISED COST ESTIMATES

CONSTRUCTION* \$ 255,971.72

RIGHT OF WAY \$ 80,000.00

UTILITIES \$ -

*Cost Contains 5 % Contingency

REASONS FOR COST INCREASE AND CONTINGENCY JUSTIFICATION:

Contingency set at 5% due to enhancements/bicycle/pedestrian/facility/safety.

CONTINGENCY SUMMARY

A. CONSTRUCTION COST ESTIMATE:	\$	227,934.64	Base Estimate From CES
B. ENGINEERING AND INSPECTION (E & I):	\$	11,396.73	Base Estimate (A) x 5 %
C. CONTINGENCY:	\$	11,966.57	Base Estimate (A) + E & I (B) x 5 % See % Table in "Risk Based Cost Estimation" Memo
D. TOTAL LIQUID AC ADJUSTMENT:	\$	4,673.78	Total From Liquid AC Spreadsheet
E. CONSTRUCTION TOTAL:	\$	255,971.72	(A + B + C + D = E)

REIMBURSABLE UTILITY COSTS

UTILITY OWNER	REIMBURSABLE COST
TOTAL	\$ -

ATTACHMENTS:

Detailed Cost Estimate Printout From TRAQS
Liquid AC Adjustment Spreadsheet

PROJ. NO. 13054A
P.I. NO. 12880
DATE 9/5/2014

CALL NO. 9/29/2009

INDEX (TYPE)	DATE	INDEX
REG. UNLEADED	Sep-14	\$ 3.335
DIESEL		\$ 3.765
LIQUID AC		\$ 601.00

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)				4489.47	\$	4,489.47
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60		
Monthly Asphalt Cement Price month project let (APL)			\$	601.00		
Total Monthly Tonnage of asphalt cement (TMT)				12.45		

ASPHALT	Tons	%AC	AC ton
Leveling	50	5.0%	2.5
12.5 OGFC		5.0%	0
12.5 mm		5.0%	0
9.5 mm SP	58	5.0%	2.9
25 mm SP	94	5.0%	4.7
19 mm SP	47	5.0%	2.35
	249		12.45

BITUMINOUS TACK COAT

Price Adjustment (PA)				\$	184.31	\$	184.31
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60			
Monthly Asphalt Cement Price month project let (APL)			\$	601.00			
Total Monthly Tonnage of asphalt cement (TMT)				0.51111701			

Bitum Tack

Gals	gals/ton	tons
119	232.8234	0.51111701

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)				\$	0	\$	-
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60			
Monthly Asphalt Cement Price month project let (APL)			\$	601.00			
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

TOTAL LIQUID AC ADJUSTMENT \$ **4,673.78**

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No. 12880

OFFICE Office of Program Delivery

PROJECT DESCRIPTION

Location I - Barnwell Elementary School

DATE January 23, 2015

From: Chris Haggard, City of Johns Creek

To: Lisa L. Myers, State Project Review Engineer

Subject: REVISIONS TO PROGRAMMED COSTS

PROJECT MANAGER Elaine Armster

MGMT LET DATE

MGMT ROW DATE

PROGRAMMED COSTS (TPro W/OUT INFLATION)

LAST ESTIMATE UPDATE

CONSTRUCTION \$ -

DATE 1/23/2015

RIGHT OF WAY \$ -

DATE 1/23/2015

UTILITIES \$ -

DATE 9/5/2014

REVISED COST ESTIMATES

CONSTRUCTION* \$ 441,551.00

RIGHT OF WAY \$ 50,000.00

UTILITIES \$ -

*Cost Contains 5 % Contingency

REASONS FOR COST INCREASE AND CONTINGENCY JUSTIFICATION:

Contingency set at 5% due to enhancements/bicycle/pedestrian/facility/safety.

CONTINGENCY SUMMARY

A. CONSTRUCTION COST ESTIMATE:	\$	388,604.02	Base Estimate From CES	
B. ENGINEERING AND INSPECTION (E & I):	\$	19,430.20	Base Estimate (A) x	5 %
C. CONTINGENCY:	\$	20,401.71	Base Estimate (A) + E & I (B) x	5 %
			See % Table in "Risk Based Cost Estimation" Memo	
D. TOTAL LIQUID AC ADJUSTMENT:	\$	13,115.07	Total From Liquid AC Spreadsheet	
E. CONSTRUCTION TOTAL:	\$	441,551.00	(A + B + C + D = E)	

REIMBURSABLE UTILITY COSTS

UTILITY OWNER	REIMBURSABLE COST
TOTAL	\$ -

ATTACHMENTS:

Detailed Cost Estimate Printout From TRAQS Liquid AC Adjustment Spreadsheet
--

PROJ. NO. 13054A
P.I. NO. 12880
DATE 1/23/2015

CALL NO. 9/29/2009

INDEX (TYPE)	DATE	INDEX
REG. UNLEADED	Sep-14	\$ 3.335
DIESEL		\$ 3.765
LIQUID AC		\$ 601.00

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)					12621	\$	12,621.00
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60			
Monthly Asphalt Cement Price month project let (APL)			\$	601.00			
Total Monthly Tonnage of asphalt cement (TMT)					35		

ASPHALT	Tons	%AC	AC ton
Leveling	50	5.0%	2.5
12.5 OGFC		5.0%	0
12.5 mm		5.0%	0
9.5 mm SP	350	5.0%	17.5
25 mm SP	200	5.0%	10
19 mm SP	100	5.0%	5
	700		35

BITUMINOUS TACK COAT

Price Adjustment (PA)					\$	494.07	\$	494.07
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60				
Monthly Asphalt Cement Price month project let (APL)			\$	601.00				
Total Monthly Tonnage of asphalt cement (TMT)					1.370137194			

Bitum Tack

Gals	gals/ton	tons
319	232.8234	1.37013719

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)						0	\$	-
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60				
Monthly Asphalt Cement Price month project let (APL)			\$	601.00				
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 \$ 13,115.07

STATE HIGHWAY AGENCY

JOB ESTIMATE REPORT

JOB NUMBER : 0012880_LOC_M SPEC YEAR: 01
 DESCRIPTION: BARNWELL ROAD ENHANCED SIDEWALK AND INTERSECTION IMPROVEMENTS

COST GROUPS FOR JOB 0012880_LOC_M

COST GROUP	DESCRIPTION	QUANTITY	PRICE	AMOUNT	ACTIVE?
UDEF	USER-DEFINED (LUMP SUM) MS4 COMPLIANCE	1.000	199500.00000	199500.00	Y
UDEF	USER-DEFINED (LUMP SUM) STORM DRAINAGE	1.000	500000.00000	500000.00	Y
UDEF	USER-DEFINED (LUMP SUM) LANDSCAPING	1.000	100000.00000	100000.00	Y
UDEF	USER-DEFINED (LUMP SUM) TRAFFIC SIGNS	1.000	15000.00000	15000.00	Y
LSYM	LARGE PAVEMENT MARKING SYMBOLS - BIKE LANE SYMBOL	29.000	100.00000	2900.00	Y
STRO	STRUCTURES, OTHER (SF) BRIDGE WIDENING	750.000	200.00000	150000.00	Y
STRO	STRUCTURES, OTHER (SF) PEDESTRIAN BRIDGE	1200.000	125.00000	150000.00	Y
SGNL	TRAFFIC SIGNALS (LS) HAWK - PEDESTRIAN HYBRID BEACON	2.000	100000.00000	200000.00	Y
ACTIVE COST GROUP TOTAL				1317400.00	
INFLATED COST GROUP TOTAL				1317400.00	

ITEMS FOR JOB 0012880_LOC_M

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	150-1000		LS	TRAFFIC CONTROL - LOCATION M	1.000	200000.00	200000.00
0010	163-0001		LS	EROSION CONTROL, NON-REFUNDABLE DEDUCT	1.000	320000.00	320000.00
0015	210-0100		LS	GRADING COMPLETE - LOCATION M	1.000	200000.00	200000.00
0020	310-1101		TN	GR AGGR BASE CRS, INCL MATL	2828.000	19.07	53947.27
0025	402-3103		TN	REC AC 9.5 MM SP,TPII,GP2, INCL BM & HL	2107.000	66.05	139176.07
0030	402-3190		TN	RECYL AC 19 MM SP,GP 1 OR 2 ,INC BM&HL	306.000	74.85	22907.04
0035	402-3121		TN	RECYL AC 25MM SP,GP1/2,BM&HL	612.000	69.41	42479.02
0040	413-1000		GL	BITUM TACK COAT	2028.000	2.38	4844.20
0045	432-5010		SY	MILL ASPH CONC PVMT,VARB DEPTH	22706.000	2.00	45490.79
0050	441-0104		SY	CONC SIDEWALK, 4 IN	7083.000	24.76	175407.66
0055	441-6012		LF	CONC CURB & GUTTER/ 6"X24"TP2	10183.000	9.51	96856.52
0060	500-3107		CY	CL A CONC, RET WALL	500.000	578.93	289468.37
0065	500-9999		CY	CL B CONC,BASE OR PVMT WIDEN	837.000	151.50	126809.58
0070	700-9300		SY	SOD	2464.000	3.88	9582.32
0075	653-1501		LF	THERMO SOLID TRAF ST 5 IN, WHI	25200.000	0.29	7490.20
0080	653-1502		LF	THERMO SOLID TRAF ST, 5 IN YEL	15706.000	0.36	5715.88
0085	653-1704		LF	THERM SOLID TRAF STRIPE,24",WH	125.000	3.83	479.17
0090	653-1804		LF	THERM SOLID TRAF STRIPE, 8",WH	1085.000	1.85	2007.79
0095	653-3501		GLF	THERMO SKIP TRAF ST, 5 IN, WHI	365.000	0.50	185.68
ITEM TOTAL							1742847.57
INFLATED ITEM TOTAL							1742847.57

STATE HIGHWAY AGENCY

JOB ESTIMATE REPORT

TOTALS FOR JOB 0012880_LOC_M

ESTIMATED COST:	3060247.56
CONTINGENCY PERCENT (0.0):	0.00
ESTIMATED TOTAL:	3060247.56

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No. 12880

OFFICE Office of Program Delivery

PROJECT DESCRIPTION

Location M - Barnwell Road Enhanced Sidewalk (10-Foot Wide Sidewalk)

DATE September 5, 2014

From: Chris Haggard, City of Johns Creek

To: Lisa L. Myers, State Project Review Engineer

Subject: REVISIONS TO PROGRAMMED COSTS

PROJECT MANAGER Elaine Armster

MGMT LET DATE

MGMT ROW DATE

PROGRAMMED COSTS (TPro W/OUT INFLATION)

LAST ESTIMATE UPDATE

CONSTRUCTION \$ -

DATE 9/5/2014

RIGHT OF WAY \$ -

DATE 9/5/2014

UTILITIES \$ -

DATE 9/5/2014

REVISED COST ESTIMATES

CONSTRUCTION* \$ 3,431,604.68

RIGHT OF WAY \$ 725,000.00

UTILITIES \$ -

*Cost Contains 5 % Contingency

REASONS FOR COST INCREASE AND CONTINGENCY JUSTIFICATION:

Contingency set at 5% due to enhancements/bicycle/pedestrian/facility/safety.

CONTINGENCY SUMMARY

A. CONSTRUCTION COST ESTIMATE:	\$	3,060,247.56	Base Estimate From CES
B. ENGINEERING AND INSPECTION (E & I):	\$	153,012.38	Base Estimate (A) x 5 %
C. CONTINGENCY:	\$	160,663.00	Base Estimate (A) + E & I (B) x 5 % See % Table in "Risk Based Cost Estimation" Memo
D. TOTAL LIQUID AC ADJUSTMENT:	\$	57,681.74	Total From Liquid AC Spreadsheet
E. CONSTRUCTION TOTAL:	\$	3,431,604.68	(A + B + C + D = E)

REIMBURSABLE UTILITY COSTS

UTILITY OWNER	REIMBURSABLE COST
TOTAL	\$ -

ATTACHMENTS:

Detailed Cost Estimate Printout From TRAQS Liquid AC Adjustment Spreadsheet
--

PROJ. NO. 13054A
P.I. NO. 12880
DATE 9/5/2014

CALL NO. 9/29/2009

INDEX (TYPE)	DATE	INDEX
REG. UNLEADED	Sep-14	\$ 3.335
DIESEL		\$ 3.765
LIQUID AC		\$ 601.00

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)				54540.75	\$	54,540.75
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60		
Monthly Asphalt Cement Price month project let (APL)			\$	601.00		
Total Monthly Tonnage of asphalt cement (TMT)				151.25		

ASPHALT	Tons	%AC	AC ton
Leveling		5.0%	0
12.5 OGFC		5.0%	0
12.5 mm		5.0%	0
9.5 mm SP	2107	5.0%	105.35
25 mm SP	612	5.0%	30.6
19 mm SP	306	5.0%	15.3
	3025		151.25

BITUMINOUS TACK COAT

Price Adjustment (PA)				\$	3,140.99	\$	3,140.99
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60			
Monthly Asphalt Cement Price month project let (APL)			\$	601.00			
Total Monthly Tonnage of asphalt cement (TMT)				8.71046467			

Bitum Tack

Gals	gals/ton	tons
2028	232.8234	8.71046467

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)					\$	-
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60		
Monthly Asphalt Cement Price month project let (APL)			\$	601.00		
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

TOTAL LIQUID AC ADJUSTMENT \$ **57,681.74**

STATE HIGHWAY AGENCY

JOB ESTIMATE REPORT

JOB NUMBER : 0012880_LOC_N SPEC YEAR: 01
 DESCRIPTION: BARNWELL ROAD ENHANCED SIDEWALK AND INTERSECTION IMPROVEMENTS

COST GROUPS FOR JOB 0012880_LOC_N

COST GROUP	DESCRIPTION	QUANTITY	PRICE	AMOUNT	ACTIVE?
UDEF	USER-DEFINED (LUMP SUM) MS4 COMPLIANCE	1.000	9300.00000	9300.00	Y
UDEF	USER-DEFINED (LUMP SUM) STORM DRAINAGE	1.000	2500.00000	2500.00	Y
LSYM	LARGE PAVEMENT MARKING SYMBOLS - BIKE LANE SYMBOL	11.000	100.00000	1100.00	Y
ACTIVE COST GROUP TOTAL				12900.00	
INFLATED COST GROUP TOTAL				12900.00	

ITEMS FOR JOB 0012880_LOC_N

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	150-1000		LS	TRAFFIC CONTROL - LOCATION N	1.000	10000.00	10000.00
0010	163-0001		LS	EROSION CONTROL, NON-REFUNDABLE DEDUCT	1.000	5000.00	5000.00
0015	210-0100		LS	GRADING COMPLETE - LOCATION N	1.000	5000.00	5000.00
0020	402-3103		TN	REC AC 9.5 MM SP,TPII,GP2, INCL BM & HL	735.000	69.94	51408.05
0025	413-1000		GL	BITUM TACK COAT	533.000	2.72	1450.14
0030	432-5010		SY	MILL ASPH CONC PVMT,VARB DEPTH	8889.000	2.69	23981.81
0035	441-5025		LF	CONC HEADER CURB, 4", TP 9	1630.000	12.00	19560.00
0040	653-1501		LF	THERMO SOLID TRAF ST 5 IN, WHI	3800.000	0.41	1579.05
0045	653-1502		LF	THERMO SOLID TRAF ST, 5 IN YEL	4170.000	0.45	1914.82
0050	653-1704		LF	THERM SOLID TRAF STRIPE, 24",WH	65.000	4.00	260.35
0055	653-1804		LF	THERM SOLID TRAF STRIPE, 8",WH	144.000	1.97	284.94
0060	653-3501		GLF	THERMO SKIP TRAF ST, 5 IN, WHI	60.000	0.67	40.30
0065	653-6006		SY	THERM TRAF STRIPING, YELLOW	212.000	3.06	648.87
ITEM TOTAL							121128.34
INFLATED ITEM TOTAL							121128.34

TOTALS FOR JOB 0012880_LOC_N

ESTIMATED COST:	134028.33
CONTINGENCY PERCENT (0.0):	0.00
ESTIMATED TOTAL:	134028.33

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No. 12880

OFFICE Office of Program Delivery

PROJECT DESCRIPTION

Location N - Rivermont Parkway

DATE September 5, 2014

From: Chris Haggard, City of Johns Creek

To: Lisa L. Myers, State Project Review Engineer

Subject: **REVISIONS TO PROGRAMMED COSTS**

PROJECT MANAGER Elaine Armster

MGMT LET DATE

MGMT ROW DATE

PROGRAMMED COSTS (TPro W/OUT INFLATION)

LAST ESTIMATE UPDATE

CONSTRUCTION \$ -

DATE 9/5/2014

RIGHT OF WAY \$ -

DATE 9/5/2014

UTILITIES \$ -

DATE 9/5/2014

REVISED COST ESTIMATES

CONSTRUCTION* \$ 161,843.80

RIGHT OF WAY \$ -

UTILITIES \$ -

*Cost Contains 5 % Contingency

REASONS FOR COST INCREASE AND CONTINGENCY JUSTIFICATION:

Contingency set at 5% due to enhancements/bicycle/pedestrian/facility/safety.

CONTINGENCY SUMMARY

A. CONSTRUCTION COST ESTIMATE:	\$	134,028.33	Base Estimate From CES	
B. ENGINEERING AND INSPECTION (E & I):	\$	6,701.42	Base Estimate (A) x	5 %
C. CONTINGENCY:	\$	7,036.49	Base Estimate (A) + E & I (B) x	5 %
			See % Table in "Risk Based Cost Estimation" Memo	
D. TOTAL LIQUID AC ADJUSTMENT:	\$	14,077.57	Total From Liquid AC Spreadsheet	
E. CONSTRUCTION TOTAL:	\$	161,843.80	(A + B + C + D = E)	

REIMBURSABLE UTILITY COSTS

UTILITY OWNER	REIMBURSABLE COST
TOTAL	\$ -

ATTACHMENTS:

Detailed Cost Estimate Printout From TRAQS Liquid AC Adjustment Spreadsheet
--

PROJ. NO. 13054A
P.I. NO. 12880
DATE 9/5/2014

CALL NO. 9/29/2009

INDEX (TYPE)	DATE	INDEX
REG. UNLEADED	Sep-14	\$ 3.335
DIESEL		\$ 3.765
LIQUID AC		\$ 601.00

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)				13252.05	\$	13,252.05
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60		
Monthly Asphalt Cement Price month project let (APL)			\$	601.00		
Total Monthly Tonnage of asphalt cement (TMT)				36.75		

ASPHALT	Tons	%AC	AC ton
Leveling		5.0%	0
12.5 OGFC		5.0%	0
12.5 mm		5.0%	0
9.5 mm SP	735	5.0%	36.75
25 mm SP		5.0%	0
19 mm SP		5.0%	0
	735		36.75

BITUMINOUS TACK COAT

Price Adjustment (PA)				\$	825.52	\$	825.52
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60			
Monthly Asphalt Cement Price month project let (APL)			\$	601.00			
Total Monthly Tonnage of asphalt cement (TMT)				2.289288791			

Bitum Tack

Gals	gals/ton	tons
533	232.8234	2.28928879

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)					\$	0	\$	-
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60				
Monthly Asphalt Cement Price month project let (APL)			\$	601.00				
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

TOTAL LIQUID AC ADJUSTMENT \$ 14,077.57

STATE HIGHWAY AGENCY

JOB ESTIMATE REPORT

=====
 JOB NUMBER : 0012880_LOC_O SPEC YEAR: 01
 DESCRIPTION: BARNWELL ROAD ENHANCED SIDEWALK AND INTERSECTION IMPROVEMENTS

COST GROUPS FOR JOB 0012880_LOC_O

COST GROUP	DESCRIPTION	QUANTITY	PRICE	AMOUNT	ACTIVE?
UDEF	USER-DEFINED (LUMP SUM) MS4 COMPLIANCE	1.000	8300.00000	8300.00	Y
UDEF	USER-DEFINED (LUMP SUM) STORM DRAINAGE	1.000	7500.00000	7500.00	Y
STRO	STRUCTURES, OTHER (SF) RAISED WOODEN BOARDWALK, 10 FT	400.000	500.00000	200000.00	Y
ACTIVE COST GROUP TOTAL				215800.00	
INFLATED COST GROUP TOTAL				215800.00	

ITEMS FOR JOB 0012880_LOC_O

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	150-1000		LS	TRAFFIC CONTROL - LOCATION O	1.000	5000.00	5000.00
0010	163-0001		LS	EROSION CONTROL, NON-REFUNDABLE DEDUCT	1.000	35000.00	35000.00
0015	210-0100		LS	GRADING COMPLETE - LOCATION O	1.000	25000.00	25000.00
0020	441-0104		SY	CONC SIDEWALK, 4 IN	250.000	34.82	8705.18
0025	500-3107		CY	CL A CONC, RET WALL	100.000	489.78	48978.20
0030	700-9300		SY	SOD	500.000	4.23	2119.69
ITEM TOTAL							124803.07
INFLATED ITEM TOTAL							124803.07

TOTALS FOR JOB 0012880_LOC_O

ESTIMATED COST:	340603.07
CONTINGENCY PERCENT (0.0):	0.00
ESTIMATED TOTAL:	340603.07

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No. 12880

OFFICE Office of Program Delivery

PROJECT DESCRIPTION

Location O - Rivermont Parkway to Brumbelow Road (Boardwalk)

DATE September 5, 2014

From: Chris Haggard, City of Johns Creek

To: Lisa L. Myers, State Project Review Engineer

Subject: **REVISIONS TO PROGRAMMED COSTS**

PROJECT MANAGER Elaine Armster

MGMT LET DATE

MGMT ROW DATE

PROGRAMMED COSTS (TPro W/OUT INFLATION)

LAST ESTIMATE UPDATE

CONSTRUCTION \$ -

DATE 9/5/2014

RIGHT OF WAY \$ -

DATE 9/5/2014

UTILITIES \$ -

DATE 9/5/2014

REVISED COST ESTIMATES

CONSTRUCTION* \$ 375,514.88

RIGHT OF WAY \$ 110,000.00

UTILITIES \$ -

*Cost Contains 5 % Contingency

REASONS FOR COST INCREASE AND CONTINGENCY JUSTIFICATION:

Contingency set at 5% due to enhancements/bicycle/pedestrian/facility/safety.

CONTINGENCY SUMMARY

A. CONSTRUCTION COST ESTIMATE:	\$	340,603.07	Base Estimate From CES	
B. ENGINEERING AND INSPECTION (E & I):	\$	17,030.15	Base Estimate (A) x	5 %
C. CONTINGENCY:	\$	17,881.66	Base Estimate (A) + E & I (B) x	5 %
			See % Table in "Risk Based Cost Estimation" Memo	
D. TOTAL LIQUID AC ADJUSTMENT:	\$	-	Total From Liquid AC Spreadsheet	
E. CONSTRUCTION TOTAL:	\$	375,514.88	(A + B + C + D = E)	

REIMBURSABLE UTILITY COSTS

UTILITY OWNER	REIMBURSABLE COST
TOTAL	\$ -

ATTACHMENTS:

Detailed Cost Estimate Printout From TRAQS
Liquid AC Adjustment Spreadsheet

PROJ. NO. 13054A
P.I. NO. 12880
DATE 9/5/2014

CALL NO. 9/29/2009

INDEX (TYPE)	DATE	INDEX
REG. UNLEADED	Sep-14	\$ 3.335
DIESEL		\$ 3.765
LIQUID AC		\$ 601.00

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)					0	\$	-
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60			
Monthly Asphalt Cement Price month project let (APL)			\$	601.00			
Total Monthly Tonnage of asphalt cement (TMT)				0			

ASPHALT	Tons	%AC	AC ton
Leveling		5.0%	0
12.5 OGFC		5.0%	0
12.5 mm		5.0%	0
9.5 mm SP		5.0%	0
25 mm SP		5.0%	0
19 mm SP		5.0%	0
	0		0

BITUMINOUS TACK COAT

Price Adjustment (PA)					\$	-	\$	-
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60				
Monthly Asphalt Cement Price month project let (APL)			\$	601.00				
Total Monthly Tonnage of asphalt cement (TMT)				0				

Bitum Tack

Gals	gals/ton	tons
	232.8234	0

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)					0	\$	-
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	961.60			
Monthly Asphalt Cement Price month project let (APL)			\$	601.00			
Total Monthly Tonnage of asphalt cement (TMT)				0			

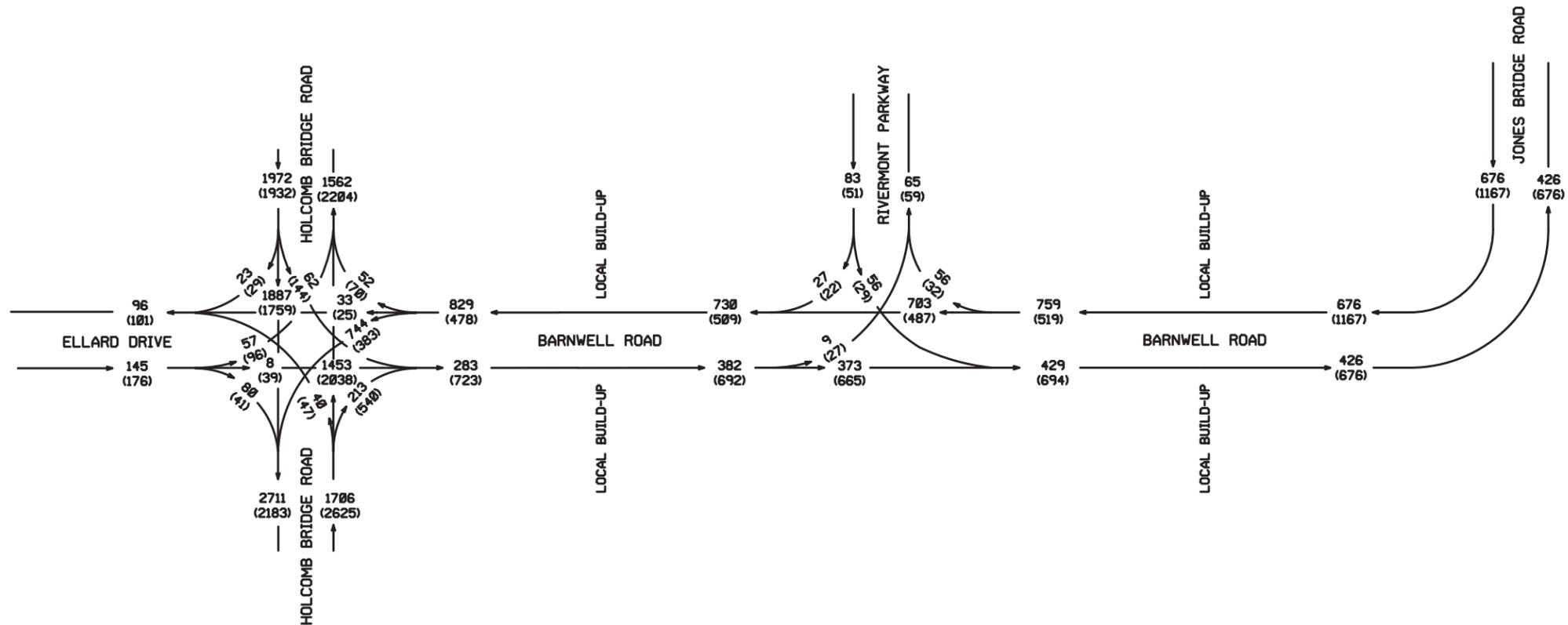
Bitum Tack

	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

TOTAL LIQUID AC ADJUSTMENT \$ -

Barnwell Road Accident Summary			
Year	Accidents	Injuries	Fatalities
2009	13	1	0
2010	14	6	0
2011	17	8	0
2012	16	1	0
2013	17	6	0

