

D.O.T. 66

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

---

**INTERDEPARTMENT CORRESPONDENCE**

**FILE** P. I. No. 132985-, Forsyth-Gwinnett Counties **OFFICE** Preconstruction  
BRST-054-1(63)  
SR 20 Bridge over Chattahoochee River **DATE** February 28, 2006

**FROM** *John Kunk*  
Margaret B. Pirkle, P.E., Assistant Director of Preconstruction

**TO** SEE DISTRIBUTION

**SUBJECT APPROVED PROJECT CONCEPT REPORT**

Attached for your files is the approval for subject project.

MBP/cj

Attachment

**DISTRIBUTION:**

Brian Summers  
Harvey Keeper  
Ken Thompson  
Jamie Simpson  
Michael Henry  
Keith Golden  
Joe Palladi (file copy)  
Paul Liles  
Babs Abubakari  
Russell McMurry  
BOARD MEMBER

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

**FILE** P.I. No. 132985-, Forsyth-Gwinnett County **OFFICE** Preconstruction  
BRST-054-1(63)  
SR 20 Bridge over Chattahoochee River **DATE** February 17, 2006

**FROM** *John Pirkle*  
Margaret B. Pirkle, P.E., Assistant Director of Preconstruction

**TO** David E. Studstill, Jr., P.E., Chief Engineer

**SUBJECT** PROJECT CONCEPT REPORT

This project is the replacement of the SR 20 bridge over the Chattahoochee River, including approaches, from James Burgess Road in Forsyth County to east of Burnett Road in Gwinnett County. This project will connect onto project STP-0002-00(392) Forsyth County, P.I. No. 0002392, for the proposed widening of SR 20 from Samples Road to James Burgess Road. The eastern terminus will connect onto project MLS-004-00(430) Gwinnett County, P.I. No. 0004430 for the proposed widening of SR 20 from near Burnett Trail to Peachtree Industrial Boulevard. The proposed lane configuration for both adjacent projects is for two through lanes in each direction.

The proposed construction will include four through lanes, a 44' grassed median, 16' shoulders, curb and gutter on the outside pavement edges and 5' concrete sidewalk on both sides of the roadway. Design will accommodate for the future widening of two additional lanes. The existing bridge over the Chattahoochee River is proposed to be replaced with two parallel bridges. The proposed bridge typical section will include two, 12' lanes, a 10' inside shoulder, and a 12' outside shoulder on each single direction bridge. The bridges are to be constructed on a pier configuration similar to the existing bridge. It is proposed that these piers be built under this project to allow for the future widening of the bridges to three lanes in each direction. The bridges are also to be constructed to allow for a future trail along the Chattahoochee River National Recreation Area on both sides of SR 20.

Environmental concerns include requiring a COE 404 Permit; an Environmental Assessment will be prepared in conjunction with project MLS-004-00(430); time saving procedures are not appropriate.

The estimated costs for this project are:

	<u>PROPOSED</u>	<u>APPROVED</u>	<u>FUNDING</u>	<u>PROG DATE</u>
Construction (includes E&C and inflation)	\$13,553,000	\$9,402,000	LICO/L240	2008
Right-of-Way	\$ 450,000	\$ 515,000	LICO	2007
Utilities*	LGPA	LGPA		

David Studstill

Page 2

P. I. No. 132985, Forsyth-Gwinnett

February 17, 2006

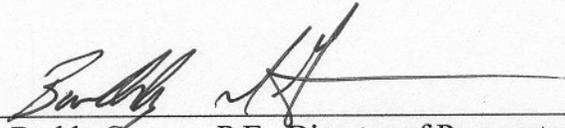
\*Forsyth County signed LGPA for utilities 8-99/Gwinnett County signed PMA on 8-04 for PE, right-of-way, and utilities.

I recommend this project concept be approved.

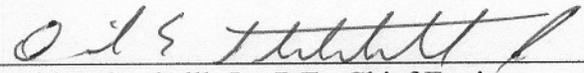
MBP:JDQ/cj

Attachment

CONCUR

  
Buddy Gratton, P.E., Director of Preconstruction

APPROVE

  
David E. Studstill, Jr., P.E., Chief Engineer

**DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA**  
*Office of Program Delivery and Consultant Design*

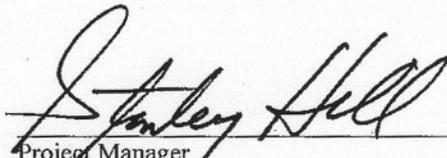
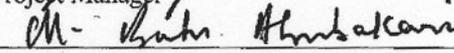
**PROJECT CONCEPT REPORT**

Project Number: BRST-054-1(63)  
County: Forsyth/Gwinnett  
P. I. Number: 132985

Federal Route Number: N/A  
State Route Number: 20

Recommendation for approval:  
DATE 12-22-05

DATE 12-22-05

  
\_\_\_\_\_  
Project Manager  
  
\_\_\_\_\_  
Office Head/District Engineer

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

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Planning Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Financial Management Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Environment/Location Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Traffic Safety and Design Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
District Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
Project Review Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Bridge & Structural Engineer

# DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

Office of Road and Airport Design

## PROJECT CONCEPT REPORT

Project Number: BRST-054-1(63)

County: Forsyth/Gwinnett

P. I. Number: 132985

Federal Route Number: N/A

State Route Number: 20

Recommendation for approval:

DATE \_\_\_\_\_

\_\_\_\_\_  
Project Manager

DATE \_\_\_\_\_

\_\_\_\_\_  
Office Head/District Engineer

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

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Planning Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Financial Management Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Environment/Location Engineer

DATE 12-28-05

*Heidi Bock*  
\_\_\_\_\_  
State Traffic Safety and Design Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
District Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
Project Review Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Bridge & Structural Engineer

**DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA**  
*Office of Program Delivery and Consultant Design*

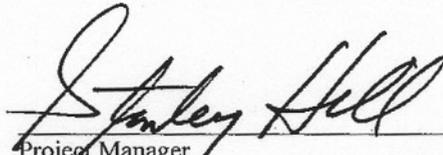
**PROJECT CONCEPT REPORT**

Project Number: BRST-054-1(63)  
County: Forsyth/Gwinnett  
P. I. Number: 132985

Federal Route Number: N/A  
State Route Number: 20

Recommendation for approval:  
DATE 12-22-05

DATE 12-22-05

  
\_\_\_\_\_  
Project Manager  
  
\_\_\_\_\_  
Office Head/District Engineer

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

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Planning Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Financial Management Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Environment/Location Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Traffic Safety and Design Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
District Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
Project Review Engineer

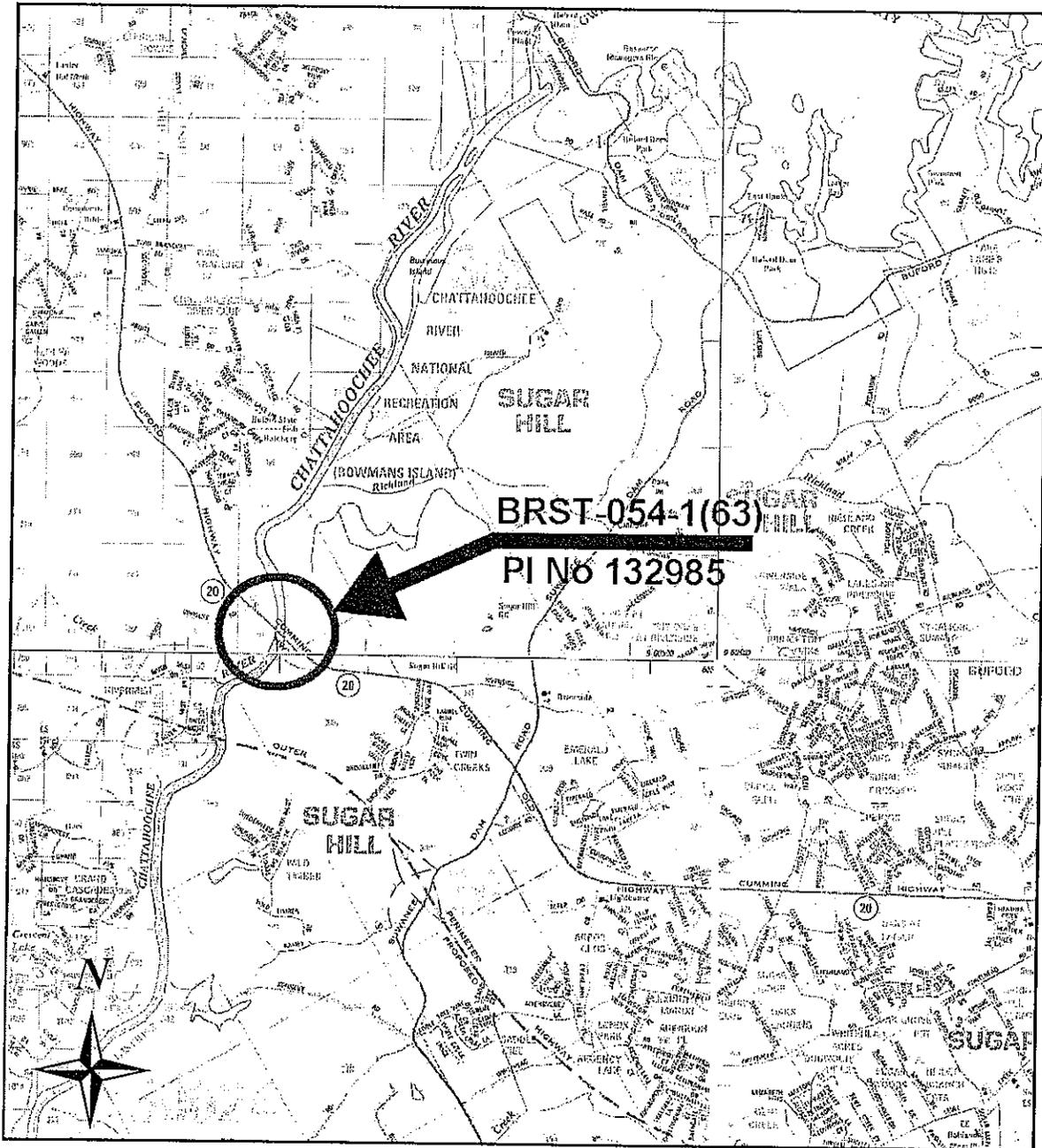
DATE \_\_\_\_\_

\_\_\_\_\_  
State Bridge & Structural Engineer

December 16, 2005

State of Georgia  
Department Of Transportation

Project Concept Report Page 2  
Project Number: BRST-054-1(63)  
P.I. Number: 132985  
County: Forsyth/Gwinnett



