ORIGINAL TO GENERAL FILES

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P. I. No. 142285, Gwinnett County
BRST-0998(1)
SR 324 over I-85 Bridge Replacement

OFFICE Preconstruction

DATE July 20, 2005

FROM 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 Keepler
Ken Thompson
Jamie Simpson
Michael Henry
Keith Golden
Joe Palladi (file copy)
Paul Liles
Babs Abubakari
Russell McMurry
BOARD MEMBER
FHWA

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No. 142285, Gwinnett County
BRST-0998(1)
SR 324 over I-85 Bridge Replacement

OFFICE Preconstruction

DATE April 18, 2005

FROM 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 bridge on SR 324 over I-85 and approach widening. This proposed bridge replacement is to accompany the planned Gwinnett County project (GW-254 and GW-255) which widens SR 324 from two to four lanes. State Route 324 functions as a major collector that connects SR 20 near Buford with SR 8 near Auburn. State Route 324 is a major connection for commuter traffic to access I-85 and I-985. The SR 324 corridor will continue to see new single family residential, multi-family residential, and commercial growth as the area surrounding the Mall of Georgia develops. The existing two lane configuration of SR 324 is not compatible with conveying the projected traffic volumes for the year 2022 and beyond. The base year (2008) traffic along this section of SR 324 is 29,000 VPD and the 20 year traffic (2028) or design year projected volume is 55,000 VPD. Under no-build conditions, the future level-of-service (LOS) is projected to be "F." The proposed improvements will result in an improved LOS in 2028 of "E."

The proposed bridge will be designed to allow for future HOV lane interchange with I-85. Retaining walls are proposed in the I-85 median for the future HOV interchange backfilled with earth material creating a box section. Separate bridges (each 182' long and 102' wide) from the median box section to the outside of I-85 are planned. This will require permanently shifting the I-85 travel lanes 12' towards the outside. The bridges will also span the future HOV lanes, future additional SOV lanes, and future collector-distributor lanes on I-85. The bridge will also be designed to allow a future full access interchange. Camp Branch Road and Morgan Road will be relocated on each side of the bridge to allow for future ramp locations.

Environmental concerns include requiring a COE 404 permit; a Categorical Exclusion be prepared; a public information open house has been held; time saving procedures are not appropriate.

P. I. No. 142285, Gwinnett
April 18, 2005

This project will require split funding because the sufficiency rating exceeds 50. "BR" funding will cover the amount equal to the widening and the remainder will consist of "STP" funding.

The estimated costs for this project are:

	PROPOSED	APPROVED	FUNDING	PROG DATE
Construction (includes E&C and inflation)	BR $5,423,000 STP $1,900,000	BR $5,423,000 STP $1,900,000	Q10 Q24	2011
Right-of-Way & Utilities*	Local	Local		

*PMA sent 2-11-05 requesting Gwinnett County do 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 _____
For: Robert M. Callan, Administrator, FHWA

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

7/19/05 Design the bridge to allow for future HOV lanes as noted in the report and future Truck Only lanes (two & barrier separated) per typical developed in accordance with Board Resolution of June 2005.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

RECEIVED
APR - 7 2005

FILE: BRST-0998(1) Gwinnett
P.I. No. 142285
S.R. 324 Bridge Replacement over I-85

OFFICE: Engineering Services

DATE: April 7, 2005

FROM: David Mulling, Project Review Engineer REW

TO: Meg Pirkle, Assistant Director of Preconstruction

SUBJECT: **CONCEPT REPORT**

We have reviewed the Concept Report submitted March 22, 2005 by the letter from Russell McMurry, dated March 21, 2005, and have the following comments:

- Page 3 of the Report states that this project is "Full Oversight". Based on information in TPro, this Project is shown as "Exempt".
- The specific names of each Alternate should agree with each of the separate Cost Estimates. For example, the Concept Report mentions on Page 3 that Concept "A" is the preferred Alternate; however, on Page 6 on "Other Alternates Considered", Concept "A" is noted as the "No Build" Alternate. The Cost Estimates for "A", "B" and "C" should be referenced to all of the Alternates considered.

The costs for this project are:

	Bridge Replacement	**Bridge Widening**
Construction	$6,038,678	$4,471,118
Inflation	$618,965	$458,290
E&C (10%)	$665,765	$492,940
Reimbursable Utilities	$0.00	0.00
Right of Way	$4,500,075	$4,500,075

NOTE: This project will require split funding since the bridge has a sufficiency rating above 50 and is to be replaced. The BR funding is the amount equal to the Bridge Widening costs. Other costs will have to come from other funding sources.

REW

c: Russell McMurry, Attn.: Neil Kantner, District 1, Gainesville

SCORING RESULTS AS PER MOG 2440-2

Project Number:	County:	PI No.:
BRST-0998(1)	Gwinnett	142285

Report Date:	Concept By:
March 21, 2005	DOT Office: District 1
☒ Concept Stage	Consultant: GS&P

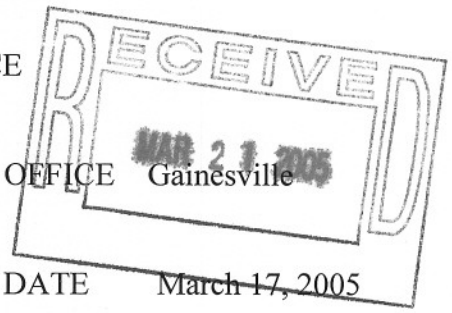
Project Type: Choose One From Each Column			
	☒ Major ☐ Minor	☒ Urban ☐ Rural	☐ ATMS ☒ Bridge Replacement ☐ Building ☐ Interchange Reconstruction ☐ Intersection Improvement ☐ Interstate ☐ New Location ☐ Widening & Reconstruction ☐ Miscellaneous

FOCUS AREAS	SCORE	RESULTS
Presentation	90	Names of Alternates (A, B or C) should tie to names shown for Cost Estimates.
Judgement	100	
Environmental	100	
Right of Way	100	
Utility	100	
Constructability	100	
Schedule	100	

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE



FILE Project # BRST-0998(1)
PI# 142285
Bridge Replacement SR 324 over I-85
Gwinnett County

OFFICE Gainesville

DATE March 17, 2005

FROM Russell R. McMurry, P.E., District Engineer

TO Meg Pirkle, P.E., Assistant Director of Preconstruction

SUBJECT Project Concept Report

Attached is the original copy of the Concept Report for your further handling for approval in accordance with the Plan Development Process (PDP).

If you need any additional information on this project, please call me at 770-532-5526

CC: David Mulling, Project Review Engineer
Harvey Keepler, State Environmental/Location Engineer
Keith Golden, State Traffic Safety and Design Engineer
Joe Palladi, State Transportation Planning Administrator
Jamie Simpson, State Financial Management Engineer
Paul Liles, State Bridge and Structural Engineer
File

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

PROJECT CONCEPT REPORT

BRIDGE REPLACEMENT
SR 324 OVER I-85

Project Number: BRST-0998(1)
County: Gwinnett
P.I. Number: 142285

Federal Route Number: N/A
State Route Number: 324

Recommendation for approval:

DATE 3/21/05 _____
Project Manager

DATE 3/21/05 _____
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

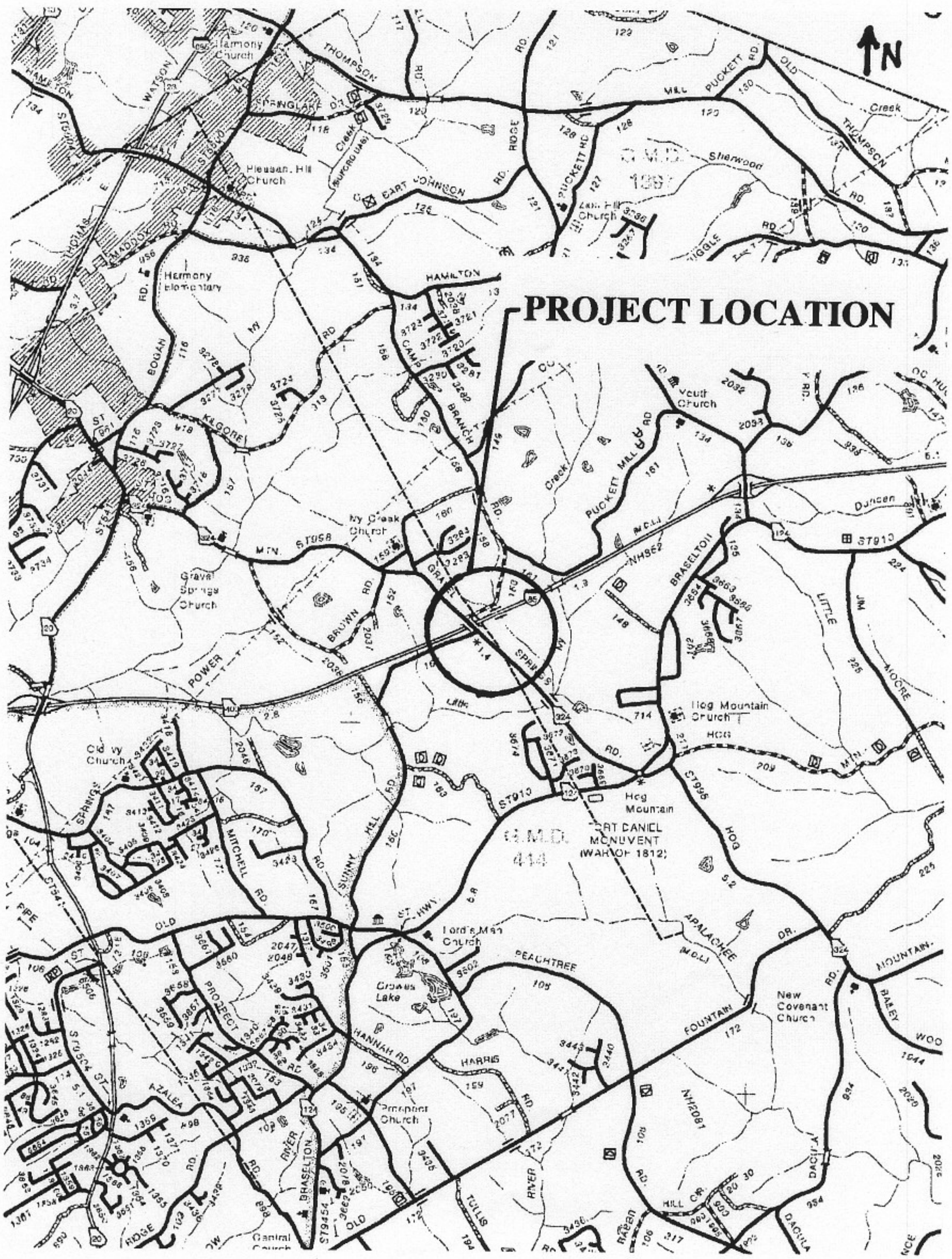
DATE _____
District Engineer

DATE _____
Project Review Engineer

DATE _____
State Bridge Engineer

Project Concept Report page 1
Project Number: BRST-0998(1)
P. I. Number: 142285
County: Gwinnett

PROJECT LOCATION MAP



Need and Purpose: The purpose of the proposed project is to improve safety, operational efficiency throughout the SR 324 corridor, and to provide for future transportation needs along I-85. This proposed bridge replacement is to accompany the planned Gwinnett County Project GW-254 & GW-255 (as identified in the ARC Regional Transportation Plan) which widens SR 324 from 2 to 4 lanes.

The proposed project was added to the STIP in 1999. The project is currently not assigned a year in the Regional Transportation Plan, however the roadway projects have Construction/ Implementation date of 2004.

S.R. 324 functions as a major collector that connects S.R. 20 near Buford with S.R. 8 near Auburn. S.R. 324 is a major connection for commuter traffic to access I-85 and I-985. It is also one of a number of east west routes that traverse Gwinnett County linking residential areas to I-85 and I-985. Present land use for the property immediately adjacent to the corridor is a mixture of commercial, agricultural and single-family residential. Commercial areas are currently confined to the nodes at S.R. 20 and S.R. 124. The current Level of Service (LOS) is E.

The S.R. 324 corridor will continue to see new single family residential, multi-family residential and commercial growth as the area surrounding the Mall of Georgia develops. Due to residential development and high potential commercial along the project corridor in the vicinity of the Mall of Georgia, the traffic volumes along S.R. 324 have steadily increased over the last five years and will continue to increase in the years to come. The existing two lane configuration of S.R. 324 is not compatible with conveying the projected traffic volumes for the year 2022 and beyond when traffic along the route is expected to double (see Table 1). Accidents along the project route at several locations have mainly been the result of geometric deficiencies in the roadway alignment and side road intersections. The Accident Rate is below the statewide average for similar facilities (Table 2). However, as the traffic volumes further increase, both the safety and level of service will further decrease. The projected LOS is F with a no build alternate. The projected LOS of the proposed project at the open-to-traffic date is C (Table 1). The projected LOS in the design year is E (Table 1).