FULTON COUNTY - 2014 TMC



P. I. * 0012880
 FULTON CO.
 BARNWELL RD
 FM HOLCOMB BRIDGE RD
 TO JONES BRIDGE RD
 2014 AM TMC = 000
 2014 PM TMC = (000)
 PEAK HOUR T = 3.3%
 S.U. = 3.3%
 COMB. = 0.0% RPJ
 8/14

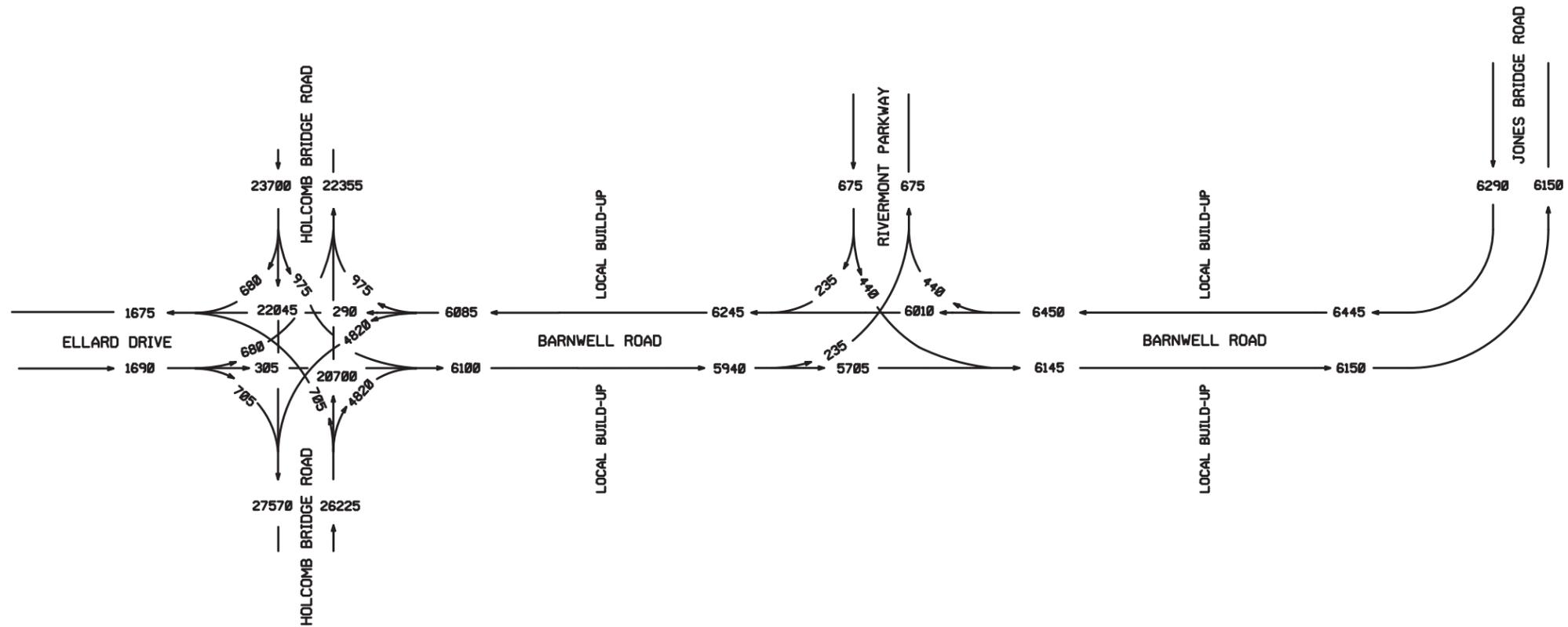
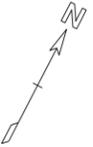
REVISION DATES	

STATE OF GEORGIA
 DEPARTMENT OF TRANSPORTATION
 OFFICE: PROGRAM DELIVERY
 TRAFFIC DIAGRAM
 BARNWELL RD FROM
 HOLCOMB BRIDGE RD TO JONES BRIDGE RD



DRAWING No.
 01

FULTON COUNTY - 2014 ADT



P. I. * 0012880
 FULTON CO.
 BARNWELL RD
 FM HOLCOMB BRIDGE RD
 TO JONES BRIDGE RD
 2014 ADT = 000
 24 HOUR T = 3.4%
 S.U. = 2.9%
 COMB. = 0.5% RPJ
 8/14

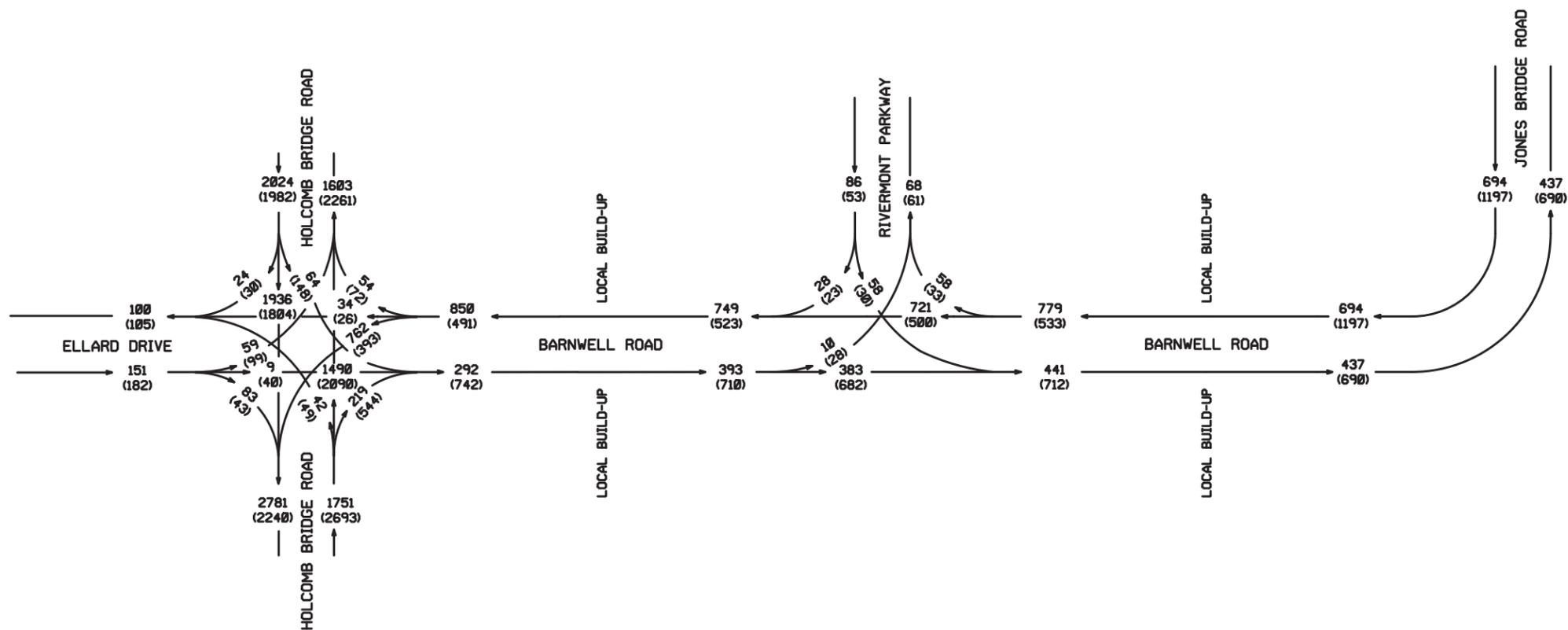
REVISION DATES	

STATE OF GEORGIA
 DEPARTMENT OF TRANSPORTATION
 OFFICE: PROGRAM DELIVERY
 TRAFFIC DIAGRAM
 BARNWELL RD FROM
 HOLCOMB BRIDGE RD TO JONES BRIDGE RD



DRAWING No.
 02

FULTON COUNTY - 2018 DHV NO BUILD VOLUMES



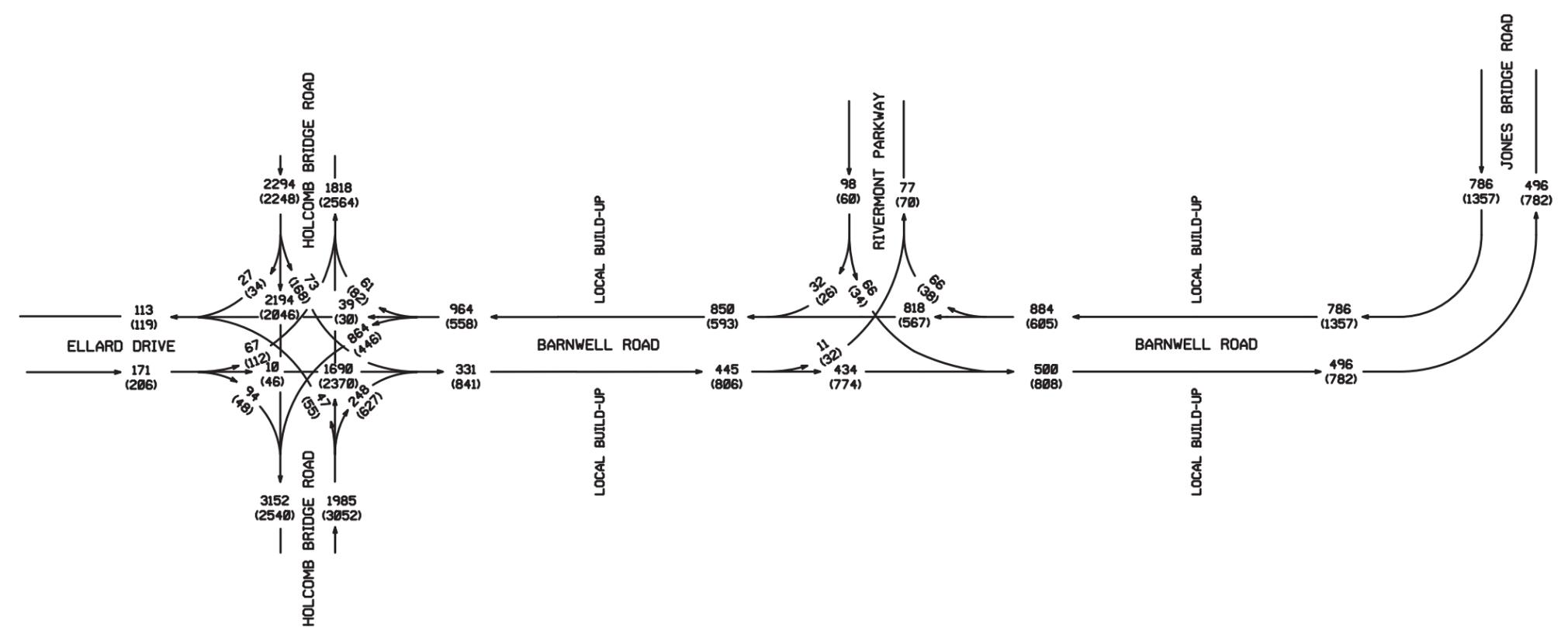
P. I. * 0012880
FULTON CO.
BARNWELL RD
FM HOLCOMB BRIDGE RD
TO JONES BRIDGE RD
2018 AM DHV = 000
2018 PM DHV = (000)
PEAK HOUR T = 3.3%
S.U. = 3.3%
COMB. = 0.0% RPJ
8/14

REVISION DATES	

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY
TRAFFIC DIAGRAM
BARNWELL RD FROM
HOLCOMB BRIDGE RD TO JONES BRIDGE RD
DRAWING No. 03



FULTON COUNTY - 2038 DHV NO BUILD VOLUMES



P. I. * 0012880
FULTON CO.
BARNWELL RD
FM HOLCOMB BRIDGE RD
TO JONES BRIDGE RD
2038 AM DHV = 000
2038 PM DHV = (000)
PEAK HOUR T = 3.3%
S.U. = 3.3%
COMB. = 0.0% RPJ
8/14

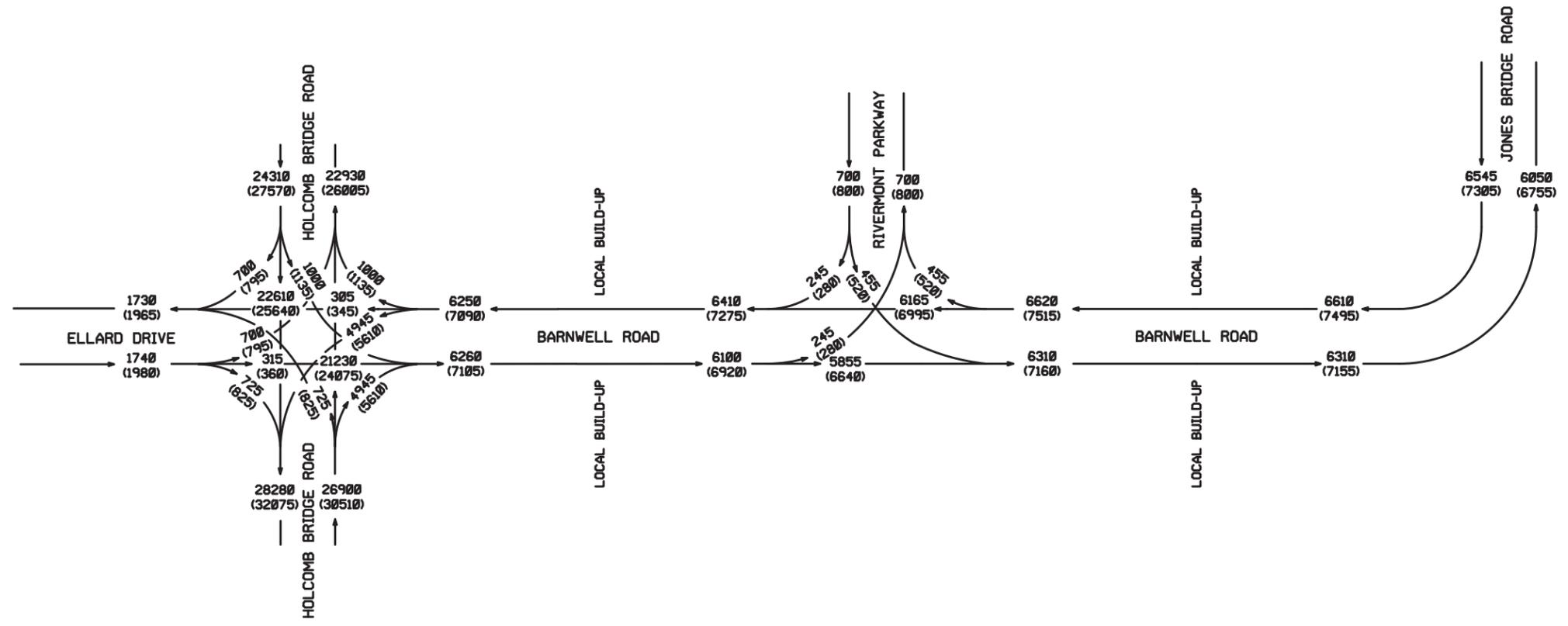
REVISION DATES	

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY
TRAFFIC DIAGRAM
BARNWELL RD FROM
HOLCOMB BRIDGE RD TO JONES BRIDGE RD



DRAWING No.
04

FULTON COUNTY - 2018/2038 ADT NO BUILD VOLUMES



P. I. * 0012880
FULTON CO.
BARNWELL RD
FM HOLCOMB BRIDGE RD
TO JONES BRIDGE RD
2018 ADT = 000
2038 ADT = (000)

24 HOUR T = 3.4%
S.U. = 2.9%
COMB. = 0.5%
RPJ
8/14

REVISION DATES	

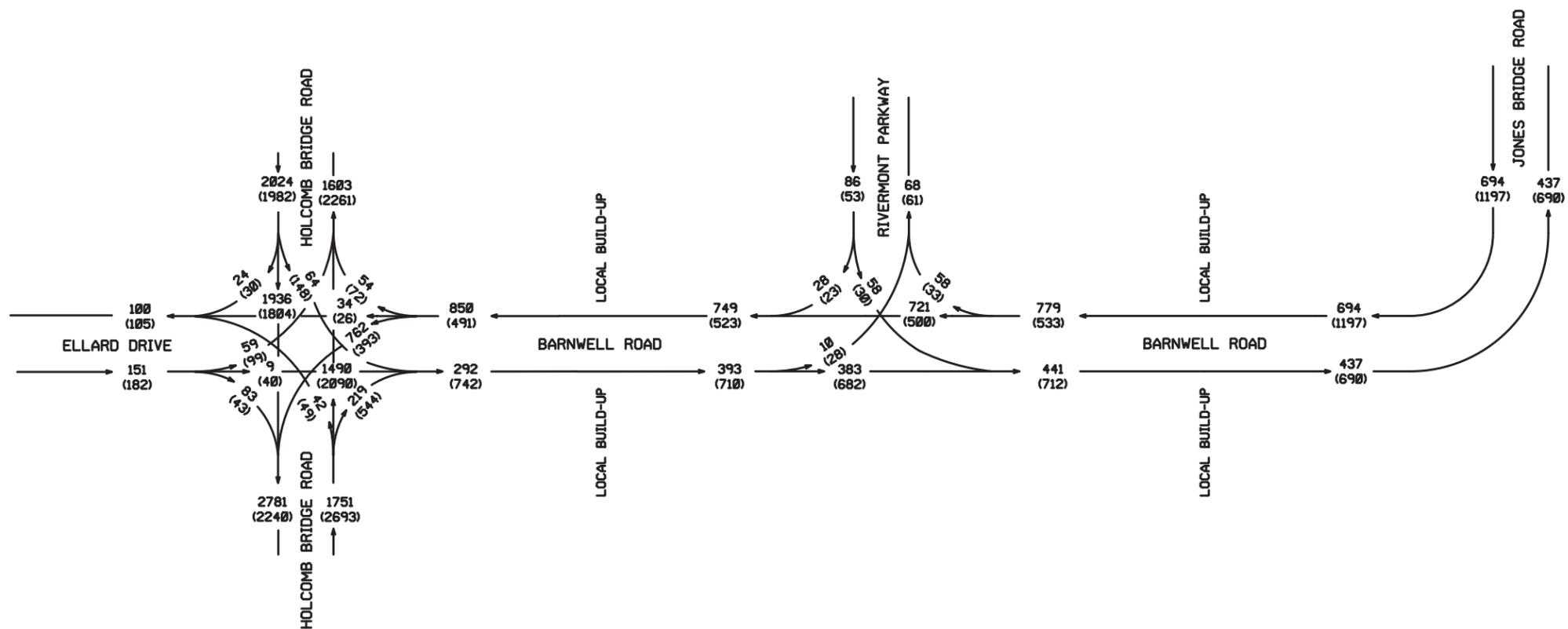
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY

TRAFFIC DIAGRAM
BARNWELL RD FROM
HOLCOMB BRIDGE RD TO JONES BRIDGE RD

DRAWING No.
05



FULTON COUNTY - 2018 DHV BUILD VOLUMES



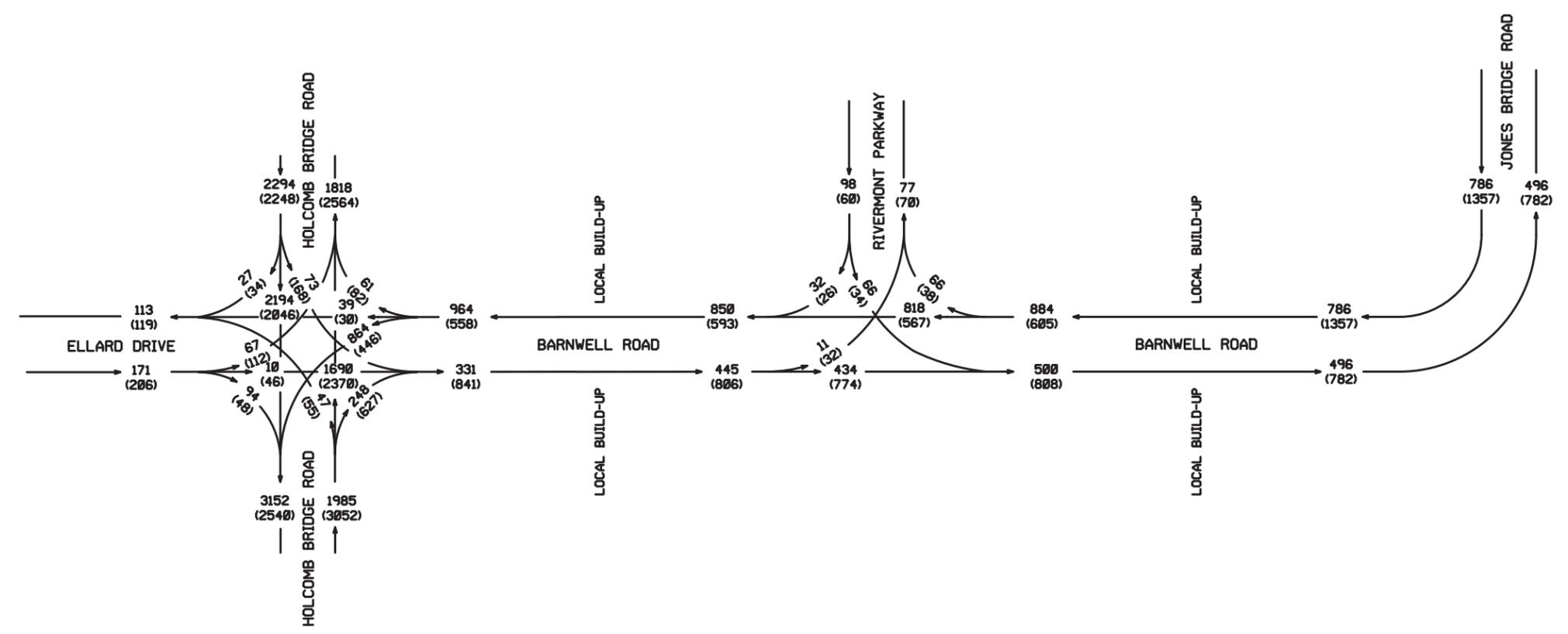
P. I. * 0012880
FULTON CO.
BARNWELL RD
FM HOLCOMB BRIDGE RD
TO JONES BRIDGE RD
2018 AM DHV = 000
2018 PM DHV = (000)
PEAK HOUR T = 3.3%
S.U. = 3.3%
COMB. = 0.0% RPJ
8/14



REVISION DATES	

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY
TRAFFIC DIAGRAM
BARNWELL RD FROM
HOLCOMB BRIDGE RD TO JONES BRIDGE RD
DRAWING No. 06

FULTON COUNTY - 2038 DHV BUILD VOLUMES



P. I. * 0012880
FULTON CO.
BARNWELL RD
FM HOLCOMB BRIDGE RD
TO JONES BRIDGE RD
2038 AM DHV = 000
2038 PM DHV = (000)
PEAK HOUR T = 3.3%
S.U. = 3.3%
COMB. = 0.0% RPJ
8/14

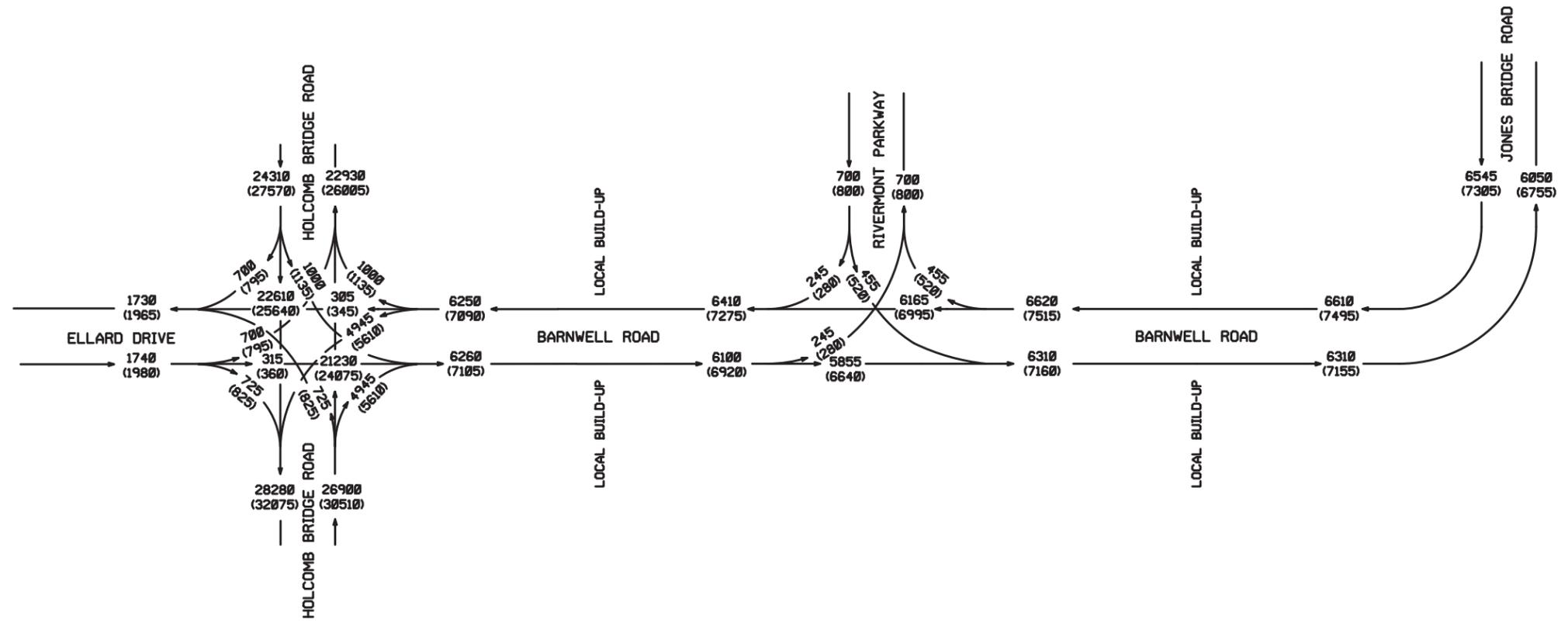
REVISION DATES	

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY
TRAFFIC DIAGRAM
BARNWELL RD FROM
HOLCOMB BRIDGE RD TO JONES BRIDGE RD



DRAWING No.
07

FULTON COUNTY - 2018/2038 ADT BUILD VOLUMES



P. I. * 0012880
FULTON CO.
BARNWELL RD
FM HOLCOMB BRIDGE RD
TO JONES BRIDGE RD
2018 ADT = 000
2038 ADT = (000)
24 HOUR T = 3.4%
S.U. = 2.9%
COMB. = 0.5%
RPJ
8/14

REVISION DATES	

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY
TRAFFIC DIAGRAM
BARNWELL RD FROM
HOLCOMB BRIDGE RD TO JONES BRIDGE RD
DRAWING No. 08





TRAFFIC ENGINEERING REPORT
FOR
PROPOSED INTERSECTION IMPROVEMENTS
BARNWELL ROAD

JOHNS CREEK, FULTON COUNTY, GEORGIA

W & A Project No. 14-710

October 1st, 2014

WOLVERTON & ASSOCIATES, INC.
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1. INTRODUCTION

BARNWELL ROAD TRAFFIC ENGINEERING REPORT

The purpose of this report is to analyze concept improvements for the 2.51 mile Barnwell Road corridor from SR 140/Holcomb Bridge Road to Redcoat Way in Johns Creek, Fulton County, Georgia. Many improvement alternatives were initially considered; however, two were finally decided up to study, Preferred Alternative and Alternative #2, in addition to the No-Build Alternative. Improvements along the Barnwell Road corridor consist of intersection improvements, pedestrian facility improvements, and bicycle facility improvements.