### Location Map

Project: BRST-054-1(63) Forsyth/Gwinnett Counties PI No.: 132985

Description: SR 20 Bridge over Chattahoochee River

December 16, 2005

**State of Georgia  
Department Of Transportation**

Project Concept Report Page 3  
Project Number: BRST-054-1(63)  
P.I. Number: 132985  
County: Forsyth/Gwinnett

### **Need and Purpose**

The proposed project would widen SR 20 over the Chattahoochee River, including approaches from a two-lane rural roadway to a four-lane divided urban roadway from James Burgess Road in Forsyth County to east of Brunette Trail in Gwinnett County. The purpose of the project is to improve east-west mobility along SR 20 between Gwinnett County and Forsyth County, which is classified as an Urban Principal Arterial; and as of June 23, 2005, it is designated by the Federal Highway Administration as part of the National Highway System from I-75 in Bartow County to SR 316 in Gwinnett County. With SR 20 currently experiencing high traffic volumes, the widening of this section of the roadway and the adjacent section in Forsyth County will enhance traffic movement and improve vehicle and pedestrian safety on this important east-west arterial. The existing typical section of roadway consists of two twelve-foot lanes, two-foot paved shoulders, and two-foot to six-foot grassed shoulders and one-hundred-foot existing right-of-way. The existing typical section of the bridge is two twelve foot lanes with two foot shoulders. The posted speed is 55 MPH. Currently SR 20 is not a designated route in any bicycle or pedestrian plans.

### **Planning Background and Project History:**

Gwinnett County's Comprehensive Transportation Plan (CTP) identifies SR 20 as a major east-west route connecting SR 400, I-85 and I-985. SR 20 also serves as a principal crossing over the Chattahoochee River, linking Gwinnett and Forsyth Counties south of Lake Lanier. SR 20 is currently a two-lane principal arterial roadway. The CTP lists SR 20 from Peachtree Industrial Boulevard to the Chattahoochee River as a significant project to add additional traffic capacity to the county roadway system. The County's CTP recommends that SR 20 be widened from two lanes to four lanes with a divided median. This project is also included in the Atlanta Regional Commission's (ARC) 2030 Regional Transportation Plan (RTP). The RTP model includes a four-lane section on SR 20. The project is listed as GW-020-A2 in the RTP, with preliminary engineering programmed for 2005, right of way for 2007 and construction in 2008.

### **Land Use and Development Trends:**

Intense residential and commercial development along the SR 20 corridor has driven a steady increase in traffic volumes over the past decade. This trend is expected to continue as development spreads northwards to Gwinnett, Forsyth, and Hall Counties and available properties around Lake Lanier become built out. As outlined in the Gwinnett County 2020 Land Use Map and the Buford/GA 20 east sub area land use element in Forsyth County's Comprehensive Plan, much of the undeveloped and agricultural areas are expected to become commercial and residential by 2020. The Windermere mixed-use development along Windermere Parkway will be responsible for a significant portion of this growth, as it is only partially built-out. This development and the Chattahoochee River Club residential community, which is mostly complete, are listed as Developments of Regional Impact (DRI). This level of residential growth will be followed by complementary retail development along the SR 20 corridor.

December 16, 2005

State of Georgia  
Department Of Transportation

Project Concept Report Page 4  
Project Number: BRST-054-1(63)  
P.I. Number: 132985  
County: Forsyth/Gwinnett

**Proposed Project:**

Project BRST-054-1(63) is the widening of the SR 20 bridge over the Chattahoochee River, including approaches, from two lanes to four lanes from James Burgess Road in Forsyth County to east of Brunette Road in Gwinnett County, at the west City Limits of the City of Sugar Hill, a total length of 0.73 miles. The project limits were established to tie to the two adjacent projects for the widening of SR 20. The typical section will include four through lanes, a 44-foot grassed median, 16-foot shoulders, curb and gutter on the outside pavement edges and five-foot concrete sidewalks on both sides of the roadway. Design will accommodate for the future widening of two additional lanes. The existing bridge over the Chattahoochee River is proposed to be replaced with two parallel bridges. The proposed bridge typical section will include two twelve-foot lanes, a ten foot inside shoulder and a twelve foot outside shoulder on each single direction bridge. The bridges are to be proposed to be constructed on a pier configuration similar to the existing bridge. It is proposed that these piers be built under this project to allow for the future widening of the bridges to three-lanes in each direction. The bridges are also to be constructed to allow for a future trail along the Chattahoochee River National Recreation Area on both sides of SR20.

**Logical Termini:**

The project will begin at James Burgess Road in Forsyth County (ML 15.00) where it will connect onto Project STP-0002-00(392) Forsyth County, PI No. 0002392 for the proposed widening of SR 20 from Samples Road to James Burgess Road. The eastern terminus will be approximately 500 feet east of Burnette Trail (ML 0.49) where it will connect onto Project MLS-000-00(430) Gwinnett County, PI No. 0004430 for the proposed widening of SR 20 from near Burnette Trail to Peachtree Industrial Boulevard (P.I.B.). The proposed lane configuration for both adjacent projects is for two through lanes in each direction.

**Other Projects in the Area:**

- SR 400 @ SR 20 Interchange Reconstruction  
*ARC TIP: FT-011, GDOT PI: 132630*  
This project would rebuild the interchange at SR 400 and tie into project PI 122250.
- SR 20/Canton Highway from Post Rd (SR 371) to GA 400  
*ARC TIP: AR-920, GDOT PI: 0003682*  
This project widens SR 20 from Post Road (SR 371) east to GA 400. The typical section of SR 20 would include four through lanes.
- SR 20/Canton Highway from Greenwood Acres Rd to Kelly Mill Rd  
*ARC TIP: FT-061B, GDOT PI: 132430*  
This project widens SR 20 north of Greenwood Acres Road to Kelly Mill Road. The typical section of SR 20 would include four through lanes.
- SR 20/Buford Highway from Samples Road/CR 80 to James Burgess Road/CR 450  
*ARC TIP: FT-, GDOT PI: 0002392*  
This project widens SR 20 west of James Burgess Road/CR450 across the Gwinnett County line at the Chattahoochee River. The typical section of SR 20 would include four through lanes.

December 16, 2005

State of Georgia  
Department Of Transportation

Project Concept Report Page 5  
Project Number: BRST-054-1(63)  
P.I. Number: 132985  
County: Forsyth/Gwinnett

- SR 20/Cumming Highway from Burnette Trail to PIB  
*ARC TIP: GW-020A1, GDOT PI: 004430*  
This project widens SR 20 through Gwinnett County from east of Burnette Trail to Peachtree Industrial Boulevard. The typical section of SR 20 would include four through lanes.
  
- SR 20/Buford Highway from SR 400 to Samples Road/CR 80  
*GDOT PI: 122250*  
SR 20 from SR 400 to Samples Road/CR 80 is currently being widened to four through lanes with a 44-foot grassed median. The northern terminus ties into existing four-lane section and the proposed reconstruction of the SR 400 interchange (refer to PI 132630). This segment of SR 20 has been designed to accommodate two additional through lanes as part of a future project.
  
- Windermere Parkway  
*Forsyth County Project*  
Windermere Parkway currently consists of a two-lane section extending south of SR 20 into the Windermere mixed-use development. The road is currently being extended further south to Mathis Airport Road to provide a continuous north-south arterial connection between SR 20 and SR 141. Although the existing section of Windermere Parkway has only two lanes, the road is graded for an anticipated two additional through lanes and a median as part of a future project.

December 16, 2005

State of Georgia  
Department Of Transportation

Project Concept Report Page 6  
Project Number: BRST-054-1(63)  
P.I. Number: 132985  
County: Forsyth/Gwinnett

**Description of the proposed project:**

Project BRST-054-1(63) is the widening of the SR 20 bridge over the Chattahoochee River, including approaches, from two lanes to four lanes from James Burgess Road in Forsyth County (MP 15.00), crossing the Forsyth/Gwinnett County line (MP 15.24 Forsyth - MP 0.00 Gwinnett) ending east of Brunette Road in Gwinnett County (MP 0.49), at the west City Limits of the City of Sugar Hill, a total length of 0.73 miles. The project limits were established to tie to the two adjacent projects for the widening of SR 20. The typical section will include four through lanes, a 44-foot grassed median, 16-foot shoulders, curb and gutter on the outside pavement edges and five-foot concrete sidewalks on both sides of the roadway. Design will accommodate for the future widening of two additional lanes.

Is the project located in a Non-attainment area?  Yes  No

The project is modeled in the Atlanta Regional Commission's 2030 RTP. The conforming plan's model description is as a bridge capacity project, widening SR 20 from two to four lanes. The RTP lists a programmed construction year of 2008.