Table 1

Year	Volume	LOS
2002	16,700	E
2008	29,000	C
2028	55,000	E

Table 2
(Rates are Accidents per 100 Million Vehicle Miles Traveled)

Year	Accident Rate	Statewide Average
2000	228	515
2001	260	527
2002	259	534

Description of the proposed project: This project is located on SR 324 over I-85. The project consists of the replacement of the bridge over I-85 and widening of SR 324 approaching the bridge. SR 324 will be widened to a four-lane divided curb and gutter facility with a 24-foot raised median. The project is part of the widening of SR 324 from SR 20 to SR 124. The proposed bridge will be designed to allow for a future HOV lane interchange with I-85. Retaining walls are proposed in the I-85 median for the future HOV interchange backfilled with earth material creating a box section. Separate bridges from the median box section to the outside of I-85 are planned. This will require permanently shifting the I-85 travel lanes 12 feet towards the outside. The bridges will also span the future HOV lanes, future additional SOV lanes, and future collector-distributor lanes on I-85. The proposed bridges will also be designed to allow a future full access interchange. Camp Branch Road and Morgan Road will be relocated on each side of the bridge to allow for future ramp locations.

The proposed project length is 0.8 miles. Two separate bridges are proposed, each 182 feet long and 102 feet wide. Additional proposed lengths of improvements are 0.8 miles on Morgan Road, 0.5 miles on Camp Branch Road, and 0.4 miles (1,900') on I-85.

The recommended alternate described in the detail of this report is represented as **Concept A**.

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

PDP Classification:

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

Functional Classification: Arterial

U. S. Route Number(s): N/A **State Route Number(s):** 324

Traffic (AADT):

Existing: (2002)	16,700
Base Year: (2008)	29,000
Design Year: (2028)	55,000

Existing design features:

- Typical Section: 2-12 ft. travel lanes, one in each direction, rural shoulders.
- Posted speed 45 mph
- Maximum degree of curvature: 1 degree
- Maximum grade:
  - S.R. 324: 5 %
  - Morgan Road: 3 %
  - Camp Branch Road: 6 %
  - Driveways: N/A
- Width of right of way: 100 ft.

- Major structures: Bridge over I-85, 4-span, length – 280', width – 33';
  - GDOT Bridge Inventory Structure I.D.:_ 135-0045-0; Project 1-85-2(13) 111 Ct. 2 Gwinnett; Sufficiency Rating 72.55
- Major interchanges or intersections along the project:
  - Intersections:
    - S.R. 324 at Morgan Road,
    - S.R. 324 at Camp Branch Road
- Existing length of roadway segments: SR 324: 4,080 feet

Proposed Design Features:

- Proposed typical section: SR 324: 2-12 ft. travel lanes northbound, 2-12 ft. travel lanes and 1-12 ft. auxiliary lane southbound, curb and gutter with a 24 ft. raised median and 5 ft. sidewalks on each side. 24 ft. raised median to transition to 20' on either side of Camp Branch and Morgan Road. I-85 to shift 12' out in each direction at SR 324.
- Proposed Design Speed Mainline
  - S.R. 324: 45 mph;
  - I-85: 70 mph.
- Proposed Maximum grade Mainline__5__% Maximum grade allowable ___7__%.
- Proposed Maximum grade Side Street __6___% Maximum grade allowable __10____%.
- Proposed Maximum grade driveway __N/A___%
- Proposed Maximum Radius _1000'____ Maximum radius allowable ___650'_____.
- Right of way
  - Width 150 feet (SR 324).
  - Easements: Temporary ( ), Permanent (X), Utility ( ), Other ( ).
  - Type of access control: Full (X), Partial ( ), By Permit (X), Other ( ) Full Access Control will be between Camp Branch and Morgan Road all other areas By Permit.
  - Number of parcels: ____27_____ Number of displacements:
    - Business: ____0_____
    - Residences: ___2_____
    - Mobile homes: ___0_____
    - Other: _____0_____
- Structures:
  - Bridges: 2 structures, each 182 ft. length, 102 ft. wide
  - Retaining walls: 4-sided retaining wall box section in the I-85 median, additional retaining walls at each bridge end bent.
- Major intersections and interchanges:
  - Relocate Morgan Road at S.R. 324 intersection;
  - Relocate Camp Branch Road at S.R. 324 intersection.
- Traffic control during construction: Utilize existing bridge during construction. Maintain traffic onsite.

- Design Exceptions to controlling criteria anticipated:

	UNDETERMINED	YES	NO
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 Exceptions: A temporary reduction in standard shoulder width may be required; to be corrected in separate project (PI 110600) to widen I-85
- Design Variances; None anticipated.
- Environmental concerns:

  Preliminary assessment of impacts to waters of the U.S. indicates that this project would qualify for a Section 404 Nationwide Permit 14 – Linear Transportation Crossing (Permit handled under S.R. 324 Widening Project by Gwinnett County). No individual threatened and endangered species or any potentially suitable habitats were identified within the proposed project area. See attached environmental summary for more information. Public Hearing to be held if required.
- Level of environmental analysis:
  - Are Time Savings Procedures appropriate? Yes ( ), No (X),
  - Categorical exclusion (X),
  - Environmental Assessment/Finding of No Significant Impact (FONSI) ( ), or
  - Environmental Impact Statement (EIS) ( ).
- Utility involvements:
  - Buford Gas,
  - Gwinnett County Water
  - Georgia Power
  - Jackson EMC
  - Bellsouth
  - Charter Cable TV

Project responsibilities:

- Design, Gwinnett County
- Right of Way Acquisition, Gwinnett County
- Relocation of Utilities, Gwinnett County
- Letting to contract, Gwinnett County
- Supervision of construction, Gwinnett County

- Providing material pits, Contractor
- Providing detours. N/A

Coordination

- Initial Concept Meeting date and brief summary. Attach minutes. **Not required.**
- Concept meeting date and brief summary. **Minutes attached.**
- P.A.R. meetings, dates and results. **Not required**
- FEMA, USCG, and/or TVA; **Not required**
- Public involvement.
  - **Public information meeting was held on October 24, 2002. A total of 174 people attended the meeting. A total of 85 comments were received (Opposed – 8, Support – 25, Conditional – 17, No comment – 35). See attached comments. A public hearing will be held if required.**
- Local government comments. **Support project, no documentation attached.**
- Other projects in the area.
  - **S.R. 324 Widening from S.R. 20 to S.R. 124 (Gwinnett County Project PN 9531)**
  - **I-85 HOV Widening; P.I. No. 0003164**
  - **I-85 SOV Widening; P.I. No. 110600**
- Other coordination to date. **LGPA**
- Railroads **None**

Scheduling – Responsible Parties' Estimate

- Time to complete the environmental process: CE: 9-12_Months.
- Time to complete preliminary construction plans: ____6____Months.
- Time to complete right of way plans: ___2_____Months.
- Time to complete the Section 404 Permit: ___6_____Months.
- Time to complete final construction plans: ___6_____Months.
- Time to complete to purchase right of way: ___12____Months.

Other alternates considered:

Concept A: No Build—this alternate was not considered prudent due to the adjacent road widening of SR 324 and future transportation needs of I-85.

Concept B: Rebuild On New Alignment—a realignment north of the existing bridge location was considered at this location verses an alignment to the south. The adjacent SR 324 road widening projects propose widening to the south of the existing roadway. An alignment to the north would not be consistent with the adjacent widening and would create additional costs for maintenance of traffic during construction. Due to these reasons this alternative was not considered prudent.

Concept C: Widen and Rehabilitate Existing Bridge—a widening and rehabilitation of the existing bridge without consideration of future transportation needs on I-85 was considered at this location. It is anticipated that the existing roadway horizontal and vertical alignment would meet the design. Widening would be to both sides of the bridge, approximately 70 feet to the south and 10 feet to the north. The future needs of I-85 were not included in this concept and therefore the existing bridge would not need to be longer. A cost for bridge deck rehabilitation is included in the cost estimate. This alternate was not selected due to a lack of consideration for the future projects planned for I-85.

Comments: The project is split funded with Q10 Bridge funds and Q24 STP funds. Due to the sufficiency rating, this project only qualifies for Q10 funds of an amount based on the cost for rehabilitation of the existing structure. This estimated cost of rehabilitation will be applied to the project using Q10 bridge funds and the remainder will be funded from Q24. The LGPA attached does not reflect responsibilities noted in this report. A revised LGPA is underway to match this report. This change is to allow for coordination with Gwinnett County's SR 324 Roadway project.

Attachments:

1. Cost Estimate,
2. Sketch location map,
3. Concept drawing,
4. Typical sections,
5. Gwinnett County DOT accident summaries,
6. Traffic assignments,
7. Capacity analysis,
8. Bridge inventory,
9. Minutes of Initial Concept and Concept meetings,
10. Environmental screening summary,
11. Gwinnett County Public Information Meeting handouts and public comments.
12. LGPA(current, revised LGPA underway)
13. Conforming plan concept schematics

Project Concept Cost Estimate
Concept A

Project No.:	BRST-0998(1)	**GS&P Project No.:**	21932
PI No.:	142285	**Date:**	11/16/04
County:	Gwinnett		
Description:	Bridge Replacement SR 324 Over I-85		
Length of Roadway:	0.8 miles		

A. Right of Way

1. Land (41.32 acres)		$1,652,800.00			$1,652,800
2. Improvements (6 single fam resid)		$600,000.00			$600,000
3. Relocation (6 resid)		$150,000.00			$150,000
4. Damages (4 parcels)		$80,000.00			$80,000
5. Admin/Court Costs		$1,117,260.00			$1,117,260
6. Inflation		$900,015.00			$900,015
				Subtotal: A	**$4,500,075**

B. Reimbursable Utilities

1. Railroad		$0.00			$0
2. Transmission Lines		$0.00			$0
3. Services		$0.00			$0
				Subtotal: B	**$0**

C. Construction

1. Major Structures

1	Retaining Walls	$500,000.00			$500,000
2	Bridges	$3,000,000.00			$3,000,000
3	Detour Bridges	$0.00			$0
4	Box Culverts	$0.00			$0
5	Remove Existing Bridge	$100,000.00			$100,000
				Subtotal: C-1	**$3,600,000**

2. Grading & Earthwork

1	Borrow	100000	CY	$5.00	$500,000
2	Unclassified Excavation	0	CY	$5.00	$0
				Subtotal: C-2	**$500,000**

3. Drainage

1	Drainage pipes		
	3,000 LF18"RCP @	$32.79	$98,370
	4,000 LF24"RCP @	$36.10	$144,400
	1,000 LF36"RCP @	$53.04	$53,040
	0 LF48"RCP @	$84.71	$0
2	Safety end sections		
	0 ea 15"@	$400.00	$0
	0 ea 18"@	$515.00	$0
	4 ea 24"@	$762.50	$3,050
	0 ea 36"@	$1,591.86	$0
	0 ea 48"@	$2,967.88	$0

Project Concept Cost Estimate
Concept A

Project No.:	BRST-0998(1)	**GS&P Project No.:**	21932
PI No.:	142285	**Date:**	11/16/04
County:	Gwinnett		
Description:	Bridge Replacement SR 324 Over I-85		
Length of Roadway:	0.8 miles		

	0 ea 54"@	$3,000.00			$0
	3 Flared end sections				
	0 ea 15"@	$365.00			$0
	0 ea 18"@	$408.82			$0
	0 ea 24"@	$495.75			$0
	2 ea 36"@	$718.38			$1,437
	0 ea 48"@	$912.91			$0
	0 ea 54"@	$1,000.00			$0
	4 Catch Basins/Drop Inlets/Manholes				
	60 Each @	$1,700.00			$102,000
				Subtotal: C-3	**$402,297**

4. Base & Paving

1 Asphalt Paving				
0 Ton 9.5 mm Superpave Overlay		$38.99		$0
917 Ton 9.5 mm Superpave		$38.99		$35,741
2,444 Ton 19mm Superpave		$44.67		$109,193
3,667 Ton 25mm Superpave		$37.57		$137,757
183 Ton Leveling @		$55.00		$10,083
2,194 gal Bitum. Tack @		$1.08		$2,370
2 Graded Aggregate Base				
6,250 Ton 10" GAB		$ 10.60		$66,250
0 Ton 8" GAB		$ 8.85		$0
0 Ton 6" GAB		$ 6.26		$0
			Subtotal: C-4	**$361,394**

5. Concrete Work

1 Curb & Gutter			
16,320 LF Type 2 @	$12.15		$198,288
2 Valley Gutter			
300 SY 6" @	$26.35		$7,905
3 Concrete Approach Slab			
800 SY @	$126.37		$101,096
		Subtotal: C-5	**$307,289**

6. Signing & Striping

1 Arrow Type 2	0	EA	$61.14	$0
2 Arrow Type 3	0	EA	$76.41	$0
3 Word Type 1	0	EA	$81.42	$0
4 Solid 5" White	0	LF	$0.68	$0
5 Solid 5" Yellow	0	LF	$0.45	$0
6 Highway Signs	0	EA	$150.00	$0
7 Skip 5" White	0	LF	$1.60	$0
8 Skip 5" Yellow	0	LF	$1.60	$0
9 Thermo. Solid Traff. Stripe, 8" WHITE	0	LF	$1.60	$0
10 Thermo. Solid Traff. Stripe, 24" WHITE	0	LF	$4.46	$0
11 Thermo. Traff. Stripping(Hatching)	0	SY	$3.50	$0
12 RPM Type 1, Yellow	0	EA	$5.76	$0
13 RPM Type 3, White	0	EA	$4.44	$0
14 Miscellanous Sigining and Marking	1	LS	$50,000.00	$50,000
			Subtotal: C-6	**$50,000**