The Preferred Alternative consists of geometric improvements at eleven of the sixteen intersections along the Barnwell Road corridor. Intersection improvements include adding turn lanes and adding roundabouts. From SR 140/Holcomb Bridge Road to Barnwell Elementary School the typical section is expected to include a multi-use sidewalk that runs along the west side of the corridor as well as bicycle lanes on both the northbound and southbound travel lanes. From Barnwell Elementary School to Redcoat Way the typical section is expected to include a multi-use sidewalk that runs along the east side of the corridor as well as bicycle lanes on both the northbound and southbound travel lanes. The Preferred Alternative concept drawing can be seen in Appendix A.

Alternative #2 consists of geometric improvements at twelve of the sixteen intersections along the Barnwell Road corridor. Intersection improvements include adding turn lanes and adding roundabouts. Pedestrian improvements include adding a High-Intensity Activated Crosswalk (HAWK) beacon near the Barnwell Elementary School. The typical section for Alternative #2 is expected to be the same as the Preferred Alternative for both sections of Barnwell Road. The Alternative #2 concept drawing can be seen in Appendix A.

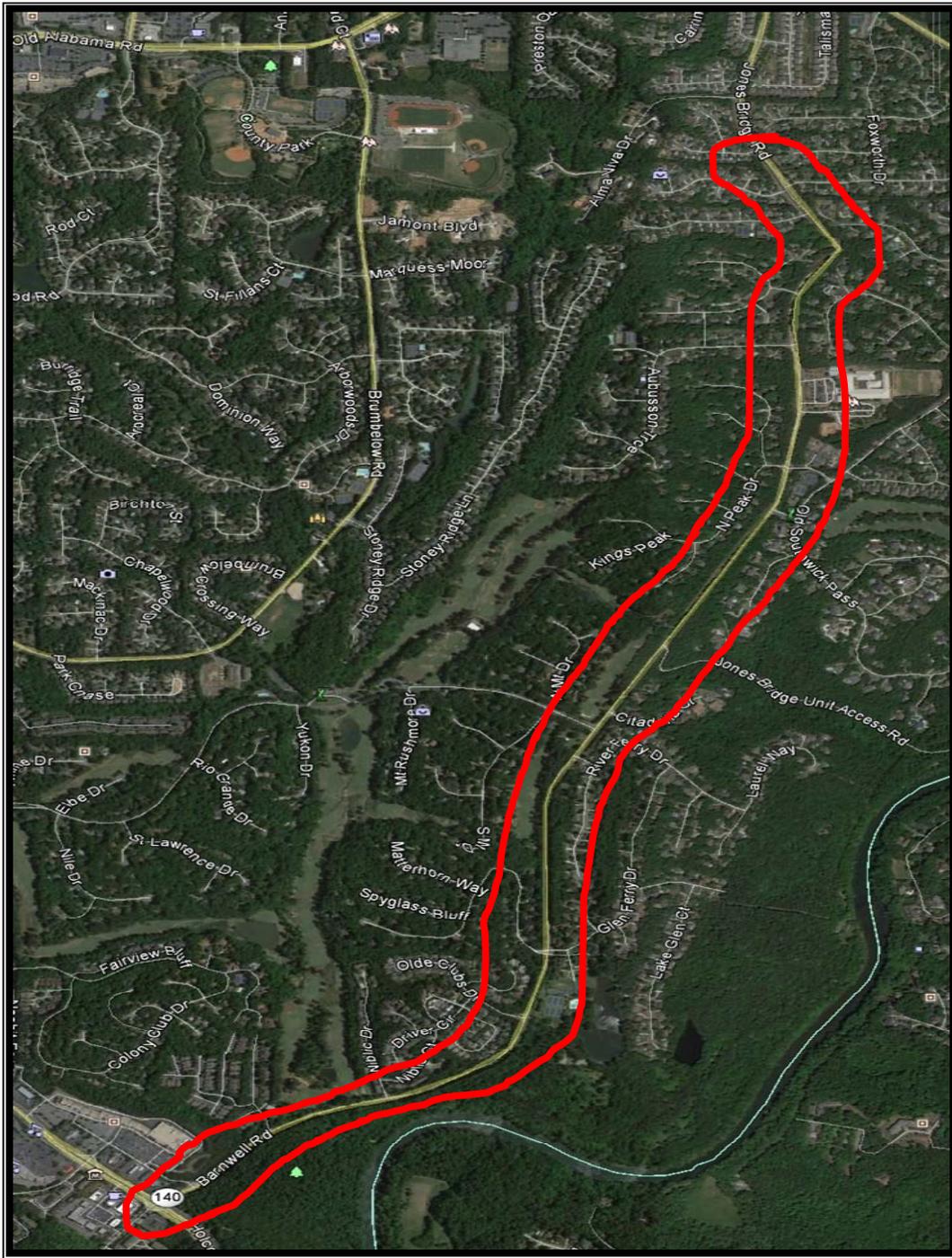
Improvements are also planned along Rivermont Parkway and Brumbelow Road as part of the concepts shown in the Appendix; however, those improvements were added to the concept and not part of the original study.

Figure 1 schematically illustrates the existing roadway facility as well as the location of the study intersections along the Barnwell Road corridor.

Planned Improvements

There are no other known projects that will affect the study corridor.

Figure 1 – Project Location Map



2. METHODOLOGY

BARNWELL ROAD TRAFFIC ENGINEERING REPORT

Initial evaluations were made to assess the current conditions along the corridor. Weekday AM and PM peak hour turning movement counts (TMCs) were taken at the following intersections:

- SR 140/Holcomb Bridge Road and Barnwell Road/Ellard Drive,
- Barnwell Road and Sandy Lane Drive,
- Barnwell Road and Niblick Drive,
- Barnwell Road and Olde Clubs Drive,
- Barnwell Road and Fairway Ridge Drive/Glen Ferry Drive,
- Barnwell Road and River Ferry Drive,
- Barnwell Road and Rivermont Parkway,
- Barnwell Road and Citadella Court,
- Barnwell Road and Old Southwick Pass,
- Barnwell Road and North Peak Drive/Old Southwick Pass,
- Barnwell Road and Barnwell Elementary School Driveway #1,
- Barnwell Road and Barnwell Elementary School Driveway #2,
- Barnwell Road and Barnwell Elementary School Driveway #3,
- Barnwell Road and Aubusson Trace,
- Barnwell Road and Jacobean Entry, and
- Barnwell Road and Jones Bridge Road.

Weekday 24-hour directional volume counts were taken on each approach for the above listed intersections.

The turning movement counts (TMC's) are contained in Appendix B. The 24-hour directional tube counts are contained in Appendix C.

The growth rate was calculated utilizing historic count data provided by the City of Johns Creek and the Georgia Department of Transportation (GDOT), in the vicinity of the project from 2008 to 2013 along with present 2014 average daily traffic (ADT) count data on the Barnwell Road Corridor. Based on the count data provided by the City and GDOT and the current ADT count, it is expected that the volume on Barnwell Road will increase at an annual growth rate of 0.63%. This growth rate was applied to the existing volumes to estimate the traffic that will exist in the Opening Year 2018 and the Design Year 2038 and was approved by the GDOT Office of Planning. As part of the approved methodology for the projected traffic volumes, traffic volumes were not grown for side streets along the corridor that are built out subdivisions; therefore, traffic was only grown for Barnwell Road, SR 140, Rivermont Parkway and Jones Bridge Road.

Seven scenarios were analyzed for the weekday AM and PM peak hours: No-Build 2014, No-Build 2018, Preferred Alternative 2018, Alternative #2 2018, No-Build 2038, Preferred Alternative 2038, and Alternative #2 2038.

In order to quantify the impacts of the additional traffic to determine any needed roadway and/or operational improvements, the existing and projected conditions were evaluated with capacity analysis techniques. The *Synchro* program (1) was used to conduct the capacity analysis. *Synchro* implements the capacity methods of the *Highway Capacity Manual* (HCM) (2) for performing the industry standard evaluation of intersection performance.

The HCM defines level of service (LOS) in terms of the amount of control delay, including initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

The LOS definitions for both stop controlled and signal controlled intersections are provided in Table 1.

Table 1 – Level of Service Criteria

LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (SEC)	
	WITH STOP-SIGN CONTROL	WITH SIGNAL CONTROL
A	≤ 10	≤ 10
B	> 10 and ≤ 15	> 10 and ≤ 20
C	> 15 and ≤ 25	> 20 and ≤ 35
D	> 25 and ≤ 35	> 35 and ≤ 55
E	> 35 and ≤ 50	> 55 and ≤ 80
F	> 50	> 80

Source: *Highway Capacity Manual*

Roundabout analysis was performed using the GDOT Roundabout Analysis Tool (3). The HCM 2010 model LOS and queue values are used for the Build Year (2018) and the calibrated model values are used for the Design Year (2038)

Capacity Analyses were performed to evaluate the Existing Year 2014, Opening Year 2018, and Design Year 2038 LOS and queue lengths to identify any necessary improvements.

GDOT has ranges of adequate LOS based on the area classification. Rural, sparsely developed areas have a minimum LOS requirement of C. This is due to the expectancy of rural residents for relatively uncongested conditions and to design flexibility related to lower right of way costs. The minimum LOS for urban areas is D. This reflects the greater acceptance of delay and congestion by urban residents. Therefore, the Barnwell Road project corridor has a minimum LOS requirement of D.

The 95th percentile queue lengths (the queue would be expected to be this length or shorter 95% of the time) for each intersection were analyzed for the Design Year 2038 condition. *Synchro* was used to obtain the queue lengths for each of the study intersections. For the roundabouts, the queue lengths from the GDOT Roundabout Analysis Tool were used. The queue lengths were then compared to the minimum turn bay length for right and left turn bays based on speed of the roadway from the GDOT *Regulations for Driveway and Encroachment Control* Manual (4). If the queue length was shorter than the minimum requirement, the minimum was recommended.

3. SR 140/HOLCOMB BRIDGE RD @ BARNWELL RD

BARNWELL ROAD TRAFFIC ENGINEERING REPORT

The intersection of SR 140/Holcomb Bridge Road and Barnwell Road/Ellard Drive currently has a left turn lane, two through lanes and a right turn lane on both approaches of SR 140/Holcomb Bridge Road; a left turn lane and a shared through+right lane northbound on Ellard Drive; and a left turn lane and a shared left+through+right lane southbound on Barnwell Road. There is a traffic signal with protected+permitted left turn phasing for the eastbound and westbound (SR 140) approaches while the northbound (Ellard Drive) and southbound (Barnwell Road) approaches are split phased. There are crosswalks across all legs and pedestrian signal heads and pedestrian push buttons on all corners. The speed limit along SR 140/Holcomb Bridge Road is 45 mph, the speed limit along Ellard Drive is 25 mph and the speed limit along Barnwell Road is 25 mph.

It is proposed in the Preferred Alternative and Alternative #2 to add two lanes to Barnwell Road at its intersection with SR 140/Holcomb Bridge Road. This will change the geometry to dual left turn bays, a through-pocket lane, and a right turn lane. This improvement will also eliminate the split phasing and add northbound and southbound protected phases. This improvement was chosen in a previous study of this intersection done for the City of Johns Creek by Wolverton & Associates, Inc in 2013. This study analyzed 3 Alternatives and the proposed improvements for both Alternatives in the project reflect the Preferred Alternative from that study.

The tables below show the LOS and 95th percentile queue lengths for the seven scenarios studied in this report. The *Synchro* printouts for this information can be found in Appendix D of this report.

Table 2 – Holcomb Bridge Capacity Analysis

INT #	INTERSECTION	Movement	AM No-Build			PM No-Build			AM Preferred Alternative		PM Preferred Alternative		AM Alternative #2		PM Alternative #2	
			Existing	Opening Year 2018	Design Year 2038	Existing	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038
1	SR 140/Holcomb Bridge Road & Barnwell Road/Ellard Drive	Overall	F (105.9)	F (114.5)	F (165.9)	F (86.8)	F (95.0)	F (147.9)	F (98.1)	F (148.9)	F (94.4)	F (152.3)	F (98.1)	F (148.9)	F (94.4)	F (152.3)
		SBL	F (235.3)	F (248.5)	F (336.7)	F (81.4)	F (81.8)	F (86.9)	F (173.2)	F (243.7)	E (72.4)	E (71.5)	F (173.2)	F (243.7)	E (72.4)	E (71.5)
		SBL+T+R	F (232.8)	F (248.3)	F (334.4)	E (77.6)	E (78.5)	F (83.5)	-	-	-	-	-	-	-	-
		SBT	-	-	-	-	-	-	D (51.7)	D (52.4)	E (60.2)	E (58.0)	D (51.7)	D (52.4)	E (60.2)	E (58.0)
		SBR	-	-	-	-	-	-	D (51.1)	D (51.7)	E (58.8)	E (56.6)	D (51.1)	D (51.7)	E (58.8)	E (56.6)

Table 3 – Holcomb Bridge Queue Lengths

INT #	INTERSECTION	Movement	Proposed Turn Bay Length	AM No-Build			PM No-Build			Preferred Alternative AM		Preferred Alternative PM		Alternative #2 AM		Alternative #2 PM	
				2014	2018	2038	2014	2018	2038	2018	2038	2018	2038	2018	2038	2018	2038
1	SR 140/Holcomb Bridge Road & Barnwell Road/Ellard Drive	EBL	-	70	72	87	308	330	386	159	187	424	482	159	187	424	482
		EBT	-	1494	1554	1873	1220	1273	1556	1554	1873	1273	1556	1554	1873	1273	1556
		EBR	-	22	22	25	21	21	25	22	25	21	25	22	25	21	25
		WBL	-	35	39	46	43	47	57	96	111	114	133	96	111	114	133
		WBT	-	869	911	1203	1573	1634	1965	911	1203	1634	1965	911	1203	1634	1965
		WBR	-	34	34	34	83	99	201	34	34	99	201	34	34	99	201
		NBL	-	114	116	138	231	242	278	110	122	171	187	110	122	171	187
		NBT+R	-	31	43	48	117	129	161	40	45	118	138	40	45	118	138
		SBL	760	840	865	1021	400	411	509	630	759	275	307	630	759	275	307
		SBL+T+R	-	992	1027	1197	190	196	225	-	-	-	-	-	-	-	-
		SBT	100	-	-	-	-	-	-	69	77	51	58	69	77	51	58
		SBR	-	-	-	-	-	-	-	25	25	49	52	25	25	49	52

4. BARNWELL RD @ SANDY LANE DR

BARNWELL ROAD TRAFFIC ENGINEERING REPORT

The intersection of Barnwell Road and Sandy Lane Drive currently has a shared left+through lane on the northbound approach and a shared through+right lane on the southbound approach of Barnwell Road. Sandy Lane Drive has a shared left+right lane on the eastbound approach. The intersection is stop controlled on the eastbound approach of Sandy Lane Drive and free flowing on Barnwell Road. The speed limit along Barnwell Road is 40 mph and the speed limit along Sandy Lane Drive is 15 mph.

In both the Preferred Alternative and Alternative #2, the intersection of Sandy Lane Drive is proposed to have a bypass turn lane for the northbound approach on Barnwell Road. Roundabout Analysis was also completed for the intersection.

The tables below show the LOS and 95th percentile queue lengths for the seven scenarios studied in this report. The *Synchro* printouts for this information can be found in Appendix D of this report.

The roundabout analysis shows that a roundabout is not recommended for this intersection due to the lack of traffic on the side street. GDOT's roundabout analysis tool recommends that if less than 10% of the total intersection volume is on the side street approaches, a roundabout is not the preferred solution. This intersection has 8% of the volume on the side street in the Design year (2038). The Roundabout Analysis can be found in Appendix D of this report.

Table 4 – Sandy Lane Capacity Analysis

INT #	INTERSECTION	Movement	AM No-Build			PM No-Build			AM Preferred Alternative		PM Preferred Alternative		AM Alternative #2		PM Alternative #2	
			Existing	Opening Year 2018	Design Year 2038	Existing	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038
2	Barnwell Road & Sandy Lane Drive	EBL+R	D (25.1)	D (26.2)	D (33.8)	C (16.3)	C (16.7)	C (19.3)	D (26.2)	D (33.8)	C (16.7)	C (19.2)	D (26.2)	D (33.8)	C (16.7)	C (19.2)
		NBL+T	A (0.4)	A (0.4)	A (0.4)	A (1.6)	A (1.7)	A (1.9)	-	-	-	-	-	-	-	-
		NBL	-	-	-	-	-	-	A (10.0)	B (10.6)	A (8.9)	A (9.2)	A (10.0)	B (10.6)	A (8.9)	A (9.2)
		NB	-	-	-	-	-	-	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
		SBT+R	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)

Table 5 – Sandy Lane Queue Lengths

INT #	INTERSECTION	Movement	Proposed Turn Bay Length	AM No-Build			PM No-Build			Preferred Alternative AM		Preferred Alternative PM		Alternative #2 AM		Alternative #2 PM	
				2014	2018	2038	2014	2018	2038	2018	2038	2018	2038	2018	2038	2018	2038
2	Barnwell Road & Sandy Lane Drive	EBL+R	-	32	33	44	14	14	17	33	44	14	17	33	44	14	17
		NBL+T	-	1	1	1	5	5	6	-	-	-	-	-	-	-	-
		NBL	100*	-	-	-	-	-	-	1	1	5	6	1	1	5	6
		SBT+R	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0

* = Bypass Lane

5. BARNWELL ROAD AND NIBLICK DRIVE

BARNWELL ROAD TRAFFIC ENGINEERING REPORT

The intersection of Barnwell Road and Niblick Drive currently has a shared left+through lane on the northbound approach and separate through and right turn lanes on the southbound approach of Barnwell Road. Niblick Drive has a shared left+right lane on the eastbound approach. The intersection is stop controlled on the eastbound approach of Niblick Drive and free flowing on Barnwell Road. The speed limit along Barnwell Road is 40 mph and the speed limit along Niblick Drive is 15 mph.

The Preferred Alternative consists of removing the southbound right turn lane on Barnwell Road and installing a roundabout. Alternative #2 consists of removing the southbound right turn lane on Barnwell Road and adding a northbound left turn lane on Barnwell Road. Roundabout analysis was also completed for this intersection.

The tables below show the LOS and 95th percentile queue lengths for the seven scenarios studied in this report.

The roundabout analysis shows that a roundabout is not recommended for this intersection due to the lack of traffic on the side street. GDOT's roundabout analysis tool recommends that if less than 10% of the total intersection volume is on the side street approaches, a roundabout is not the preferred solution. However, the City would like to install a roundabout at this intersection in order to help with some speed issues on Barnwell Road. The 85th percentile speed along Barnwell Road is 48 mph while the posted speed limit is 40 mph. This intersection has 4% of the volume on the side street in the Design year (2038). The Roundabout Analysis can be found in Appendix D of this report.

Table 6 – Niblick Capacity Analysis

INT #	INTERSECTION	Improvement	Movement	AM No-Build			PM No-Build			AM Preferred Alternative		PM Preferred Alternative		AM Alternative #2		PM Alternative #2		
				Existing	Opening Year 2018	Design Year 2038	Existing	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	
3	Barnwell Road & Niblick Drive	Turn Lanes	EB	C (17.9)	C (18.4)	C (21.4)	C (20.2)	C (20.9)	D (25.3)	-	-	-	-	C (18.6)	C (21.6)	C (21.1)	D (25.6)	
			NBL	-	-	-	-	-	-	-	-	-	-	-	A (9.9)	B (10.5)	A (8.9)	A (9.2)
			NBT	-	-	-	-	-	-	-	-	-	-	-	A (0.0)	A (0.0)	A (0.0)	A (0.0)
			NBL+T	A (0.7)	A (0.7)	A (0.7)	A (0.8)	A (0.8)	A (0.9)	-	-	-	-	-	-	-	-	-
			SBT+R	-	-	-	-	-	-	-	-	-	-	-	A (0.0)	A (0.0)	A (0.0)	A (0.0)
			SBT	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	-	-	-	-	-	-	-	-	-
		SBR	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	-	-	-	-	-	-	-	-	-	
		Roundabout	NB	-	-	-	-	-	-	-	A (9.0)	A (7.0)	A (6.0)	A (5.0)	-	-	-	-
			SB	-	-	-	-	-	-	-	A (7.0)	A (6.0)	B (14.0)	B (11.0)	-	-	-	-
			EB	-	-	-	-	-	-	-	C (20.0)	D (32.0)	B (10.0)	A (9.0)	-	-	-	-

Table 7 – Niblick Queue Lengths

INT #	INTERSECTION	Improvement	Movement	Proposed Turn Bay Length	AM No-Build			PM No-Build			Preferred Alternative AM		Preferred Alternative PM		Alternative #2 AM		Alternative #2 PM		
					2014	2018	2038	2014	2018	2038	2018	2038	2018	2038	2018	2038	2018	2038	
3	Barnwell Road & Niblick Drive	Turn Lanes	EB	-	9	9	11	10	10	13	-	-	-	-	9	11	11	13	
			NBL	210	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2
			NBL+T	-	2	2	2	2	2	2	-	-	-	-	-	-	-	-	-
			SBR	150	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-
			SBT+R	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
			SBT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Roundabout	EB	-	-	-	-	-	-	-	-	6	4	3	2	-	-	-	-
			NB	-	-	-	-	-	-	-	-	38	36	150	136	-	-	-	-
			SB	-	-	-	-	-	-	-	-	244	219	94	86	-	-	-	-

6. BARNWELL RD @ OLDE CLUBS DR

BARNWELL ROAD TRAFFIC ENGINEERING REPORT

The intersection of Barnwell Road and Olde Clubs Drive currently has a shared left+through+right lane on the northbound approach and separate left+through and right turn lanes on the southbound approach of Barnwell Road. Olde Clubs Drive has separate through+left and right turn lanes on the eastbound approach. There is an entrance to the park on the westbound approach with a shared left+through+right lane. The intersection is stop controlled on the eastbound and westbound approaches of Olde Clubs Drive and free flowing on Barnwell Road. The speed limit along Barnwell Road is 40 mph and the speed limit along Olde Clubs Drive is 15 mph.

In both the Preferred Alternative and Alternative #2, the intersection of Barnwell Road and Olde Clubs Drive is proposed to add northbound and southbound left turn lanes on Barnwell Road. Roundabout analysis was also completed for this intersection.

The tables below show the LOS and 95th percentile queue lengths for the seven scenarios studied in this report.

The roundabout analysis shows that a roundabout is not recommended for this intersection due to the lack of traffic on the side street. GDOT's roundabout analysis tool recommends that if less than 10% of the total intersection volume is on the side street approaches, a roundabout is not the preferred solution. This intersection has 4% of the volume on the side street in the Design year (2038). The Roundabout Analysis can be found in Appendix D of this report.

Table 8 – Olde Clubs Capacity Analysis

INT #	INTERSECTION	Movement	AM No-Build			PM No-Build			AM Preferred Alternative		PM Preferred Alternative		AM Alternative #2		PM Alternative #2		
			Existing	Opening Year 2018	Design Year 2038	Existing	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	
4	Barnwell Road & Olde Clubs Drive	EBT+L	E (35.6)	E (37.5)	E (49.6)	E (41.4)	E (43.8)	F (62.0)	E (37.5)	E (49.6)	E (43.8)	F (62.1)	E (37.5)	E (49.6)	E (43.8)	F (62.1)	
		EBR	C (17.3)	C (17.7)	C (20.4)	B (12.2)	B (12.3)	B (13.2)	C (17.7)	C (20.4)	B (12.3)	B (13.2)	C (17.7)	C (20.4)	B (12.3)	B (13.2)	
		WBL+T+R	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
		NBL	-	-	-	-	-	-	B (10.3)	B (11.0)	A (8.8)	A (9.1)	B (10.3)	B (11.1)	A (8.8)	A (9.1)	
		NBT+R	-	-	-	-	-	-	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	
		NBL+T+R	A (0.5)	A (0.5)	A (0.6)	A (0.5)	A (0.5)	A (0.6)	-	-	-	-	-	-	-	-	
		SBL	-	-	-	-	-	-	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	
		SBT	-	-	-	-	-	-	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	
SBL+T	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	-	-	-	-	-	-	-	-			
SBR	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)		

Table 9 – Olde Clubs Queue Lengths

INT #	INTERSECTION	Movement	Proposed Turn Bay Length	AM No-Build			PM No-Build			Preferred Alternative AM		Preferred Alternative PM		Alternative #2 AM		Alternative #2 PM	
				2014	2018	2038	2014	2018	2038	2018	2038	2018	2038	2018	2038	2018	2038
4	Barnwell Road & Olde Club Drive	EBT+L	-	5	5	7	20	21	30	5	7	21	30	5	7	21	30
		EBR	150	4	4	5	2	2	3	4	5	2	3	4	5	1	3
		WBL+T+R	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		NBL	210	-	-	-	-	-	-	1	1	2	2	1	1	2	2
		NBT+R	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
		NBL+T+R	-	1	1	1	2	2	2	-	-	-	-	-	-	-	-
		SBL	210	-	-	-	-	-	-	0	0	0	0	0	0	0	0
		SBL+T	-	0	0	0	0	0	0	-	-	-	-	-	-	-	-
SBR	150	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

7. BARNWELL ROAD AND FAIRWAY RIDGE DRIVE/GLEN FERRY DRIVE

BARNWELL ROAD TRAFFIC ENGINEERING REPORT

The intersection of Barnwell Road and Fairway Ridge Drive/Glen Ferry Drive currently has separate left+through and a right turn lanes on the northbound approach of Barnwell Road and a shared left+through+right lane on the southbound approach. Fairway Ridge Drive has a shared left+through lane and separate right turn lane on the eastbound approach, and Glen Ferry Drive has a shared left+through+right lane on the westbound approach. The intersection is stop controlled on the eastbound and westbound approaches of Fairway Ridge Drive/Glen Ferry Drive and free flowing on Barnwell Road. The speed limit along Barnwell Road is 40 mph and the speed limit along both Fairway Ridge Drive and Glen Ferry Drive is 25 mph.

The Preferred Alternative consists of removing the northbound right turn lane on Barnwell Road, removing an eastbound right turn lane on Fairway Ridge Drive, and adding a roundabout. Alternative #2 consists of adding northbound and southbound left turn lanes on Barnwell Road. Roundabout analysis was also completed for this intersection.

The tables below show the LOS and 95th percentile queue lengths for the seven scenarios studied in this report.

The roundabout analysis shows that a roundabout is not recommended for this intersection due to the lack of traffic on the side street. GDOT's roundabout analysis tool recommends that if less than 10% of the total intersection volume is on the side street approaches, a roundabout is not the preferred solution. However, the City would like to install a roundabout at this intersection in order to help with some speed issues on Barnwell Road. The 85th percentile speed along Barnwell Road is 48 mph while the posted speed limit is 40 mph. This intersection has 6% of the volume on the side street in the Design year (2038). The Roundabout Analysis can be found in Appendix D of this report.