PDP Classification: Major  Minor

Federal Oversight: Full Oversight ( ), Exempt ( ), State Funded( X ), or Other ( )

Functional Classification: Urban Principal Arterial

U. S. Route Number(s): N/A State Route Number(s): 20

**Traffic (AADT):**

Base Year: (2008) 29,140 Design Year: (2028) 43,085

**Existing design features:**

- Typical Section: SR 20 currently includes one 12-foot through lane in each direction. Turn lanes are in place at the intersection with James Burgess Road. The existing rural section does not include sidewalks, curbs, or gutters.
- Posted speed: 55 mph Maximum degree of curvature: 4°00'
- Maximum grade: 4.5 %
- Width of right-of-way: 100 ft.
- Major structures: Bridge over Chattahoochee River (800'-8" x 31'-10")  
Sufficiency Rating: 66
- Major interchanges or intersections along the project: James Burgess Rd
- Existing length of roadway segment: 0.73 miles:
  - Begin: MP 15.00 Forsyth County (James Burgess Road)
  - Forsyth/Gwinnett County Line MP 15.24 Forsyth - MP 0.00 Gwinnett
  - End: MP 0.49 Gwinnett County (east of Burnette Trail)

December 16, 2005

State of Georgia  
Department Of Transportation

Project Concept Report Page 7  
Project Number: BRST-054-1(63)  
P.I. Number: 132985  
County: Forsyth/Gwinnett

**Proposed Design Features:**

- Proposed typical section(s): The typical sections require a right-of-way width of 140 feet. The section generally includes two travel lanes in each direction, with a 44-foot grassed median. This section includes 2-foot paved inside shoulders, and a 16-foot wide outside shoulders with curb and gutter. A 5-foot wide sidewalk will be provided on both sides of SR 20. Type B median crossovers will be utilized for left turns where applicable. The section for the proposed bridges over the Chattahoochee River will include two travel lanes in each direction with a 10-foot inside shoulder and 12-foot outside shoulder, with 10-foot sidewalk.
- Proposed Design Speed Mainline 45 mph
- Proposed Posted Speed Mainline 45 mph
- Proposed Maximum grade Mainline 4.5 % Maximum grade 7 %
- Proposed Minimum radius of curve 1400' Minimum radius 711'
- Proposed Maximum grade driveway 12 % Maximum S.E. Rate 4%

James Burgess Road

- Proposed Design Speed 35 mph
- Proposed Maximum grade Side Street 6 % Maximum grade 9 %

Ruth Lane

- Proposed Design Speed 35 mph
- Proposed Maximum grade Side Street 3 % Maximum grade 9 %

Burnette Trail

- Proposed Design Speed 25 mph
- Proposed Maximum grade Side Street 10 % Maximum grade 11 %

▪ Right-of-Way

- Width 140' Minimum
- Easements: Temporary (X), Permanent ( X ), Utility ( ), Other ( ).
- Type of access control: Full ( ), Partial ( ), By Permit (X), Other ( ).
- Number of parcels: 20 Number of displacements: 1
  - Business: 1
  - Residences: \_\_\_\_\_
  - Mobile homes: \_\_\_\_\_
  - Other: \_\_\_\_\_

December 16, 2005

State of Georgia  
Department Of Transportation

Project Concept Report Page 8  
Project Number: BRST-054-1(63)  
P.I. Number: 132985  
County: Forsyth/Gwinnett

- Structures:
  - Bridges: 2-Parallel bridges over Chattahoochee River  
800' x 52' each, (2-12' lanes, 12' outside shoulder with  
sidewalks, 10' inside shoulder)
  - Retaining walls: None anticipated
- Major intersections and interchanges: The project includes a major intersection at James Burgess Drive, which is currently signalized.
- Traffic control during construction: Traffic Control will consist of staged construction and will allow for the roadway to remain open during construction. Staged construction will be divided into phases to allow for partial width construction. Minor detours may be required to provide access to properties with frontage and current access to SR 20. Access will be maintained during all phases of construction for this project.
- Design Exceptions to controlling criteria anticipated:

	<u>UNDETERMINED</u>	<u>YES</u>	<u>NO</u>
HORIZONTAL ALIGNMENT:	( )	( )	(X)
ROADWAY WIDTH:	( )	( )	(X)
SHOULDER WIDTH:	( )	( )	(X)
VERTICAL GRADES:	( )	( )	(X)
CROSS SLOPES:	( )	( )	(X)
STOPPING SIGHT DISTANCE:	( )	( )	(X)
SUPERELEVATION RATES:	( )	( )	(X)
HORIZONTAL CLEARANCE:	( )	( )	(X)
SPEED DESIGN:	( )	( )	(X)
VERTICAL CLEARANCE:	( )	( )	(X)
BRIDGE WIDTH:	( )	( )	(X)
BRIDGE STRUCTURAL CAPACITY:	( )	( )	(X)

- Design Variances: None Anticipated
- Environmental concerns: An environmental screening was performed for the project. The widening of SR 20 will cause stream impacts to several small perennial streams along the length of the project. Environmental screening did not identify any low income or minority populations or communities in the study area. An in-depth study of environmental justice communities will be performed as part of the environmental assessment (EA) currently underway. It is anticipated that a Section 404 Nationwide Permit Application from the Core of Engineers (COE) will be needed for the widening project. The environmental screening also identified several potential historic properties. These properties will be examined further as part of the Environmental Assessment (EA)

December 16, 2005

State of Georgia  
Department Of Transportation

Project Concept Report Page 9  
Project Number: BRST-054-1(63)  
P.I. Number: 132985  
County: Forsyth/Gwinnett

that is currently underway. In addition, as part of the EA all UST's and LUST's will be located.

- Level of environmental analysis:
  - Are Time Savings Procedures appropriate? Yes ( ), No (X),
  - GEPA Type B Letter ( )
  - Categorical exclusion ( ),
  - Environmental Assessment/Finding of No Significant Impact (FONSI) (X), or
  - Environmental Impact Statement (EIS) ( ).

**Utility involvements:**

The following is a list of utilities and contact person (if available) with facilities within the project area:

<u>UTILITY</u>	<u>CONTACT</u>	<u>TELEPHONE</u>
City of Sugar Hill Gas	Johnny Upchurch	770-271-2137
Bellsouth	Eddie King	770-493-2006
Gwinnett County Water & Sewer	Shannon Hebb	678-376-7135
Georgia Power	Jerry Wylie	770-806-9973
Adelphia Cable	Ashley Grimes	770-307-0813
Sawnee EMC	Tim Kohler	770-887-2363
Charter Cable	Jimmy Price	770-806-7060

**Project Responsibilities:**

- Design: Gwinnett County (100%)
  - The design is being completed by Lowe Engineers, LLC.
  - Environmental analysis and permitting will be performed by Moreland Altobelli Associates, Inc
- Right-of-Way Acquisition: Gwinnett County DOT
- Relocation of Utilities: Gwinnett County DOT
- Letting to contract: Gwinnett County DOT
- Supervision of construction: Gwinnett County DOT
- Providing material pits: Contractor (if required)
- Providing detours: Gwinnett County DOT

December 16, 2005

State of Georgia  
Department Of Transportation

Project Concept Report Page 10  
Project Number: BRST-054-1(63)  
P.I. Number: 132985  
County: Forsyth/Gwinnett

**Coordination:**

- Initial Concept Meeting: Held May 24, 2005. Minutes Attached
- Concept meeting: Held December 2, 2005. Minutes Attached
- Public involvement: PIOH held **TBD**

**Scheduling – Responsible Parties' Estimate:**

- Time to complete the environmental process: 12 Months.
- Time to complete preliminary construction plans: 10 Months.
- Time to complete right-of-way plans: 7 Months.
- Time to complete the Section 404 Permit: 6 Months.
- Time to complete final construction plans: 7 Months.
- Time to complete to purchase right-of-way: 18 Months.

**Other alternates considered:**

No build Alternative:

The no-build alternative would include no improvements along SR 20 east of the Chattahoochee River, which would maintain an operating level of Service F along this portion of the roadway. The analysis of the no build alternative also took into account ongoing projects impacting the SR 20 corridor, including the widening of SR 20 west of the Chattahoochee River in Forsyth County. This alternative is not prudent because SR 20 would not be capable of handling the projected increase in traffic over the next 24 years. This would result in excessive delays and extremely poor Levels of Service on the study corridor.

Northern Arc:

This alternative was previously dismissed.

**Comments:**

**December 16, 2005**

**State of Georgia  
Department Of Transportation**

Project Concept Report Page 11  
Project Number: BRST-054-1(63)  
P.I. Number: 132985  
County: Forsyth/Gwinnett

**Attachments:**

1. Cost Estimates:
  - a. Construction including E&C,
  - b. Right-of-Way, and
  - c. Utilities.
2. Typical sections,
3. Capacity analysis,
4. ARC Model,
5. Bridge inventory,
6. Minutes of Initial Concept meetings,
7. Minutes of Concept Team Meeting,

**Project Costs**  
**BRST-054-1(63) Forsyth/Gwinnett Counties, PI No 132985**  
**Estimate Report for file "132985c\_2005-12-16"**

**Section C. Major Structures**

Item Number	Quantity	Units	Unit Price	Item Description	Cost
543-1100	1	LS	6240000.00	CONSTR OF BRIDGE - COMPLETE - TO BOTTOM OF CAP	6240000.00
<b>Section Sub Total:</b>					<b>\$6,240,000.00</b>

**Section D. Grading and Drainage**

Item Number	Quantity	Units	Unit Price	Item Description	Cost
208-0100	70000	CY	8.70	IN PLACE EMBANKMENT	609000.00
441-6222	12300	LF	12.52	CONC CURB & GUTTER, 8 IN X 30 IN, TP 2	153996.00
500-3800	10	CY	652.21	CLASS A CONCRETE, INCL REINF STEEL	6522.10
550-1180	2000	LF	31.29	STORM DRAIN PIPE, 18 IN, H 1-10	62580.00
550-1181	500	LF	33.45	STORM DRAIN PIPE, 18 IN, H 10-15	16725.00
550-1241	1000	LF	43.45	STORM DRAIN PIPE, 24 IN, H 10-15	43450.00
550-1301	300	LF	52.02	STORM DRAIN PIPE, 30 IN, H 10-15	15606.00
550-1361	300	LF	68.43	STORM DRAIN PIPE, 36 IN, H 10-15	20529.00
550-4118	3	EA	263.22	FLARED END SECTION 18 IN, SIDE DRAIN	789.66
550-4124	3	EA	341.72	FLARED END SECTION 24 IN, SIDE DRAIN	1025.16
550-4130	1	EA	488.03	FLARED END SECTION 30 IN, SIDE DRAIN	488.03
550-4136	1	EA	529.84	FLARED END SECTION 36 IN, SIDE DRAIN	529.84
573-2006	500	LF	12.16	UNDDR PIPE INCL DRAINAGE AGGR, 6 IN	6080.00
668-1100	20	EA	1781.11	CATCH BASIN, GP 1	35622.20
668-1110	10	LF	188.91	CATCH BASIN, GP 1, ADDL DEPTH	1889.10
668-1200	5	EA	2470.33	CATCH BASIN, GP 2	12351.65
668-1210	10	LF	254.80	CATCH BASIN, GP 2, ADDL DEPTH	2548.00
668-2100	11	EA	2695.00	DROP INLET, GP 1	29645.00
<b>Section Sub Total:</b>					<b>\$1,019,376.74</b>