Project Concept Cost Estimate
Concept A

Project No.:	BRST-0998(1)	**GS&P Project No.:**	21932
PI No.:	142285	**Date:**	11/16/04
County:	Gwinnett		
Description:	Bridge Replacement SR 324 Over I-85		
Length of Roadway:	0.8 miles		

7. Lighting

1	Overhead Lights	$0.00		$0
			Subtotal: C-7	**$0**

8. Guardrail

2000	LF Type W @	$11.31		$22,620
84	LF Type T @	$48.84		$4,103
4	ea Type 1 anchors @	$468.96		$1,876
4	ea Type 12 anchors @	$3,025.00		$12,100
			Subtotal: C-8	**$40,698**

9. Traffic Control

1	LS @	$250,000		$250,000
			Subtotal: C-9	**$250,000**

10. Clearing & Grubbing

20	AC @	$6,000		$120,000
			Subtotal: C-10	**$120,000**

11. Permanent Erosion Control

1000	lb Grassing @	$ 50.00		$50,000
			Subtotal: C-11	**$50,000**

12. Temporary Erosion Control

1	Temporary Grassing	0 lb @	$42.00	$0
2	Temporary Mulch	0 ton @	$462.54	$0
3	Temporary Silt Fence	0 LF @	$2.22	$0
4	Main. Of Silt Fence	0 LF @	$1.98	$0
5	Erosion Control Mats	0 CY @	$35.00	$0
6	Temp. Dtich Checks	0 ea @	$197.75	$0
7	Silt Contorl gates-Construct & Remove	0 ea @	$1,004.60	$0
8	Silt Contorl gates-Maint.	0 ea @	$233.29	$0
9	Stn Dumped Rip Rap 24 in	0 SY @	$48.43	$0
10	Construct Sediment Basin	0 ea @	$8,166.00	$0
11	Maintain Sediment Basin	0 ea @	$1,115.78	$0
12	Miscellaneous Erosion Control	1 ls @	$357,000.00	$357,000
			Subtotal: C-12	**$357,000**

Project Concept Cost Estimate
Concept A

Project No.:	BRST-0998(1)	**GS&P Project No.:**	21932
PI No.:	142285	**Date:**	11/16/04
County:	Gwinnett		
Description:	Bridge Replacement SR 324 Over I-85		
Length of Roadway:	0.8 miles		

Summary

A. Right of Way		$4,500,075
B. Reimbursable Utilities		$0
C. Construction		
1. Major Structures		$3,600,000
2. Grading & Earthwork		$500,000
3. Drainage		$402,297
4. Base & Paving		$361,394
5. Concrete Work		$307,289
6. Signing & Striping		$50,000
7. Lighting		$0
8. Guardrail		$40,698
9. Traffic Control		$250,000
10. Clearing & Grubbing		$120,000
11. Permanent Erosion Control		$50,000
12. Temporary Erosion Control		$357,000
	SUBTOTAL CONSTRUCTION COST	**$6,038,678**
	E. & C. (15%)	**$905,802**
	INFLATION (5% PER 2 YEARS)	**$666,519**
	TOTAL CONSTRUCTION COST	**$7,610,999**
	GRAND TOTAL PROJECT COST	**$12,111,074**

Prepared by Gresham, Smith and Partners

Gresham Smith and Partners does not have control over the cost of labor, materials, equipment, or over the Contractor's method of costing in the marketplace, the opinion of probable cost as herein stated is made on the basis of our experience and qualifications and represent our best judgment as a design professional familiar with the construction industry. However, we can not guarantee that bids or the construction cost will not vary from these probable cost opinions. If the Owner desires greater assurance of the cost of construction, it is recommended he employ an independent cost estimator.

Project Concept Cost Estimate
Concept B

Project No.:	BRST-0998(1)	**GS&P Project No.:**	21932
PI No.:	142285	**Date:**	11/16/04
County:	Gwinnett		
Description:	Bridge Replacement SR 324 Over I-85		
Length of Roadway:	0.8 miles		

Summary

A. Right of Way		$4,500,075
B. Reimbursable Utilities		$0
C. Construction		
1. Major Structures		$3,600,000
2. Grading & Earthwork		$500,000
3. Drainage		$402,297
4. Base & Paving		$361,394
5. Concrete Work		$307,289
6. Signing & Striping		$50,000
7. Lighting		$0
8. Guardrail		$40,698
9. Traffic Control		$500,000
10. Clearing & Grubbing		$120,000
11. Permanent Erosion Control		$50,000
12. Temporary Erosion Control		$357,000
	SUBTOTAL CONSTRUCTION COST	**$6,288,678**
	E. & C. (15%)	**$943,302**
	INFLATION (5% PER 2 YEARS)	**$694,113**
	TOTAL CONSTRUCTION COST	**$7,926,093**
	GRAND TOTAL PROJECT COST	**$12,426,168**

Prepared by Gresham, Smith and Partners

Gresham Smith and Partners does not have control over the cost of labor, materials, equipment, or over the Contractor's method of costing in the marketplace, the opinion of probable cost as herein stated is made on the basis of our experience and qualifications and represent our best judgment as a design professional familiar with the construction industry. However, we can not guarantee that bids or the construction cost will not vary from these probable cost opinions. If the Owner desires greater assurance of the cost of construction, it is recommended he employ an independent cost estimator.

Project Concept Cost Estimate
Concept B

Project No.:	BRST-0998(1)	**GS&P Project No.:**	21932
PI No.:	142285	**Date:**	11/16/04
County:	Gwinnett		
Description:	Bridge Replacement SR 324 Over I-85		
Length of Roadway:	0.8 miles		

A. Right of Way

1. Land (41.32 acres)		$1,652,800.00			$1,652,800
2. Improvements (6 single fam resid)		$600,000.00			$600,000
3. Relocation (6 resid)		$150,000.00			$150,000
4. Damages (4 parcels)		$80,000.00			$80,000
5. Admin/Court Costs		$1,117,260.00			$1,117,260
6. Inflation		$900,015.00			$900,015
				Subtotal: A	**$4,500,075**

B. Reimbursable Utilities

1. Railroad		$0.00			$0
2. Transmission Lines		$0.00			$0
3. Services		$0.00			$0
				Subtotal: B	**$0**

C. Construction

1. Major Structures					
1 Retaining Walls		$500,000.00			$500,000
2 Bridges		$3,000,000.00			$3,000,000
3 Detour Bridges		$0.00			$0
4 Box Culverts		$0.00			$0
5 Remove Existing Bridge		$100,000.00			$100,000
				Subtotal: C-1	**$3,600,000**
2. Grading & Earthwork					
1 Borrow		100000	CY	$5.00	$500,000
2 Unclassified Excavation		0	CY	$5.00	$0
				Subtotal: C-2	**$500,000**
3. Drainage					
1 Drainage pipes					
3,000 LF18"RCP @	$32.79				$98,370
4,000 LF24"RCP @	$36.10				$144,400
1,000 LF36"RCP @	$53.04				$53,040
0 LF48"RCP @	$84.71				$0
2 Safety end sections					
0 ea 15"@	$400.00				$0
0 ea 18"@	$515.00				$0
4 ea 24"@	$762.50				$3,050
0 ea 36"@	$1,591.86				$0
0 ea 48"@	$2,967.88				$0

Project Concept Cost Estimate
Concept B

Project No.:	BRST-0998(1)	**GS&P Project No.:**	21932
PI No.:	142285	**Date:**	11/16/04
County:	Gwinnett		
Description:	Bridge Replacement SR 324 Over I-85		
Length of Roadway:	0.8 miles		

0	ea 54"@	$3,000.00			$0
3	Flared end sections				
0	ea 15"@	$365.00			$0
0	ea 18"@	$408.82			$0
0	ea 24"@	$495.75			$0
2	ea 36"@	$718.38			$1,437
0	ea 48"@	$912.91			$0
0	ea 54"@	$1,000.00			$0
4	Catch Basins/Drop Inlets/Manholes				
60	Each @	$1,700.00			$102,000
				Subtotal: C-3	**$402,297**

4. Base & Paving

1	Asphalt Paving				
0	Ton 9.5 mm Superpave Overlay		$38.99		$0
917	Ton 9.5 mm Superpave		$38.99		$35,741
2,444	Ton 19mm Superpave		$44.67		$109,193
3,667	Ton 25mm Superpave		$37.57		$137,757
183	Ton Leveling @		$55.00		$10,083
2,194	gal Bitum. Tack @		$1.08		$2,370
2	Graded Aggregate Base				
6,250	Ton 10" GAB		$ 10.60		$66,250
0	Ton 8" GAB		$ 8.85		$0
0	Ton 6" GAB		$ 6.26		$0
				Subtotal: C-4	**$361,394**

5. Concrete Work

1	Curb & Gutter				
16,320	LF Type 2 @	$12.15			$198,288
2	Valley Gutter				
300	SY 6" @	$26.35			$7,905
3	Concrete Approach Slab				
800	SY @	$126.37			$101,096
				Subtotal: C-5	**$307,289**

6. Signing & Striping

1	Arrow Type 2	0	EA	$61.14	$0
2	Arrow Type 3	0	EA	$76.41	$0
3	Word Type 1	0	EA	$81.42	$0
4	Solid 5" White	0	LF	$0.68	$0
5	Solid 5" Yellow	0	LF	$0.45	$0
6	Highway Signs	0	EA	$150.00	$0
7	Skip 5" White	0	LF	$1.60	$0
8	Skip 5" Yellow	0	LF	$1.60	$0
9	Thermo. Solid Traff. Stripe, 8" WHITE	0	LF	$1.60	$0
10	Thermo. Solid Traff. Stripe, 24" WHITE	0	LF	$4.46	$0
11	Thermo. Traff. Stripping(Hatching)	0	SY	$3.50	$0
12	RPM Type 1, Yellow	0	EA	$5.76	$0
13	RPM Type 3, White	0	EA	$4.44	$0
14	Miscellanous Sigining and Marking	1	LS	$50,000.00	$50,000
				Subtotal: C-6	**$50,000**

Project Concept Cost Estimate
Concept B

Project No.:	BRST-0998(1)	**GS&P Project No.:**	21932
PI No.:	142285	**Date:**	11/16/04
County:	Gwinnett		
Description:	Bridge Replacement SR 324 Over I-85		
Length of Roadway:	0.8 miles		

7. Lighting

1	Overhead Lights	$0.00	$0
		Subtotal: C-7	**$0**

8. Guardrail

2000	LF Type W @	$11.31	$22,620
84	LF Type T @	$48.84	$4,103
4	ea Type 1 anchors @	$468.96	$1,876
4	ea Type 12 anchors @	$3,025.00	$12,100
		Subtotal: C-8	**$40,698**

9. Traffic Control

1	LS @	$500,000	$500,000
		Subtotal: C-9	**$500,000**

10. Clearing & Grubbing

20	AC @	$6,000	$120,000
		Subtotal: C-10	**$120,000**

11. Permanent Erosion Control

1000	lb Grassing @	$ 50.00	$50,000
		Subtotal: C-11	**$50,000**

12. Temporary Erosion Control

1	Temporary Grassing	0 lb @	$42.00	$0
2	Temporary Mulch	0 ton @	$462.54	$0
3	Temporary Silt Fence	0 LF @	$2.22	$0
4	Main. Of Silt Fence	0 LF @	$1.98	$0
5	Erosion Control Mats	0 CY @	$35.00	$0
6	Temp. Dtich Checks	0 ea @	$197.75	$0
7	Silt Contorl gates-Construct & Remove	0 ea @	$1,004.60	$0
8	Silt Contorl gates-Maint.	0 ea @	$233.29	$0
9	Stn Dumped Rip Rap 24 in	0 SY @	$48.43	$0
10	Construct Sediment Basin	0 ea @	$8,166.00	$0
11	Maintain Sediment Basin	0 ea @	$1,115.78	$0
12	Miscellaneous Erosion Control	1 ls @	$357,000.00	$357,000
			Subtotal: C-12	**$357,000**

Project Concept Cost Estimate
Concept C

Project No.:	BRST-0998(1)	**GS&P Project No.:**	21932
PI No.:	142285	**Date:**	11/16/04
County:	Gwinnett		
Description:	Bridge Replacement SR 324 Over I-85		
Length of Roadway:	0.8 miles		

A. Right of Way

1. Land (41.32 acres)		$1,652,800.00			$1,652,800
2. Improvements (6 single fam resid)		$600,000.00			$600,000
3. Relocation (6 resid)		$150,000.00			$150,000
4. Damages (4 parcels)		$80,000.00			$80,000
5. Admin/Court Costs		$1,117,260.00			$1,117,260
6. Inflation		$900,015.00			$900,015
				Subtotal: A	**$4,500,075**