Table 10 – Fairway Ridge/Glen Ferry Capacity Analysis

INT #	INTERSECTION	Improvement	Movement	AM No-Build			PM No-Build			AM Preferred Alternative		PM Preferred Alternative		AM Alternative #2		PM Alternative #2			
				Existing	Opening Year 2018	Design Year 2038	Existing	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038		
5	Barnwell Road & Fairway Ridge Drive	Turn Lanes	EBL+T	E (37.8)	E (39.8)	F (53.2)	E (39.9)	E (42.2)	F (57.7)	-	-	-	-	E (39.8)	F (53.2)	E (42.2)	F (57.7)		
			EBR	C (17.1)	C (17.5)	C (20.1)	B (12.0)	B (12.1)	B (12.9)	-	-	-	-	C (17.5)	C (20.1)	B (12.1)	B (12.9)		
			WBL+T+R	E (44.1)	E (47.6)	F (75.8)	D (26.6)	D (27.8)	E (35.9)	-	-	-	-	E (49.5)	F (79.6)	D (28.0)	E (36.2)		
			NBL	-	-	-	-	-	-	-	-	-	-	-	B (10.1)	B (10.6)	A (8.7)	A (9.0)	
			NBT	-	-	-	-	-	-	-	-	-	-	-	A (0.0)	A (0.0)	A (0.0)	A (0.0)	
			NBL+T	A (0.2)	A (0.2)	A (0.2)	A (0.5)	A (0.5)	A (0.6)	-	-	-	-	-	-	-	-	-	
			NBR	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	-	-	-	-	-	A (0.0)	A (0.0)	A (0.0)	A (0.0)	
			SBL	-	-	-	-	-	-	-	-	-	-	-	-	A (8.1)	A (8.3)	A (9.2)	A (9.6)
			SBT+R	-	-	-	-	-	-	-	-	-	-	-	-	A (0.0)	A (0.0)	A (0.0)	A (0.0)
		SBL+T+R	A (0.4)	A (0.4)	A (0.4)	A (0.3)	A (0.3)	A (0.3)	-	-	-	-	-	-	-	-	-	-	
		Roundabout	NB	-	-	-	-	-	-	-	A (7.0)	A (6.0)	B (14.0)	B (11.0)	-	-	-	-	
			SB	-	-	-	-	-	-	-	D (27.0)	C (20.0)	A (9.0)	A (8.0)	-	-	-	-	
			EB	-	-	-	-	-	-	-	A (10.0)	A (8.0)	A (6.0)	A (5.0)	-	-	-	-	
			WB	-	-	-	-	-	-	-	A (5.0)	A (4.0)	A (8.0)	A (6.0)	-	-	-	-	
	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-			

Table 11 – Fairway Ridge/Glen Ferry Queue Lengths

INT #	INTERSECTION	Improvement	Movement	Proposed Turn Bay Length	AM No-Build			PM No-Build			Preferred Alternative AM		Preferred Alternative PM		Alternative #2 AM		Alternative #2 PM	
					2014	2018	2038	2014	2018	2038	2018	2038	2018	2038	2018	2038	2018	2038
5	Barnwell Road & Fairway Ridge Drive	Turn Lanes	EBL+T	-	8	9	12	14	15	20	-	-	-	-	9	12	15	20
			EBR	150	7	7	9	2	2	2	-	-	-	-	7	9	2	2
			WBL+T+R	-	43	46	66	14	15	20	-	-	-	-	48	69	15	20
			NBL	210	-	-	-	-	-	-	-	-	-	-	0	0	2	2
			NBL+T	-	0	0	0	2	2	2	-	-	-	-	-	-	-	-
			NBR	150	0	0	0	0	0	0	-	-	-	-	0	0	0	0
			SBL	210	-	-	-	-	-	-	-	-	-	-	1	1	1	1
			SBT+R	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
			SBL+T+R	-	1	1	1	1	1	1	-	-	-	-	-	-	-	-
		Roundabout	NB	-	-	-	-	-	-	-	39	37	151	134	-	-	-	-
			SB	-	-	-	-	-	-	-	323	284	78	72	-	-	-	-
			EB	-	-	-	-	-	-	-	8	6	4	3	-	-	-	-
			WB	-	-	-	-	-	-	-	4	3	5	4	-	-	-	-
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

8. BARNWELL ROAD AND RIVER FERRY DRIVE

BARNWELL ROAD TRAFFIC ENGINEERING REPORT

The intersection of Barnwell Road and River Ferry Drive currently has a separate through and right lane on the northbound approach and a shared left+through lane on the southbound approach of Barnwell Road. River Ferry Drive has a shared left+right lane on the westbound approach. The intersection is stop controlled on the westbound approach of River Ferry Drive and free flowing on Barnwell Road. The speed limit along Barnwell Road is 40 mph and the speed limit along River Ferry Drive is 25 mph.

In both the Preferred Alternative and Alternative #2, the intersection of Barnwell Road and River Ferry Drive is proposed to add a southbound left turn lane on Barnwell Road. Roundabout analysis was also completed for this intersection.

The tables below show the LOS and 95th percentile queue lengths for the seven scenarios studied in this report.

The roundabout analysis shows that a roundabout is not recommended for this intersection due to the lack of traffic on the side street. GDOT's roundabout analysis tool recommends that if less than 10% of the total intersection volume is on the side street approaches, a roundabout is not the preferred solution. This intersection has 3% of the volume on the side street in the Design year (2038). The Roundabout Analysis can be found in Appendix D of this report.

Table 12 – River Ferry Capacity Analysis

INT #	INTERSECTION	Movement	AM No-Build			PM No-Build			AM Preferred Alternative		PM Preferred Alternative		AM Alternative #2		PM Alternative #2		
			Existing	Opening Year 2018	Design Year 2038	Existing	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	
6	Barnwell Road & River Ferry Drive	WBL+R	C (19.8)	C (20.6)	D (25.1)	C (20.6)	C (21.3)	D (26.0)	C (20.6)	D (25.1)	C (21.3)	D (26.0)	C (20.6)	D (25.1)	C (21.3)	D (26.0)	
		NBT	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
		NBR	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
		SBL	-	-	-	-	-	-	-	A (8.2)	A (8.3)	A (9.4)	A (9.8)	A (8.2)	A (8.3)	A (9.4)	A (9.8)
		SBT	-	-	-	-	-	-	-	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
		SBL+T	A (0.6)	A (0.6)	A (0.7)	A (1.0)	A (1.0)	A (1.1)	-	-	-	-	-	-	-	-	-

Table 13 – River Ferry Queue Lengths

INT #	INTERSECTION	Movement	Proposed Turn Bay Length	AM No-Build			PM No-Build			Preferred Alternative AM		Preferred Alternative PM		Alternative #2 AM		Alternative #2 PM	
				2014	2018	2038	2014	2018	2038	2018	2038	2018	2038	2018	2038	2018	2038
6	Barnwell Road & River Ferry Drive	WBL+R	-	15	15	19	17	17	22	15	19	17	22	15	19	17	22
		NBR	150	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		SBL	210	-	-	-	-	-	-	2	2	3	3	2	2	3	3
		SBL+T	-	2	2	2	3	3	3	-	-	-	-	-	-	-	-

9. BARNWELL ROAD AND RIVERMONT PARKWAY

BARNWELL ROAD TRAFFIC ENGINEERING REPORT

The intersection of Barnwell Road and Rivermont Parkway currently has a shared left+through lane on the northbound approach and a shared through+right lane on the southbound approach of Barnwell Road. Rivermont Parkway has separate left and right turn lanes on the eastbound approach. The intersection is stop controlled on the eastbound approach of Rivermont Parkway and free flowing on Barnwell Road. The speed limit along Barnwell Road is 40 mph and the speed limit along Rivermont Parkway is 25 mph.

In both the Preferred Alternative and Alternative #2, the intersection of Barnwell Road and Rivermont Parkway is proposed to remove the southbound right turn lane on Barnwell Road and add a roundabout. Roundabout analysis was also completed for this intersection.

The tables below show the LOS and 95th percentile queue lengths for the seven scenarios studied in this report.

The roundabout analysis shows that a roundabout is not recommended for this intersection due to the lack of traffic on the side street. GDOT's roundabout analysis tool recommends that if less than 10% of the total intersection volume is on the side street approaches, a roundabout is not the preferred solution. However, the City would like to install a roundabout at this intersection in order to help with some speed issues on Barnwell Road. The 85th percentile speed along Barnwell Road is 48 mph while the posted speed limit is 40 mph. This intersection has 9% of the volume on the side street in the Design year (2038). The Roundabout Analysis can be found in Appendix D of this report.

Table 14 – Rivermont Capacity Analysis

INT #	INTERSECTION	Improvement	Movement	AM No-Build			PM No-Build			AM Preferred Alternative		PM Preferred Alternative		AM Alternative #2		PM Alternative #2	
				Existing	Opening Year 2018	Design Year 2038	Existing	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038
7	Barnwell Road & Rivermont Parkway	Turn Lanes	EBL	F (57.3)	F (67.7)	F (159.5)	D (25.1)	D (26.1)	D (34.1)	-	-	-	-	-	-	-	-
			EBR	C (21.3)	C (22.2)	D (27.9)	B (13.8)	B (14.0)	C (15.4)	-	-	-	-	-	-	-	-
			NBL+T	A (1.6)	A (1.8)	A (2.0)	A (1.7)	A (1.7)	A (1.9)	-	-	-	-	-	-	-	-
			SBT+R	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	-	-	-	-	-	-	-	-
		Roundabout	EB	-	-	-	-	-	-	B (12.0)	A (10.0)	A (7.0)	A (6.0)	B (12.0)	A (10.0)	A (7.0)	A (6.0)
			NB	-	-	-	-	-	-	A (8.0)	A (7.0)	B (14.0)	B (12.0)	A (8.0)	A (7.0)	B (14.0)	B (12.0)
			SB	-	-	-	-	-	-	C (23.0)	C (18.0)	B (11.0)	A (9.0)	C (23.0)	C (18.0)	B (11.0)	A (9.0)

Table 15 – Rivermont Queue Lengths

INT #	INTERSECTION	Improvement	Movement	Proposed Turn Bay Length	AM No-Build			PM No-Build			Preferred Alternative AM		Preferred Alternative PM		Alternative #2 AM		Alternative #2 PM	
					2014	2018	2038	2014	2018	2038	2018	2038	2018	2038	2018	2038	2018	2038
7	Barnwell Road & Rivermont Parkway	Turn Lanes	EBL	-	95	110	191	15	16	24	-	-	-	-	-	-	-	
			EBR	-	15	16	24	5	5	7	-	-	-	-	-	-	-	
			NBL+T	-	2	3	3	3	3	4	-	-	-	-	-	-	-	
			SBT+R	-	0	0	0	0	0	0	-	-	-	-	-	-	-	
		Roundabout	EB	-	-	-	-	-	-	-	30	43	8	7	30	43	8	7
			NB	-	-	-	-	-	-	-	48	61	151	138	48	61	151	138
			SB	-	-	-	-	-	-	-	289	467	99	92	289	467	99	92

10. BARNWELL ROAD AND CITADELLA COURT

BARNWELL ROAD TRAFFIC ENGINEERING REPORT

The intersection of Barnwell Road and Citadella Court currently has separate through and right turn lanes on the northbound approach and a shared left+through lane on the southbound approach of Barnwell Road. Citadella Court has a shared left+right lane on the westbound approach. The intersection is stop controlled on the westbound approach of Citadella Court and free flowing on Barnwell Road. The speed limit along Barnwell Road is 40 mph and the speed limit along Citadella Court is 15 mph.

In both the Preferred Alternative and Alternative #2, the intersection of Barnwell Road and Citadella court is proposed to remove the northbound right turn lane on Barnwell Road and add a southbound left turn lane on Barnwell Road. Roundabout analysis was also completed for this intersection.

The tables below show the LOS and 95th percentile queue lengths for the seven scenarios studied in this report.

The roundabout analysis shows that a roundabout is not recommended for this intersection due to the lack of traffic on the side street. GDOT's roundabout analysis tool recommends that if less than 10% of the total intersection volume is on the side street approaches, a roundabout is not the preferred solution. This intersection has 1% of the volume on the side street in the Design year (2038). The Roundabout Analysis can be found in Appendix D of this report.

Table 16 – Citadella Capacity Analysis

INT #	INTERSECTION	Movement	AM No-Build			PM No-Build			AM Preferred Alternative		PM Preferred Alternative		AM Alternative #2		PM Alternative #2	
			Existing	Opening Year 2018	Design Year 2038	Existing	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038
8	Barnwell Road & Citadella Court	WBL+R	C (22.1)	C (22.9)	D (28.5)	C (22.8)	C (23.7)	D (29.1)	C (23.0)	D (28.5)	C (23.7)	D (19.2)	C (23.0)	D (28.5)	C (23.7)	D (29.2)
		NBT	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	-	-	-	-	-	-	-	-
		NBR	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	-	-	-	-	-	-	-	-
		NBT+R	-	-	-	-	-	-	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
		SBL	-	-	-	-	-	-	A (8.5)	A (8.7)	A (0.0)	A (0.0)	A (8.5)	A (8.7)	A (0.0)	A (0.0)
		SBT	-	-	-	-	-	-	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
		SBL+T	A (0.1)	A (0.1)	A (0.1)	A (0.0)	A (0.0)	A (0.0)	-	-	-	-	-	-	-	-

Table 17 – Citadella Queue Lengths

INT #	INTERSECTION	Movement	Proposed Turn Bay Length	AM No-Build			PM No-Build			Preferred Alternative AM			Preferred Alternative PM		Alternative #2 AM		Alternative #2 PM	
				2014	2018	2038	2014	2018	2038	2018	2038	2018	2038	2018	2038	2018	2038	
8	Barnwell Road & Citadella Court	WBL+R	-	3	3	4	4	5	6	3	4	5	6	3	4	5	6	
		NBR	150	0	0	0	0	0	0	-	-	-	-	-	-	-	-	
		NBT+R	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	
		SBL	210	-	-	-	-	-	-	0	0	0	0	0	0	0	0	
		SBT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		SBL+T	-	0	0	0	0	0	0	0	-	-	-	-	-	-	-	

11. BARNWELL ROAD AND OLD SOUTHWICK PASS

BARNWELL ROAD TRAFFIC ENGINEERING REPORT

The intersection of Barnwell Road and Old Southwick Pass currently has separate through and right turn lanes on the northbound approach and separate through and left turn lanes on the southbound approach of Barnwell Road. Old Southwick Pass has separate left and right turn lanes on the westbound approach. The intersection is stop controlled on the westbound approach of Old Southwick Pass and free flowing on Barnwell Road. The speed limit along Barnwell Road is 40 mph and the speed limit along Old Southwick Pass is 25 mph.

The Preferred Alternative consists of removing both the northbound right turn lane and the southbound left turn lane on Barnwell Road and adding a roundabout. Alternative #2 does not propose any geometry changes at this intersection. Roundabout analysis was also completed for this intersection.

The tables below show the LOS and 95th percentile queue lengths for the seven scenarios studied in this report.

The roundabout analysis shows that a roundabout is recommended for this intersection. GDOT's roundabout analysis tool recommends that if less than 10% of the total intersection volume is on the side street approaches, a roundabout is not the preferred solution. This intersection has 15% of the volume on the side street in the Design year (2038). The Roundabout Analysis can be found in Appendix D of this report.

Table 18 – Old Southwick Capacity Analysis

INT #	INTERSECTION	Improvement	Movement	AM No-Build			PM No-Build			AM Preferred Alternative		PM Preferred Alternative		AM Alternative #2		PM Alternative #2		
				Existing	Opening Year 2018	Design Year 2038	Existing	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	
9	Barnwell Road & Old Southwick Pass	Turn Lanes	WBL	F (120.1)	F (135.4)	F (258.0)	D (26.4)	D (27.4)	D (34.3)	-	-	-	-	F (135.4)	F (258.0)	D (27.5)	D (34.5)	
			WBR	B (12.3)	B (12.4)	B (13.3)	B (13.5)	B (13.7)	B (14.9)	-	-	-	-	B (12.4)	B (13.3)	B (13.7)	B (14.9)	
			NBT	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	-	-	-	-	A (0.0)	A (0.0)	A (0.0)	A (0.0)	
			NBR	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	-	-	-	-	A (0.0)	A (0.0)	A (0.0)	A (0.0)	
			SBL	A (8.8)	A (8.8)	A (9.1)	A (9.1)	A (9.1)	A (9.5)	-	-	-	-	A (8.8)	A (9.1)	A (9.6)	A (10.0)	
		SBT	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	-	-	-	-	A (0.0)	A (0.0)	A (0.0)	A (0.0)		
		Roundabout	WB	-	-	-	-	-	-	-	A (8.0)	A (6.0)	A (7.0)	A (6.0)	-	-	-	-
			NB	-	-	-	-	-	-	-	B (10.0)	A (9.0)	B (12.0)	B (10.0)	-	-	-	-
			SB	-	-	-	-	-	-	-	D (32.0)	C (22.0)	A (8.0)	A (7.0)	-	-	-	-

Table 19 – Old Southwick Queue Lengths

INT #	INTERSECTION	Improvement	Movement	Proposed Turn Bay Length	AM No-Build			PM No-Build			Preferred Alternative AM		Preferred Alternative PM		Alternative #2 AM		Alternative #2 PM	
					2014	2018	2038	2014	2018	2038	2018	2038	2018	2038	2018	2038	2018	2038
9	Barnwell Road & Old Southwick Pass	Turn Lanes	WBL	-	134	142	188	16	16	21	-	-	-	-	142	188	16	21
			WBR	150	5	5	5	6	6	7	-	-	-	-	5	5	6	7
			NBR	150	0	0	0	0	0	0	-	-	-	-	0	0	0	0
			SBL	210	5	5	5	3	3	3	-	-	-	-	5	5	3	4
			Roundabout	WB	-	-	-	-	-	-	-	18	13	9	7	-	-	-
		NB		-	-	-	-	-	-	-	92	83	126	111	-	-	-	-
		SB		-	-	-	-	-	-	-	353	294	53	48	-	-	-	-

12. BARNWELL ROAD AND NORTH PEAK DRIVE/OLD SOUTHWICK PASS

BARNWELL ROAD TRAFFIC ENGINEERING REPORT

The intersection of Barnwell Road and North Peak Drive/Old Southwick Pass currently has separate left+through and right turn lanes on both the northbound and southbound approaches of Barnwell Road. North Peak Drive has a shared left+through lane and separate right turn lane on the eastbound approach, and Old Southwick pass has a shared left+through+right lane on the westbound approach. The intersection is stop controlled on the eastbound and westbound approaches of North Peak Drive/Old Southwick Pass and free flowing on Barnwell Road. The speed limit along Barnwell Road is 40 mph and the speed limit along both North Peak Drive and Old Southwick Pass is 25 mph.

In both the Preferred Alternative and Alternative #2, the intersection of Barnwell Road and North Peak Drive/Old Southwick Pass is proposed to add a northbound left turn lane, remove the southbound right turn lane, and add a southbound left turn lane on Barnwell Road. Roundabout analysis was also completed for this intersection.

The tables below show the LOS and 95th percentile queue lengths for the seven scenarios studied in this report.

The roundabout analysis shows that a roundabout is recommended for this intersection. GDOT's roundabout analysis tool recommends that if less than 10% of the total intersection volume is on the side street approaches, a roundabout is not the preferred solution. This intersection has 17% of the volume on the side street in the Design year (2038). A Roundabout was not considered in the Alternatives due to the proximity of this intersection to an adjacent proposed roundabout at Old Southwick Pass. The Roundabout Analysis can be found in Appendix D of this report.

Table 20 – North Peak/Old Southwick Capacity Analysis

INT #	INTERSECTION	Movement	AM No-Build			PM No-Build			AM Preferred Alternative		PM Preferred Alternative		AM Alternative #2		PM Alternative #2		
			Existing	Opening Year 2018	Design Year 2038	Existing	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	
10	Barnwell Road & North Peak Drive/Old Southwick Pass	EBL+T	F (51.9)	F (56.2)	F (90.5)	C (23.7)	C (24.6)	D (31.0)	F (57.8)	F (93.2)	C (25.0)	D (31.4)	F (57.8)	F (93.2)	C (25.0)	D (31.4)	
		EBR	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
		WBL+T+R	C (24.1)	D (25.4)	E (35.2)	C (20.4)	C (21.1)	D (25.8)	D (25.4)	E (35.3)	C (21.3)	D (26.1)	D (25.4)	E (35.3)	C (21.3)	D (26.1)	D (26.1)
		NBL	-	-	-	-	-	-	A (9.8)	B (10.3)	A (8.8)	A (9.0)	A (9.8)	B (10.3)	A (8.8)	A (9.0)	A (9.0)
		NBT	-	-	-	-	-	-	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
		NBL+T	A (0.4)	A (0.4)	A (0.5)	A (0.7)	A (0.7)	A (0.8)	-	-	-	-	-	-	-	-	-
		NBR	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
		SBL	-	-	-	-	-	-	A (8.6)	A (8.9)	A (8.9)	A (9.2)	A (8.6)	A (8.9)	A (8.9)	A (8.9)	A (9.2)
		SBL+T	A (0.9)	A (0.9)	A (1.1)	A (0.2)	A (0.2)	A (0.2)	-	-	-	-	-	-	-	-	-
SBT+R	-	-	-	-	-	-	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)		
SBR	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	-	-	-	-	-	-	-	-	-		

Table 21 – North Peak/Old Southwick Queue Lengths

INT #	INTERSECTION	Movement	Proposed Turn Bay Length	AM No-Build			PM No-Build			Preferred Alternative AM		Preferred Alternative PM		Alternative #2 AM		Alternative #2 PM	
				2014	2018	2038	2014	2018	2038	2018	2038	2018	2038	2018	2038	2018	2038
10	Barnwell Road & North Peak Drive/ Old Southwick Pass	EBL+T	-	49	53	79	11	12	16	54	81	12	16	54	81	12	16
		EBR	150	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		WBL+T+R	-	44	46	64	19	19	25	46	64	20	25	56	64	20	25
		NBL	210	-	-	-	-	-	-	1	1	2	2	1	1	2	2
		NBL+T	-	1	1	1	2	2	2	-	-	-	-	-	-	-	-
		NBR	150	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		SBL	210	-	-	-	-	-	-	3	3	1	1	3	3	1	1
		SBL+T	-	3	3	3	1	1	1	-	-	-	-	-	-	-	-
		SBT+R	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
SBR	-	0	0	0	0	0	0	-	-	-	-	-	-	-	-		

13. BARNWELL ROAD AND BARNWELL ELEMENTARY DRIVEWAY #1

BARNWELL ROAD TRAFFIC ENGINEERING REPORT

The intersection of Barnwell Road and Barnwell Elementary Driveway #1 currently has separate through and right turn lanes on the northbound approach and a shared left+through lane on the southbound approach of Barnwell Road. Barnwell Elementary Driveway #1 has a shared left+through+right lane on the westbound approach. The intersection is stop controlled on the westbound approach of Barnwell Elementary Driveway #1 and free flowing on Barnwell Road. The speed limit along Barnwell Road is 25 mph and the speed limit along Barnwell Elementary Driveway #1 is 15 mph.

The Preferred Alternative consists of removing the northbound right turn lane on Barnwell Road and adding a roundabout. The roundabout will also join the Barnwell Elementary Driveway #2 creating four legs within the roundabout. Alternative #2 consists of adding a southbound left turn lane on Barnwell Road. Another improvement will be the addition of the High-Intensity Activated Crosswalk (HAWK) beacon between Barnwell Elementary School Driveway #1 and #2. Roundabout analysis was also completed for this intersection.

The tables below show the LOS and 95th percentile queue lengths for the seven scenarios studied in this report.

The roundabout analysis shows that a roundabout is not recommended for this intersection due to the lack of traffic on the side street. GDOT's roundabout analysis tool recommends that if less than 10% of the total intersection volume is on the side street approaches, a roundabout is not the preferred solution. However, the City would like to install a roundabout at this intersection in order to combine two of the schools driveways and for the benefits it will bring operationally to the intersection as well as from a safety standpoint. This intersection has 8% of the volume on the side street in the Design year (2038). The Roundabout Analysis can be found in Appendix D of this report.

Table 22 – Elementary Driveway #1 Capacity Analysis

INT #	INTERSECTION	Improvement	Movement	AM No-Build			PM No-Build			AM Preferred Alternative		PM Preferred Alternative		AM Alternative #2		PM Alternative #2		
				Existing	Opening Year 2018	Design Year 2038	Existing	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	
11	Barnwell Road & Barnwell Elementary Dwy 1	Turn Lanes	WBL+R	F (767.3)	F (815.7)	F (Error)	C (16.0)	C (16.4)	C (18.6)	-	-	-	-	F (815.7)	F (Error)	C (16.4)	C (18.6)	
			NBT	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	-	-	-	-	A (0.0)	A (0.0)	A (0.0)	A (0.0)	
			NBR	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	-	-	-	-	A (0.0)	A (0.0)	A (0.0)	A (0.0)	
			SBL	-	-	-	-	-	-	-	-	-	-	-	A (9.8)	B (10.1)	A (9.1)	A (9.5)
			SBL+T	A (4.4)	A (4.5)	A (5.1)	A (0.7)	A (0.7)	A (0.8)	-	-	-	-	-	-	-	-	-
		SBT	-	-	-	-	-	-	-	-	-	-	-	A (0.0)	A (0.0)	A (0.0)	A (0.0)	
		Roundabout	WB	-	-	-	-	-	-	-	C (17.0)	B (11.0)	A (7.0)	A (6.0)	-	-	-	-
			NB	-	-	-	-	-	-	-	B (14.0)	B (10.0)	B (13.0)	B (11.0)	-	-	-	-
			SB	-	-	-	-	-	-	-	E (49.0)	D (26.0)	B (10.0)	A (9.0)	-	-	-	-

*= The Roundabout option incorporates Barnwell Elementary Driveway #2 into the roundabout proposed at Driveway #1.

Table 23 – Elementary Driveway #1 Queue Lengths

INT #	INTERSECTION	Improvement	Movement	Proposed Turn Bay Length	AM No-Build			PM No-Build			Preferred Alternative AM		Preferred Alternative PM		Alternative #2 AM		Alternative #2 PM		
					2014	2018	2038	2014	2018	2038	2018	2038	2018	2038	2018	2038	2018	2038	
11	Barnwell Road & Barnwell Elementary Dwy 1	Turn Lanes	WBL+R	-	956	974	Error	5	6	7	-	-	-	-	974	Error	6	7	
			NBR	150	0	0	0	0	0	-	-	-	-	0	0	0	0		
			SBL	210	-	-	-	-	-	-	-	-	-	-	17	18	2	2	
			SBL+T	-	16	17	18	2	2	2	-	-	-	-	-	-	-	-	
		Roundabout	WB	-	-	-	-	-	-	-	-	113	73	4	3	-	-	-	-
			NB	-	-	-	-	-	-	-	-	124	99	136	121	-	-	-	-
			SB	-	-	-	-	-	-	-	-	437	322	93	85	-	-	-	-

*= The Roundabout option incorporates Barnwell Elementary Driveway #2 into the roundabout proposed at Driveway #1.

14. BARNWELL ROAD AND BARNWELL ELEMENTARY DRIVEWAY #2

BARNWELL ROAD TRAFFIC ENGINEERING REPORT

The intersection of Barnwell Road and Barnwell Elementary Driveway #2 currently has separate through and right turn lanes on the northbound approach and a shared left+through lane on the southbound approach of Barnwell Road. Barnwell Elementary Driveway #2 is a one lane, “entrance only” driveway, giving access to the elementary school. The intersection is free flowing on Barnwell Road. The speed limit along Barnwell Road is 25 mph and the speed limit along Barnwell Elementary Driveway #2 is 15 mph.

The Preferred Alternative consists of removing the northbound right turn lane on Barnwell Road and joining the driveway as the fourth leg of the roundabout at Barnwell Elementary Driveway #1. Alternative #2 consists of adding a southbound left turn lane on Barnwell Road. An additional improvement will be the addition of the HAWK beacon between Barnwell Elementary School Driveway #1 and #2. Roundabout analysis was also completed for this intersection.

The tables below show the LOS and 95th percentile queue lengths for the seven scenarios studied in this report.

The roundabout analysis was not performed on this intersection alone due to the proximity to Barnwell Elementary Driveway #1. This driveway is proposed to be added into that roundabout as a fourth leg. The Roundabout Analysis can be found in Appendix D of this report.