**Section E. Base and Paving**

Item Number	Quantity	Units	Unit Price	Item Description	Cost
310-1101	20500	TN	15.16	GR AGGR BASE CRS, INCL MATL	310780.00
402-3112	3200	TN	63.30	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	202560.00
402-3121	6300	TN	41.66	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	262458.00
402-3130	2000	TN	39.28	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	78560.00
413-1000	2900	GL	1.01	BITUM TACK COAT	2929.00
433-1100	500	SY	110.68	REINF CONC APPROACH SLAB, INCL CURB	55340.00
441-0014	500	SY	24.30	DRIVEWAY CONCRETE, 4 IN TK	12150.00
441-0016	1100	SY	29.05	DRIVEWAY CONCRETE, 6 IN TK	31955.00
441-0104	4500	SY	24.77	CONC SIDEWALK, 4 IN	111465.00
441-4020	160	SY	29.12	CONC VALLEY GUTTER, 6 IN	4659.20
441-4050	300	SY	33.29	CONC VALLEY GUTTER WITH CURB, 8 IN	9987.00
441-7011	4	EA	640.61	CURB CUT WHEELCHAIR RAMP, TYPE A	2562.44
441-7014	10	EA	542.60	CURB CUT WHEELCHAIR RAMP, TYPE D	5426.00
<b>Section Sub Total:</b>					<b>\$1,090,831.64</b>

**Project Costs**  
**BRST-054-1(63) Forsyth/Gwinnett Counties, PI No 132985**

**Section F. Lump Items**

<b>Item Number</b>	<b>Quantity</b>	<b>Units</b>	<b>Unit Price</b>	<b>Item Description</b>	<b>Cost</b>
150-1000	1	LS	106522.71	TRAFFIC CONTROL -	106522.71
163-0232	5	AC	473.25	TEMPORARY GRASSING	2366.25
163-0240	43	TN	197.09	MULCH	8474.87
163-0300	7	EA	1228.63	CONSTRUCTION EXIT	8600.41
163-0503	4	EA	484.32	CONSTRUCT AND REMOVE SILT CONTROL GATE, TP 3	1937.28
163-0504	36	EA	154.91	CONSTRUCT AND REMOVE SILT CONTROL GATE, TP 4	5576.76
163-0520	1000	LF	12.65	CONSTRUCT AND REMOVE TEMPORARY PIPE SLOPE DRAIN	12650.00
163-0521	40	EA	166.64	CONSTRUCT AND REMOVE TEMPORARY DITCH CHECKS	6665.60
163-0531	3	EA	7611.49	CONSTRUCT AND REMOVE SEDIMENT BASIN, TP 1, STA NO -	22834.47
165-0010	8000	LF	1.06	MAINTENANCE OF TEMPORARY SILT FENCE, TP A	8480.00
165-0030	7000	LF	1.15	MAINTENANCE OF TEMPORARY SILT FENCE, TP C	8050.00
165-0040	40	EA	69.66	MAINTENANCE OF EROSION CONTROL CHECKDAMS/DITCH CHECKS	2786.40
165-0060	3	EA	1010.89	MAINTENANCE OF TEMPORARY SEDIMENT BASIN, STA NO -	3032.67
165-0087	4	EA	175.19	MAINTENANCE OF SILT CONTROL GATE, TP 3	700.76
165-0088	36	EA	63.87	MAINTENANCE OF SILT CONTROL GATE, TP 4	2299.32
165-0101	7	EA	404.97	MAINTENANCE OF CONSTRUCTION EXIT	2834.79
167-0100	24	MO	955.65	WATER QUALITY MONITORING	22935.60
167-0200	24	EA	58.24	WATER QUALITY SAMPLING	1397.76
167-1500	24	MO	810.98	WATER QUALITY INSPECTIONS	19463.52
171-0010	8000	LF	1.83	TEMPORARY SILT FENCE, TYPE A	14640.00
171-0030	7000	LF	3.18	TEMPORARY SILT FENCE, TYPE C	22260.00
201-1500	17	LS	8000.00	CLEARING & GRUBBING -	136000.00
441-0204	700	SY	27.36	PLAIN CONC DITCH PAVING, 4 IN	19152.00
603-2024	500	SY	43.00	STN DUMPED RIP RAP, TP 1, 24 IN	21500.00
603-7000	500	SY	3.99	PLASTIC FILTER FABRIC	1995.00
610-2705	110	SY	35.60	REM CONC APPROACH SLAB	3916.00
622-1050	2000	LF	118.73	PRECAST CONCRETE MEDIAN BARRIER, METHOD 4	237460.00
700-6910	10	AC	768.58	PERMANENT GRASSING	7685.80
700-7000	29	TN	57.75	AGRICULTURAL LIME	1674.75
700-7010	36	GL	18.75	LIQUID LIME	675.00
700-8000	10	TN	261.59	FERTILIZER MIXED GRADE	2615.90
700-8100	750	LB	1.51	FERTILIZER NITROGEN CONTENT	1132.50
710-9000	500	SY	4.40	PERMANENT SOIL REINFORCING MAT	2200.00
715-2200	500	SY	2.00	BITUMINOUS TREATED ROVING, WATERWAYS	1000.00
716-2000	29000	SY	1.06	EROSION CONTROL MATS, SLOPES	30740.00
<b>Section Sub Total:</b>					<b>\$752,256.12</b>

**Project Costs**  
**BRST-054-1(63) Forsyth/Gwinnett Counties, PI No 132985**

**Section G. Miscellaneous**

Item Number	Quantity	Units	Unit Price	Item Description	Cost
634-1200	20	EA	88.20	RIGHT OF WAY MARKERS	1764.00
636-1020	200	SF	13.54	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 3	2708.00
636-1029	40	SF	21.77	HIGHWAY SIGNS, TP 2 MATL, REFL SHEETING, TP 3	870.80
636-2070	550	LF	6.87	GALV STEEL POSTS, TP 7	3778.50
639-4004	4	EA	4349.50	STRAIN POLE, TP IV	17398.00
641-1100	100	LF	31.00	GUARDRAIL, TP T	3100.00
641-1200	4000	LF	13.56	GUARDRAIL, TP W	54240.00
641-5001	8	EA	473.05	GUARDRAIL ANCHORAGE, TP 1	3784.40
641-5012	6	EA	1546.11	GUARDRAIL ANCHORAGE, TP 12	9276.66
647-1000	1	LS	41520.25	TRAFFIC SIGNAL INSTALLATION NO -	41520.25
653-0120	18	EA	58.67	THERMOPLASTIC PVMT MARKING, ARROW, TP 2	1056.06
653-0170	8	EA	76.79	THERMOPLASTIC PVMT MARKING, ARROW, TP 7	614.32
653-1501	2500	LF	0.27	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	675.00
653-1502	9000	LF	0.26	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	2340.00
653-1704	120	LF	3.34	THERMOPLASTIC SOLID TRAF STRIPE, 24 IN, WHITE	400.80
653-1804	1500	LF	1.64	THERMOPLASTIC SOLID TRAF STRIPE, 8 IN, WHITE	2460.00
653-3501	10000	GLF	0.17	THERMOPLASTIC SKIP TRAF STRIPE, 5 IN, WHITE	1700.00
653-6004	3000	SY	2.55	THERMOPLASTIC TRAF STRIPING, WHITE	7650.00
653-6006	200	SY	2.67	THERMOPLASTIC TRAF STRIPING, YELLOW	534.00
654-1001	120	EA	3.47	RAISED PVMT MARKERS TP 1	416.40
654-1003	300	EA	3.77	RAISED PVMT MARKERS TP 3	1131.00
<b>Section Sub Total:</b>					<b>\$157,418.19</b>

**Section H. Special Features**

Item Number	Quantity	Units	Unit Price	Item Description	Cost
540-1102	1	LS	105960.43	REMOVAL OF EXISTING BR, BR NO -	105960.43
<b>Section Sub Total:</b>					<b>\$105,960.43</b>

**Total Estimated Cost: \$9,365,843.12**

**Subtotal Construction Cost \$9,365,843.12**

E&C Rate 25.0 % \$2,341,460.78

Inflation Rate 5.0 % @ 3.0 Years \$1,845,363.78

**Total Construction Cost \$13,552,667.68**

Right Of Way \$450,000.00

ReImb. Utilities \$50,000.00

**Grand Total Project Cost \$14,052,667.68**



## **Traffic Analysis**

The purpose of this study is to evaluate current and design year traffic conditions along SR 20 within the project limits and to provide recommendations for intersection improvements.

### **Existing and Projected Traffic Volumes**

Existing and Projected traffic volumes for SR 20 were determined based on the traffic studies provided by the adjacent projects, STP-0002-00(392) to the west and MLS-000-00(430) to the east. Additionally, 24 hour traffic counts were collected on the two side roads within the project limits, Ruth Lane and Burnette Trail. The volumes from these studies were based on 2004 traffic counts and growth based on a review of Forsyth County's Major Transportation Plan, Gwinnett County's Comprehensive Plan, GDOT Historical Traffic Counts, and the ARC 2030 regional transportation model. From this review, a 2% annual growth rate was selected as a reasonable basis for the projecting traffic growth for this four-lane typical section. The projected traffic AADT and AM/PM DHV for SR 20 and the intersections within the project limits are shown on the attached traffic diagrams.

### **Level of Service Analysis**

A capacity analysis of the existing roadway was conducted using the procedures of the 2002 Highway Capacity Manual (HCM) - Two Lane Segment Analysis and the Highway Capacity Software, Version 4.1e (HCS). This analysis indicates the existing two-lane road operates at a Level of Service (LOS) E in the base year 2008 and at LOS F in the design year 2028 for the segment within the project limits. Using the procedures of the HCM - Multi-lane Analysis, the proposed four-lane road was analyzed for current and future conditions. This analysis shows that the four-lane facility will operate at a LOS B in 2008 and a LOS C in 2028.