B. Reimbursable Utilities

1. Railroad		$0.00			$0
2. Transmission Lines		$0.00			$0
3. Services		$0.00			$0
				Subtotal: B	**$0**

C. Construction

1. Major Structures

1 Retaining Walls		$0.00			$0
2 Bridge					
Widening (80 ft)	22400 sf @	$80.00	SF		$1,792,000
Remove existing metal bridgerail & install new parapet:		$61,600.00	LS		$61,600
Remove and re-build endposts and guardrail attachments:		$7,200.00	LS		$7,200
Clean and re-seal construction and expansion joints:		$10,640.00	LS		$10,640
Remove and replace portions of approach slabs and endwalls:		$24,000.00	LS		$24,000
Raise existing bridge:		$112,000.00	LS		$112,000
Stage construction to maintain traffic:		$25,000.00	LS		$25,000
3 Detour Bridges		$0.00			$0
4 Box Culverts		$0.00			$0
5 Remove Existing Bridge		$0.00			$0
				Subtotal: C-1	**$2,032,440**

2. Grading & Earthwork

1 Borrow		100000	CY	$5.00	$500,000
2 Unclassified Excavation		0	CY	$5.00	$0
				Subtotal: C-2	**$500,000**

3. Drainage

1 Drainage pipes			
3,000	LF18"RCP @	$32.79	$98,370
4,000	LF24"RCP @	$36.10	$144,400
1,000	LF36"RCP @	$53.04	$53,040
0	LF48"RCP @	$84.71	$0
2 Safety end sections			
0	ea 15"@	$400.00	$0
0	ea 18"@	$515.00	$0
4	ea 24"@	$762.50	$3,050
0	ea 36"@	$1,591.86	$0
0	ea 48"@	$2,967.88	$0

Project Concept Cost Estimate
Concept C

Project No.:	BRST-0998(1)	**GS&P Project No.:**	21932
PI No.:	142285	**Date:**	11/16/04
County:	Gwinnett		
Description:	Bridge Replacement SR 324 Over I-85		
Length of Roadway:	0.8 miles		

0	ea 54"@	$3,000.00			$0
3	Flared end sections				
0	ea 15"@	$365.00			$0
0	ea 18"@	$408.82			$0
0	ea 24"@	$495.75			$0
2	ea 36"@	$718.38			$1,437
0	ea 48"@	$912.91			$0
0	ea 54"@	$1,000.00			$0
4	Catch Basins/Drop Inlets/Manholes				
60	Each @	$1,700.00			$102,000
				Subtotal: C-3	**$402,297**

4. Base & Paving

1	Asphalt Paving				
0	Ton 9.5 mm Superpave Overlay		$38.99		$0
917	Ton 9.5 mm Superpave		$38.99		$35,741
2,444	Ton 19mm Superpave		$44.67		$109,193
3,667	Ton 25mm Superpave		$37.57		$137,757
183	Ton Leveling @		$55.00		$10,083
2,194	gal Bitum. Tack @		$1.08		$2,370
2	Graded Aggregate Base				
6,250	Ton 10" GAB		$ 10.60		$66,250
0	Ton 8" GAB		$ 8.85		$0
0	Ton 6" GAB		$ 6.26		$0
				Subtotal: C-4	**$361,394**

5. Concrete Work

1	Curb & Gutter				
16,320	LF Type 2 @	$12.15			$198,288
2	Valley Gutter				
300	SY 6" @	$26.35			$7,905
3	Concrete Approach Slab				
800	SY @	$126.37			$101,096
				Subtotal: C-5	**$307,289**

6. Signing & Striping

1	Arrow Type 2	0	EA	$61.14	$0
2	Arrow Type 3	0	EA	$76.41	$0
3	Word Type 1	0	EA	$81.42	$0
4	Solid 5" White	0	LF	$0.68	$0
5	Solid 5" Yellow	0	LF	$0.45	$0
6	Highway Signs	0	EA	$150.00	$0
7	Skip 5" White	0	LF	$1.60	$0
8	Skip 5" Yellow	0	LF	$1.60	$0
9	Thermo. Solid Traff. Stripe, 8" WHITE	0	LF	$1.60	$0
10	Thermo. Solid Traff. Stripe, 24" WHITE	0	LF	$4.46	$0
11	Thermo. Traff. Stripping(Hatching)	0	SY	$3.50	$0
12	RPM Type 1, Yellow	0	EA	$5.76	$0
13	RPM Type 3, White	0	EA	$4.44	$0
14	Miscellanous Sigining and Marking	1	LS	$50,000.00	$50,000
				Subtotal: C-6	**$50,000**

Project Concept Cost Estimate
Concept C

Project No.:	BRST-0998(1)	**GS&P Project No.:**	21932
PI No.:	142285	**Date:**	11/16/04
County:	Gwinnett		
Description:	Bridge Replacement SR 324 Over I-85		
Length of Roadway:	0.8 miles		

7. Lighting

1	Overhead Lights	$0.00	$0
		Subtotal: C-7	**$0**

8. Guardrail

2000	LF Type W @	$11.31	$22,620
84	LF Type T @	$48.84	$4,103
4	ea Type 1 anchors @	$468.96	$1,876
4	ea Type 12 anchors @	$3,025.00	$12,100
		Subtotal: C-8	**$40,698**

9. Traffic Control

1	LS @	$250,000	$250,000
		Subtotal: C-9	**$250,000**

10. Clearing & Grubbing

20	AC @	$6,000	$120,000
		Subtotal: C-10	**$120,000**

11. Permanent Erosion Control

1000	lb Grassing @	$ 50.00	$50,000
		Subtotal: C-11	**$50,000**

12. Temporary Erosion Control

1	Temporary Grassing	0 lb @	$42.00	$0
2	Temporary Mulch	0 ton @	$462.54	$0
3	Temporary Silt Fence	0 LF @	$2.22	$0
4	Main. Of Silt Fence	0 LF @	$1.98	$0
5	Erosion Control Mats	0 CY @	$35.00	$0
6	Temp. Dtich Checks	0 ea @	$197.75	$0
7	Silt Contorl gates-Construct & Remove	0 ea @	$1,004.60	$0
8	Silt Contorl gates-Maint.	0 ea @	$233.29	$0
9	Stn Dumped Rip Rap 24 in	0 SY @	$48.43	$0
10	Construct Sediment Basin	0 ea @	$8,166.00	$0
11	Maintain Sediment Basin	0 ea @	$1,115.78	$0
12	Miscellaneous Erosion Control	1 ls @	$357,000.00	$357,000
			Subtotal: C-12	**$357,000**

Project Concept Cost Estimate
Concept C

Project No.:	BRST-0998(1)	**GS&P Project No.:**	21932
PI No.:	142285	**Date:**	11/16/04
County:	Gwinnett		
Description:	Bridge Replacement SR 324 Over I-85		
Length of Roadway:	0.8 miles		

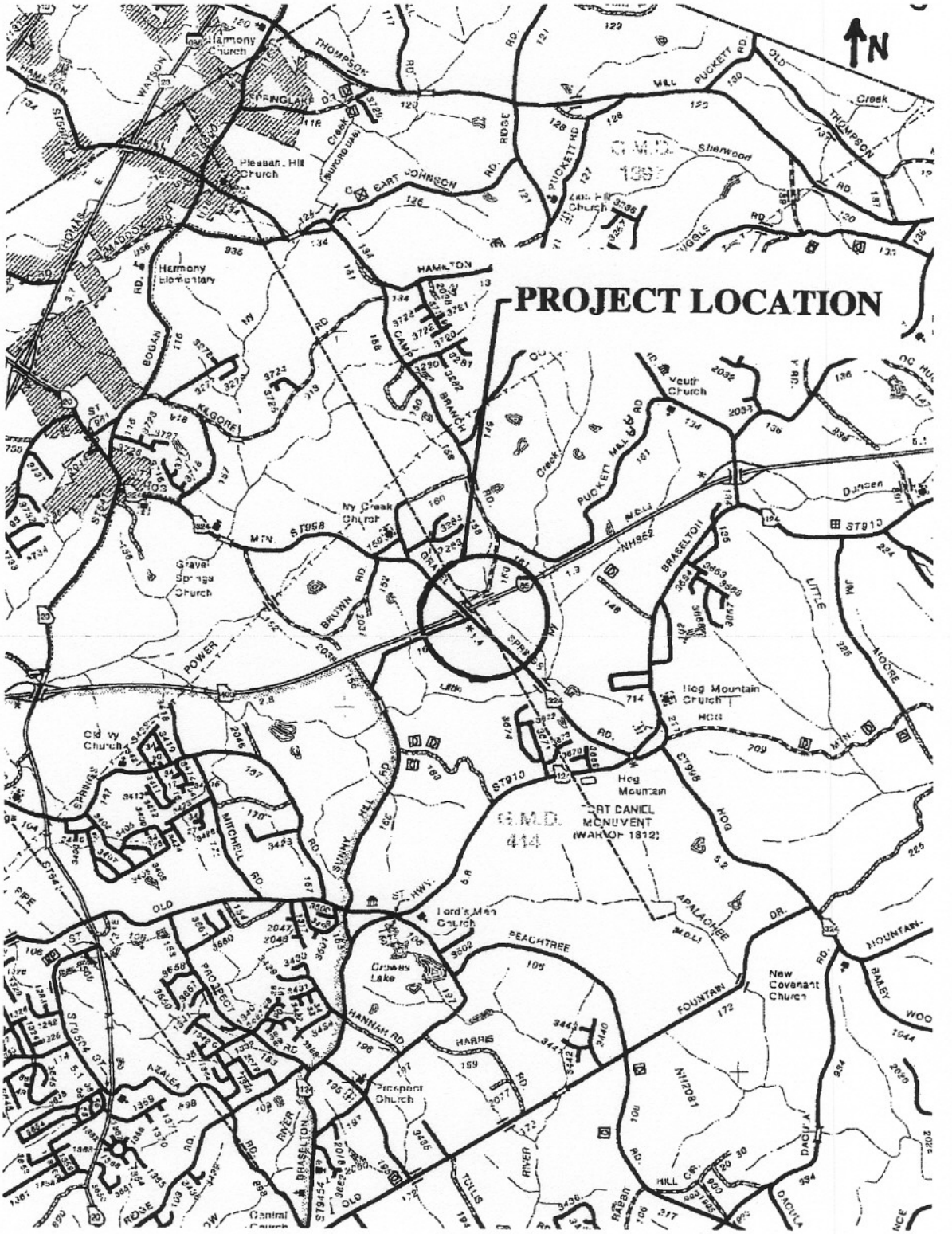
Summary

A. Right of Way		$4,500,075
B. Reimbursable Utilities		$0
C. Construction		
1. Major Structures		$2,032,440
2. Grading & Earthwork		$500,000
3. Drainage		$402,297
4. Base & Paving		$361,394
5. Concrete Work		$307,289
6. Signing & Striping		$50,000
7. Lighting		$0
8. Guardrail		$40,698
9. Traffic Control		$250,000
10. Clearing & Grubbing		$120,000
11. Permanent Erosion Control		$50,000
12. Temporary Erosion Control		$357,000
	SUBTOTAL CONSTRUCTION COST	**$4,471,118**
	E. & C. (15%)	**$670,668**
	INFLATION (5% PER 2 YEARS)	**$493,500**
	TOTAL CONSTRUCTION COST	**$5,635,286**
	GRAND TOTAL PROJECT COST	**$10,135,361**