Table 24 – Elementary Driveway #2 Capacity Analysis

INT #	INTERSECTION	Movement	AM No-Build			PM No-Build			AM Preferred Alternative		PM Preferred Alternative		AM Alternative #2		PM Alternative #2			
			Existing	Opening Year 2018	Design Year 2038	Existing	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038		
12	Barnwell Road & Barnwell Elementary Dwy 2	NBT	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	For the Preferred Alternative, Barnwell Elementary Driveway #2 has been joined to the roundabout proposed at Driveway #1.					A (0.0)	A (0.0)	A (0.0)	A (0.0)	
		NBR	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)						A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
		SBL	-	-	-	-	-	-						-	A (8.7)	A (9.0)	A (9.4)	A (9.8)
		SBT	-	-	-	-	-	-						-	A (0.0)	A (0.0)	A (0.0)	A (0.0)
		SBL+T	A (1.2)	A (1.3)	A (1.3)	A (1.4)	A (1.4)	A (1.5)						-	-	-	-	

Table 25 – Elementary Driveway #2 Queue Lengths

INT #	INTERSECTION	Movement	Proposed Turn Bay Length	AM No-Build			PM No-Build			Preferred Alternative AM		Preferred Alternative PM		Alternative #2 AM		Alternative #2 PM	
				2014	2018	2038	2014	2018	2038	2018	2038	2018	2038	2018	2038	2018	2038
12	Barnwell Road & Barnwell Elementary Dwy 2	NBR	150	0	0	0	0	0	0	For the Preferred Alternative, Barnwell Elementary Driveway #2 has been joined to the roundabout proposed at Driveway #1.				0	0	0	0
		SBL	210	-	-	-	-	-	-					4	4	4	5
		SBL+T	-	4	4	4	4	4	5					-	-	-	-

15. BARNWELL ROAD AND BARNWELL ELEMENTARY #3

BARNWELL ROAD TRAFFIC ENGINEERING REPORT

The intersection of Barnwell Road and Barnwell Elementary Driveway #3 currently has a through lane on both the northbound and southbound approaches of Barnwell Road. Barnwell Elementary Driveway #3 is a shared left+right lane, “exit only” driveway, allowing departure from the elementary school. The intersection is stop controlled on the westbound approach of Barnwell Elementary Driveway #3 and free flowing on Barnwell Road. The speed limit along Barnwell Road is 25 mph and the speed limit along Barnwell Elementary Driveway #3 is 15 mph.

In both the Preferred Alternative and Alternative #2, the intersection of Barnwell Road and Barnwell Elementary Driveway #3 is not proposed to make any geometry changes. Roundabout analysis was not completed for this intersection.

The tables below show the LOS and 95th percentile queue lengths for the seven scenarios studied in this report.

Table 26 – Elementary Driveway #3 Capacity Analysis

INT #	INTERSECTION	Movement	AM No-Build			PM No-Build			AM Preferred Alternative		PM Preferred Alternative		AM Alternative #2		PM Alternative #2		
			Existing	Opening Year 2018	Design Year 2038	Existing	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	
13	Barnwell Road & Barnwell Elementary Dwy 3	WB	C (20.5)	C (21.2)	D (26.3)	C (20.6)	C (20.7)	D (25.1)	C (21.2)	D (26.3)	C (20.7)	D (25.1)	C (21.2)	D (26.3)	C (20.7)	D (25.1)	
		NB	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
		SB	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)

Table 27 – Elementary Driveway #3 Queue Lengths

INT #	INTERSECTION	Movement	Proposed Turn Bay Length	AM No-Build			PM No-Build			Preferred Alternative AM		Preferred Alternative PM		Alternative #2 AM		Alternative #2 PM	
				2014	2018	2038	2014	2018	2038	2018	2038	2018	2038	2018	2038	2018	2038
13	Barnwell Road & Barnwell Elementary Dwy 3	WB	-	20	21	27	21	22	27	21	27	22	27	21	27	22	27

16. BARNWELL ROAD AND AUBUSSON TRACE

BARNWELL ROAD TRAFFIC ENGINEERING REPORT

The intersection of Barnwell Road and Aubusson Trace currently has a shared left+through lane on the northbound approach and separate through and right turn lanes on the southbound approach of Barnwell Road. Aubusson Trace has shared left+right turn lanes on the eastbound approach. The intersection is stop controlled on the eastbound approach of Aubusson Trace and free flowing on Barnwell Road. The speed limit along Barnwell Road is 40 mph and the speed limit along Aubusson Trace is 25 mph.

The Preferred Alternative and Alternative #2 do not propose any geometry changes at this intersection. Roundabout analysis was also completed for this intersection.

The tables below show the LOS and 95th percentile queue lengths for the seven scenarios studied in this report.

The roundabout analysis shows that a roundabout is not recommended for this intersection due to the lack of traffic on the side street. GDOT's roundabout analysis tool recommends that if less than 10% of the total intersection volume is on the side street approaches, a roundabout is not the preferred solution. This intersection has 6% of the volume on the side street in the Design year (2038). The Roundabout Analysis can be found in Appendix D of this report.

Table 28 – Aubusson Capacity Analysis

INT #	INTERSECTION	Movement	AM No-Build			PM No-Build			AM Preferred Alternative		PM Preferred Alternative		AM Alternative #2		PM Alternative #2		
			Existing	Opening Year 2018	Design Year 2038	Existing	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	
14	Barnwell Road & Aubusson Trace	EBL+R	D (30.1)	D (31.8)	E (44.0)	D (28.0)	D (29.3)	E (38.9)	D (31.8)	E (44.0)	D (29.3)	E (38.9)	D (32.0)	E (44.4)	D (30.2)	E (40.3)	
		NBL+T	A (0.5)	A (0.5)	A (0.6)	A (1.0)	A (1.0)	A (1.1)	A (0.5)	A (0.6)	A (1.0)	A (1.1)	A (0.5)	A (0.6)	A (1.0)	A (1.1)	
		SBT	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
		SBR	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)

Table 29 – Aubusson Queue Lengths

INT #	INTERSECTION	Movement	Proposed Turn Bay Length	AM No-Build			PM No-Build			Preferred Alternative AM		Preferred Alternative PM		Alternative #2 AM		Alternative #2 PM	
				2014	2018	2038	2014	2018	2038	2018	2038	2018	2038	2018	2038	2018	2038
14	Barnwell Road & Aubusson Trace	EBL+R	-	39	41	56	29	31	41	41	56	31	41	41	56	32	42
		NBL+T	-	1	2	2	3	3	3	2	2	3	3	2	2	3	3
		SBR	150	0	0	0	0	0	0	0	0	0	0	0	0	0	0

17. BARNWELL ROAD AND JACOBEOAN ENTRY

BARNWELL ROAD TRAFFIC ENGINEERING REPORT

The intersection of Barnwell Road and Jacobean Entry currently has a shared left+through lane on the northbound approach and separate through and right turn lanes on the southbound approach of Barnwell Road. Jacobean Entry has a shared left+ right turn lane on the eastbound approach. The intersection is stop controlled on the eastbound approach of Jacobean Entry and free flowing on Barnwell Road. The speed limit along Barnwell Road is 40 mph and the speed limit along Jacobean Entry is 25 mph.

The Preferred Alternative and Alternative #2 do not propose any geometry changes at this intersection. Roundabout analysis was also completed for this intersection.

The tables below show the LOS and 95th percentile queue lengths for the seven scenarios studied in this report.

The roundabout analysis shows that a roundabout is not recommended for this intersection due to the lack of traffic on the side street. GDOT's roundabout analysis tool recommends that if less than 10% of the total intersection volume is on the side street approaches, a roundabout is not the preferred solution. This intersection has 3% of the volume on the side street in the Design year (2038). The Roundabout Analysis can be found in Appendix D of this report.

Table 30 – Jacobean Capacity Analysis

INT #	INTERSECTION	Movement	AM No-Build			PM No-Build			AM Preferred Alternative		PM Preferred Alternative		AM Alternative #2		PM Alternative #2		
			Existing	Opening Year 2018	Design Year 2038	Existing	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	Opening Year 2018	Design Year 2038	
15	Barnwell Road & Jacobean Entry	EBL+R	C (20.9)	C (21.6)	D (26.4)	D (27.0)	D (28.2)	E (35.4)	C (21.6)	D (26.4)	D (28.2)	E (35.4)	C (21.9)	D (26.7)	D (28.4)	E (35.8)	
		NBL+T	A (0.4)	A (0.4)	A (0.4)	A (0.3)	A (0.3)	A (0.4)	A (0.4)	A (0.4)	A (0.3)	A (0.4)	A (0.4)	A (0.4)	A (0.3)	A (0.4)	
		SBT	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
		SBR	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)

Table 31 – Jacobean Queue Lengths

INT #	INTERSECTION	Movement	Proposed Turn Bay Length	AM No-Build			PM No-Build			Preferred Alternative AM		Preferred Alternative PM		Alternative #2 AM		Alternative #2 PM	
				2014	2018	2038	2014	2018	2038	2018	2038	2018	2038	2018	2038	2018	2038
15	Barnwell Road & Jacobean Entry	EBL+R	-	14	15	19	7	8	10	15	19	8	10	15	19	8	10
		NBL+T	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		SBR	150	0	0	0	0	0	0	0	0	0	0	0	0	0	0

18. BARNWELL ROAD AND JONES BRIDGE ROAD

BARNWELL ROAD TRAFFIC ENGINEERING REPORT

The intersection of Barnwell Road and Jones Bridge Road is a very sharp turn where Barnwell Road changes names to Jones Bridge Road. There is currently one lane northbound and one lane southbound and the speed limit is 40 mph on the roadway; however, signage at the intersection warns of the sharp curve and has a posted cautionary speed limit of 15 mph.

The Preferred Alternative proposes to construct a splitter island in the curve between the northbound and southbound lanes. This will help vehicles by providing some spacing between the two directions of travel and make navigating the curve easier. Alternative #2 proposes to make no improvements to the intersection.

No capacity analysis or roundabout analysis was performed on this intersection since there are no conflicting movements through the curve.

19. CONCLUSIONS

BARNWELL ROAD TRAFFIC ENGINEERING REPORT

The purpose of this study is to analyze concept improvements along 2.51 miles of the Barnwell Road corridor from SR 140/Holcomb Bridge Road to Redcoat Way in Johns Creek, Fulton County, Georgia.

Based on the analysis documented in this report, Wolverton & Associates, Inc. makes the following conclusions:

For Existing Year 2014, Opening Year 2018 and Design Year 2038 conditions, several intersections along the Barnwell Road corridor are currently operating inadequately and are expected to continue to operate inadequately.

Two corridor improvement alternatives were considered. W&A, along with the City of Johns Creek, recommends the Preferred Alternative. The Preferred Alternative includes single lane roundabouts at the following intersections:

- Barnwell Road and Niblick Drive,
- Barnwell Road and Fairway Ridge Drive,
- Barnwell Road and Rivermont Parkway,
- Barnwell Road and Old Southwick Pass, and
- Barnwell Road and Barnwell Elementary Driveway #1, with Driveway #2 joined as the fourth leg.

The following list details the remaining proposed geometry changes along the Barnwell Road corridor:

- At the intersection of Barnwell Road and SR 140/Holcomb Bridge Road, it is proposed to add two lanes to Barnwell Road creating a dual left turn, through-pocket lane, and right turn lane. Also, it is proposed to eliminate the split phasing and add northbound and southbound protected phases.
- At the intersection of Barnwell Road and Sandy Lane Drive, it is proposed to add a bypass turn lane for the northbound approach of Barnwell Road.
- At the intersection of Barnwell Road and Olde Clubs Drive, it is proposed to add northbound and southbound left turn lanes on Barnwell Road.
- At the intersection of Barnwell Road and River Ferry Drive, it is proposed to add a southbound left turn lane on Barnwell Road.
- At the intersection of Barnwell Road and Citadella Court, it is proposed to remove the existing northbound right turn lane on Barnwell Road and add a southbound left turn lane on Barnwell Road.
- At the intersection of Barnwell Road and North Peak Drive/Old Southwick Pass, it is proposed to remove the existing southbound right turn lane on Barnwell Road and add northbound and southbound left turn lane on Barnwell Road.

The Preferred Alternative also proposes pedestrian facility improvements as well as bicycle improvements. From SR 140/Holcomb Bridge Road to Barnwell Elementary School the typical section is expected to

include a multi-use sidewalk that runs along the west side of the corridor as well as bicycle lanes on both the northbound and southbound travel lanes. From Barnwell Elementary School to Redcoat Way the typical section is expected to include a multi-use sidewalk that runs along the east side of the corridor as well as bicycle lanes on both the northbound and southbound travel lanes.

For the Preferred Alternative, the study intersections are expected to operate adequately for all conditions except for the intersections of Barnwell Road and SR 140/Holcomb Bridge Road, Barnwell Road and Olde Clubs Drive, Barnwell Road and North Peak Drive/Old Southwick Pass, Barnwell Road and Barnwell Elementary Driveway #1 and #2 (combined), and Aubusson Trace.

At the intersection of Barnwell Road and SR 140/Holcomb Bridge Road, the intersection is expected to operate at LOS F for the Opening Year 2018 and Design Year 2038 conditions. The proposed improvement was chosen in a previous study of this intersection done for the City of Johns Creek by W&A in 2013. The proposed improvements are expected to give the least amount of delay and queuing for the southbound approach on Barnwell Road.

At the intersection of Barnwell Road and Olde Clubs Drive, the eastbound left turn lane on Olde Clubs Drive is expected to operate at LOS E for the Opening Year 2018 conditions and Design Year 2038 AM peak hour condition. The eastbound left turn on Olde Clubs Drive is expect to operate at LOS F for the Design Year 2038 PM peak hour condition. This is not expected to be an issue at the intersection due to the low volumes during both the AM and PM peak periods.

At the intersection of Barnwell Road and North Peak Drive/Old Southwick Pass, the eastbound left+through lane on North Peak Drive is expected to operate at LOS F for the Opening Year 2018 and Design Year 2038 AM peak hour conditions. The westbound lane on Old Southwick Pass is expected to operate at LOS E for the Design Year 2038 AM peak hour condition. The inadequate LOS on the eastbound left+through lane is not expected to be an issue at the intersection due to the low volumes during the AM peak period. The westbound lane is expected to have 35.3 seconds of delay per vehicle during the Design Year 2038 AM peak hour condition. This is 0.3 seconds of delay per vehicle away from being LOS D; therefore, the westbound lane is not expected to be an issue at the intersection of Barnwell Road and North Peak Drive/Old Southwick Pass.

At the intersection of Barnwell Road and Barnwell Elementary Driveway #1, it is proposed to change the intersection into a single-lane roundabout and connecting the Elementary Driveway #2 as the fourth leg. It is expected that the southbound approach on Barnwell Road will operate at LOS E for the Opening Year 2018 AM peak hour condition. The southbound approach on Barnwell Road will operate at LOS D for the Design Year 2038 AM peak hour condition. This result is based on the assumption in the GDOT Roundabout Analysis spreadsheet that operation of a roundabout will improve as motorist's become familiar with the improvement.

At the intersection of Barnwell Road and Aubusson Trace, the eastbound left turn lane on Aubusson Trace is expected to operate at LOS E for the Design Year 2038 AM and PM peak hour condition. This is not expected to be an issue at the intersection due to the low volumes during both the AM and PM peak periods.

Below are the recommended turn bay lengths for the intersections proposed to have turn bays added in the Preferred Alternative.

At the intersection of Barnwell Road and SR 140/Holcomb Bridge Road, the Synchro 95th percentile queue for the southbound left turn lanes is expected to be 759 feet; therefore, a 760 foot long left turn bay should suffice for the improvement. The queue for the southbound right turn lane is expected to be 52 feet; however, because the outside approach lane turns into the right turn lane, storage is not an issue for this movement. The queue for the southbound through lane is expected to be 77 feet; however, a 100 foot “through-pocket” is recommended for the study intersection.

At the intersection of Barnwell Road and Sandy Lane Drive, the Synchro 95th percentile queue for the northbound left turn lane is expected to be 6 feet; however, due to constructability, the recommended bypass lane length is 100 feet.

At the intersection of Barnwell Road and Olde Club Drive, the Synchro 95th percentile queue for the northbound left turn lane is 2 feet; however, the design minimum for a 40 mph roadway left turn lane is 210 feet. The queue for the southbound left turn lane is 0 feet; however, the design minimum for a 40 mph roadway left turn lane is 210 feet. The queue for the southbound right turn lane is 0 feet; however, the design minimum for a 40 mph roadway right turn lane is 150 feet.

At the intersection of Barnwell Road and River Ferry Drive, the Synchro 95th percentile queue for the northbound right turn lane is 0 feet; however, the design minimum for a 40 mph roadway right turn lane is 150 feet. The queue for the southbound left turn lane is 3 feet; however, the design minimum for a 40 mph roadway left turn lane is 210 feet.

At the intersection of Barnwell Road and Citadella Court, the Synchro 95th percentile queue for the southbound left turn lane is 0 feet; however, the design minimum for a 40 mph roadway left turn lane is 210 feet.

At the intersection of Barnwell Road and North Peak Drive/Old Southwick Pass, the Synchro 95th percentile queue for the northbound left turn lane is 2 feet; however, the design minimum for a 40 mph roadway left turn lane is 210 feet. The queue for the northbound right turn lane is 0 feet; however, the design minimum for a 40 mph roadway right turn lane is 150 feet. The queue for the southbound left turn lane is 3 feet; however, the design minimum for a 40 mph roadway left turn lane is 210 feet.

At the intersection of Barnwell Road and Aubusson Trace, the Synchro 95th percentile queue for the southbound right turn lane is 0 feet; however, the design minimum for a 40 mph roadway left turn lane is 150 feet.

At the intersection of Barnwell Road and Jacobean Entry, the Synchro 95th percentile queue for the southbound right turn lane is 0 feet; however, the design minimum for a 40 mph roadway left turn lane is 150 feet.

REFERENCES

BARNWELL ROAD TRAFFIC ENGINEERING REPORT

1. Synchro, Version 8, Trafficware Ltd., Sugar Land, TX, 2013.
2. Highway Capacity Manual, HCM 2010, Transportation Research Board, Washington, DC, 2010.
3. GDOT Roundabout Analysis Tool, Georgia Department of Transportation, Version 2.1, 02/25/2012.
4. GDOT Regulations for Driveway and Encroachment Control, Georgia Department of Transportation, 10/06/2006.

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

Analyst:	Rob Jacquette, PE, PTOE
Agency/Company:	Wolverton & Associates, Inc.
Date:	8/29/2014
Project Name or PI#:	0012880
Year, Peak Period:	AM Peak 2014
County/District:	Johns Creek
Intersection:	Barnwell Road & Niblick Dr

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

Roundabout Considerations Worksheet

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

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

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

Volume Information (for Analysis Time Period)

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

	Volumes	Split
Major Street	12,149	95%
Minor Street	625	5%
Total volumes	12,774	

Proximity to Other Intersections

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

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

Go up to next section...



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

Analyst:	Rob Jacquette, PE, PTOE
Agency/Company:	Wolverton & Associates, Inc.
Date:	8/29/2014
Project Name or PI#:	0012880
Year, Peak Period:	AM Peak 2014
County/District:	Johns Creek
Intersection:	Barnwell Road & Glen Ferry Dr

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

Roundabout Considerations Worksheet

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

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

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

Volume Information (for Analysis Time Period)

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

	Volumes	Split
Major Street	12,562	97%
Minor Street	452	3%
Total volumes	13,014	

Proximity to Other Intersections

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

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

Go up to next section...



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

Analyst:	Rob Jacquette, PE, PTOE
Agency/Company:	Wolverton & Associates, Inc.
Date:	8/29/2014
Project Name or PI#:	0012880
Year, Peak Period:	AM Peak 2014
County/District:	Johns Creek
Intersection:	Barnwell Road & Rivermont Pkwy

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

Roundabout Considerations Worksheet

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

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

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

Volume Information (for Analysis Time Period)

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

	Volumes	Split
Major Street	12,317	90%
Minor Street	1,364	10%
Total volumes	13,681	

Proximity to Other Intersections

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

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

Go up to next section...





August 26, 2014

Mr. Brent A. Story, P.E., State Design Policy Engineer
Georgia Department of Transportation
Office of Design Policy & Support, 26th Floor
One Georgia Center
600 West Peachtree Street, NW
Atlanta, Georgia 30308

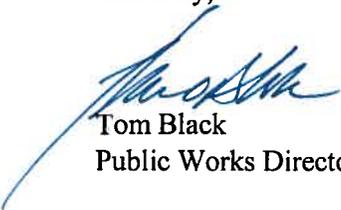
Dear Brent:

I am writing in regards to the Barnwell Road Trail project, PI #0012880 and subsequent lighting needs for this project under design by the Georgia Department of Transportation (GDOT). The City of Johns Creek understands that GDOT requires a commitment of long term maintenance and operational costs before the project can proceed forward. As a means of ensuring that the design continues, the City of Johns Creek agrees to provide maintenance and energy costs as stated below for any lighting within the jurisdiction of the City of Johns Creek along Barnwell Road.

Upon completion of the installation of said lighting system (GDOT, P.I. No. 0012880, Fulton County, Barnwell Road) and acceptance by the DEPARTMENT, the City of Johns Creek shall assume full responsibility for the operation, the repair and the maintenance of the entire lighting system, including but not limited to repairs of any damages replacement of lamps, ballasts, luminaires, lighting structures, associated equipment, conduit, wiring and service equipment, and the requirements of the Georgia Utility Facility Protection Act within the City limits. The City of Johns Creek further agrees to provide and pay for all the energy required for the operation of said lighting system in the unincorporated area.

Please advise if additional information is required by the Department on this issue.

Sincerely,



Tom Black
Public Works Director

Public Works

Bridge Inventory Data Listing



Parameters: Bridge Serial Num

Structure ID:121-0290-0		Fulton		SUFF. RATING: 75.08	
Location & Geography			Signs & Attachments		
Structure ID:	121-0290-0	*104 Highway System:	0	225 Expansion Joint Type:	00
200 Bridge Information:	06	*26 Functional Classification:	17	242 Deck Drains:	1
*6A Feature Int:	HOGAN CREEK	*204 Federal Route Type:	M No: 09479	243 Parapet Location:	0
*6B Critical Bridge:	0	105 Federal Lands Highway:	0	Height:	0.00
*7A Route No Carried:	CR00107	*110 Truck Route:	0	Width:	0.00
*7B Facility Carried:	BARNWELL ROAD	206 School Bus Route:	1	238 Curb Height:	1
9 Location:	6.3 MI S OF ALPHARETTA	217 Benchmark Elevation:	0000.00	Curb Material:	1
2 Dot District:	7	218 Datum:	0	239 Handrail	2 2
207 Year Photo:	2012	*19 Bypass Length:	03	*240 Median Barrier Rail:	0
*91 Inspection Frequency:	24 Date: 10/22/2012	*20 Toll:	3	241 Bridge Median Height:	0
92A Fract Crit Insp Freq:	0 Date: 02/01/1901	*21 Maintanance:	04	* Bridge Median Width:	0
92B Underwater Insp Freq:	0 Date: 02/01/1901	*22 Owner:	04	230 Guardrail Loc. Dir. Rear:	0
92C Other Spc. Insp Freq:	0 Date: 02/01/1901	*31 Design Load:	2	Fwr:	0
* 4 Place Code:	42425	37 Historical Significance:	5	Oppo. Dir. Rear:	0
*5 Inventory Route(O/U):	1	205 Congressional District:	06	Oppo. Fwr:	0
Type:	5	27 Year Constructed:	1956	244 Aproach Slab	0
Designation:	1	106 Year Reconstructed:	1970	224 Retaining Wall:	4
Number:	09479	33 Bridge Median	0	233Posted Speed Limit:	40
Direction:	0	34 Skew:	33	236 Warning Sign:	0.00
*16 Latitude:	33 - 59.2730 HMMS Prefix:0	35 Structure Flared:	0	234 Delineator:	0.00
*17 Longitude:	84 - 15.8990 HMMS Suffix:0	38 Navigation Control:	0	235 Hazard Boards:	1
	MP: 0.00	213 Special Steel Design:	0	237 Utilities Gas:	32
98 Border Bridge:	000 % Shared:00	267 Type of Paint:	5	Water:	31
99 ID Number:	0000000000000000	*42 Type of Service On:	1	Electric:	00
*100 STRAHNET:	0	Type of Service Under:	5	Telephone:	00
12 Base Highway Network:	1	214 Movable Bridge:	0	Sewer:	00
13A LRS Inventory Route:	1213010725	203 Type Bridge:	M - A - M - O	247 Lighting Street:	0
13B Sub Inventory Route:	0	259 Pile Encasement	3	Navigation:	0
*101 Parallel Structure:	N	*43 Structure Type Main:	3 02	Aerial:	0
*102 Direction of Traffic:	2	45 No.Spans Main:	001	*248 County Continuity No.:	00
*264 Road Inventory Mile Post:	000.32	44 Structure Type Appr:	0 00		
*208 Inspection Area:	09 Initials: WBR	46 No Spans Appr:	0000		
Engineer's Initials:	RES	226 Bridge Curve Horz	0 Vert: 0.00		
* Location ID No:	121-09479M-000.33E	111 Pier Protection	0		
		107 Deck Structure Type:	1		
		108 Wearing Structure Type:	6		
		Membrane Type:	8		
		Deck Protection:	0		

Bridge Inventory Data Listing



Parameters: Bridge Serial Num

9

Structure ID:121-0290-0

Programming Data		Measurements:				
201 Project No:	COUNTY DESIGN	*29 ADT	009090	Year:2011	65 Inventory Rating Method:	1
202 Plans Available:	1	109 %Trucks:	1		63 Operating Rating Method:	1
249 Prop Proj No:	00000000000000000000000000000000	* 28 Lanes On:	02	Under:00	66 Inventory Type:	2 Rating: 35
250 Approval Status:	0000	210 No. Tracks On:	00	Under:00	64 Operating Type:	2 Rating: 59
251 PI Number:	0000000	* 48 Max. Span Length	0038		231 Calculated Loads:	
252 Contract Date:	02/01/1901	* 49 Structure Length:	38		H-Modified:	21 0
260 Seismic No:	00000	51 Br. Rwdy. Width	24.30		HS-Modified:	30 0
75 Type Work:	31 1	52 Deck Width:	25.60		Type 3:	33 0
94 Bridge Imp. Cost:	\$148	* 47 Tot. Horiz. Cl:	24		Type 3s2:	40 0
95 Roadway Imp. Cost:	\$15	50 Curb / Sidewalk Width	0.30 / 0.30		Timber:	37 0
96 Total Imp Cost:	\$223	32 Approach Rdwy. Width	022		Piggyback:	00 0
76 Imp Length:	001358	*229 Shoulder Width:			261 H Inventory Rating:	24
97 Imp Year:	2013	Rear Lt:	5.00	Type:8 Rt:5.00	262 H Operating Rating	40
114 Fureur ADT:	013635	Fwd. Lt:	5.00	Type:8 Rt:5.00	67 Structural Evaluation:	6
Hydraulic Data		Pavement Width:			58 Deck Condition:	7
215 Waterway Data:		Rear:	22.00	Type: 2	59 Superstructure Condition:	6
High Water Elev:	0000.0	Fwd:	22.00	Type: 2	* 227 Collision Damage:	0
Flood Elev:	0000.0	Intersaction Rear:	0	Fwd: 0	60A Substructure Condition:	6
Avg Streambed Elev:	0000.0	36 Safety Features Br. Rail:	3		60B Scour Condition:	7
Drainage Area:	00000	Transition:	0		60C Underwater Condition	N
Area of Opening:	000000	App. G. Rail:	0		71 Waterway Adequacy:	9
113 Scour Critical	U	App. Rail End:	0		61 Channel Protection Cond.:	8
216 Water Depth:	1.2	53 Minimum Cl. Over:	99' 99 "		68 Deck Geometry:	2
222 Slope Protection:	0	Under:	N	00' 00"	69 UnderClr. Horz/Vert:	N
221 Spur Dikes Rear	0	*228 Minimum Vertical Cl			72 Appr. Alignment:	7
219 Fender System	0	Act. Odm Dir.:	99' 99"		62 Culvert:	N
220 Dolphin:	0	Oppo. Dir:	99' 99"		Posting Data	
223 Culvert Cover:	000	Posted Odm. Dir:	00' 00"		70 Bridge Posting Required	5
Type:	0	Oppo. Dir:	00' 00"		41 Struct Open, Posted, CL:	A
No. Barrels:	0	55 Lateral Undercl. Rt:	N	0.00	* 103 Temporary Structure:	0
Width:	0.00	56 Lateral Undercl. Lt:	0.00		232 Posted Loads	
Length:	0	*10 Max Min Vert Cl:	99' 99" Dir:0		H-Modified:	00
*265 U/W Insp. Area	0	39 Nav Vert Cl:	000 Horiz:0000		HS-Modified:	00
*Location ID No:	121-09479M-000.33E	116 Nav Vert Cl Closed:	000		Type 3:	00
		245 Deck Thickness Main	6.00		Type 3s2:	00
		Deck Thick Approach:	0.00		Timber:	00
		246 Overlay Thickness:	1.50		Piggyback	00
		212 Year Last Painted:	Sup:2003 Sub:0000		253 Notification Date:	02/01/1901
					258 Fed Notify Date:	02/01/1901



CONCEPTUAL LEVEL HYDROLOGY STUDY FOR MS4 PERMIT

Project: PI 0012880 Barnwell Road
Enhanced Sidewalk and
Intersection Improvements
City of Johns Creek
Fulton County, Georgia

Job No.: 13-054A

Date: 08/27/14

General

The Barnwell Road Enhanced Sidewalk and Intersection Improvements project resides within the City of Johns Creek, which is designated as a MS4 (Municipal Separate Storm Sewer Systems) area. Understanding how impervious and pervious surfaces and cleared areas affect storm water quality and quantity, environmental impacts and requirements, right-of-way, and possibly the roadway typical section is an important design consideration that must be addressed early during conceptual development. Barnwell Road is not owned or operated (maintained) by GDOT; therefore, MS4 compliance will conform to the City of Johns Creek design criteria.