There is one signalized intersection within the project limits, the intersection with James Burgess Road. This intersection was analyzed as part of the adjacent project, STP-0002-00(392) and was determined to have an existing LOS of B in both the AM and PM. Under a No-Build scenario, the operation of this intersection was determined to be at an LOS E in the AM and an LOS C in the PM for the design year of 2028. With the proposed improvements, operation is shown to improve to LOS C and LOS A in the AM and PM respectively in 2028. The traffic analysis for the adjacent project recommends the following improvements for the intersection of SR 20 and James Burgess:

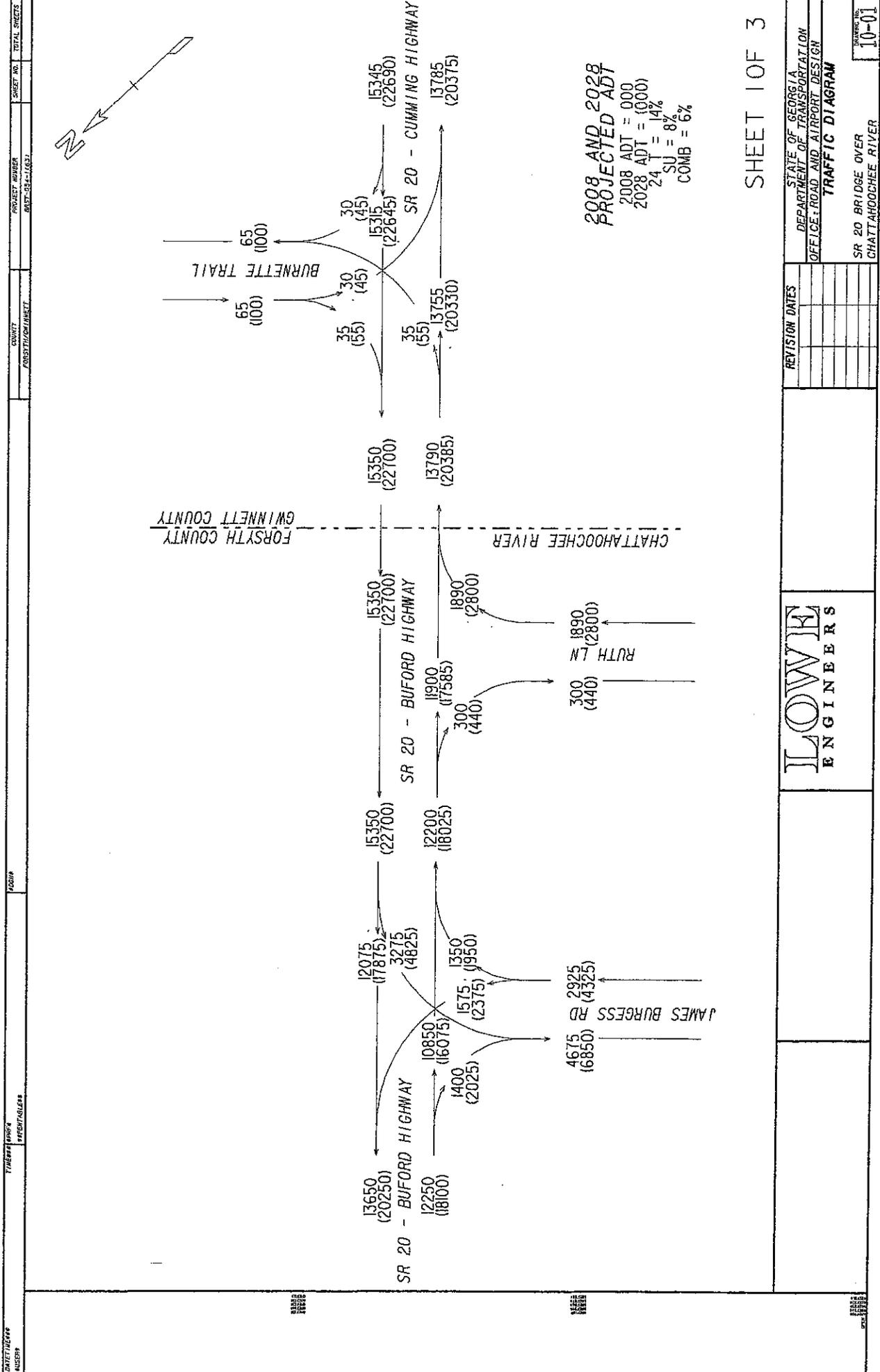
- Add double left turn lanes on the northbound Burgess Road approach.

### **Safety Analysis**

Historical accident and injury rates were calculated based on 2000, 2001, and 2002 data as shown in the table below. The historical data includes no record of fatalities during this time period, however, it is known that a fatality accident occurred on SR 20 on the bridge over the Chattahoochee River in late 2004. The table also shows statewide average accident and injury rates corresponding to an urban minor arterial functional classification.

Year	Accidents			Injuries		
	<i>Total</i>	<i>Rate</i>	<i>Statewide</i>	<i>Total</i>	<i>Rate</i>	<i>Statewide</i>
<b>2000</b>	52	214	660	21	86	258
<b>2001</b>	49	193	564	22	87	218
<b>2002</b>	48	181	282	14	53	93

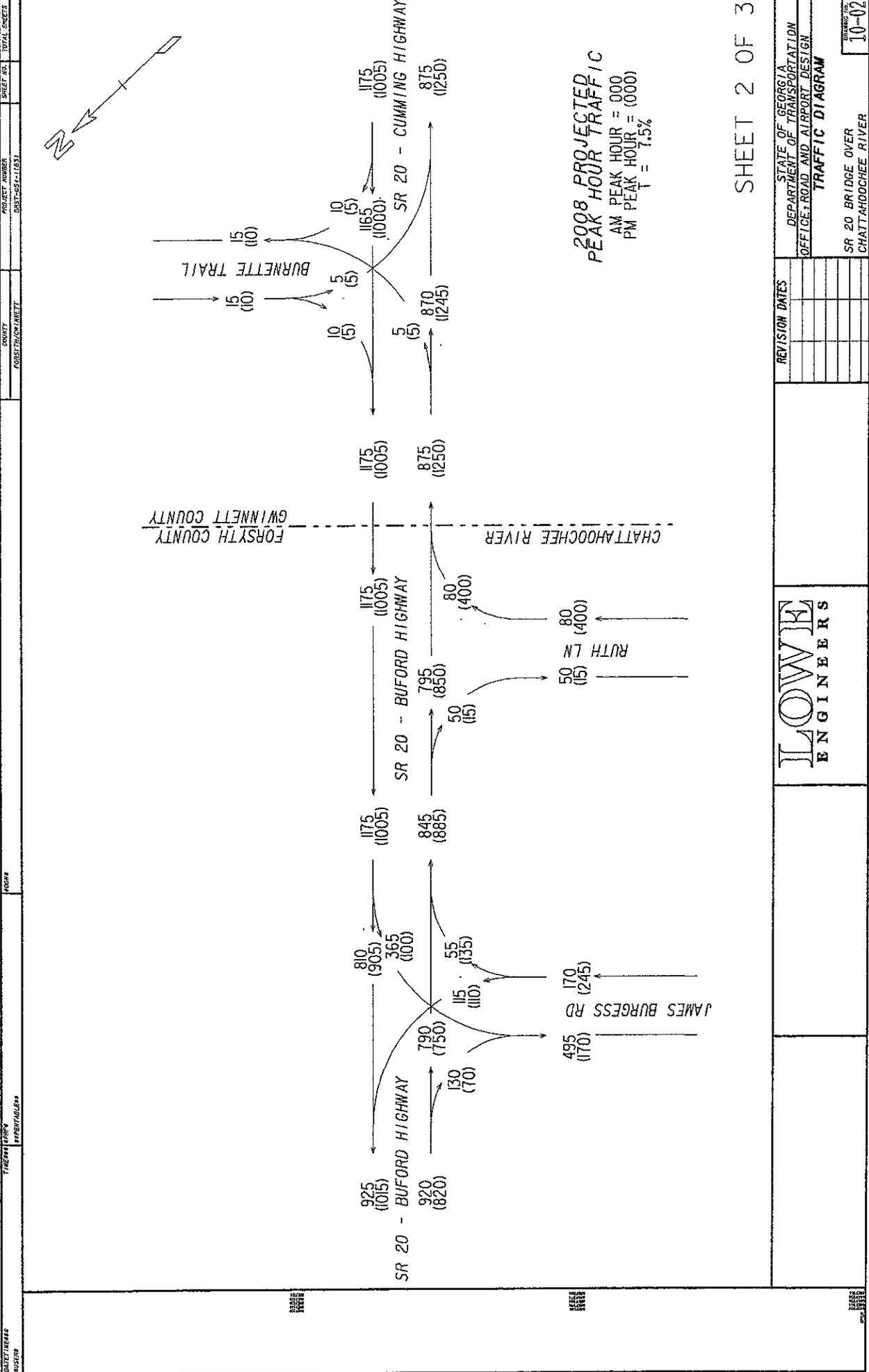
The analysis indicates a declining trend over the three-year period, with SR 20 accident rates below the statewide average for all three years. The injury rate also declined and was below the statewide average for all three years. Of the 149 total accidents, 100 involved rear-end collisions and 18 involved angle collisions. One possible cause for the high number of rear-end collisions is the relatively high traffic volumes and congestion on this two lane arterial. With numerous driveways and side streets, turning vehicles are being struck in the rear by fast moving traffic. This project will reduce these accidents by providing two through lanes in each direction and turn lanes where necessary.