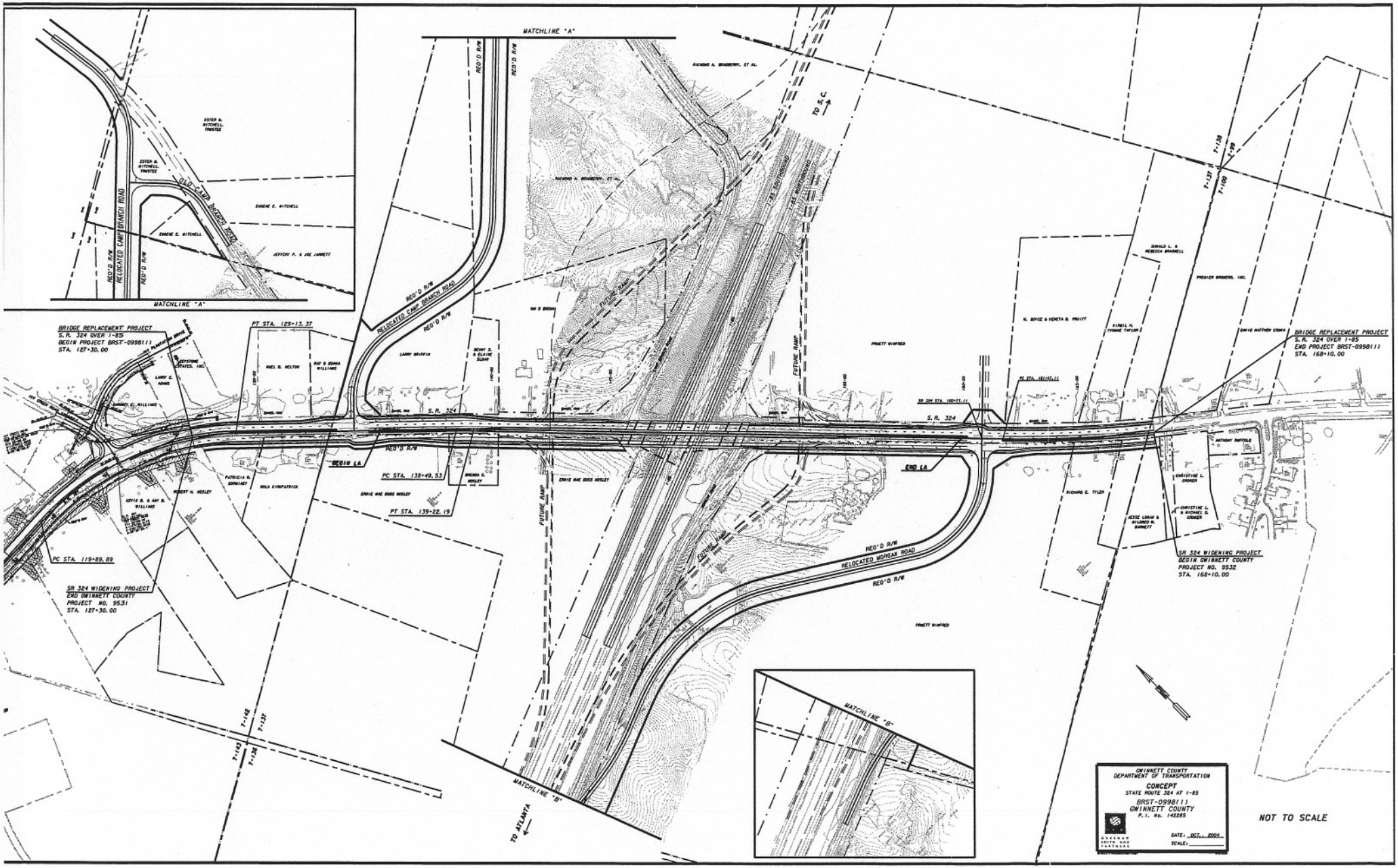
Prepared by Gresham, Smith and Partners

Gresham Smith and Partners does not have control over the cost of labor, materials, equipment, or over the Contractor's method of costing in the marketplace, the opinion of probable cost as herein stated is made on the basis of our experience and qualifications and represent our best judgment as a design professional familiar with the construction industry. However, we can not guarantee that bids or the construction cost will not vary from these probable cost opinions. If the Owner desires greater assurance of the cost of construction, it is recommended he employ an independent cost estimator.

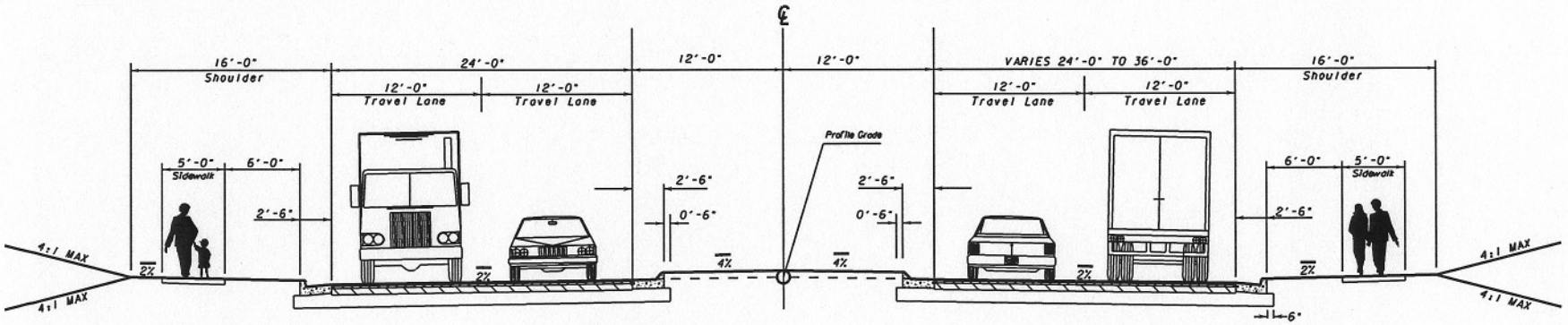
PROJECT LOCATION MAP
Project Number: BRST-0998(1)
P. I. Number: 142285
County: Gwinnett



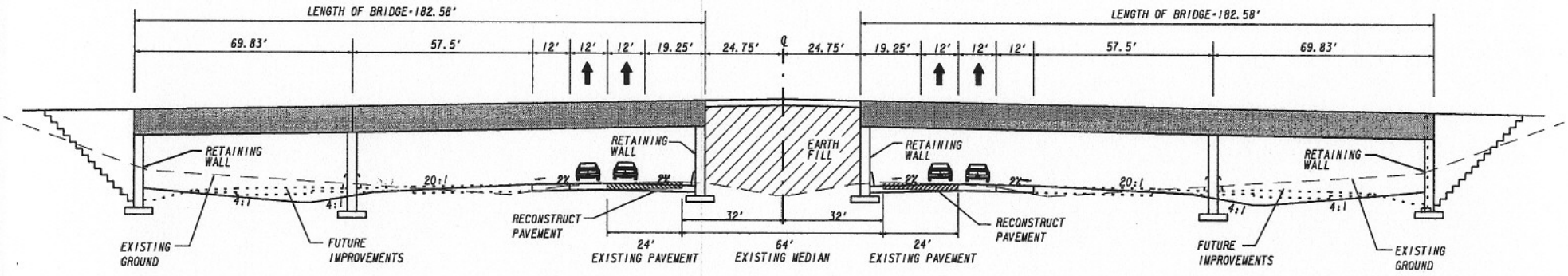
EXISTING SR 324 BRIDGE OVER I-85


MATCHLINE "A"
OLD CAMP BRANCH ROAD
RELOCATED CAMP BRANCH ROAD
RELOCATED MORGAN ROAD
FUTURE RAMP
S.R. 324
BRIDGE REPLACEMENT PROJECT
S.R. 324 OVER I-85
BEGIN PROJECT BRST-0998(1)
STA. 127+30.00
PT STA. 129+13.37
PC STA. 138+49.53
PT STA. 139+22.19
PC STA. 119+89.89
BEGIN LA
END LA
SR 324 WIDENING PROJECT
END GWINNETT COUNTY
PROJECT NO. 9531
STA. 127+30.00
BRIDGE REPLACEMENT PROJECT
S.R. 324 OVER I-85
END PROJECT BRST-0998(1)
STA. 168+10.00
SR 324 WIDENING PROJECT
BEGIN GWINNETT COUNTY
PROJECT NO. 9532
STA. 168+10.00
MATCHLINE "B"
TO ATLANTA
TO S.C.
GWINNETT COUNTY
DEPARTMENT OF TRANSPORTATION
CONCEPT
STATE ROUTE 324 AT I-85
BRST-0998(1)
GWINNETT COUNTY
P.I. No. 142285
DATE: OCT. 2004
SCALE:
NOT TO SCALE

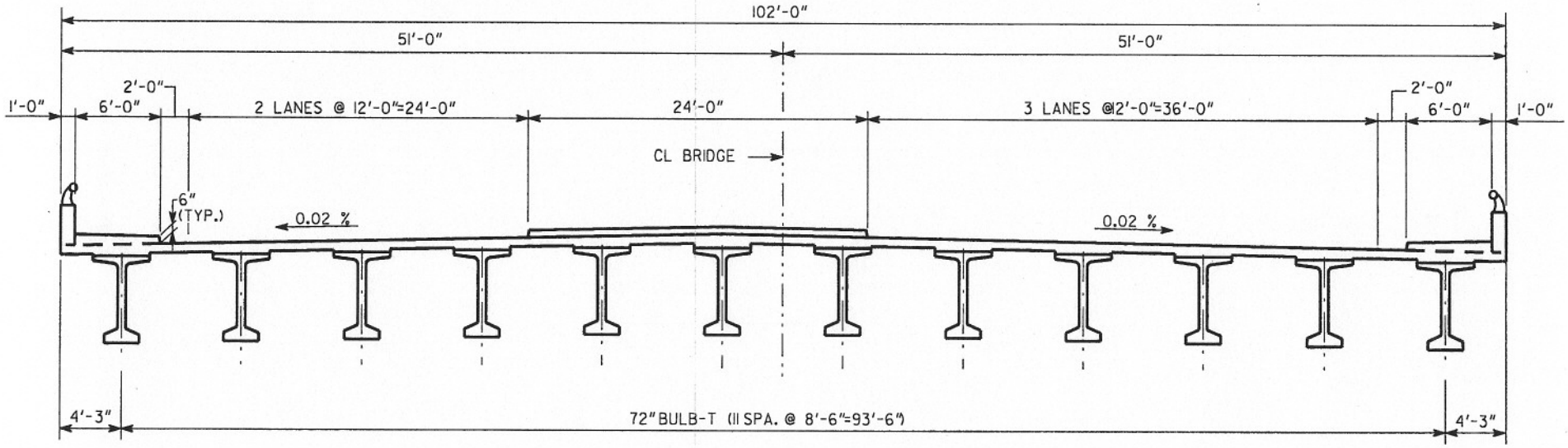
EXISTING SR 324 BRIDGE OVER I-85



SR 324 TYPICAL SECTION



SR 324 BRIDGE OVER I-85 TYPICAL SECTION



SR 324 BRIDGE TYPICAL SECTION

CRASH DATA FOR THE INTERSECTION OF

GRAVEL SPRINGS ROAD & MORGAN ROAD

(January 2000 - June 2003)

ACCIDENT NUMBER	ACCIDENT DATE	ACCIDENT TIME	NO. OF INJURIES	NO. OF FATALITIES	ACCIDENT TYPE
GWN 2003018437	27-Feb-03	14:42	1	0	Angle
GWN 2003000411	2-Jan-03	14:09	0	0	Rear End
GWN 2002068011	27-Jul-02	16:42	0	0	Angle
GWN 2002032165	9-Apr-02	22:32	0	0	Not with Vehicle
GWN 2001121416	28-Dec-01	16:50	1	0	Angle
GWN 2001077329	18-Aug-01	12:02	0	0	Rear End
GWN 2001042991	12-May-01	15:47	0	0	Rear End
GWN 2001011194	5-Feb-01	13:55	0	0	Rear End
		TOTAL	2	0	

Mar 10 04 10:27a CPM Division 770-822-7430 p.3

INTERSECTION ACCIDENT REPORT

01/01/2000 THROUGH 06/30/2003

JUR	NUM	DATE	DAY	TIME	TYPE	VEH	INJ	FTL	WC	SC	LC	R1	D1	M1	C1	R2	D2	M2	C2
ROADON				**ROADNEAR**								**INTX**	**DIR**						
GRAVEL SPRINGS ROAD				MORGAN ROAD								Y							
GWN	2003018437	02/27/03	THU	1442	1	4	1	0	2	2	1	2	4	1	4	1	1	5	1
GWN	2002032165	04/09/02	TUE	2232	6	1	0	0	2	1	5	1	3	5	2				
GWN	2001042991	05/12/01	SAT	1547	3	3	0	0	1	1	1	1	3	5	3	1	3	4	1
GWN	2002068011	07/27/02	SAT	1642	1	2	0	0	2	1	1	2	1	1	4	1	3	5	1
GWN	2001077329	08/18/01	SAT	1202	3	2	0	0	1	1	1	1	4	5	3	1	4	5	1
GWN	2001121416	12/28/01	FRI	1650	1	2	1	0	1	1	1	2	1	1	4	1	4	5	1
Total # Accidents		6		**Total # Injuries**			2			**Total # Fatalities**			0						
ROADON				**ROADNEAR**								**INTX**	**DIR**						
MORGAN ROAD				GRAVEL SPRINGS ROAD								Y							
GWN	2003000411	01/02/03	THU	1409	3	2	0	0	2	1	1	1	4	5	3	1	4	4	1
GWN	2001011194	02/05/01	MON	1355	3	2	0	0	1	1	1	1	3	1	18	1	3	4	1
Total # Accidents		2		**Total # Injuries**			0			**Total # Fatalities**			0						
Grand Total																			
Total # Accidents		8		**Total # Injuries**			2			**Total # Fatalities**			0						

CRASH DATA FOR THE INTERSECTION OF

GRAVEL SPRINGS ROAD & CAMP BRANCH ROAD

(January 2000 - June 2003)

ACCIDENT NUMBER	ACCIDENT DATE	ACCIDENT TIME	NO. OF INJURIES	NO. OF FATALITIES	ACCIDENT TYPE
GWN 2003055585	20-Jun-03	20:42	3	0	Angle
GWN 2003029101	2-Apr-03	10:59	0	0	Angle
GWN 2003003403	11-Jan-03	19:13	0	0	Angle
GWN 2003001424	5-Jan-03	16:52	0	0	Angle
GWN 2002000455	2-Jan-02	13:05	0	0	Head On
GWN 2001119146	21-Dec-01	17:25	1	0	Angle
GWN 2001113023	3-Dec-01	20:38	1	0	Not with Vehicle
GWN 2001095395	12-Oct-01	20:06	0	0	Rear End
GWN 2001090324	28-Sep-01	13:53	1	0	Angle
GWN 2001063224	9-Jul-01	18:15	2	0	Rear End
GWN 2001038880	30-Apr-01	0:01	1	0	Angle
GWN 2000055148	1-Sep-00	17:07	0	0	Rear End
GWN 2000037723	10-Jul-00	18:14	0	0	Angle
GWN 2000025942	12-May-00	19:09	0	0	Angle
GWN 2000009372	19-Feb-00	17:10	0	0	Rear End
		TOTAL	9	0	