Existing Conditions

Site visits have been performed to review the project corridor and collect data related to storm water management. While Conceptual Report approval is the scope of work authorized at this time, we will develop a general approach to MS4 that will be included in the report and will be used as a basis for design during the future phases of work.

Barnwell Road is approximately 2.7 miles in length, beginning at State Route 140/Holcomb Bridge Road and terminating at Jones Bridge Road. Jones Bridge Road is a simple name change along the alignment; with the project terminating approximately 800 feet to the north at Redcoat Way. Barnwell Road and Jones Bridge Road are two lane roadways with left turn lanes at SR 140/Holcomb Bridge Road, Old Southwick Pass, and Redcoat Way. The roadways have rural shoulders, except for isolated areas of urban shoulders at side street intersections.

There are five (5) drainage basins along the project corridor, with some smaller sub-basins in between. Basin 1 consists of a high point at SR 140/Holcomb Bridge Road and a break point just north of Niblick Drive. This is not a high point in the roadway but a break point where surface water flows away from Barnwell Road without returning to the corridor. This basin sheds water to Hogan Creek, which bisects the project approximately midway between Sandy Lane Drive and Niblick Drive. Hogan Creek has several tributaries and a drainage area over 3.5 square miles. This large drainage area will be important when developing the hydrology study and MS4 approach for this section of Barnwell Road.

Basin 2 begins at the limits of Basin 1 just north of Niblick Drive and continues to a high point at Rivermont Parkway. In this section of Barnwell Road, there are 2 storm water management facilities that exist just outside the western right-of-way. These facilities appear to have been constructed during the development of the adjacent residential areas in the last 20 to 30 years. It appears this basin



discharges underneath Barnwell Road at a cross drain located between Niblick Drive and Olde Clubs Drive.

Basin 3 begins at Rivermont Parkway and ends at Barnwell Elementary School. The low point is a culvert crossing just north of National Park Service Road. From a review of the Fulton County GIS topographic maps, it appears smaller cross-drains may exist between the low point and Barnwell Elementary School; however, without detailed survey data it cannot be confirmed (survey database preparation is not authorized at this time).

Basin 4 begins at Barnwell Elementary School and drains to a depressed area along the eastern side of Barnwell Road just south of Jones Bridge Road. This depressed area does not appear to have an outlet and is a concern. A field review of the surrounding area and a review of the Fulton County GIS topographic maps confirms a depressed area with no outlet. The discharge point is located at the Barnwell Road/Jones Bridge Road intersection. From this location, the water sheds away from the corridor, through a residential property and onto Meriweather Woods, a local street (private) within the Country Club of the South residential development.

Basin 5, between the Barnwell Road/Jones Bridge Road intersection and Redcoat Way, sheds by sheet flow away from the corridor. This sheet flow also discharges into residential developments and eventually into existing underground drainage systems located on public and private property.

Proposed MS4 Stormwater Approach

The Barnwell Road corridor is heavily developed, mainly with medium density single-family residential neighborhoods. There are two main drainage features that bisect Barnwell Road; namely Hogan Creek and the upper limits of a tributary to the Chattahoochee River at National Park Service Drive. Available area for MS4 Best Management Practices (BMPs) will be limited so creative and economical solutions must be developed. In addition, the majority of the project is located within the 1-mile buffer for a 305b/303d Impaired Stream (Chattahoochee River); therefore, additional BMPs will be required (please reference attached map).

The use of existing storm water management facilities will be strongly considered and the City of Johns Creek Development Regulations allow for modifications to existing facilities for this purpose. However, the challenge may be bringing these systems into compliance with current design criteria. Economics will drive this decision, one that will be determined during the preliminary design phase.

New impervious areas for linear projects are generally treated with storm water BMPs approved by the City. Some of the more common BMPs are as follows:

1. Grass Channels
2. Dry and Wet Enhanced Swales
3. Infiltration Trenches
4. Stormwater Wetlands
5. Stormwater Ponds
6. Detention ponds
7. Filter Strips



With the installation of an enhanced sidewalk and widening of the existing pavement for turn lanes and roundabouts, it does not appear there will be a reduction of impervious area within individual study basins. Also with sidewalk construction there is the installation of curb and gutter and longitudinal drainage. Longitudinal drainage discharges as concentrated flow. Concentrated stormwater flow can be difficult to treat without the use of a structural BMP.

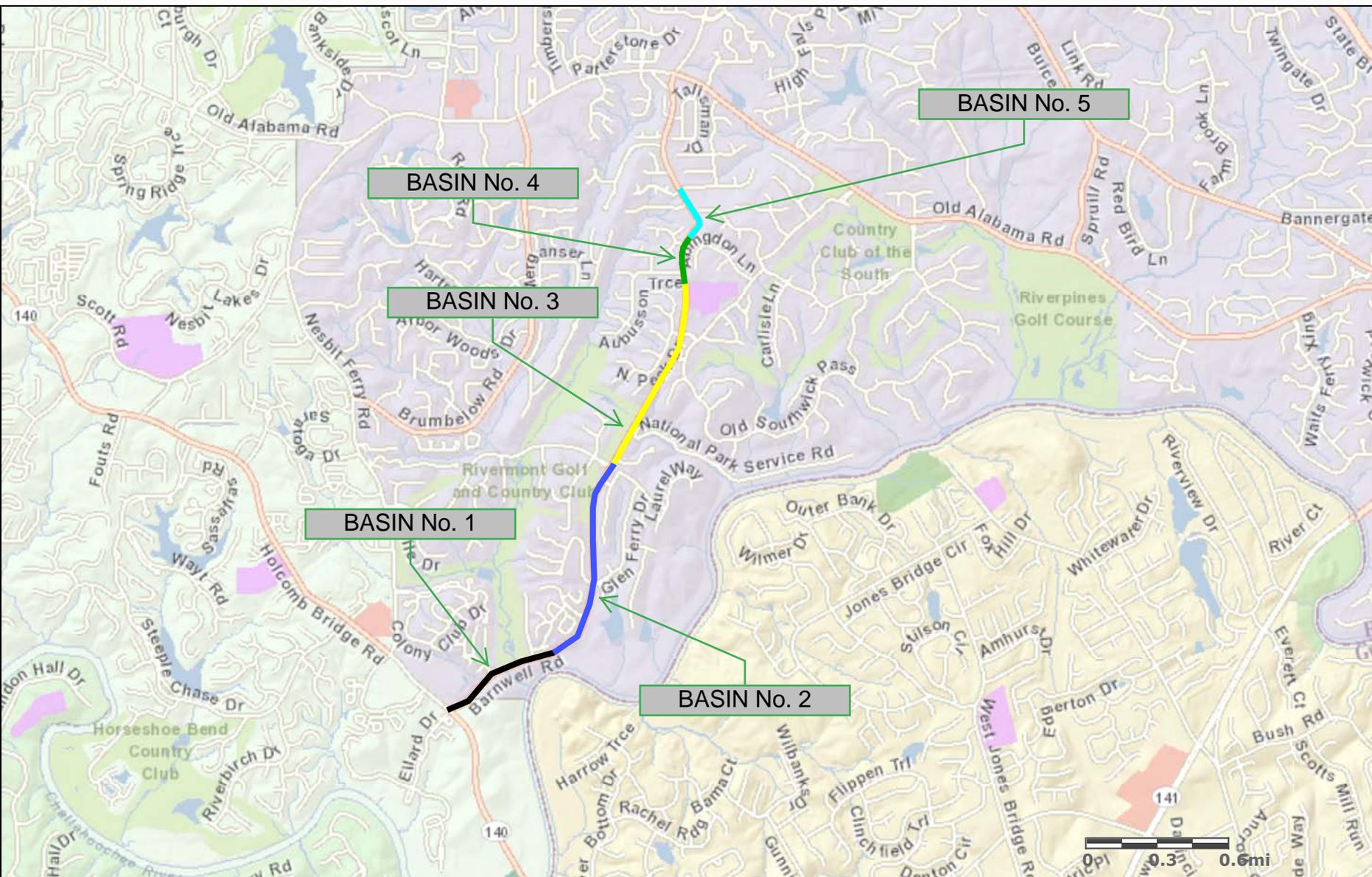
Where Hogan Creek bisects Barnwell Road (Basin 1), we propose to model the Hogan Creek drainage basin using timing of hydrographs. With large drainage basins, the small (with respect to the total basin) increase in impervious area associated with the project will most likely show “no increase” in the peak flow at the Hogan Creek crossing. However, exit velocities must be analyzed so that no adverse impacts to Hogan Creek result from the project improvements.

Generally, storm water ponds provide the most cost effective treatment since they serve the purpose of not only stormwater quantity control but also stormwater quality control. As mentioned earlier, if the existing facilities present within Basin 2 can be modified economically, they will be used. The existing stormwater facilities are within wooded areas and are generally out of sight from the neighbors and the traveling public. The corridor has a “residential” feel to it and it is our opinion construction of new stormwater ponds will not fit in with the surrounding landscape and will not be well received by the citizens of Johns Creek.

At the Barnwell Road low point in Basin 3, a cross drain is present and is located at the headwaters of a tributary to the Chattahoochee River. In addition, a separate tributary is present on the east side of Barnwell Road that runs parallel to the roadway from the north. The two tributaries combine approximately 200-feet downstream of the cross-drain outlet. Since the two tributaries combine on National Park Service property, easement acquisition for a stormwater BMP could delay the project for many months. Alternative solutions, such as the construction of a stormwater BMP on the western side of Barnwell Road should be considered. The existing topography on this side will present a challenge; however, the use of retaining walls could lessen impacts and also keep the project moving and on schedule.

Barnwell Elementary School is located within Basin 4 and the school parcel has open area adjacent to Barnwell Road. Two options should be considered for this basin. Option 1: Consider construction of a stormwater BMP in the open area adjacent to Barnwell Road. This facility could be used by the school as an educational tool to teach young children about the effects of stormwater on the environment. Option 2: Consider obtaining an easement agreement from the Fulton County School system to accept the increase in stormwater from the proposed improvements. Stormwater from the roadway will ultimately discharge into the existing stormwater management facility for the school. If there is excess treatment volume available, it could be used. If not, minor modifications to this facility could be incorporated into the Barnwell Road project. It too, could be used for educational purposes.

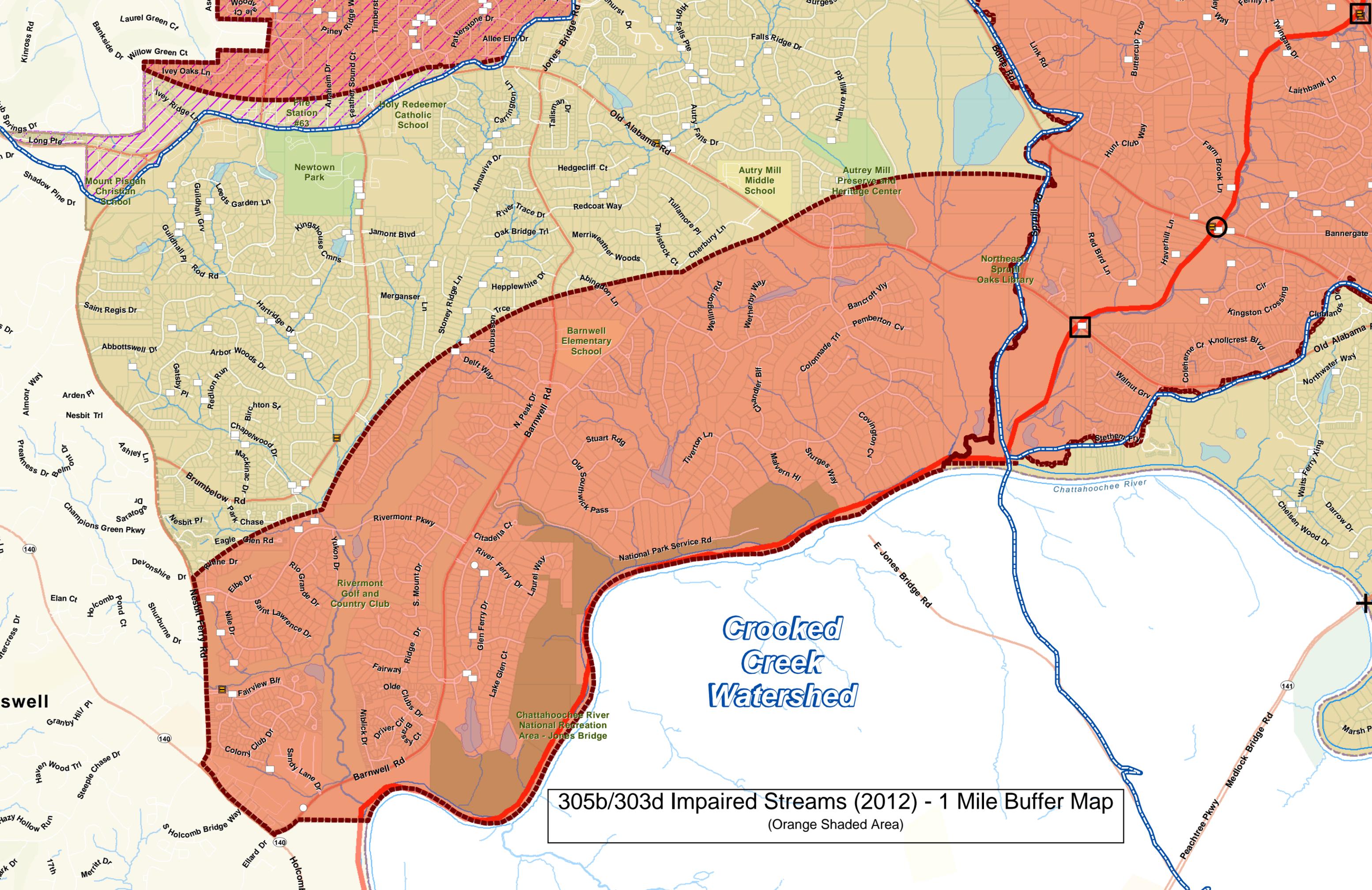
In Basin 5, there are areas that leave the project site as sheet flow, and where sheet flow can be maintained it should be a priority. Analysis of the sheet flow discharge for downstream impacts will be required. If no significant impacts are attributed to the project, then additional treatment will not be required.



*PI 0012880 Barnwell Road MS4 Conceptual Drainage Area Map
 Fulton County, Georgia*

Fulton County provides the data on this map for your personal use "as is". The data are not guaranteed to be accurate, correct, or complete. The feature locations depicted in these maps are approximate and are not necessarily accurate to surveying or engineering standards. Fulton County assumes no responsibility for losses resulting from the use these data, even if Fulton County is advised of the possibility of such losses.





305b/303d Impaired Streams (2012) - 1 Mile Buffer Map
(Orange Shaded Area)

Crooked Creek Watershed

Chattahoochee River National Recreation Area - Jones Bridge

Northeast Spruill Oaks Library

Autrey Mill Preserve and Heritage Center

Newtown Park

Mount Pisgah Christian School

Holy Redeemer Catholic School

Barnwell Elementary School

Rivermont Golf and Country Club

If a delay in paving is reasonably expected by the developer or the city, the base shall be primed with 0.25 gallon of R.C. 70 per square yard the same day it is compacted, and cured for seven days prior to paving.

2. Prime coats may also be required for cement or lime stabilized bases or sub-bases, regardless of pavement thickness.
3. Prime coats shall not be applied to a wet surface, in air temperatures less than 40 degrees F in the shade or if rain is imminent.

c. *Soil cement subgrade.*

1. If the subgrade material (resident soil) is unsatisfactory to the city then a soil cement mix design with engineer test results acceptable to the city may be used. The design must come from a geo-technical firm with the results certified by a professional engineer registered in the State of Georgia. The tests required for the design are ASTM D558 or AASHTO T134 or ASTM D559 and/or 560 or ASHTO T135 and 136.
2. The minimum base course shall consist of at least six inches of suitable soil (high mica content not suitable) stabilized with ten percent of Portland cement by volume (approximately 42.3 pounds per sq. yd.). Where the grade of the street is five percent or greater, a single surface treatment course must be applied before the binder.

(3) **Paving standards for all streets.**

a. *Asphalt streets.*

1. Asphalt paving installation shall be in accordance with GDOT specifications and these regulations. Asphalt paving shall not be installed directly on the subgrade. A graded aggregate base shall be installed in accordance with these and GDOT specifications for all asphalt paving sections.
2. All pavement sections shall be designed by a qualified, registered professional engineer based on the 20-year projected traffic loads for that section. The minimum acceptable pavement sections shall be defined as follows:

Table 11.9-1

Minimum Construction Standards⁽¹⁾

Street Classification	Base	Binder	Topping 9.5 mm-Type II or 12.5 mm
Principal and minor arterials	12" GAB	6" ⁽²⁾	1½"
Collectors	12" GAB	6" ⁽²⁾	1½"
Nonresidential local	8" GAB	3" 19mm	1½"
Residential local and alleys	8" GAB	1½" 19 mm	1½"

Notes:

1. Unless otherwise specified by the public works department or GDOT.
2. **Binder course shall consist of four inches 25 mm Superpave base and two inches of 19 mm Superpave binder.**

- b. *Concrete streets.* On residential streets five inches of 3500 psi concrete is to be applied on a stabilized and compacted sub-grade with six inches of compacted GAB, or seven inches of compacted GAB on all other streets. The design and construction of the street shall comply with GDOT standards. Use of concrete streets requires the approval of the public works director.
 - c. *Pavement overlays.* Where pavement overlays are required they shall comply with the following standards:
 - 1. Finished surface shall be a maximum height of 1.5 inches above the edge of the existing curb and gutter or shoulder, where curb and gutter has not been provided. Edge grinding shall be required in accordance with this section to meet this standard.
 - 2. When edge grinding has been required it shall be performed for a minimum distance of seven feet along the edges/sides and ten feet at the ends of all overlay sections. Edge grinding shall be performed to a minimum depth of one inch \pm 0.25 inch.
 - 3. At the direction of the city inspectors all base failures, rutting, cracking and potholes etc. within the area of the overlay section shall be repaired in accordance with GDOT standards prior to resurfacing.
 - 4. A tack coat shall be applied to all surfaces to be overlaid, in accordance with GDOT standards.
- (4) *Local residential-rural streets.* Where allowed local residential-rural streets do not require curb and gutter. The road base shall be extended one foot beyond the edge of pavement, and the shoulders shall extend eight feet from the edge of pavement to a standard ditch section on each side (see standard drawings). Otherwise, the roadway shall comply with the standards for new residential subdivision streets, above.

(Ord. No. 2009-06-18, (11.9), 6-29-2009)

Sec. 113-130. Curb and gutter.

- (1) *General requirements.*
 - a. *Curb and gutter required.* All new streets and access improvements shall be provided with curb and gutter except where approved for a rural road section by the department of public works. All areas approved for use of the rural road section shall provide appropriate roadside drainage facilities designed in accordance with the Georgia Stormwater Management Manual as adopted by the city. All gutters shall drain smoothly with no areas of ponding.
 - b. *Alternative curb and gutter design.* Alternative curbing designs such as rolled back or vertical curbing without a gutter may be approved by the public works director when such designs are deemed appropriate for the type of development proposed.
- (2) **Local and collector road curbing.** Local and collector road curbing shall meet the following requirements:
 - a. Concrete shall be class "A" (as defined by GDOT) and have a minimum strength of 3,000 PSI at 28 days.
 - b. **Typical minimum section shall be 6" x 24" X 12"(GDOT 24-inch type II).**
 - c. Vertical curbing only, except where specific approval has been granted by the public works director for an alternate curb design.
- (3) *Arterial curbing.* Arterial curbing shall meet the following requirements:



MEETING MINUTES

Project: Barnwell Road PI 0012880 Enhanced Sidewalk and Intersection Improvements SR 140 to Redcoat Way City of Johns Creek, Georgia	Job No.: 13-054A	Date: 05/07/14
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To: Mr. Chris Haggard, P.E. City of Johns Creek
Project Manager

From: James (Jimmy) C. Garrison, III, P.E. Development Planning & Engineering, Inc. (DPE)
Project Manager

Subject: *Project Kick-Off and Initial Concept Team Meeting*

Attending: Mr. Chris Haggard, P.E. City of Johns Creek
Ms. Cindy Jenkins, P.E. City of Johns Creek
Mr. Tom Black City of Johns Creek
Ms. Elaine Armster Georgia Department of Transportation (GDOT)
Ms. Heather Perrin Edwards-Pitman Environmental, Inc. (EPEI)
Mr. Rob Jacquette, P.E., PTOE Wolverton & Associates, Inc. (Wolverton)
Mr. Jimmy Garrison, P.E. DPE

No. of Pages: 10 (including this page)

A Project Kick-Off and an Initial Concept Team Meeting was held on May 7, 2014 in the GDOT 4th Floor Conference Room (405). The following items were discussed:

- I. INTRODUCTION
 - a. Participants introduced themselves.
 - b. A Meeting Agenda and an Anticipated Project Schedule was provided to all participants.
- II. PROJECT REVIEW
 - a. The description of the project was presented by Mr. Garrison and Mr. Haggard.
 - b. The current and future scope of work was outlined. The current scope of work is to obtain approval of a Concept Report for the project corridor. This will allow the City to apply for funding of individual or multiple projects within the corridor.
 - c. Future scope of work will include preparation and approval of a NEPA Categorical Exclusion, completion of Special Studies not required for Concept Report approval (see Item V), completion of the survey database, and development and approval of final construction and right-of-way plans.
 - d. The proposed typical section was presented (a copy is provided at the end of this document).
 - Bike Lanes along Barnwell Road from just north of Holcomb Bridge Road to just south of Jones Bridge Road;



- 8 to 10-foot Enhanced Sidewalk along the western side of Barnwell Road from Holcomb Bridge Road to North Peak Drive;
- 8 to 10-foot Enhanced Sidewalk along the eastern side of Barnwell Road from Barnwell Elementary School to Red Coat Way;
- Review the use of a HAWK crossing at Barnwell Elementary School;
- Review the feasibility of a pedestrian bridge crossing at Hogan Creek;
- Review the feasibility of bike and pedestrian lanes within the existing roadway section for Rivermont Parkway from Barnwell Road to the Rivermont community pool.
- Review the feasibility of future pedestrian connectivity from the Rivermont community pool to Brumbelow Road.

III. CONCEPT REPORT

- a. Anticipate “Limited Scope” Concept Report since a Categorical Exclusion is anticipated. Ms. Armster agreed that this project meets the Limited Scope criteria.
- b. The Concept Report is the deliverable for the scoping phase of the project.

IV. PUBLIC INVOLVEMENT

- a. Meetings are planned with Neighborhood Groups and Stakeholders.
- b. A PIOH will be scheduled in the future.
- c. GDOT requests an invitation to all public meetings.

V. ENVIRONMENTAL DOCUMENT

- a. NEPA Categorical Exclusion (CE) is anticipated. GDOT concurred with this approach.
- b. An environmental screening will be performed for the project corridor. Information will be collected as necessary for Concept Report approval.
- c. The following Special Studies will be prepared and submitted to GDOT for review and approval:
 - Historical Resources Survey; and,
 - Ecological Resources Survey, including aquatic survey, threatened and endangered species, and protected bat survey (if required).
- d. An Archaeological Background Investigation and Summary will be provided.
- e. Future work will include a CE for entire project corridor.

VI. TRAFFIC ANALYSIS

- a. Provide traffic count and volume projections for the following major intersections:
 - Barnwell Road at Holcomb Bridge Road;
 - Barnwell Road at River Ferry Drive/Rivermont Parkway/Citadella Court; and,
 - Barnwell Road at Jones Bridge Road.
- b. Provide existing and design traffic capacity analysis of the corridor and the following intersections:
 - Barnwell Road at Holcomb Bridge Road;

- Barnwell Road at Sandy Creek Lane;
 - Barnwell Road at Niblick Drive;
 - Barnwell Road at Olde Clubs Drive;
 - Barnwell Road at Glen Ferry Drive;
 - Barnwell Road at River Ferry Drive/Rivermont Parkway/Citadella Court;
 - Barnwell Road at Old Southwick Pass;
 - Barnwell Road at North Peak Drive;
 - Barnwell Road at Barnwell Elementary School;
 - Barnwell Road at Aubusson Trace;
 - Barnwell Road at Jacobean Entry; and,
 - Barnwell Road at Jones Bridge Road.
- c. For the intersections listed above, determine the feasibility for a roundabout.
 - d. Determine the feasibility for a roundabout, traditional left turn lane and/or HAWK Crossing at Barnwell Elementary School.
 - e. Provide future alternatives traffic analysis for (1) No Build; (2) Build Alternative – address sight distance issues and provide for left turn lanes; and (3) Build Alternative – address sight distance issues and provide for left turn lanes with alternative intersection treatments (i.e. roundabouts, bypass lanes, etc.).
 - f. Identify and incorporate ITS improvements that connect with the Johns Creek and Roswell systems.
 - g. Coordinate findings with GDOT.

VII. STORM DRAINAGE AND MS4

- a. There are existing storm water management facilities within the project corridor and anticipated construction limits. These facilities will be utilized to the extent practical.
- b. MS4 design will follow the City of Johns Creek regulations (facilities are City streets).
- c. The addition of longitudinal storm drainage pipe is anticipated during the design phases of this project.

VIII. SURVEY/UTILITIES

- a. Conceptual designs provided for this phase of the project (Concept Report approval) will utilize the City of Johns Creek G.I.S. database.
- b. Utilities will be determined from existing utility records and field observations.
- c. Future phases of work will include a full survey database.