SHEET 1 OF 3

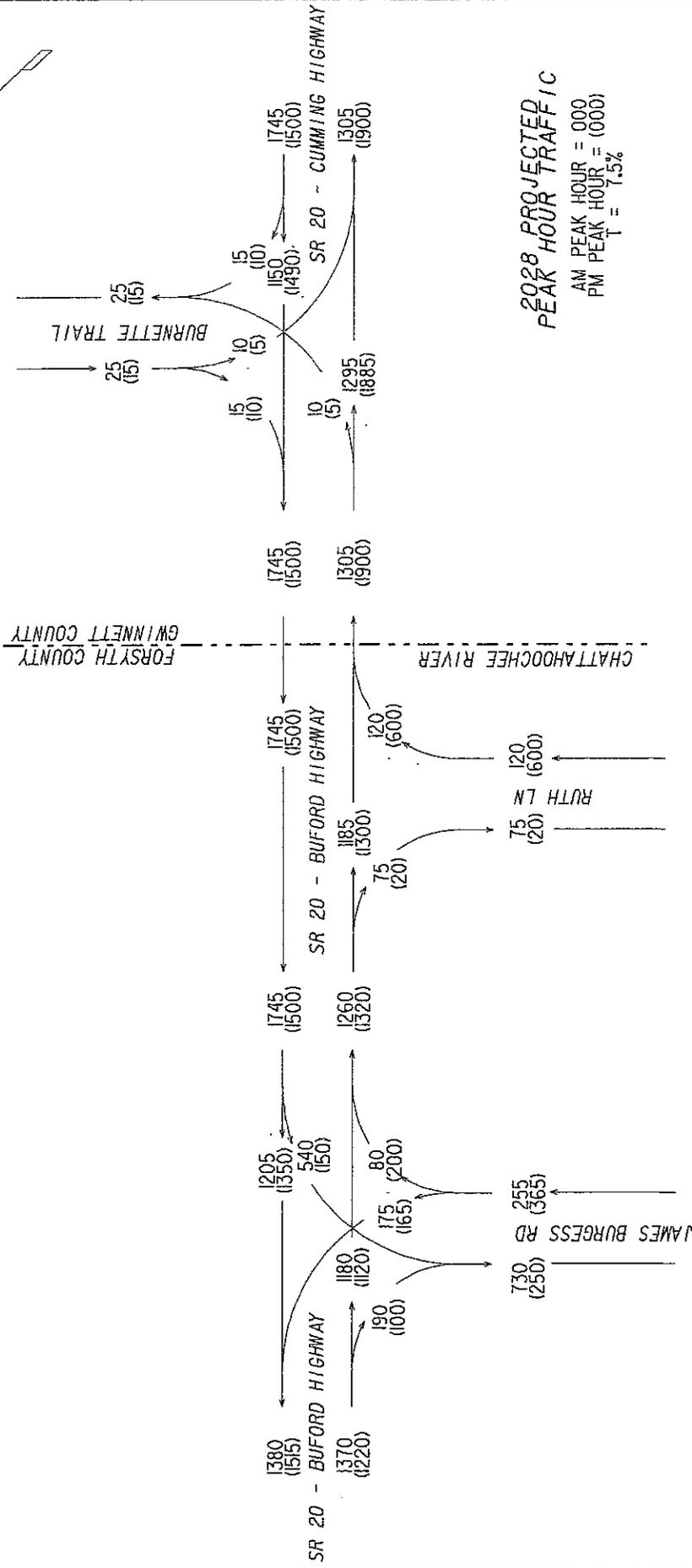
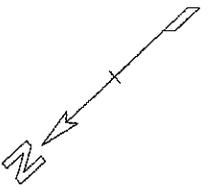
PROJECT NUMBER SR20-03-11-10-01		SHEET NO. TOTAL SHEETS	
COUNTY FORSYTH/GWINNETT		REVISION DATES	
STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE OF ROAD AND AIRPORT DESIGN		TRAFFIC DIAGRAM	
SR 20 BRIDGE OVER CHATTAHOOCHEE RIVER		DRAWING NO. 10-01	

**LOWE**  
ENGINEERS



SHEET 2 OF 3

STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE: ROAD AND AIRPORT DESIGN	REVISION DATES
<b>TRAFFIC DIAGRAM</b>	
DATE: 10-02	



**LOWE ENGINEERS**

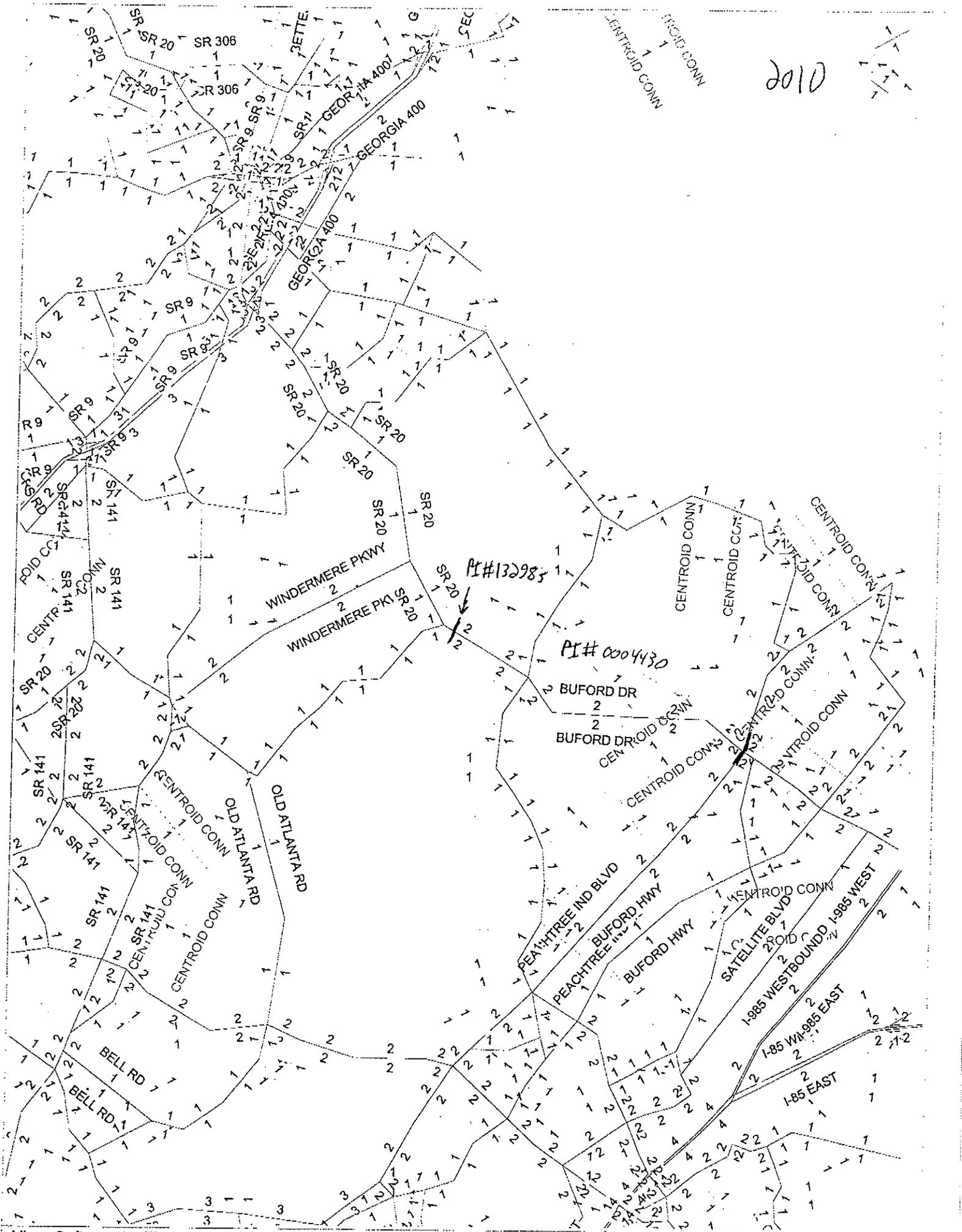
STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
OFFICE: ROAD AND AIRPORT DESIGN