Mar 10 04 10:27a CPM Division 770-822-7430 p.5

INTERSECTION ACCIDENT REPORT

01/01/2000 THROUGH 06/30/2003

JUR	NUM	DATE	DAY	TIME	TYPE	VEH	INJ	FTL	WC	SC	LC	R1	D1	M1	C1	R2	D2	M2	C2
ROADON				**ROADNEAR**								**INTX**	**DIR**						
CAMP BRANCH ROAD				GRAVEL SPRINGS ROAD								Y							
GWN	2000009372	02/19/00	SAT	1710	3	2	0	0	1	1	1	1	2	5	3	1	2	5	1
GWN	2001038880	04/30/01	MON	0001	1	2	1	0	2	1	1	1	3	1	4	2	2	5	1
GWN	2001063224	07/09/01	MON	1815	3	2	2	0	2	1	1	1	2	2	3	1	2	4	1
GWN	2001119146	12/21/01	FRI	1725	1	2	1	0	1	1	1	1	2	1	4	2	4	5	1
Total # Accidents		4		**Total # Injuries**			4			**Total # Fatalities**			0						
ROADON				**ROADNEAR**								**INTX**	**DIR**						
GRAVEL SPRINGS ROAD				CAMP BRANCH ROAD								Y							
GWN	2002000455	01/02/02	WED	1305	2	3	0	0	4	2	1	1	4	5	3	1	4	4	1
GWN	2003001424	01/05/03	SUN	1652	1	2	0	0	1	1	1	2	4	1	4	1	2	5	1
GWN	2003003403	01/11/03	SAT	1913	1	2	0	0	2	1	5	2	2	1	4	1	4	5	1
GWN	2003029101	04/02/03	WED	1059	1	2	0	0	1	2	1	2	2	2	4	1	4	5	1
GWN	2000025942	05/12/00	FRI	1909	1	2	0	0	1	1	1	2	2	1	4	1	4	5	1
GWN	2003055585	06/20/03	FRI	2042	1	2	3	0	1	1	2	2	4	1	6	1	1	5	1
GWN	2000037723	07/10/00	MON	1814	1	2	0	0	1	1	1	2	2	5	4	1	3	5	1
GWN	2000055148	09/01/00	FRI	1707	3	2	0	0	2	2	1	1	3	5	3	1	3	4	1
GWN	2001090324	09/28/01	FRI	1353	1	3	1	0	1	1	1	2	2	1	3	1	4	5	1
GWN	2001095395	10/12/01	FRI	2006	3	2	0	0	1	1	5	1	4	5	3	1	4	4	1
GWN	2001113023	12/03/01	MON	2038	6	1	1	0	1	1	5	1	3	5	1				
Total # Accidents		11		**Total # Injuries**			5			**Total # Fatalities**			0						

Grand Total

Total # Accidents	15	**Total # Injuries**	9	**Total # Fatalities**	0

21932.00/T

Department of Transportation
State of Georgia

INTERDEPARTMENT CORRESPONDENCE

FILE BRST-0998(1) Gwinnett
P.I. No. 142285

OFFICE Environment/ Location

DATE January 22, 2003

FROM Harvey D. Keepler, State Environmental/ Location Engineer

TO Larry Dent, P.E., District Engineer, Gainesville
Attn: Todd Long

SUBJECT SR 324/Gravel Spring Rd. @ I-85

We are furnishing estimated traffic assignments for the above project as follows:

Existing 2002 ADT = 16700
2008 ADT = 29000
2028 ADT = 55000
K = 9%
D = 60%
T = 8%
24 HR T = 10%
S.U. = 5%
COMB. = 5%

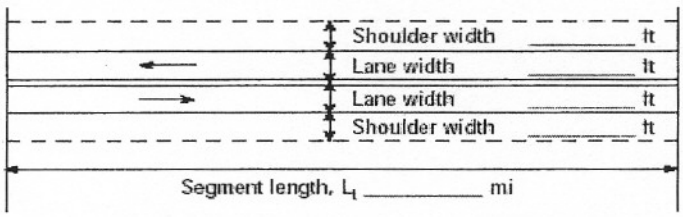
If you have any questions concerning this information please contact Teresa Williamson at (404)699-4458.

HDK:TJW

TWO-WAY TWO-LANE HIGHWAY SEGMENT WORKSHEET

General Information		Site Information	
Analyst	L.Randall	Highway	SR 324 over I-85
Agency or Company	GS&P	From/To	Morgan Rd. to Camp Branch Rd.
Date Performed	3/1/2004	Jurisdiction	Gwinnett County
Analysis Time Period		Analysis Year	2002

Input Data



☑ Class I highway ☐ Class II highway

Terrain ☐ Level ☑ Rolling

Two-way hourly volume	1670 veh/h
Directional split	60 / 40
Peak-hour factor, PHF	0.90
No-passing zone	80
% Trucks and Buses , P_T	8 %
% Recreational vehicles, P_R	0%
Access points/ mi	20

Average Travel Speed

Grade adjustment factor, f_G (Exhibit 20-7)	0.99
Passenger-car equivalents for trucks, E_T (Exhibit 20-9)	1.5
Passenger-car equivalents for RVs, E_R (Exhibit 20-9)	1.1
Heavy-vehicle adjustment factor, f_{HV} $f_{HV}=1/(1+P_T(E_T-1)+P_R(E_R-1))$	0.962
Two-way flow rate[1], v_p (pc/h) $v_p=V/(PHF*f_G*f_{HV})$	1949
v_p * highest directional split proportion[2] (pc/h)	1169

Free-Flow Speed from Field Measurement		Estimated Free-Flow Speed	
Field Measured speed, S_{FM}	mi/h	Base free-flow speed, $BFFS_{FM}$	50.0 mi/h
Observed volume, V_f	veh/h	Adj. for lane width and shoulder width[3], f_{LS} (Exhibit 20-5)	1.3 mi/h
Free-flow speed, FFS $FFS=S_{FM}+0.00776(V_f/f_{HV})$	43.7 mi/h	Adj. for access points, f_A (Exhibit 20-6)	5.0 mi/h
		Free-flow speed, FFS $(FSS=BFFS-f_{LS}-f_A)$	43.7 mi/h

Adj. for no-passing zones, f_{np} (mi/h) (Exhibit 20-11)	1.0
Average travel speed, ATS (mi/h) $ATS=FFS-0.00776v_p-f_{np}$	27.6

Percent Time-Spent-Following

Grade Adjustment factor, f_G (Exhibit 20-8)	1.00
Passenger-car equivalents for trucks, E_T (Exhibit 20-10)	1.0
Passenger-car equivalents for RVs, E_R (Exhibit 20-10)	1.0
Heavy-vehicle adjustment factor, f_{HV} $f_{HV}=1/(1+P_T(E_T-1)+P_R(E_R-1))$	1.000
Two-way flow rate[1], v_p (pc/h) $v_p=V/(PHF*f_G*f_{HV})$	1856
v_p * highest directional split proportion[2] (pc/h)	1114
Base percent time-spent-following, BPTSF(%) $BPTSF=100(1-e^{-0.000879v_p})$	80.4
Adj. for directional distribution and no-passing zone, $f_{d/np}$(%)(Exh. 20-12)	4.9
Percent time-spent-following, PTSF(%) $PTSF=BPTSF+f_{d/np}$	85.3

Level of Service and Other Performance Measures

Level of service, LOS (Exhibit 20-3 for Class I or 20-4 for Class II)	E
Volume to capacity ratio v/c $v/c=V_p/3{,}200$	0.61
Peak 15-min veh-miles of travel, VMT_{15} (veh- mi) $VMT_{15}=0.25L_t(V/PHF)$	60
Peak-hour vehicle-miles of travel, VMT_{60} (veh- mi) $VMT_{60}=V*L_t$	217
Peak 15-min total travel time, TT_{15}(veh-h) $TT_{15}=VMT_{15}/ATS$	2.2

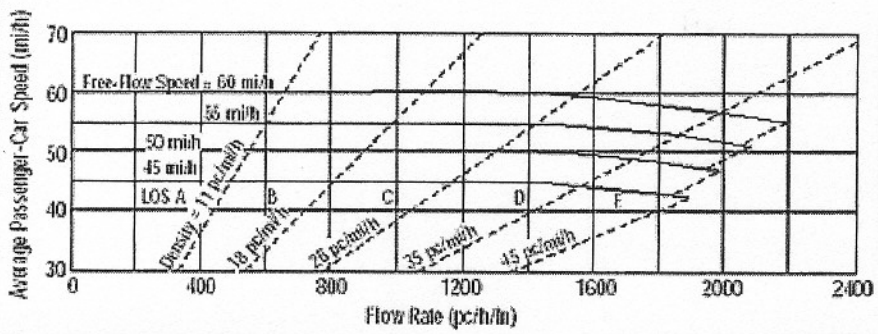
Notes

1. If v_p >= 3,200 pc/h, terminate analysis-the LOS is F. 2. If highest directional split v_p>= 1,700 pc/h, terminated anlysis-the LOS is F.

Copyright © 2000 University of Florida, All Rights Reserved

Version 4.1d

MULTILANE HIGHWAYS WORKSHEET(Direction 1)



Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p, S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p, S, D

General Information

Analyst	L.Randall
Agency or Company	
Date Performed	3/1/2004
Analysis Time Period	

Site Information

Highway/Direction to Travel	SR 324
From/To	Morgan Rd. to Camp Branch Rd.
Jurisdiction	Gwinnett County
Analysis Year	2002

Project Description 21932

☑ Oper.(LOS) ☐ Des. (N) ☐ Plan. (vp)

Flow Inputs

Volume, V (veh/h)	835	Peak-Hour Factor, PHF	0.90
AADT(veh/h)		%Trucks and Buses, P_T	8
Peak-Hour Prop of AADT (veh/d)		%RVs, P_R	0
Peak-Hour Direction Prop, D		General Terrain:	Rolling
DDHV (veh/h)		Grade Length (mi)	0.00
Driver Type Adjustment	1.00	Up/Down %	0.00
		Number of Lanes	2

Calculate Flow Adjustments

f_p	1.00	E_R	2.0
E_T	2.5	f_{HV}	0.893

Speed Inputs

Lane Width, LW (ft)	12.0
Total Lateral Clearence, LC (ft)	12.0
Access Points, A (A/mi)	20
Median Type, M	Divided
FFS (measured)	
Base Free-Flow Speed, BFFS	50.0

Calc Speed Adj and FFS

f_{LW} (mi/h)	0.0
f_{LC} (mi/h)	0.0
f_A (mi/h)	5.0
f_M (mi/h)	0.0
FFS (mi/h)	45.0

Operations

Operational (LOS)

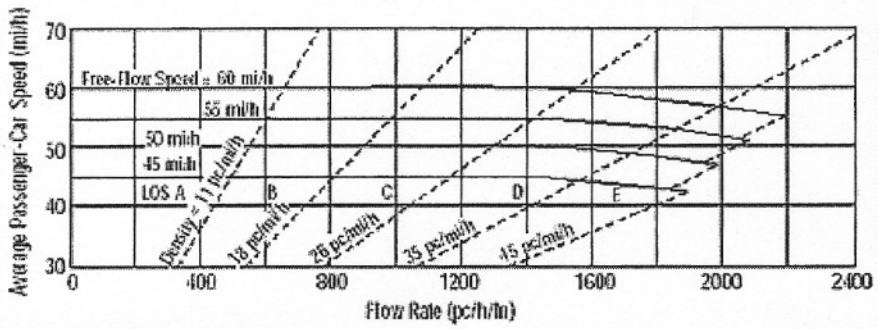
Flow Rate, v_p (pc/h/ln)	519
Speed, S (mi/h)	45.0
D (pc/mi/ln)	11.5
LOS	B

Design

Design (N)

Required Number of Lanes, N	
Flow Rate, v_p (pc/h)	
Max Service Flow Rate (pc/h/ln)	
Design LOS	

MULTILANE HIGHWAYS WORKSHEET(Direction 2)



Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p, S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p, S, D

General Information

Analyst	L.Randall
Agency or Company	
Date Performed	3/1/2004
Analysis Time Period	

Site Information

Highway/Direction to Travel	SR 324
From/To	Morgan Rd. to Camp Branch Rd.
Jurisdiction	Gwinnett County
Analysis Year	2002

Project Description 21932

☑ Oper.(LOS) ☐ Des. (N) ☐ Plan. (vp)

Flow Inputs

Volume, V (veh/h)	835	Peak-Hour Factor, PHF	0.90
AADT(veh/h)		%Trucks and Buses, P_T	8
Peak-Hour Prop of AADT (veh/d)		%RVs, P_R	0
Peak-Hour Direction Prop, D		General Terrain:	Rolling
DDHV (veh/h)		Grade Length (mi)	0.00
Driver Type Adjustment	1.00	Up/Down %	0.00
		Number of Lanes	2