IX. ANTICIPATED PROJECT SCHEDULE

- a. An Anticipated Project Schedule was presented and major milestones were briefly reviewed. A copy is attached to this document.



X. AGENCY COORDINATION/COMMUNICATION

- a. Coordinate submittals with Ms. Armster. The City will review prior to submission to GDOT.
- b. Monthly status reports outlining project progress will be provided to Ms. Armster.
- c. Future meeting dates will be determined as the Concept Report development progresses.

The meeting was adjourned at approximately 2:50 p.m.

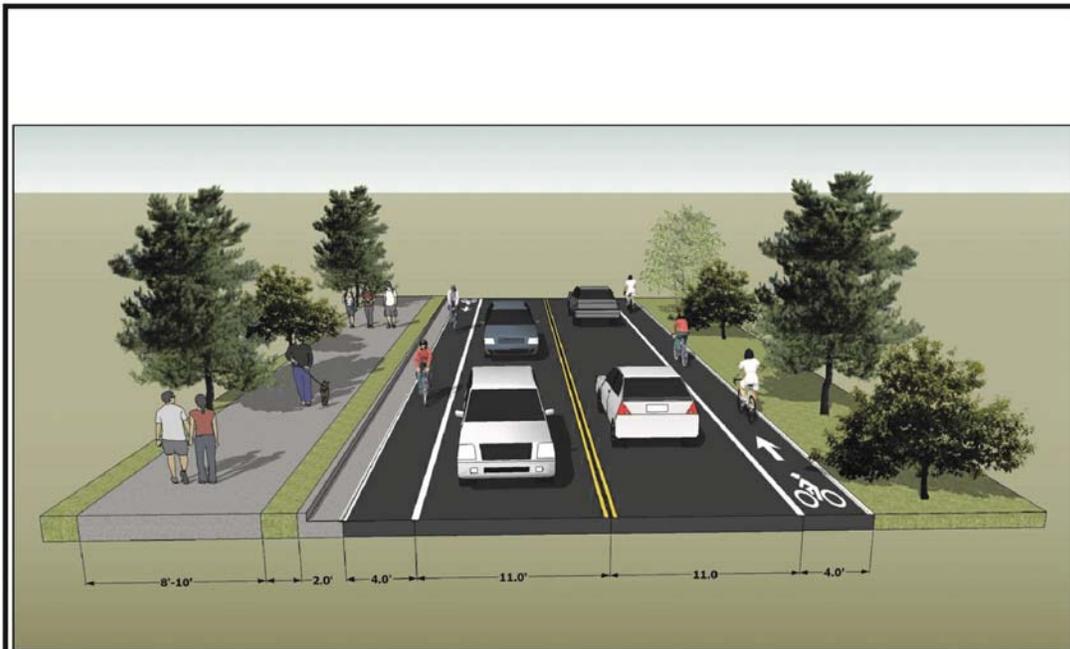
This memorandum represents our understanding of this meeting. Should there be any corrections, please notify us immediately.

Distribution:

Participants via e-mail

File

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BARNWELL ROAD
 HOLCOMB BRIDGE ROAD TO BARNWELL ELEMENTARY SCHOOL



BARNWELL ROAD
 BARNWELL ELEMENTARY SCHOOL TO JONES BRIDGE ROAD



5074 BRISTOL INDUSTRIAL WAY
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 BUFORD, GEORGIA 30518
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CITY OF JOHNS CREEK, GEORGIA

BARNWELL ROAD ENHANCED SIDEWALK
 AND INTERSECTION IMPROVEMENTS
 TYPICAL SECTIONS





ID	Task Name	Duration	Start	Finish	Predecessors	% Complete	2014											
							pr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
							4/13	5/11	6/8	7/6	8/3	8/31	9/28	10/26	11/23	12/21	1/18	2/15
1	PROJECT MILESTONES	186 days	Wed 5/7/14	Wed 1/21/15			0%											
2	<i>NTP</i>	0 days	Wed 5/7/14	Wed 5/7/14	20	0%	5/7											
3	<i>Kick-Off and Initial Concept Team Meeting</i>	0 days	Wed 5/7/14	Wed 5/7/14	20	0%	5/7											
4	<i>Traffic Diagram Approval</i>	0 days	Tue 8/5/14	Tue 8/5/14	47	0%	8/5											
5	<i>Traffic Study Approval</i>	0 days	Tue 10/14/14	Tue 10/14/14	43	0%	10/14											
6	<i>PIOH</i>	0 days	Tue 10/28/14	Tue 10/28/14	17	0%	10/28											
7	<i>Special Studies Approval</i>	0 days	Tue 10/21/14	Tue 10/21/14	95	0%	10/21											
8	<i>Concept Report Approval</i>	0 days	Wed 1/21/15	Wed 1/21/15	67	0%	1/21											
9	QA/QC	186 days	Wed 5/7/14	Wed 1/21/15		0%	0%											
10	Start	0 days	Wed 5/7/14	Wed 5/7/14	20	0%	5/7											
11	End	0 days	Wed 1/21/15	Wed 1/21/15	18,89	0%	1/21											
12	NTP	0 days	Wed 5/7/14	Wed 5/7/14			5/7											
13	<i>Notice to Proceed</i>	0 days	Wed 5/7/14	Wed 5/7/14		0%	5/7											
14	PHASE 0 - PUBLIC INVOLVEMENT	130 days	Wed 5/7/14	Tue 11/4/14		0%	0%											
15	<i>Community Engagement</i>	130 days	Wed 5/7/14	Tue 11/4/14		0%	0%											
16	<i>Community Engagement Meetings</i>	130 days	Wed 5/7/14	Tue 11/4/14	12	0%	5/7											
17	<i>PIOH</i>	0 days	Tue 10/28/14	Tue 10/28/14	69	0%	10/28											
18	PHASE 1 - CONCEPT	186 days	Wed 5/7/14	Wed 1/21/15		0%	0%											
19	<i>Kick-Off and Initial Concept Team Meeting</i>	11 days	Wed 5/7/14	Wed 5/21/14		0%	0%											
20	<i>Kick-Off and Initial Concept Team Meeting</i>	0 days	Wed 5/7/14	Wed 5/7/14	12	0%	5/7											
21	<i>Prepare and Distribute Minutes</i>	2 wks	Wed 5/7/14	Tue 5/20/14		0%	5/7											
22	<i>Submit</i>	1 day	Wed 5/21/14	Wed 5/21/14	21	0%	5/21											
23	Data Gathering	20 days	Wed 5/7/14	Tue 6/3/14		0%	0%											
24	<i>Review Client Provided Data</i>	1 wk	Wed 5/7/14	Tue 5/13/14	12	0%	5/7											
25	<i>Field Inspection</i>	1 wk	Wed 5/14/14	Tue 5/20/14	24	0%	5/14											

Task Milestone Project Summary External Milestone Progress
 Split Summary External Tasks Deadline Critical

BARNWELL STAKEHOLDER MEETING MINUTES

River Glen Subdivision

Meeting held 6/26/14 (5 PM)

Summary:

- Meeting was held with Chris Haggard, City of Johns Creek, Jimmy Garrison, DPE and 5 to 6 HOA members
- Meeting started with Chris introducing the project study area, intent of the project and a timeline for the project.
- Residents supported the project and wanted to understand how they would access the trail. Chris explained that roundabouts were being considered to help slow traffic on Barnwell Road and as a way to provide cross walks to the proposed trail on the west side of Barnwell Road.
- Residents were concerned about the illegal left turns from Barnwell Road into the Kroger. Chris indicated that this project has a concept to help block this movement and the signage would be evaluated in the short term to help the problem.
- Residents asked why the City constructed a boardwalk at Barnwell Road and Jones Bridge Road. Chris explained it was to reduce impacts to the existing oak trees on that side of the roadway.

Rivermont

Meeting held 7/21/14 (6 PM)

- Meeting was held with Chris Haggard, City of Johns Creek, Jimmy Garrison, DPE and 7 to 8 HOA members
- Meeting started with Chris introducing the project study area, intent of the project and a timeline for the project.
- Residents supported the project and wanted to understand impacts to their properties. Chris explained that some easement would be required, but that would be determined during the engineering process.
- Residents requested fencing similar to the previous projects. Chris stated addition of fencing would be handled during right of way negotiations if a property was impacted.
- Residents were concerned about newly landscaped median and entrance sign being impacted with potential roundabout. Chris explained that this would be evaluated during design and impacts would be avoided if possible.
- Chris pointed out a potential connection of the trail to Brumbelow Road and the residents supported this and said Rivermont owned some of the property in this area which could help the process.
- Residents asked why the City constructed a boardwalk at Barnwell Road and Jones Bridge Road. Chris explained it was to reduce impacts to the existing oak trees on that side of the roadway.
- One HOA member noted that she feels traffic is a higher priority than the trail project but she likes the trail idea.
- Rivermont HOA has a monthly newsletter for 900+ homes and a website for residents (for communication purposes).

Country Club of the South

Meeting held 8/12/14 (9 AM)

- Meeting was held with Chris Haggard, City of Johns Creek, Jimmy Garrison, DPE, Manuel Rogers, Facility Manager and 2 HOA members
- Meeting started with Chris introducing the project study area, intent of the project and a timeline for the project.
- Residents started by asking how this project would impact the existing fence. They are planning a landscaping project and did not want to invest money if this area would be impacted. Chris explained that the concept design could call for an additional 12' of pavement for a turn lane, but this would be evaluated further during design and once survey was received for the existing conditions.
- Residents also mentioned the existing fence was being undermined due to erosion and we walked out to the fence to investigate. The erosion is apparent, but the cause is not. Drainage appears to be flowing to the other side of the road, so this erosion has happened over a long period of time.
- Residents asked why the City constructed a boardwalk at Barnwell Road and Jones Bridge Road. Chris explained it was to reduce impacts to the existing oak trees on that side of the roadway.
- During one-on-one discussions, it was one HOA member's opinion that a sidewalk connecting Old Southwick Pass to Barnwell Elementary School would be supported by the neighborhood.
- Currently vendor traffic is a concern at the CCOS Service Driveway. Many times traffic is stalled on Barnwell Road due to the volume of vendors accessing the property. The HOA obtained bids for adding a third lane to the driveway; however, it was determined to be too costly. One suggestion offered for the HOA to consider was allowing "Entrance Only" traffic during the peak hours and route exiting traffic (minor) to the Old Southwick Pass location. This would give the vendors double the current storage and possibly mitigate vendor traffic backup on Barnwell Road.

River Ridge

Meeting held 8/18/14 (6 PM)

- Meeting was held with Chris Haggard, City of Johns Creek, Jimmy Garrison, DPE and 5 to 6 HOA members
- Meeting started with Chris introducing the project study area, intent of the project and a timeline for the project.
- Residents were concerned about the illegal left turns from Barnwell Road into the Kroger. Chris indicated that this project has a concept to help block this movement and the signage would be evaluated in the short term to help the problem.
- Residents asked about a number of drainage maintenance problems which included closed drainage as well as ponds adjacent to Barnwell Road. Chris indicated that these drainage concerns would be evaluated during the design phase of the project.
- Residents asked why the City constructed a boardwalk at Barnwell Road and Jones Bridge Road. Chris explained it was to reduce impacts to the existing oak trees on that side of the roadway.



CONCEPT TEAM MEETING MINUTES

Project: Barnwell Road PI 0012880 Enhanced Sidewalk and Intersection Improvements SR 140/Holcomb Bridge Road to Redcoat Way City of Johns Creek, Georgia	Job No.: 13-054A	Date: 10/02/14
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To: Mr. Chris Haggard, P.E. City of Johns Creek
Project Manager

From: James (Jimmy) C. Garrison, III, P.E. Development Planning & Engineering, Inc. (DPE)
Project Manager

Subject: *Concept Team Meeting Minutes*

Attending:

Mr. Chris Haggard, P.E.	City of Johns Creek
Ms. Cindy Jenkins, P.E.	City of Johns Creek
Ms. Elaine Armster	Georgia Department of Transportation (GDOT)
Ms. Kimberly Nesbitt	GDOT
Ms. Katelyn DiGioia	GDOT
Mr. Bobby Dollar	GDOT
Mr. Ryan Perry	GDOT
Mr. Scott Lee	GDOT
Mr. Mike Lobdell	GDOT
Ms. Jill Brown	Edwards-Pitman Environmental, Inc. (EPEI)
Mr. Rob Jacquette, P.E., PTOE	Wolverton & Associates, Inc. (Wolverton)
Mr. Jimmy Garrison, P.E.	DPE

No. of Pages: 4 (including this page)

A Concept Team Meeting was held on October 2, 2014 at 10:00 a.m. in GDOT’s District 7 Conference Room (144). The following items were discussed:

- I. INTRODUCTION
 - a. Participants introduced themselves.
 - b. A Meeting Agenda was provided to all participants. A roll plot of the Preferred Alternative and 2 copies of the Concept Report were provided for participant use.

- II. PROJECT REVIEW
 - a. The description of the project was presented by Mr. Garrison.
 - b. The project is a scoping phase using TAP Grant funds.
 - c. The Barnwell Road at Jones Bridge Road intersection improvement project and the pedestrian bridge at Hogan Creek are two projects that are currently underway by the City of Johns Creek.



- d. The current and future scope of work was outlined. The current scope of work is to obtain approval of a Concept Report for the project corridor. This will allow the City to apply for funding of individual or multiple projects within the corridor.
- e. Once funded, a Revised Concept Report will be prepared for each individual project.
- f. The Future scope of work will include preparation and approval of a NEPA Categorical Exclusion, completion of Special Studies, completion of the survey database, and development and approval of final construction and right-of-way plans.
- g. The City of Johns Creek provided additional detail how this project offers the potential to expand the trail system through the Cities of Roswell, Sandy Springs, Peachtree Corners and Gwinnett County. It also offers connectivity to Newtown Park within the City of Johns Creek, Garrard Landing Park within the City of Roswell, and Holcomb Bridge Park in Gwinnett County.
- h. The proposed typical section was discussed with color copies provided in the Concept Report.
 - 4-foot Bike Lanes along Barnwell Road from just north of Holcomb Bridge Road to just south of Jones Bridge Road;
 1. GDOT stated the need to evaluate for additional separation and shoulder paving where existing guardrail is present.
 - 10-foot Enhanced Sidewalk with 2-foot grass strip along the western side of Barnwell Road from SR 140/Holcomb Bridge Road to North Peak Drive;
 - 10-foot Enhanced Sidewalk with 2-foot grass strip along the eastern side of Barnwell Road from Barnwell Elementary School to Redcoat Way;
 - A HAWK crossing is under evaluation by the City at Barnwell Elementary School and possibly at the Chattahoochee River National Recreation Area driveway;
 - Determine the most cost effective solution for the crossing at Hogan Creek (pedestrian bridge crossing, bridge widening, or both);
 - Provide 6-foot bike and 6-foot pedestrian lanes within the existing roadway section for Rivermont Parkway from Barnwell Road to the Rivermont community pool.
 1. GDOT suggested a 10-foot combined bike and pedestrian lane with a 2-foot buffer adjacent to the travel lane.
 2. GDOT also suggested a minimum 6.5-foot bike lane if using for two-way bike traffic.
 3. GDOT asked if the City has an ordinance prohibiting golf cart use of the enhanced sidewalk. The City stated there is no ordinance to allow or deny golf cart use.
 - Provide future pedestrian connectivity from the Rivermont community pool to Brumbelow Road using an enhanced sidewalk and boardwalk.

III. CONCEPT REPORT

- a. Provided a brief review of the Concept Report and its contents.
- b. The proposed project estimate is \$10.5 Million. Cost estimate breakdowns (GDOT CES format and a summary table) for individual project locations are also provided in the Concept Report.
- c. A 5 percent contingency was applied to each cost estimate per current GDOT policy.
- d. The Concept Report is the deliverable for the scoping phase of the project.
- e. Schedule is to deliver an approved Concept Report in December 2014.



1. GDOT requests a list of the intersection improvements in the Project Description and under Roundabouts.
2. GDOT requests discussion of bike lanes under Complete Streets.
3. Environmentally Sensitive Areas will be added to the Preferred Alternative Concept Plan and on the Individual Project Location Drawings in the Concept Report.

IV. PUBLIC INVOLVEMENT

- a. Discussed meetings held with Neighborhood Groups and Stakeholders. Copies of Meeting Minutes are included in the Appendices of the Concept Report.
- b. A PIOH will be scheduled in the next 30 to 60 days.

V. ENVIRONMENTAL DOCUMENT

- a. NEPA Categorical Exclusion (CE) is anticipated.
 1. The City stated that an environmental re-evaluation will be completed for each individual project as it is funded.
- b. An environmental screening was performed for the project corridor.
- c. The following Special Studies were prepared and submitted to GDOT for review and approval:
 - Historical Resources Survey; and,
 - Ecological Resources Survey, including aquatic survey, and threatened and endangered species.
 1. GDOT stated that there could be protected crawfish species at the cross-drain just north of the Chattahoochee River National Recreation Area driveway.
- d. An Archaeological Background Investigation and Summary was prepared.
- e. Future work will include a CE for entire project corridor.

VI. TRAFFIC ANALYSIS

- a. Traffic counts and volume projections were approved by GDOT and provided for the following major intersections:
 - Barnwell Road at SR 140/Holcomb Bridge Road;
 - Barnwell Road at River Ferry Drive/Rivermont Parkway/Citadella Court; and,
 - Barnwell Road at Jones Bridge Road.
- b. Existing and design traffic capacity analyses was provided for the corridor and the following intersections:
 - Barnwell Road at SR 140/Holcomb Bridge Road;
 - Barnwell Road at Sandy Creek Lane;
 - Barnwell Road at Niblick Drive;
 - Barnwell Road at Olde Clubs Drive;
 - Barnwell Road at Glen Ferry Drive;
 - Barnwell Road at River Ferry Drive/Rivermont Parkway/Citadella Court;
 - Barnwell Road at Old Southwick Pass;



- Barnwell Road at North Peak Drive;
 - Barnwell Road at Barnwell Elementary School;
 - Barnwell Road at Aubusson Trace;
 - Barnwell Road at Jacobean Entry; and,
 - Barnwell Road at Jones Bridge Road.
- c. For the intersections listed above, the feasibility for a roundabout was prepared using GDOT's Roundabout Analysis Tool. GDOT's Roundabout Analysis Tool results are presented in the Concept Report.

VII. STORM DRAINAGE AND MS4

- a. There are existing storm water management facilities within the project corridor and anticipated construction limits. These facilities will be utilized to the extent practical.
- b. MS4 design will follow the City of Johns Creek regulations (facilities are City streets).
- c. The addition of longitudinal storm drainage pipe is anticipated during the design phases of each individual project.
- d. A Conceptual Level Hydrology Study for a MS4 Permit is included in the Concept Report.

VIII. SURVEY/UTILITIES

- a. Utility Owners were provided by the City of Johns Creek.
- b. Future phases of work will include a full survey database.

IX. PROJECT SCHEDULE

- a. A copy of the Project Schedule is included in the Concept Report.

X. ACTION ITEM SUMMARY

- a. Address review comments from the Concept Team Meeting and resubmit the Concept Report for final review.

XI. MEETING CLOSEOUT

Distribution:

Project Team
Participants via e-mail
File

g:\documents\13\13054a\concept report\concept team meeting\pi0012880 barnwell road concept team meeting minutes 100214.docx

Keith Golden, P.E., Commissioner



GEORGIA DEPARTMENT OF TRANSPORTATION

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

March 6, 2014

RECEIVED

MAR 12 2014

CITY OF JOHNS CREEK
PUBLIC WORKS DEPT.

Mr. Tom Black, Director
City of Johns Creek Public Works
12000 Findley Rd, Suite 400
Johns Creek, GA 30097-1412

Dear Mr. Black:

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

Fulton County, PI# 0012880

We look forward to working with you on the successful completion of the joint project.
Should you have any questions, please contact the Project Manager Xavier James at (404) 631-1583.

Sincerely,

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

Angela Robinson,
Financial Management Administrator

AR:kp

Enclosure

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

AGREEMENT
BETWEEN
DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
AND
THE CITY OF JOHNS CREEK
FOR
TRANSPORTATION FACILITY IMPROVEMENTS

This Framework Agreement is made and entered into this 4th day of March, 2014 by and between the DEPARTMENT OF TRANSPORTATION, an agency of the State of Georgia, hereinafter called the "DEPARTMENT", and the **CITY OF JOHNS CREEK**, acting by and through its Mayor and City Council, hereinafter called the "LOCAL GOVERNMENT".

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

14. The LOCAL GOVERNMENT shall be responsible for acquiring a Value Engineering Consultant for the DEPARTMENT to conduct a Value Engineering Study if the total estimated PROJECT cost is \$50 million or more. The Value Engineering Study cost is considered a PE cost. The LOCAL GOVERNMENT shall provide project related design data and plans to be evaluated in the study along with appropriate staff to present and answer questions about the PROJECT to the study team. The LOCAL GOVERNMENT shall provide responses to the study recommendations indicating whether they will be implemented or not. If not, a valid response for not implementing

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

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

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

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

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

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

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

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

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

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

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

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

Revised: 12/2011

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

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

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

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

DEPARTMENT OF TRANSPORTATION

CITY OF JOHNS CREEK

BY: [Signature]
Commissioner

BY: [Signature]
Mike Bodker
Mayor

ATTEST:
[Signature]
Treasurer



Signed, sealed and delivered this 5th day of February, 2014 in the presence of:

[Signature]
Witness



This Agreement approved by the City of Johns Creek, the 27th day of January, 2014.

Attest
[Signature]
Joanie Jones, City Clerk



FEIN: 11-3793525

Attach "Project Manager" Project Charging Form for Approval

Preliminary Engineering Phase I		Preliminary Engineering - Phase I ¹				GDOT Oversight for PE (Phase I) ²				Preliminary Engineering Grand Total (Phase I)	
Percentage	PE Amount	Maximum PE Participation Amount (\$)	Participant	PE Activity Sponsor	Percentage	Amount	Participant	Percentage	Amount		
80%	\$200,000.00	\$200,000.00	Federal	Local Government	#DIV/0!	\$0.00	Federal	80%	\$200,000.00		
0%	\$0.00	\$0.00	State		#DIV/0!	\$0.00	State	0%	\$0.00		
20%	\$50,000.00	N/A	Local		0%	\$0.00	Local	20%	\$50,000.00		
0%	\$0.00	\$0.00	Other		#DIV/0!	\$0.00	Other	0%	\$0.00		
100%	\$250,000.00				#DIV/0!	\$0.00		100%	\$250,000.00		
Total											

Right of Way Phase II		Right of Way - Phase II ¹				Acquisition Funding By:	
Percentage	ROW Amount	Maximum ROW Participation Amount (\$)	Participant	Acquisition By:	Percentage	Amount	Participant
#DIV/0!	\$0.00	\$0.00	Federal	Local Government	#DIV/0!	\$0.00	Federal
#DIV/0!	\$0.00	\$0.00	State		#DIV/0!	\$0.00	State
#DIV/0!	\$0.00	N/A	Local		0%	\$0.00	Local
#DIV/0!	\$0.00	\$0.00	Other		#DIV/0!	\$0.00	Other
Total	\$0.00						

Construction Phase III		Construction - Phase III ¹				GDOT Oversight for CST (Phase III) ²	
Percentage	CST Amount	Maximum CST Participation Amount (\$)	Participant	Letting By:	Percentage	Amount	Participant
#DIV/0!	\$0.00	\$0.00	Federal	Local Govt	#DIV/0!	\$0.00	Federal
#DIV/0!	\$0.00	\$0.00	State		#DIV/0!	\$0.00	State
#DIV/0!	\$0.00	N/A	Local		0%	\$0.00	Local
#DIV/0!	\$0.00	\$0.00	Other		#DIV/0!	\$0.00	Other
Total	\$0.00						

Summary of Phases I Through III		Grand Total - All Phases I through III			
Percentage	TOTAL Amount	Maximum Participation Amount (\$)	Participant	Percentage	Amount
80%	\$200,000.00	\$200,000.00	Federal	80%	\$200,000.00
0%	\$0.00	\$0.00	State	0%	\$0.00
20%	\$50,000.00	N/A	Local	20%	\$50,000.00
0%	\$0.00	\$0.00	Other	0%	\$0.00
Total	\$250,000.00			100%	\$250,000.00

Utility Relocation - Phase IV	
Utility Funding By:	Local Government
Percentage	100%
Railroad Funding By:	Local Government
Percentage	100%

Construction Oversight	
Testing (Phase V) Funding By:	Local Government
Percentage	100%
Inspection (Phase VI) Funding By:	Local Government
Percentage	100%

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

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

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

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

ATTACHMENT "B" Project Timeline

PI # 0012880 – City of Johns Creek

Proposed Project Timeline

Environmental Phase			
Concept Phase			
Preliminary Plan Phase			
Right of Way Phase			
Deadlines for Responsible Parties Agreement	Execute	Approve Concept	Authorize Right of Way funds
Agreement	(Approve Concept)	Document	(Authorize Const. funds)
Parties	Month/Year	Month/Year	Month/Year
	<i>April/2014</i>	<i>October/2014</i>	<i>TBD</i>
		<i>TBD</i>	<i>TBD</i>

Annual Reporting Requirements

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

ATTACHMENT "C"

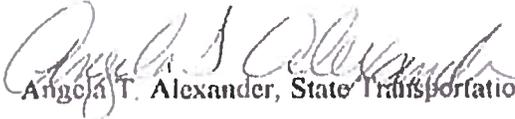
Subject # 0012880 City of Johns Creek

D.O.T. 66

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

FILE OFFICE Planning
DATE September 17, 2010

FROM 
Angela T. Alexander, State Transportation Planning Administrator

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

SUBJECT Preliminary Engineering Oversight for Project Managers/Project Delivery Staff

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

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

GDOT Funds PE Oversight with Federal-Aid:

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

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

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

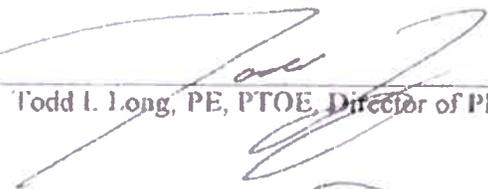
GDOT Requests Local Government/Project Sponsor to Fund PE Oversight:

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

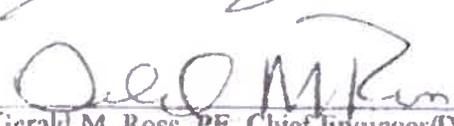
- 1) A subsequent phase of the project is not programmed within the first 4 active years of the Currently approved TIP/STIP
- 2) The MPO has elected to not approve the use of L200 or L230 funds for GDOT's PE oversight expenses
- 3) The project is funded with CMAQ funds
- 4) The project is funded with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

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

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

Approved:  _____ Date 9/27/10

Todd I. Long, PE, PTOE, Director of Planning

Approved:  _____ Date 10/7/20

Gerald M. Ross, PE, Chief Engineer/Deputy Commissioner

ATTACHMENT "D"
GDOT Oversight Estimate for Locally Administered Project

Thursday, November 07, 2013 7:15 AM

PI Number	<input type="text" value="0012880"/>	Project Number	<input type="text"/>
County	<input type="text" value="Fulton"/>	Project Length	<input type="text" value="2.24"/> Miles
Project Manager	<input type="text" value="James. Xavier"/>	Project Cost	<input type="text" value="\$250,000"/>
Project Type	<input type="text" value="Enhancement"/>		
Project Description	<input type="text" value="CS 107/Barnwell Road from SR 140 to North of CS 2523/North Peak Drive"/>		
Expected Life of Project	<input type="text" value="1.00"/> Years		

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

C:\Documents and Settings\vgavalas\My Documents\Oversight Estimate 0012880.dox

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

Name of Contracting Entity: City of Johns Creek

Contract No. and Name: PI # 0012880
Barnwell Road Improvements

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

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

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

100011
E-Verify / Company Identification Number

[Signature]
Signature of Authorized Officer or Agent

02-13-2008
Date of Authorization

Mary Ann Haskins
Printed Name of Authorized Officer or Agent

HR & Support Services Dir
Title of Authorized Officer or Agent

01 31 2014
Date

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE

31 DAY OF January, 2014

Joan Jones
Notary Public
My Commission Expires: 12/22/14

[NOTARY SEAL]



Revised: 12/2011

ATTACHMENT “F”

TITLE VI INTRODUCTION

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

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

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

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

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

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

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

Revised: 12/2011

ATTACHMENT "F"

TITLE VI ACKNOWLEDGEMENT FORM

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

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

MARY ANN HASKINS, HR & Support
Official Name and Title Services Dir.