**TRAFFIC DIAGRAM**

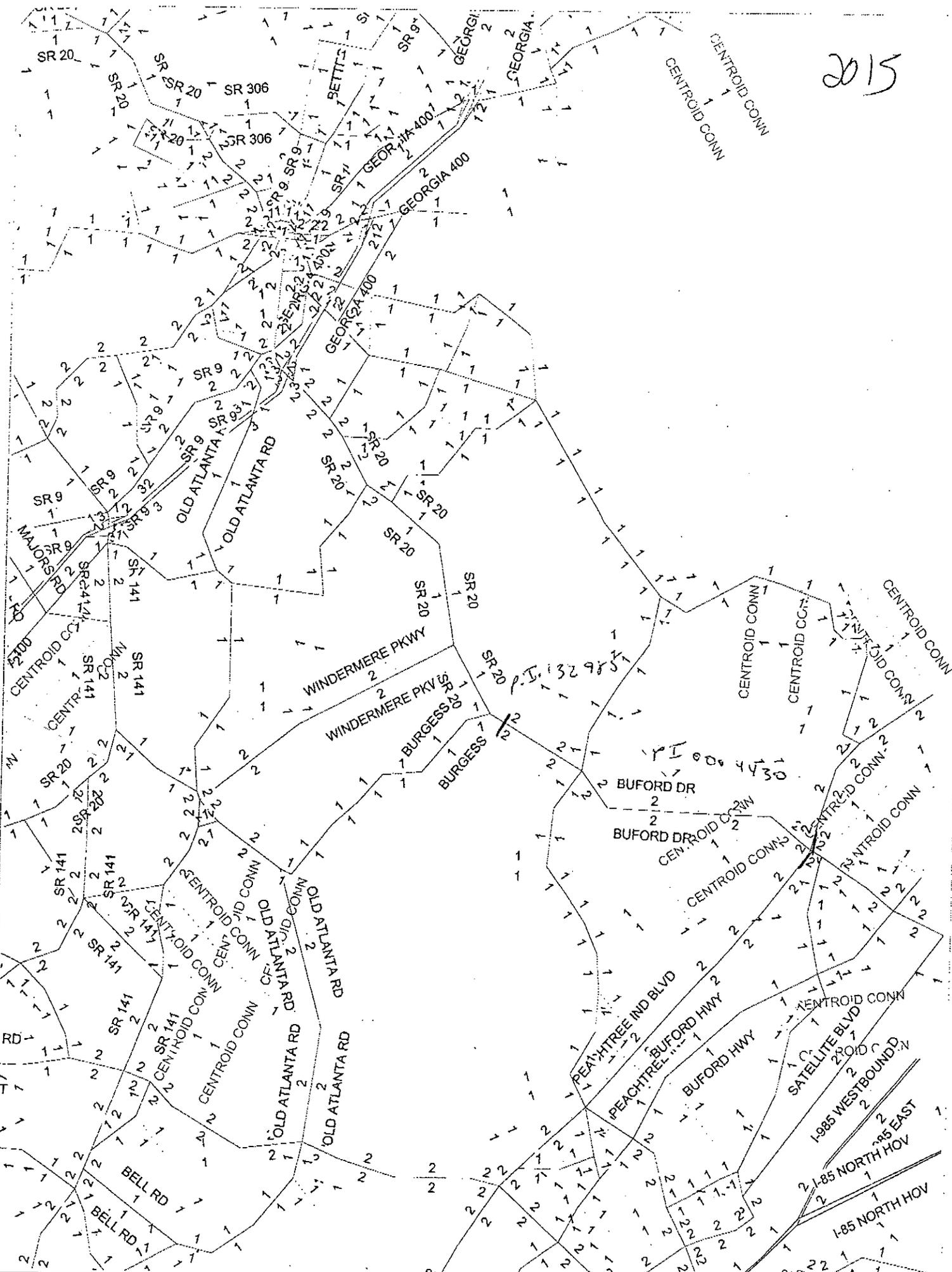
SR 20 BRIDGE OVER CHATTAHOOCHEE RIVER

DRAWING NO. 10-03

2010



2015



# BRIDGE INVENTORY DATA LISTING GEORGIA DEPARTMENT OF TRANSPORTATION

Structure ID: 135-0019-0

Gwinnett County

SUFF. RATING: 66.0

## Location & Geography

\* Structure I.D. No.: 135-0019-0  
 \* 200 Bridge Information: 06  
 \* 6A Feature Int.: CHATTAHOOCHEE RIVER  
 \* 6B Critical Bridge: 0  
 \* 7A Route Number Carried: SR00020  
 \* 7B Facility Carried: CUMMING HIGHWAY  
 \* 9 Location: @ FORSYTH CO LINE  
 \* 2 DOT District: 1  
 \* 207 Year Photo: 1998  
 \* 91 Inspection Frequency: 24 Date: 11/16/1999  
 \* 92A Fract Crit Insp Freq: 0.00 Date: 0000  
 \* 92B Underwater Insp Freq: 1.60 Date: 03/23/1999  
 \* 92C Other Spc. Insp Freq: 0.00 Date: 0000  
 \* 4 Place Code: 00000  
 \* 5 Inventory Route (O/U): 1  
 \* Type: 3  
 \* Designator: 1  
 \* Number: 00020  
 \* Direction: 0  
 \* 16 Latitude: 34-08.2  
 \* 17 Longitude: 84 -06.0  
 \* 98 Border Bridge: 000 %Shared: 00  
 \* 99 ID Number: 0000000000000000  
 \* 100 Defense Highway: 0  
 \* 101 Parallel Structure: N  
 \* 102 Direction of Traffic: 2  
 \* 264 Road Inventory Mile Post: 000.00  
 \* 208 Inspection Area: 07 Initials: DAS  
 \* Location I.D. No.: 135-00020D-000.01E  
 \* XReferen I.D. No.: 000-0000000-000.000

## Signs & Attachments

\* 104 Highway System: 0  
 \* 26 Functional Classification: 06  
 \* 204 Federal Route Type: F No: 054-1  
 \* 110 Truck Route: 0  
 \* 206 School Bus Route: 0  
 \* 217 Benchmark Elevation: 0.00  
 \* 218 Datum: 0  
 \* 19 Bypass Length: 10  
 \* 20 Toll: 3  
 \* 21 Maintenance: 01  
 \* 22 Owner: 01  
 \* 31 Design Load: 5  
 \* 37 Historical Significance: 5  
 \* 205 Congressional District: 10  
 \* 27 Year Constructed: 1947  
 \* 106 Year Reconstructed: 0000  
 \* 33 Bridge Median: 0  
 \* 34 Skew: 29  
 \* 35 Structure Flared: 0  
 \* 38 Navigation Control: 0  
 \* 213 Special Steel Design: 0  
 \* 267 Type of Paint: 2  
 \* 42 Type Service On: 1  
 \* Under: 5  
 \* 214 Movable Bridge: 00  
 \* 203 Type Bridge: A-O-M-O  
 \* 259 Pile Encasement: 3  
 \* 43 Structure Type Main: 4 02  
 \* 45 No. Spans Main: 008  
 \* 44 Structure Type Appr: 3 3  
 \* 46 No. Spans Appr: 0002  
 \* 226 Bridge Curve Horz: 0 Vert: 0  
 \* 111 Pier Protection: 0  
 \* 107 Deck Structure Type: 1  
 \* 108 Wearing Surface Type: 1  
 \* Membrane: 0  
 \* Protection: 8  
 \* 223 Expansion Joint Type: 01  
 \* 242 Deck Drains: 1  
 \* 243 Parapet Location: 0  
 \* Height: 0  
 \* Width: 0  
 \* 238 Curb: 1.2 1  
 \* 239 Handrail: 1 1  
 \* 240 Median Barrier Rail: 0  
 \* 241 Bridge Median Height: 0  
 \* Width: 0  
 \* 230 Guardrail Loc Dir Rear: 3  
 \* Fwr: 3  
 \* Oppo Dir Rear: 0  
 \* Fwr: 0  
 \* 244 Approach Slab: 3  
 \* 224 Retaining Wall: 0  
 \* 233 Posted Speed Limit: 55  
 \* 236 Warning Sign: 1  
 \* 234 Delineator: 1  
 \* 235 Hazard Boards: 1  
 \* 237 Utilities Gas: 00  
 \* Water: 00  
 \* Electric: 00  
 \* Telephone: 00  
 \* Sewer: 00  
 \* 247 Lighting Street: 0  
 \* Navigation: 0  
 \* Aerial: 0  
 \* 248 County Continuity No: 00

# BRIDGE INVENTORY DATA LISTING GEORGIA DEPARTMENT OF TRANSPORTATION

Structure ID: 135-0019-0

Gwinnett County

SUFF. RATING: 66.0

## Programming Data

201 Project No: S-233-C (1)  
 202 Plans Available: 1  
 249 Prop. Proj No: BRST-054-1 (63)  
 250 Approval Status: 0000  
 251 P.I. No: 132985  
 252 Contract Date: 02/01/2004  
 260 Seismic No: 00000  
 75 Type Work: 34 1  
 94 Bridge Imp. Cost: \$ 2,009  
 95 Roadway Imp. Cost: \$ 119  
 96 Total Imp. Cost: \$ 2,605  
 76 Imp. Length: 001011  
 97 Imp. Year: 1990  
 114 Future ADT: 035400 Year: 2018

## Measurements

\* 29 ADT: 023600 Year: 1998  
 109 % Trucks: 11  
 \* 28 Lanes On: 02 Under: 00  
 210 No. Tracks On: 00 Under: 00  
 \* 48 Max. Span Length: 0101  
 \* 49 Structure Length: 803  
 51 Br. Rdwy. Width: 25.8  
 52 Deck Width: 31.8  
 \* 47 Tot. Horz. Cl: 25.8  
 50 Curb/Sdewlk Width: 2.0/2.0  
 32 Approach Rdwy Width: 032  
 \* 229 Slider Width:  
     Rear Lt: 4.0 Type: 2 Rt: 4.0  
     Fwrd Lt: 1.3 Type: 2 Rt: 1.7  
     Pavmt Width:  
         Rear: 24.0 Type: 2  
         Fwrd: 24.0 Type: 2  
 Intersection Rear: 1 Fwrd: 0  
 36 Safety Features Br. Rail:  
     Transition: 2  
     App. G. Rail: 2  
     App. Rail End: 2  
 53 Minimum Cl. Over: 99' 99"  
     Under: N 00' 00"  
 \* 228 Min. Vert. Cl  
     Act. Odm. Dir: 99' 99"  
     Oppo. Dir: 99' 99"  
     Posted Odm. Dir: 00' 00"  
     Oppo. Dir: 00' 00"  
 55 Lateral Undercl. Rt: N 99.9  
 56 Lateral Undercl. Lt: 0.0  
 \* 10 Max Min Vert Cl: 99' 99" Dir: 0  
 39 Nav Vert Cl: 000 Horz: 0000  
 116 Nav Vert Cl Closed:  
 245 Deck Thickness Main: 6.5  
     Deck Thick Approach: 6.5  
 246 Overlay Thickness: 0.0  
 211 Tons Structural Steel: 0.0  
 212 Year Last Painted: Sup: 1999 Sub: 0000

## Ratings

66 Inventory Type: 2 Rating: 36  
 64 Operating Type: 2 Rating: 51  
 231 Calculated Loads  
     H-Modified: 20 0  
     HS-Modified: 25 0  
     Type 3: 28 0  
     Type 3s2: 40 0  
     Timber: 36 0  
     Piggyback: 00 0  
 261 H Inventory Rating: 20  
 262 H Operating Rating: 28  
 67 Structural Evaluation: 7  
 58 Deck Condition: 6  
 59 Superstructure Condition: 7  
 \* 227 Collision Damage: 0  
 60A Substructure Condition: 7  
 60B Scour Condition: 6  
 60C Underwater Condition: 6  
 71 Waterway Adequacy: 6  
 61 Channel Protection Cond: 5  
 68 Deck Geometry: 2  
 69 UnderClr. Horz/Vert: N  
 72 Appr. Alignment: 6  
 62 Culvert: N

## Posting Data

70 Bridge Posting Required: 5  
 41 Struct Open, Posted, Cl: A  
 \* 103 Temporary Structure: 0  
 232 Posted Loads H-Modified: 00  
     HS-Modified: 00  
     Type 3: 00  
     Type 3S2: 00  
     Timber: 00  
     Piggyback: 00  
 253 Notification Date: 0000  
 253 Fed Notify Date: 0000 0

## Hydraulic Data

215 Waterway Data  
 Highwater Elev: 0000.0 Year: 0000  
 Flood Elev: 0000.0 Freq: 00  
 Avg. Streambed Elev: 0000.0  
 Drainage Area: 00000  
 Area of Opening: 000000  
 113 Scour Critical: 5  
 216 Water Depth: 06.0 Br Height: 43.4  
 222 Slope Protection: 6  
 221 Spur Dikes Rear: 0 Fwrd: 0  
 219 Fender System: 0  
 220 Dolphun: 0  
 223 Culvert Cover: 000  
     Type:  
     No Barrels: 0  
     Width: 0.0  
     Height: 0.0  
     Length: 0  
     Apron: 0  
 \* 265 U/W Insp. Area: 1 Diver: TSP

\* Location I.D. No: 135-00020D-000.01E  
 \* XReferen I.D. No: 000-0000000-000.000



**Precision  
Planning,  
Inc.**

planners, engineers, architects, & surveyors

**DATE:** May 24, 2005

**PROJECTS:** BRST-054-1(63) - S.R. 20 Bridge Widening Over the Chattahoochee River  
MLS-000-00(430) – S.R. 20 Widening from east of Burnette Trail to  
Peachtree Industrial Boulevard

**ITEM:** Initial Concept Team Meeting

---

ATTENDEES: See attached sign-in sheet.