1/31/14
Date

Citations:

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

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

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

Revised: 12/2011



December 17, 2014

Re: Project Fulton County, P.I. No. 0012880, Barnwell Road Enhanced Sidewalk and Intersection Improvements – Responses to Open House Comments

Dear Meeting Attendees:

Thank you for your comments concerning the proposed project referenced above. We appreciate your participation and all of the input that was received as a result of the recent Public Information Open House (PIOH). Every written comment received and verbal comment given to the court reporter at the PIOH will be made part of the official record of the project.

A total of 39 people signed in at the PIOH. The comment period included online access to the project design materials, description, and handouts on the City of Johns Creek website, display at the City of Johns Creek Offices, and online access via the Georgia Department of Transportation (GDOT) website. At the PIOH and during the comment period, 32 comment cards, 7 court reporter comments and 19 email comments were submitted for a total of 58 comments received. Of the 58 comments, 31 indicated support, 14 indicated opposition and 13 responded “maybe”.

The attendees of the PIOH and those persons sending in comments afterwards raised the following questions and concerns. We have prepared this single response letter that addresses all comments received so that everyone is aware of the concerns raised and the responses given. Please find the comments summarized below (*in italics*) followed by our response.

- *The proposed sidewalk and bicycle lanes are important and needed facilities.*

Improved connectivity and safety for pedestrians and bicycles are important goals of the project. Bicycle lanes are proposed on both sides of the road and 8’ to 10’ sidewalks are proposed on the west side of the road.

- *The proposed median at Holcomb Bridge Road to block the illegal left turn lanes into Kroger are important for safety on Barnwell Road.*

Improved safety for motorists is important and it is proposed to add a raised median to block illegal left turn movements into the shopping center while maintaining the existing left turn movement out.

- *Support the additional turn lanes at Holcomb Bridge Road*

Improved capacity at this intersection is important and it is proposed to add a right turn lane from Barnwell Road to Holcomb Bridge Road. This will also allow for improved signal timing at the traffic light.

Public Works

- *Please address the high curb at the Jones Bridge Road/Barnwell Road curve.*

Improved safety for motorists is an important goal of the project. The proposed design will shift traffic away from the high inside curb and create an inside shoulder to improve safety. The design will also flatten the curve and add a center median to improve traffic flow and safety.

- *Crosswalks should be added to cross to Barnwell Elementary School and to the CRNRA entrance.*

Improved safety for pedestrians is important and the City will pursue crosswalks to Barnwell Elementary School and the CRNRA entrance.

- *Expressed concern that the addition of roundabouts will slow down traffic and increase congestion along Barnwell Road.*

The proposed roundabouts are intended to slow down vehicular traffic to meet the posted 40 MPH speed limit along the corridor. Roundabouts will allow safe turning movements into and out of side roads off of Barnwell Road. Many side roads have reduced sight distance and slowing down traffic will help make these turning movements safer. Based on the traffic analysis, the roundabout operations will meet the required levels of service at these intersections.

- *Expressed concern that five (5) roundabouts are too many for the corridor.*

The project team proposed roundabouts at each location where they could benefit the neighborhoods while maintaining a desired spacing from one to the next. After discussing the project with the residents along the corridor, the City has decided to prioritize the individual projects including roundabout locations to determine which are the most advantageous and to determine if the number of roundabouts should be reduced.

- *Expressed concern that the proposed roundabouts need to be larger in diameter.*

During the design phase, the size of the roundabouts will be analyzed to determine the appropriate size for each proposed location. They will be sized to accommodate trucks, buses and emergency vehicles.

- *Expressed concern that truck traffic is too high on the corridor.*

Through trucks are not currently permitted to drive on Barnwell Road as it is classified as a collector roadway. Signs are posted on the roadway to prohibit trucks and enforcement will be increased for Barnwell Road.

- *Expressed concern that the left turn lane into the Country Club of the South service entrance is not long enough.*

Public Works

During the design phase, the left turn lane length will be evaluated to determine if it could be lengthened. It is unclear at this time what additional impacts to adjacent properties a longer left turn would involve.

- *Expressed desire to have lighting on the corridor improved.*

Street lighting is planned to enhance the newly constructed sidewalk and roadway.

- *Expressed desire to improve the road surface and drainage along Barnwell Road.*

The current concept calls for repaving of the existing road surface. The drainage along Barnwell Road will be evaluated during the design phase.

- *Request that all subdivisions along Barnwell Road have left turn lanes.*

The addition of turn lanes for every subdivision may not be practical based on the topography and potential impacts along Barnwell Road. Left turn lanes have been provided where possible. The proposed roundabouts would allow for safe left turn movements into and out of neighborhoods with fewer impacts along Barnwell Road as they would not require separate left turn lanes. Additional concepts are being considered to evaluate the impacts.

- *Request that 40 MPH speed limit sign approaching Barnwell at Jones curve be replaced with a warning speed limit sign.*

This suggestion will be implemented during the design phase of the project which is currently underway for "Location L".

- *Expressed concern that adding sidewalk between Barnwell Elementary and Redcoat Way will eliminate on street parking for Barnwell Elementary events.*

Parking on Barnwell Road is not currently allowed. Sidewalks encourage walkability.

- *Expressed concern that trees and buffer planted to protect tennis courts for River Glen Subdivision would be impacted.*

The current concept calls for the sidewalk and majority of the work to be constructed on the West side of Barnwell Road. During the design phase, impacts to the tree buffer along the River Glen Subdivision will be evaluated.

- *Should install radar speed limit signs to help reduce speed on Barnwell Road.*

This suggestion is being evaluated for implementation.

- *What is the correct cost estimate and can we get a list by project.*

Public Works

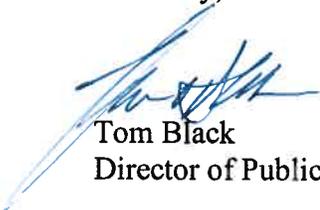


The correct cost estimate is \$10,502,228 to design and construct all of the improvements shown on the layout presented. See below for a breakdown by project.

Barnwell Road Enhanced Sidewalk and Intersection Improvements		
Project ID	Location	Total Cost
A	Holcomb Bridge Improvements	\$836,000
B	Sandy Lane Drive Bypass	\$123,000
C	Niblick Roundabout	\$512,000
D	Old Clubs Drive Turn Lanes	\$588,000
E	Glen Ferry Drive Roundabout	\$488,000
F	River Ferry Drive Turn Lanes & Rivermont Pkwy Roundabout	\$740,000
G	Old Southwick Pass Roundabout	\$324,000
H	North Peak Drive Turn Lanes	\$376,000
I	Barnwell Elementary Roundabout	\$746,000
L	Jones Bridge Road Curve	\$328,000
M	Barnwell Enhanced Sidewalk	\$4,700,000
N	Rivermont Pkwy Sidewalk	\$182,000
O	Sidewalk/Boardwalk to Brumbelow	\$566,000
Total		\$10,512,000

Again, thank you for your comments concerning this project. Should you have any further questions, comments, or concerns, please call the feel free to contact the City of Johns Creek's Project Manager, Chris Haggard at (678) 512-3253 or at chris.haggard@johnscreekga.gov.

Sincerely,



Tom Black
Director of Public Works

cc: Elaine Armster, Georgia Department of Transportation (GDOT) Project Manager
Chris Haggard, P.E., City of Johns Creek
Jimmy Garrison, P.E., DPE

Public Works



PROJECT MEMORANDUM

Project: PI 0012880 Barnwell Road Enhanced Sidewalk and Intersection Improvements
City of Johns Creek
Fulton County, Georgia

Job No.: 13-054A

Date: 01/23/15

To: Elaine Armster
Project Manager

Georgia Department of Transportation (GDOT)

From: James C. Garrison, III, P.E.
Project Manager

Development Planning & Engineering, Inc. (DPE)

Subject: *Concept Report Comments Issued January 7, 2015*

No. of Pages: 5 (including this page)

The following are the Concept Report Comments received on January 14, 2015 (via e-mail) for the above-referenced project. Our responses follow at the end of each comment.

I. District 7 Preconstruction Engineer, sent the following comments:

Comment (1): Addressing operation and safety issues, the signalized intersection at Barnwell and SR 140 is currently split phased due to substandard stopping/intersection sight distance, will proposed improvements address this issue?

Response: The proposed improvements at Barnwell Road/SR 140 will add an additional lane that will allow the intersection split phasing to be removed.

Comment (2): Verify the need for a Temporary State Route, Row funds have not been identified at this time.

Response: Federal funding will be requested to assist in Right-of-Way and Construction funding for this project. Therefore a temporary state route will be requested at the time funds are awarded.

II. Civil Engineering Group Leader in Design Policy & Support, had the following questions/comments:

Comment (1): If there are any federal or state funds used on this project, the PM and the locals needs to ensure that the lighting design is done by a GDOT prequalified firm. We've had issues with this in the past so I want to make sure everyone understands this requirement.

Response: The subconsultant who will perform lighting design services is pre-qualified with GDOT.

III. OFM Project Programming Mgr., had the following comment:

Comment (1): On page 13, it is showing Johns Creek letting the project. I haven't received the LLAF to change this to Local Let. GDOT OPD follow-up.

Response: The Local Letting Approval Form has been submitted to GDOT.

Comment (2): On page 14, Funded By for RW, CST & Mitigation is showing City/GDOT; however, at this time it has not been decided how this project is going to be funded.

Response: Comment response by GDOT Project Manager.



IV. State Utilities Preconstruction Engineer, recommended the following corrections:

Comment (1): On Page 13 In the section: COORDINATION, ACTIVITIES, RESPONSIBILITIES, AND COSTS Project Activity Party Responsible for Performing Task(s) Under Utility Relocation – *change from Utility Companies to City of Johns Creek.*

Response: Comment addressed.

Comment (2): On Page 14 In the section: Project Cost Estimate Summary and Funding Responsibilities: Under Funded - Utility* - *add City of Johns Creek. *See City of Johns Creek Public Works PFA dated March 4, 2014, page 21, for the above subject project.*

Response: Comment addressed.

V. Concept Design in Design Policy and Support had the following questions/comments:

Comment (1): Please replace words like “safe” and “safety” with less subjective wording.

Response: Comment addressed.

Comment (2): 24 inch curb and gutter will need a hydraulics study and approval from the Hydraulics section in Design Policy & Support.

Response: Comment noted. Barnwell Road is a local street and is maintained by the City of Johns Creek. Existing curb and gutter throughout the corridor is 24-inches. In addition, the Development Regulations for the City of Johns Creek Section 113-130 Curb and Gutter states “Typical minimum section shall be 6”x24”x12” (GDOT 24-inch type II)”. The potential need for additional drainage structures and additional depth of drop inlet structures is noted and will be reviewed with the City of Johns Creek. A copy of the regulation referenced above is included in the attachments section of the Concept Report.

Comment (3): Please keep the individual costs of projects on the same page.

Response: Comment addressed.

Comment (4): Unless the project is to be broken down into multiple projects, the breakdown of work sites in the project 0012880 should probably just be attached.

Response: Comment noted. Please see the response to Comment (5) below.

Comment (5): It would probably be best to describe the individual work areas on the project as something other than projects; unless, they need to be separated and programmed as individual projects.

Response: Comment noted. The individual projects will be constructed as funding becomes available.

Comment (6): If PI 0012880 is one big project, it would be better to have a single document to review or a cost cover page showing the totals.

Response: The costs for each individual project are provided on Page 15. The total cost for all projects is summarized on Page 14.

Comment (7): Please check the buffer, striping and marking of the both the bike lane and the adjacent pedestrian lane. The GA Pedestrian and Streetscape guide recommends a striping between the bike lane and traffic with a barrier between the bike and pedestrian paths. It also suggests raising the pedestrian path. The MUTCD shows striping for bike lanes.

Response: It is assumed this comment relates to the separated bike and pedestrian lane on Rivermont Parkway. Rivermont Parkway is a local street (25 mph) within a large neighborhood. The approach to this project is to utilize the existing pavement width for separate bike and pedestrian use without altering the



existing curb line or surrounding elevations. This project will also propose to construct a barrier with RPM's between the vehicular traffic and the proposed bicycle/pedestrian lane to help provide separation.

Comment (8): Clear delineation and buffers are recommended to deter motorized vehicles from accidentally entering pedestrian or bike paths.

Response: Comment noted and will be incorporated during preliminary plan preparation.

Comment (9): A design variance for vertical clearance may be needed after looking at the typical sections.

Response: After a review of the typical sections, we do not anticipate the need for a variance for vertical clearance.

Comment (10): There may need to be design variance for lateral clearances.

Response: Comment noted.

Comment (11): Please show the range of widths rather than varies on the typical sections.

Response: Comment addressed.

Comment (12): Recommend checking the GDOT Driveway and Encroachment Control Manual. The entrance to the shopping center that is the most southwestern quadrant on the project on Barnwell Rd. is only around 330 feet from the Barnwell and Holcomb Bridge Road intersection. It is so close to the intersection that its benefit is probably negligible with the proposed design. Please consider closing, relocating or redesigning this entrance to a right in only or a right in right out entrance. The access and merge proposed here would have northbound vehicles from the shopping center crossing 3 lanes of traffic headed in the opposite direction before needing to head north from the short storage provided. Is this access brake needed here? Please check that the storage is adequate here. As designed, a design exception for stopping sight distance may be needed at this location.

Response: Left turns exiting the shopping center heading northbound are important as the alternative is for traffic to access Holcomb Bridge Road with a left turn and then utilize the signal at Barnwell Road to turn left. The location of the driveway was evaluated and determined that moving it further away from Holcomb Bridge was not feasible due to soil conditions (rock) and the proximity to the bridge located on Barnwell Road. The proposed layout will be investigated further during the design phase to ensure a safe and adequate storage area is provided as this entrance is maintained as a three quarter access off of Barnwell Road.

Comment (13): Is there a culvert under Barnwell Rd. between Sandy Lane Dr. and Holcomb Bridge Rd.?

Response: From contour data provided by the City of Johns Creek and a field review, a small cross drain, which drains the ditch on the south side of Barnwell Road, is present. The existing State Water begins on the northern side of Barnwell Road.

Comment (14): Were flush medians or raised medians considered? (Not discussed in alternative section).

Response: No. The City wishes to maintain the existing "look and feel" of the roadway corridor with minimal disturbance to adjacent properties. Also, traffic counts do not appear to warrant a flush or raised median.

Comment (15): Although there is a double yellow line, people are likely to cross over and possibly make U-turn's at the passing lane proposed at Sandy Lane Drive. Has this been considered?

Response: Comment noted. Also, please reference the response to Comment 16 below.



Comment (16): Please reevaluate the design and placement of the proposed passing lane at Sandy Lane. As shown there may be sight distance issues. The taper and tangent components of the passing lane also appear to be short.

Response: Comment noted. Sight distance issues, if any, will be corrected during the design of this project. The Shoulder Bypass Lane design is based on AASHTO's Guide for the Development of Bicycle Facilities, 2012 Fourth Edition, Figure 4.7. Actual length of the tapers will be determined upon preparation of a traffic study for this intersection location.

An excerpt from Section 4.5.1 from the above referenced guide "It is becoming a common design practice to incorporate bypass lanes at T-intersections of two-lane roadways, so as to facilitate the passing of motorists stopped to make a left turns onto intersecting roads".

Comment (17): Please ensure the taper lengths and lane lengths for this project are adequate.

Response: Comment noted and will be verified during design phase.

Comment (18): Please check the geometry, fastest paths and traffic distributions on the roundabouts proposed.

Response: Comment noted and will be checked during design phase.

Comment (19): When will a peer review be performed? Since a large number of roundabouts are proposed, a peer review would likely be beneficial prior to concept approval.

Response: Comment noted. Peer Review is planned upon detail design of the roundabouts since it is our opinion they are not considered "complex" (early part of Preliminary Design Phase per Section 8.2.3 of the Design Policy Manual).

Comment (20): Have the roundabouts been modeled collectively to demonstrate how they may function as a group?

Response: The roundabouts were modeled as a group along with the other stop controlled intersections. No issues were identified with either the proximity of two roundabouts or the proximity of a roundabout and a stop controlled intersection.

Comment (21): Has it been considered that the placement of some roundabouts may be too close proximity to each other?

Response: The minimum distance between the three roundabouts is approximately 2,500 feet. The roundabouts at Old Southwick Pass and Barnwell Elementary School have been removed per citizen comments received during the PIOH.

Comment (22): Please ensure the terminology for the pedestrian facilities is consistent with the definitions used by FHWA.

Response: The term "enhanced sidewalk" is used because the city wishes to construct a sidewalk with enhanced width. This construction is not the same as a "trail" and it will match other sidewalks constructed throughout the city.

Comment (23): Please consider realigning the legs of the roundabout at the Rivermont Pkwy. and Barnwell Rd. intersection to improve the geometry of vehicle paths entering and exiting the roundabout.

Response: Comment noted and will be incorporated during detail design of the roundabout.

Comment (24): Was consideration given to tying River Ferry to Citadella or Citadella into River Ferry to allow configuring more symmetrical distribution of legs into roundabout?



Response: No. River Ferry Drive and Citadella Court are two separate neighborhoods and Citadella Court is gated at Barnwell Road. In addition, this could not be accomplished without a displacement of at least one residence.

Comment (25): Was consideration given to closing the access to Barnwell at location G (proposed roundabout) and proposing one at Barnwell and North Peak Drive instead.

Response: No. Location G is the rear entrance to one of the largest neighborhoods in the City of Johns Creek. The drive across from North Peak Drive is the service (vendor) entrance for the neighborhood. Both entrances are gated.

Comment (26): Please check the acceleration lane length at Aubusson Trace.

Response: Comment noted. This is an existing condition. This location was recently improved by a separate City project in 2013/2014.

Comment (27): Was a roundabout considered at Aubusson Trace, Jacobean Entry, or at the nearly perpendicular union of Barnwell Rd. to Jones Bridge Rd. rather than at the school? Please consider reconfiguring Barnwell/Jones Bridge Road and/or placing a roundabout at or near the joining of these two roads.

Response: Due to limited right-of-way, existing topography, and impacts to adjacent residences, roundabouts at these locations were not considered. In addition, the existing stand of trees on the inside curve at Barnwell Road and Jones Bridge Road are protected (Southeast Land Preservation) and identified by a Historical marker.

Taking this into consideration, the proposed project is to flatten the curve to the extent practical and add a center median to separate traffic thru the curve. Also, additional separation will be provided adjacent to the existing sidewalk along the inside of the curve.

Comment (28): Was Site J included in the costs?

Response: The cost for Location J is included in the cost for Location M since no major construction work is proposed at this location (only that associated with the enhanced sidewalk construction).

Comment (29): Match lines and legends throughout the layouts would be helpful.

Response: Comment noted. The sheets showing enlarged views of each location are used to supplement the overall Concept Layout. They are not continuous along Barnwell Road; therefore, match lines are not applicable.

Comment (30): Will a deterrent be employed to keep motorized vehicles from entering the pedestrian and bike paths, especially at Brumblelow Rd.? Will lighting be included for some of the proposed paths? Security? Restricted hours?

Response: Removable bollards will be placed where the proposed boardwalk intersects the trail along Brumblelow Road. Lighting will be included. Restricted hours and active security other than City police are not proposed.

Comment (31): Should handrail be included in some of the cost estimates?

Response: Hand rail is anticipated for Location O and has been included as part of the estimated cost for the boardwalk, since it will be incorporated with the boardwalk design.

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PROJECT MEMORANDUM

Project: PI 0012880 Barnwell Road Enhanced Sidewalk and Intersection Improvements
City of Johns Creek
Fulton County, Georgia

Job No.: 13-054A

Date: 02/10/15

To: Elaine Armster
Project Manager

Georgia Department of Transportation (GDOT)

From: James C. Garrison, III, P.E.
Project Manager

Development Planning & Engineering, Inc. (DPE)

Subject: *Concept Report Comments Issued February 3, 2015*

No. of Pages: 2 (including this page)

The following are the Concept Report Comments received on February 3, 2015 (via e-mail) for the above-referenced project. Our responses follow at the end of each comment.

Comment (1): It is recommend to briefly spell-out reasons for actions/design choices and/or for improvements by recent projects in the concept report to try to minimize questions.

For example, a PIOH resulted in roundabouts being removed and protected trees impacted the placement of roundabouts.

Response: Text has been added on Page 9 of the Concept Report as follows:

“Proposed roundabouts at Barnwell Elementary School and Old Southwick Pass were removed due to citizen feedback during the PIOH and concerns with separation.

Due to limited right-of-way, existing topography, and impacts to potential residences, a roundabout at Barnwell Road and Jones Bridge Road was not considered. In addition, the existing stand of trees on the inside of the curve are protected (Southeast Land Preservation) and identified by a Historical marker. Taking this into consideration, the proposed project is to flatten the curve to the extent practical and add a center median to separate traffic thru the curve. Additional separation will also be provided adjacent to the existing sidewalk along the inside of the curve.”

Comment (2): Do the cost reported take into account that a couple of the roundabouts were removed?

Response: Yes, the costs were adjusted for the removal of the roundabout at Barnwell Elementary School. The costs for the roundabout at Old Southwick Pass were similar to the costs for turn lanes (since the existing pavement was being used in each case); therefore, no adjustments were made for this location.

Comment (3): If there may be a design exception or variance, at least mark as undetermined and explain it will be reviewed in Preliminary phase and why.

Response: Text has been added on Page 8 of the Concept Report as follows:

“Lateral Offset to Obstruction” was checked “undetermined” with the following text below the table: “A Design Variance for a lateral offset to obstruction will be reviewed during the Preliminary Design Phase. It cannot be verified at this time if existing utility poles or other items will require this variance”.



Comment (4): Traffic modeling info and documents supporting the concept report should be included in the report. Just the summary or the section supporting report statements are needed not an entire study.

Response: This has been added to the Attachments section of the report.

Comment (5): Recommend briefly commenting on the decision to defer further study of the proposed configuration of lanes at the Barnwell Rd. and Holcomb Bridge Rd. and other such design features until the preliminary phase.

Response: Comments and responses have been added to the attachments portion of the concept report to address this situation. The response is below:

“Left turns exiting the shopping center heading northbound are important as the alternative is for traffic to access Holcomb Bridge Road with a left turn and then utilize the signal at Barnwell Road to turn left. The location of the driveway was evaluated and determined that moving it further away from Holcomb Bridge was not feasible due to soil conditions (rock) and the proximity to the bridge located on Barnwell Road. The proposed layout will be investigated further during the design phase to ensure a safe and adequate storage area is provided as this entrance is maintained as a three quarter access off of Barnwell Road.”

Comment (6): Two of the layouts are labeled Location M at the top of the page; is that correct? (Does one location need to be renamed? If it is a long extension, please provide additional comments as such).

Response: Location “M” is the proposed Barnwell Road Enhanced Sidewalk outside of areas not covered by the intersection improvements. These layouts are provided to allow a larger area for viewing (instead of the 11’x17” overall plan, which can be difficult to see the lane assignments, etc.). The layout for Location M to the east of Rivermont Parkway (Location F) has the word “Continuation” added for clarification.

Comment (7): Please note that the 24” curb and gutter does need to be approved by the Hydraulic Group in Design Policy & Support (we still need the Sponsor’s hydraulics people to look at it and provide note/comments). Documentation will be needed to verify that the gutter spread will still be limited to half the lane width for a 10 year storm. It can be mentioned in the concept report, but it not necessarily a concept phase requirement. Keep in mind that if the system fails then revisions to the concept may be needed if the typical section is changed.

Response: Limiting gutter spread to one-half the lane width is a current requirement within the City of Johns Creek. The hydraulic report prepared during preliminary design will be submitted to GDOT for approval by the Hydraulic Group.

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Subject: RE: 2015-03-04_Management comments for PI# 0012880 Fulton

Date: Thursday, March 19, 2015 at 4:06 PM

From: Chris Haggard <Chris.Haggard@johnscreekga.gov>

To: Elaine Armster <EArmster@dot.ga.gov>

Cc: Tom Black <thomas.black@johnscreekga.gov>, Tom Udell <Tom.Udell@johnscreekga.gov>, Cindy Lee Jenkins <cindy.jenkins@johnscreekga.gov>, Kimberly Nesbitt <knesbitt@dot.ga.gov>, Jimmy Garrison <jgarrison@dpengr.com>

Hi Elaine,

It looks like GDOT has accepted most of our responses, but a few require additional information. Below are our responses in red.

1. Barnwell Road at Jones Bridge Road (Location L)

We do not understand the response, “The curve at Barnwell Road and Jones Bridge Road is currently under design as a Local Let project.” Although we understand that only a Scoping Phase has been approved thus far, if the project will utilize state and/or federal funds, a design exception will be required if the design speed of the curve does not meet the approved design speed of the roadway. The Department will not approve design exceptions for excessive differences between the actual design speed and approved design speed. To minimize right of way, other alternatives could also be considered such as a stop condition or a roundabout.

The concept report will be revised to change the End Project to the Barnwell Elementary School which eliminates this existing curve from the project. The city will construct the trail in this area with local funding. Therefore a design exception will not be required through GDOT.

2. Mini-Roundabouts

A 90-foot inscribed diameter described by the City may be appropriate

for this project; however, this design coupled with the relatively high design speed (40mph) and fastest path issues are of much concern and should be worked out very early in preliminary design as more right of way will likely be required. It is also important to note that there is an ongoing research “Field and Safety Evaluation of Mini-Roundabouts” currently underway by FHWA <http://www.fhwa.dot.gov/research/tfhrc/projects/projectsdb/projectdetails.cfm?projectid=fhwa-proj-10-0066>

Understood.

3. Barnwell Road at Old Southwick Pass

Response is satisfactory.

Understood.

4. Barnwell Road at SR 140/Holcomb Bridge Road

The Department does not agree with the proposal to allow left turns directly from the shopping center driveway across the proposed double left-turn lanes. We believe the proposed design would result in higher than average crash rates and that adequate access from the shopping center to NB Barnwell Road exists via Holcomb Bridge Road.

Currently the exit from the Shopping Center to Holcomb Bridge Road is unsignalized and would require traffic to cross two through lanes of high volume traffic to make a left turn and then another left turn at the signal to head north onto Barnwell Road. The City has submitted a

signal permit request to add a signal at this location and once this signal is constructed, converting this driveway into a right in/right out driveway would be considered. Based on the current conditions, the City is not comfortable removing this left turn movement.

5. Barnwell Road at Sandy Lane Drive

The main purpose of the GDOT comment was to emphasize that an appropriate alignment should be designed for the through traffic around the proposed left-turn lane that meets the proposed design speed.

Understood.

6. Rivermont Parkway

The proposed typical section contained in the concept report is unacceptable to the Department. The proposal below to stripe in a 2' buffer with a 10' pedestrian walk (bikes use the travel lanes) is acceptable. It would also be acceptable to use the following configuration if desired: 2-10.5' travel lanes, 5' stripped buffer minimum, and a 10' multi-use two-way path.

The typical will be revised to show a 2' buffer with a 10' pedestrian walk as requested.

Thank you,
Chris