Minutes Written By Adam Smith

Mr. Stanley Hill called the meeting to order and each meeting attendee was introduced.

**THE FOLLOWING ITEMS WERE DISCUSSED:**

1. Mr. Stanley Hill stated that the projected traffic data should be representative of the year the roadway is open to traffic.
2. S.R. 20 is classified as a rural minor arterial.(According to Gwinnett D.O.T. the classification is rural major arterial)
3. The southbound movement on Suwanee Dam Road making a left turn on S.R. 20 should be evaluated for dual left turns based on new developments in the area.
4. Guardrail should be added to the typical section attachment.
5. A 4:1 slope should be used in design where possible to avoid the use of guardrail.
6. The required right-of-way width is 140 feet. In locations where a right turn lane is proposed the required right-of-way width is 155 feet.
7. Impacts to the gravity sewer south of S.R. 20 from the Chattahoochee River to just east of Burnette Trail should be avoided if possible.
8. The traffic analysis at Suwanee Dam Rd. should take into account increased traffic due to the proposed right in/right out on Riverside Road at S.R. 20.
9. There are five signalized intersections currently in the project corridor. Capacity analysis will be conducted at all intersections.
10. The geometric design will be based on a 45 mph design speed using the 2004 AASHTO Policy on Geometric Design of Highways and Streets and other required standards.
11. The typical section is a four-lane urban section with a 44 foot depressed median to accommodate future widening to a six-lane road.

12. Intersections with a deficient angle of intersection will be improved from the existing at approximately 60° to a more desirable 70°.
13. Most cuts along the centerline will be less than 2-3 feet and most fills along the centerline will be less than 4-5 feet (some may be over ten feet).
14. The design incorporates a shift in the alignment in some locations to reduce right-of-way impacts.
15. The design at this stage maintains 1000 feet minimum spacing between median breaks. Access points should be coordinated at new developments.
16. Gwinnett County Department of Public Utilities noted that there is an existing 16" water line running parallel to S.R. 20 from Peachtree Industrial Boulevard to Suwanee Dam Road.
17. The environmental items noted were:
  - a. Stream impacts to Chattahoochee River Tributaries and Level Creek Tributaries
  - b. Pottery shards found on the Chattahoochee River
  - c. Some historic structures will be removed by private development
  - d. Some UST sites have been identified. These should be shown on the concept plan and indicated in the concept report.
  - e. The environmental document is anticipated to be an EA (Environmental Assessment) with a FONSI (Finding of No Significant Impacts).
  - f. An alignment shift may be needed to avoid a 4F situation or to minimize impacts in areas near resources such as the park.
  - g. The proposed bridge may impact the park.
18. The existing bridge is a two-lane bridge. It will be replaced with two parallel two-lane bridges designed to allow for a future widening to a six-lane roadway.
19. The anticipated schedule is right-of-way to be approved by June 30, 2006 and let to construction by 2008.
20. The City of Sugar Hill noted that approximately 30 citizens have given feedback regarding the project. The developments proposed in the area or under construction have donated about 1.5 miles of right-of-way as a condition of zoning. They want to be sure that the intersection of Sycamore Rd./West Broad St. is designed to handle the new developments in the area. The Sugar Hill Community Center will be available to use for the Public Information Meeting.
21. The City of Buford asked to be kept informed regarding the project.
22. The District 1 traffic operations department wanted to be sure that they be informed regarding any new developments so they have adequate time to resolve any issues. They request to see the studies for all new signals.
23. Gwinnett County asked if the schedule could be pushed up to be able to have a joint meeting with the Forsyth widening project STP-0002-00(392), P.I. No. 002392 (currently scheduled for July 14<sup>th</sup>, 2005). Jason McCook stated that the PDP requires that 30 days must be given to GDOT for concept approval before scheduling the Public Information Open House.
24. The concept report should be re-submitted by Friday June 10<sup>th</sup>, 2005 to accommodate scheduling the final concept team meeting.
25. Both projects will be kept on schedule. Their concepts will be submitted and processed at the same time.

26. The concepts must be completed before the preliminary plans are begun.
27. The roadway project is to be funded with bond money. The bridge is to be state funded.
28. Sugar Hill Gas is in process of relocating existing gas line.
29. Coordination between Forsyth County and Gwinnett County and with the Forsyth widening project STP-0002-00(392), PI NO. 002392 is important for the bridge replacement project.

If there are any corrections to the above meeting minutes that you consider necessary for the project record, please contact Adam Smith directly at (770) 338-8140 within 72 hours of the date of receipt.

Cc: Georgia Department of Transportation – Jason McCook, Stanley Hill, Kim Phillips, James S. Moore, Brent Cook, Jeff Jacques  
Gwinnett County Department of Transportation – David Tucker, Alan Chapman  
MAAI – Ron Braziel, Kevin Skinner  
Lowe Engineers – Abbie Dement  
Precision Planning – Bill Crowder, Asad Hadadzadeh, Adam Smith  
Gwinnett County Department of Public Utilities – Henry T. Hoertz  
City of Sugar Hill – Bob Hail, Dan Schultz  
Forsyth County – John Cunard  
City of Buford – Bryan Kerlin  
File 360

**SR20 Bridge over Chattahoochee River**  
**BRST-054-1(63)**  
**Gwinnett Co. PN 3146-01**

**Meeting Minutes – Concept Team Meeting**  
**December 2, 2005**

- I. WELCOME- Mr. Stanley Hill
- II. INTRODUCTION OF EACH ATTENDEE
- III. PROJECT IDENTIFICATION
  - a. BRST 054-1(63)
    - i. The existing road is composed of a two-lane bridge with a 100 feet right of way and urban utilities.
    - ii. The bridge evaluation determined parallel bridges, expandable to 6-lane, in which the design is such that the profile grade line is in the center of the parallel bridges.
    - iii. The roadway section will be comprised of a four-lane divided urban highway.
    - iv. The bridge section will be comprised of parallel bridges in a parallel gravity system.
    - v. Posted speed is 55 MPH.
    - vi. Section 404 (Environmental Document) states that the impact of construction must be less than the environmental impacts to the stream (otherwise) for park land.
    - vii. FONSI permit is required.
    - viii. The initial concept layout calls for a one mile stretch (from James Burgess in Forsyth to east of Brunette Rd. in Gwinnett) adjacent to and including the bridge to have a maximum grade of 4.5% with a 150 foot right-of-way.
    - ix. Coordination between Forsyth and Gwinnett is important to project.
- IV. FUNCTIONAL CLASSIFICATION
  - a. Urban Principal arterial as of June 23, 2005
- V. NEED AND PURPOSE STATEMENT
  - a. Safe and mobile two to four lane road and bridge for this section of SR20.
  - b. GW-020-A2
  - c. Draft concept report had the wrong cover sheet for this project
  - d. Lowe will address that “maximum grade allowable” no longer has “allowable in AASHTO 2004
- VI. TRAFFIC PROJECTIONS
  - a. Current (2005) – 29,140 ADT
  - b. Projected (2028) – 43,085 ADT
- VII. EXISTING TYPICAL SECTION- will supply at a later date
- VIII. DESIGN CRITERIA
  - a. 45 MPH urban design
  - b. Maximum 4 degrees (existing), proposed 16 degree curve with a max grade of 6%
  - c. Some open ditches
  - d. More detailed descriptions of the bridge structure will be added to the concept report.
  - e. Possibility of a median break at Burnette will be reviewed as well as possibly tying relocated Burnette differently to accommodate access to City of Sugar Hill land.
  - f. Public exhibits will show background of adjacent projects and station begin/end. Legends will be coordinated between Lowe and Precision, esp. with regard to color of ROW line. Property lines and owners names and cut and fill limits are also desired to be shown. Displacements need to be identified, preferably by red dots. Median spacing is to be shown.
  - g. A site plan of any possible construction projects and CADD data files if available are desired for known projects in the area.

- h. Quick looks at the trout farm and park land are desired to see what the limits of construction may be (likely outside ROW)

IX. PROPOSED PROJECT DESCRIPTION (see III. Project Identification)

X. MAJOR STRUCTURES

- a. Parallel bridges. No piers in the river are desired. It is greatly preferred that any future piers needed for 6lane expansion (2028) be done in this project.
- b. There is a possibility of a park path along the river under the bridge to be aware of.

XI. DESIGN VARIANCES/EXCEPTIONS

- a. None

XII. RIGHT OF WAY DISPLACEMENTS/RELOCATIONS

- a. There are 2 commercial significant impacts
- b. Right of way will be widened 5' to 75' from centerline to accommodate utility poles outside the clear zone, resulting in a 150' ROW section.

XIII. UTILITIES

- a. 16" water line
- b. The gravity sewer along creek bank was just completed. There was difficulty in obtaining easements in this area.
- c. Gas- trying to move prior line

XIV. ALTERNATES CONSIDERED AND REASONS FOR REJECTION

- a. Discussion includes which side and why the road will be shifted. The shift is on the South side from Forsyth to match that project and includes the bridge. The proposed alignment then moves to the north side to the avoided lateral stream crossing running along the road.
- b. The northern arc project was dismissed.

XV. LEVEL OF ENVIRONMENTAL ANALYSIS AND CONCERNS

- a. Linear stream impacts are limited and it is anticipated that an individual permit will not be required
- b. Of any potentially historical houses- none met preliminary requirements
- c. Any existing UST's will be show on concept number report

XVI. PROJECT DEVELOPMENT SCHEDULE

- a. Bridge right-of-way 2007, construction 2008

XVII. PUBLIC HEARING

- a. TBD, PIOH anticipated in late February 2006, Environmental Public Hearing after Environmental Document is approved

XVIII. COMMENTS FROM ATTENDEEES

- a. District
  - i. If District receives a D/W permit request, they will let Lowe know about impending development.
  - ii. Traffic Operations will need to see traffic study for new signals or signal upgrades prior to PFPR.
- b. Sugar Hill/Buford
  - i. City has been working with GCDOT and PPI and have 30 citizen involvement comments so far
  - ii. City will working on its utilities for bend in road
  - iii. City offered Community Center for public information meetings.
- c. Other concerns
  - i. In conversation after the meeting, it was learned that the construction easement has been removed on east side of the project; however the permanent easement still exists along the new sanitary sewer location.
  - ii. Be aware that property owners along the river have exhibited signs of violence towards construction workers in the past.
  - iii. Both displays will be color coded to match each other