Calculate Flow Adjustments

f_p	1.00	E_R	2.0
E_T	2.5	f_{HV}	0.893

Speed Inputs

Lane Width, LW (ft)	12.0
Total Lateral Clearence, LC (ft)	12.0
Access Points, A (A/mi)	20
Median Type, M	Divided
FFS (measured)	
Base Free-Flow Speed, BFFS	50.0

Calc Speed Adj and FFS

f_{LW} (mi/h)	0.0
f_{LC} (mi/h)	0.0
f_A (mi/h)	5.0
f_M (mi/h)	0.0
FFS (mi/h)	45.0

Operations

Operational (LOS)

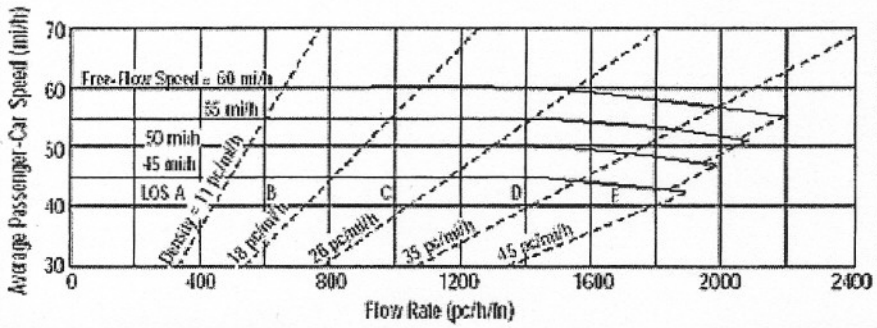
Flow Rate, v_p (pc/h/ln)	519
Speed, S (mi/h)	45.0
D (pc/mi/ln)	11.5
LOS	B

Design

Design (N)

Required Number of Lanes, N	
Flow Rate, v_p (pc/h)	
Max Service Flow Rate (pc/h/ln)	
Design LOS	

MULTILANE HIGHWAYS WORKSHEET(Direction 1)



Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p, S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p, S, D

General Information

Analyst	L.Randall
Agency or Company	
Date Performed	3/1/2004
Analysis Time Period	

Site Information

Highway/Direction to Travel	SR 324
From/To	Morgan Rd. to Camp Branch Rd.
Jurisdiction	Gwinnett County
Analysis Year	2008

Project Description 21932

☑ Oper.(LOS) ☐ Des. (N) ☐ Plan. (vp)

Flow Inputs

Volume, V (veh/h)	1450	Peak-Hour Factor, PHF	0.90
AADT(veh/h)		%Trucks and Buses, P_T	8
Peak-Hour Prop of AADT (veh/d)		%RVs, P_R	0
Peak-Hour Direction Prop, D		General Terrain:	Rolling
DDHV (veh/h)		Grade Length (mi)	0.00
Driver Type Adjustment	1.00	Up/Down %	0.00
		Number of Lanes	2

Calculate Flow Adjustments

f_p	1.00	E_R	2.0
E_T	2.5	f_{HV}	0.893

Speed Inputs

Lane Width, LW (ft)	12.0
Total Lateral Clearence, LC (ft)	12.0
Access Points, A (A/mi)	20
Median Type, M	Divided
FFS (measured)	
Base Free-Flow Speed, BFFS	50.0

Calc Speed Adj and FFS

f_{LW} (mi/h)	0.0
f_{LC} (mi/h)	0.0
f_A (mi/h)	5.0
f_M (mi/h)	0.0
FFS (mi/h)	45.0

Operations

Operational (LOS)

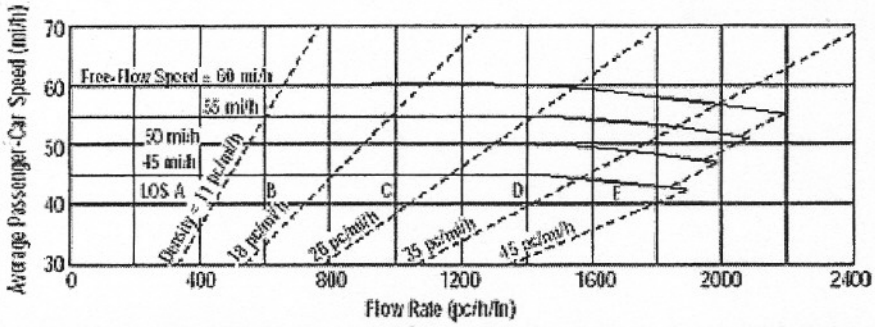
Flow Rate, v_p (pc/h/ln)	902
Speed, S (mi/h)	45.0
D (pc/mi/ln)	20.0
LOS	C

Design

Design (N)

Required Number of Lanes, N	
Flow Rate, v_p (pc/h)	
Max Service Flow Rate (pc/h/ln)	
Design LOS	

MULTILANE HIGHWAYS WORKSHEET(Direction 2)



Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p, S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p, S, D

General Information

Analyst	L.Randall
Agency or Company	
Date Performed	3/1/2004
Analysis Time Period	

Site Information

Highway/Direction to Travel	SR 324
From/To	Morgan Rd. to Camp Branch Rd.
Jurisdiction	Gwinnett County
Analysis Year	2008

Project Description 21932

☑ Oper.(LOS) ☐ Des. (N) ☐ Plan. (vp)

Flow Inputs

Volume, V (veh/h)	1450	Peak-Hour Factor, PHF	0.90
AADT(veh/h)		%Trucks and Buses, P_T	8
Peak-Hour Prop of AADT (veh/d)		%RVs, P_R	0
Peak-Hour Direction Prop, D		General Terrain:	Rolling
DDHV (veh/h)		Grade Length (mi)	0.00
Driver Type Adjustment	1.00	Up/Down %	0.00
		Number of Lanes	2

Calculate Flow Adjustments

f_p	1.00	E_R	2.0
E_T	2.5	f_{HV}	0.893

Speed Inputs

Lane Width, LW (ft)	12.0
Total Lateral Clearence, LC (ft)	12.0
Access Points, A (A/mi)	20
Median Type, M	Divided
FFS (measured)	
Base Free-Flow Speed, BFFS	50.0

Calc Speed Adj and FFS

f_{LW} (mi/h)	0.0
f_{LC} (mi/h)	0.0
f_A (mi/h)	5.0
f_M (mi/h)	0.0
FFS (mi/h)	45.0

Operations

Operational (LOS)

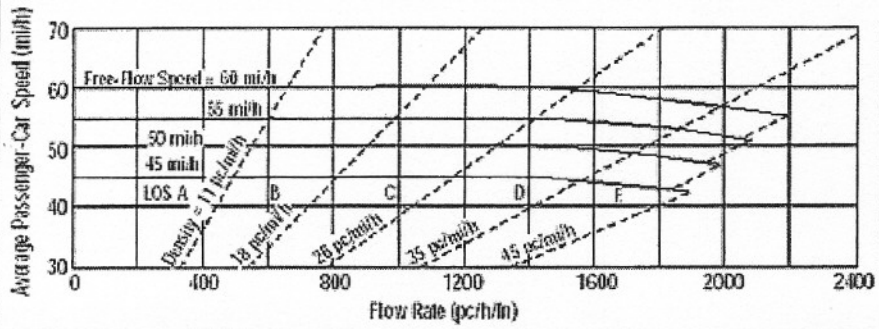
Flow Rate, v_p (pc/h/ln)	902
Speed, S (mi/h)	45.0
D (pc/mi/ln)	20.0
LOS	C

Design

Design (N)

Required Number of Lanes, N	
Flow Rate, v_p (pc/h)	
Max Service Flow Rate (pc/h/ln)	
Design LOS	

MULTILANE HIGHWAYS WORKSHEET(Direction 1)



Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p, S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p, S, D

General Information

Analyst	L.Randall
Agency or Company	
Date Performed	3/1/2004
Analysis Time Period	

Site Information

Highway/Direction to Travel	SR 324
From/To	Morgan Rd. to Camp Branch Rd.
Jurisdiction	Gwinnett County
Analysis Year	2028

Project Description 21932

☑ Oper.(LOS) ☐ Des. (N) ☐ Plan. (vp)

Flow Inputs

Volume, V (veh/h)	2750	Peak-Hour Factor, PHF	0.90
AADT(veh/h)		%Trucks and Buses, P_T	8
Peak-Hour Prop of AADT (veh/d)		%RVs, P_R	0
Peak-Hour Direction Prop, D		General Terrain:	Rolling
DDHV (veh/h)		Grade Length (mi)	0.00
Driver Type Adjustment	1.00	Up/Down %	0.00
		Number of Lanes	2

Calculate Flow Adjustments

f_p	1.00	E_R	2.0
E_T	2.5	f_{HV}	0.893

Speed Inputs

Lane Width, LW (ft)	12.0
Total Lateral Clearence, LC (ft)	12.0
Access Points, A (A/mi)	20
Median Type, M	Divided
FFS (measured)	
Base Free-Flow Speed, BFFS	50.0

Calc Speed Adj and FFS

f_{LW} (mi/h)	0.0
f_{LC} (mi/h)	0.0
f_A (mi/h)	5.0
f_M (mi/h)	0.0
FFS (mi/h)	45.0

Operations

Operational (LOS)

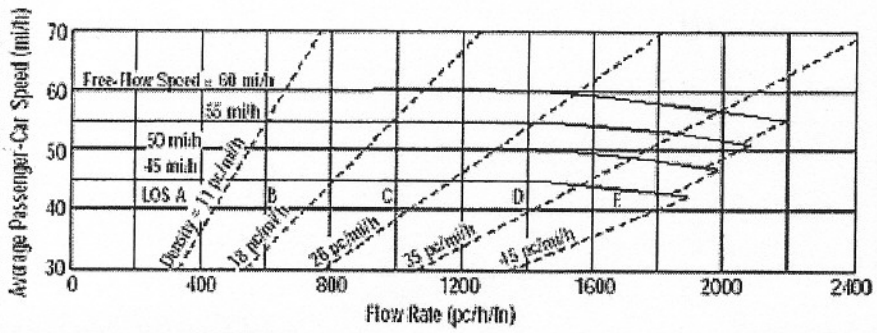
Flow Rate, v_p (pc/h/ln)	1711
Speed, S (mi/h)	43.5
D (pc/mi/ln)	39.3
LOS	E

Design

Design (N)

Required Number of Lanes, N	
Flow Rate, v_p (pc/h)	
Max Service Flow Rate (pc/h/ln)	
Design LOS	

MULTILANE HIGHWAYS WORKSHEET(Direction 2)



Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p, S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (N)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p, S, D

General Information

Analyst	L.Randall
Agency or Company	
Date Performed	3/1/2004
Analysis Time Period	

Site Information

Highway/Direction to Travel	SR 324
From/To	Morgan Rd. to Camp Branch Rd.
Jurisdiction	Gwinnett County
Analysis Year	2028

Project Description 21932

☑ Oper.(LOS) ☐ Des. (N) ☐ Plan. (vp)

Flow Inputs

Volume, V (veh/h)	2750	Peak-Hour Factor, PHF	0.90
AADT(veh/h)		%Trucks and Buses, P_T	8
Peak-Hour Prop of AADT (veh/d)		%RVs, P_R	0
Peak-Hour Direction Prop, D		General Terrain:	Rolling
DDHV (veh/h)		Grade Length (mi)	0.00
Driver Type Adjustment	1.00	Up/Down %	0.00
		Number of Lanes	2

Calculate Flow Adjustments

f_p	1.00	E_R	2.0
E_T	2.5	f_{HV}	0.893

Speed Inputs

Lane Width, LW (ft)	12.0
Total Lateral Clearence, LC (ft)	12.0
Access Points, A (A/mi)	20
Median Type, M	Divided
FFS (measured)	
Base Free-Flow Speed, BFFS	50.0

Calc Speed Adj and FFS

f_{LW} (mi/h)	0.0
f_{LC} (mi/h)	0.0
f_A (mi/h)	5.0
f_M (mi/h)	0.0
FFS (mi/h)	45.0

Operations

Operational (LOS)

Flow Rate, v_p (pc/h/ln)	1711
Speed, S (mi/h)	43.5
D (pc/mi/ln)	39.3
LOS	E

Design

Design (N)

Required Number of Lanes, N	
Flow Rate, v_p (pc/h)	
Max Service Flow Rate (pc/h/ln)	
Design LOS	

BRIDGE INVENTORY DATA LISTING GEORGIA DEPARTMENT OF TRANSPORTATION

Structure ID: 135-0045-0 **Gwinnett** SUFF. RATING (72.55)

Location & Geography

* Structure I.D.No: 135-0045-0
200 Bridge Information 06
* 6A Feature Int: I-85 (SR 403)
* 6B Critical Bridge: 0
* 7A Route Number Carried: SR00324
* 7B Facility Carried: MT GRAVEL SPRINGS RD
* 9 Location: 4.5 MI SE OF BUFORD
2 DOT District: 1
207 Year Photo: 1998
* 91 Inspection Frequency: 24 Date: 10/23/2003
92A Fract Crit Insp Freq: 00 Date: 02/01/1901
92B Underwater Insp Freq: 00 Date: 02/01/1901
92C Other Spc. Insp Freq: 00 Date: 02/01/1901
* 4 Place Code: 00000
* 5 Inventory Route (O/U): 1
Type: 3
Designation: 1
Number: 00324
Direction: 0
* 16 Latitude: 34-03.8 MMS Prefix: 00
* 17 Longitude: 83-56.8 MMS Suffix: 2/1 MP: -1.00
98 Border Bridge: 000 %Shared: 00
99 ID Number: 000000000000000
* 100 STRAHNET: 0
12 Base Highway Network: 0
13A LRS Inventory Route: 1,351,032,400
13B Sub Inventory Route: 0
* 101 Parallel Structure: N
* 102 Direction of Traffic: 2
* 264 Road Inventory Mile Post: 002.42
* 208 Inspection Area: 07 Initials: DAS
Engineer's Initial:

* Location I.D. No.: 135-00324D-002.45E

* 104 Highway System: 0
* 26 Functional Classification: 07
* 204 Federal Route Type: S No.: 00998
105 Federal Lands Highway: 0
* 110 Truck Route: 0
206 School Bus Route: 1
217 Benchmark Elevation: 0000.00
218 Datum: 0
* 19 Bypass Length: 04
* 20 Toll: 3
* 21 Maintenance: 01
* 22 Owner: 01
* 31 Design Load: 6
37 Historical Significance: 5
205 Congressional District: 07
27 Year Constructed: 1964
106 Year Reconstructed: 0000
33 Bridge Median: 0
34 Skew: 20
35 Structure Flared: 0
38 Navigation Control: N
213 Special Steel Design: 0
267 Type of Paint: 2
* 42 Type of Service on: 1
Under: 1
214 Movable Bridge: 0
203 Type Bridge: Z-O-M-O
259 Pile Encasement: 3
* 43 Structure Type Main: 4 02
45 No. Spans Main: 002
44 Structure Type Appr: 4 02
46 No. Spans Appr: 0002
226 Bridge Curve Horz: 0 Vert: 1
111 Pier Protection: 0
107 Deck Structure Type: 1
108 Wearing Surface Type: 1
Membrance: 0
Protection: 8

Signs & Attachments

225 Expansion Joint Type: 02
242 Deck Drains: 0
243 Parapet Location: 0
Height: 0.00
Width: 0.00
238 Curb: 1.20 1
239 Handrail: 7 7
* 240 Median Barrier Rail: 0
241 Bridge Median Height: 0.00
Width: 0.00
* 230 Guardrail Loc Dir Rear: 3
Fwrd: 3
Oppo Dir Rear: 0
Fwrd: 0
244 Approach Slab: 3
224 Retaining Wall: 0
233 Posted Speed Limit: 45
236 Warning Sign: 1
234 Delineator: 1
235 Hazard Boards: 1
237 Utilities Gas: 00
Water: 22
Electric: 00
Telephone: 21
Sewer: 00
247 Lighting Street: 0
Naviagtion: 0
Aerial: 0
* 248 County Continuity No.: 00

BRIDGE INVENTORY DATA LISTING GEORGIA DEPARTMENT OF TRANSPORTATION

Structure ID: 135-0045-0 **Gwinnett** SUFF. RATING 72.55

Programming Data

201 Project No.: I-85-2 (13) 111 CT.2
202 Plans Available: 4
249 Prop. Proj. No. BRST-0998 (1)
250 Approval Status: 0000
251 P.I. No.: 142285-
252 Contract Date: 02/01/2006
260 Seismic No.: 00000
75 Type Work: 34 1
94 Bridge Imp. Cost: $ 351
95 Roadway Imp. Cost: $ 290
96 Total Imp Cost: $ 796
76 Imp. Length: 001598
97 Imp. Year: 1990
114 Future ADT: 024300 Year: 2022

Hydraulic Data

215 Waterway Data
Highwater Elev.: 0000.0 Year: 1900
Avg. Streambed Elev.: 0000.0 Freq.: 00
Drainage Area: 00000
Area Of Opening: 000000
113 Scour Critical: N
216 Water Depth: 00.0 Br. Height: 00.0
222 Slope Protection: 4
221 Spur Dikes Rear: 0 Fwrd: 0
219 Fender System: 0
220 Dolphin: 0
223 Culvert Cover: 000
Type: 0
No. Barrels: 0
Width: 0.00 Height: 0.00
Length: 0 Apron: 0
* 265 U/W Insp. Area: 0 Diver: ZZZ

* Location I.D. No.: 135-00324D-002.45E

Measurements

* 29 ADT: 016200 Year: 2002
109 % Trucks: 10
* 28 Lanes On: 02 Under: 04
210 No. Tracks On: 00 Under: 00
* 48 Max. Span Length: 0076
* 49 Structure Length: 279
51 Br. Rwdy. Width: 25.90
52 Deck Width: 32.30
* 47 Tot. Horz. Cl: 25.90
50 Curb/Sdewlk Width: 2.00/2.00
32 Approach Rdwy Width: 022
* 229 Shoulder Width:
Rear Lt: 6.50 Type: 8 Rt: 3.50
Fwrd Lt: 4.60 Type: 8 Rt: 4.50
Pavement Width:
Rear: 21.50 Type: 2
Fwrd: 21.80 Type: 2
Intersection Rear: 1 Fwrd: 1
36 Safety Features Br. Rail: 1
Transition: 1
App. G. Rail: 1
App. Rail End: 1
53 Minimum Cl.Over: 99 ' 99 "
Under: H 16 ' 03 "
* 228 Min. Vertical Cl
Act. Odm Dir: 99 ' 99 "
Oppo. Dir: 99 ' 99 "
Posted Odm. Dir: 00 ' 00 "
Oppo. Dir: 00 ' 00 "
55 Lateral Undercl. Rt: H 11.00
56 Lateral Undercl. Lt: 30.40
* 10 Max Min Vert Cl: 99 ' 99 " Dir: 0
39 Nav Vert Cl: 000 Horz: 0000
116 Nav Vert Cl Closed: 000
245 Deck Thickness Main: 7.30
Deck Thick Approach: 7.30
246 Overlay Thickness: 0.00
212 Year Last Painted: Sup: 1998 Sub: 0000

Ratings

65 Inventory Rating Method: 2
63 Inventory Rating Method: 2
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: 40 0
261 H Inventory Rating: 20
262 H Operating Rating: 28
67 Structural Evaluation: 7
58 Deck Condition: 7
59 Superstructure Condition: 7
* 227 Collision Damage: 2
60A Substructure Condition: 7
60B Scour Condition: N
60C Underwater Condition: N
71 Waterway Adequacy: N
61 Channel Protection Cond: N
68 Deck Geometry: 2
69 UnderClr. Horz/Vert: 5
72 Appr. Alignment: 5
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
Type3s2: 00
Timber: 00
Piggyback: 00
253 Notification Date 02/01/1901
253 Fed Notify Date: 02/01/1901 0

GRESHAM
SMITH AND
PARTNERS

November 15, 2004

MEETING NOTES

SR 324 BRIDGE OVER I-85, BRST-0998(1)
PI NO. 142285
GWINNETT COUNTY, PN 9532-01

MEETING DATE: October 22, 2004

PARTICIPANTS: See Attached List

DISCUSSION: CONCEPT TEAM MEETING

The concept team meeting for the above project was held October 22, 2004, at 3:00 p.m., in the District 1 Area office in Lawrenceville, GA. Please see the attached list for the attendees.

The meeting was opened by Todd Long, who described the overall proposed concept, adjoining projects and some of the design considerations encountered. The extension of the project limits from the originally programmed project was also discussed. The project qualifies for federal money due to the bridge crossing I-85. The detail of the proposed project concept was discussed by Jody Braswell, Gresham Smith & Partners.

The project is located on SR 324 over I-85. The project consists of the replacement of the bridge over I-85 and widening of SR 324 approaching the bridge. SR 324 will be widened to a four-lane divided curb and gutter facility with a 24-foot raised median and 5 ft. sidewalks on each side. The project is adjacent to the Gwinnett County projects to widen SR 324 from SR 20 to SR 124. The proposed bridge will be designed to allow for a future HOV interchange with I-85. Retaining walls are proposed in the I-85 median for the future HOV interchange backfilled creating a box section. Separate bridges from the median box section to the outside of I-85 are planned. This will require permanently shifting the I-85 travel lanes towards the outside. The bridges will also span the future HOV lanes, future additional SOV lanes, and future collector-distributor lanes on I-85. The proposed bridges will also be designed to allow a future full access interchange. Camp Branch Road and Morgan Road will be relocated on each side of the bridge to allow for future ramp locations.

The proposed project length is 0.8 miles. Two separate bridges are proposed, each 182 feet long by 102 feet wide. Additional proposed lengths of improvements are 0.8 miles on Morgan Road, 0.5 miles on Camp Branch Road, and 0.4 miles on I-85.

Existing SR 324 consists of 2-12 ft. travel lanes with rural shoulders and a posted speed of 45 mph. The existing bridge over I-85 (Bridge Inventory I.D.: 135-0045-0) consists of a 4-span, 280 ft. long bridge with a width of 33 ft.

Discussion was as follows:

Gwinnett County discussed the required right of way width of 126 ft. GDOT stated that the required right of way should be set outside of the clear zone along SR 324.

Jody Braswell discussed the required right of way as shown that includes right of way for the future interchange ramps. GDOT stated that right of way cannot be purchased for a possible future interchange ramps, but that limited access should be included for the project between realigned Camp Branch Road and Morgan Road. The right of way included in the project can only include SR 324 and the realigned local roads.

Gwinnett County stated that all three SR 324 projects, including those to the west and the east of this bridge replacement, should be let at the same time so that they can be constructed concurrently. The exact letting coordination to be determined.

Jody Braswell reported that there will be a stream crossing and wetlands along relocated Camp Branch and a possible future ramp. There is also a farm pond at relocated Morgan Road. There are no other environmental resources known on the project at this time. It is anticipated that the project will qualify under the Nationwide permit and the NEPA document is anticipated to be a categorical exclusion.

Jody Braswell reported there is a gas pumping station on Morgan Road. Others reported there are potential overhead power lines which may not be on the existing right of way. Gwinnett County will send a letter to utility companies on the project to get a relocation cost estimate. Mike Hudlow, Jackson EMC, reported that Jackson EMC does have overhead power lines in the area. Georgia Power lines in the project area are underground. It was also determined that the cable TV provider on the project is Charter Communications.

GDOT will be responsible for Right of Way acquisition as well as Letting of the Contract and Supervision of Construction. The LPGA will be revised. The schedule to complete purchase of right of way should be revised from 6 months to 12 months.

GDOT discussed the location and terminus of the proposed 24 ft. median on the bridge. SR 324 east and west of the bridge will contain a 20 ft. raised median so a transition will be required at some point along SR 324. GDOT recommended continuing the 24 ft. raised median through the Camp Branch Road and Morgan Road intersections and then tapering down to a 20 ft. raised median.

This represents our understanding of the items discussed at this meeting. If you have any questions or comments concerning any of the information contained herein, please contact Gresham Smith and Partners within seven (7) days. If no comments are received within seven days, this report will be considered final.

Prepared by: Jody Braswell, P.E.
Project Manager

Bgo

Copy: Russell McMurry, GDOT Dist. 1
Alan Chapman, Gwinnett County DOT

BRST 0-178(1) Gwinnett

NAME	FIRM	Phone #
Russell R. McMurry	GDOT	770-532-5520
David Tucker	Gwinnett Co. DOT	770-822-7485
Robby Oliver	GDOT Utilities	770-532-5510
Robin Lovett	Gresham Smith & Partner	615-770-8360
Jody Braswell	GS&P	770-754-0755
Brian O'Longor	GS&P	770-754-0755
Jimmy Price	Charter Cable T.V.	404-597-2712
Mike Hudlow	Jackson EMC	770) 822-3250
State Rep. Charles Bannister	Gw/Co Candidate Chair	404 592-2754
John Heard	ST Rep	770 345-5555
Brian Allen	Gwinnett Co.	770 822-7417
Tom Moreland	MAA	770 263-5945
Chuck Cobb	GA.D.O.T.	404-656-3774
Jennifer Fulbright	GDOT	770-532-5582
Brent Cook	GDOT - Dist 1	770. 532. 5530
Scott Zehngraff	GDOT/OTSID	(404) 635-8127
Alan Chapman	Gw. Co. DOT	770-822-7485
Alwa Byrom	MAAI	770 263 5945
Ron Brazier	MAAI	770-822-7487
Bill Powell	GCDOT	770-822-7417
John Hancock	GDOT	770-339-2308
Todd Long	GDOT	770-532-5526
Randall L. Davis	GA DOT	770-339-2309
Henry T. Hobbs	GCDPU	678-376-7123
Pat Smeaton	MAAI	770 263 5945

NAME	FIRM	PHONE #
CHRIS PARYPINSKI	MAAI	(678) 728-9050
David Ada..	EPEI	770·333·9484
Linda Edwards	EPEI	770·333·9484
Laurie Reed	HNTB	770 980-5700

GRESHAM
SMITH AND
PARTNERS

June 27, 2002

MEETING NOTES

SR 324 BRIDGE OVER I-85, GWINNETT COUNTY, GEORGIA, PN 9532-01
GS&P Project No. 21932.00

MEETING DATE: June 26, 2002

PARTICIPANTS: See attached list.

DISCUSSION: I-85 HOV CONCEPT COORDINATION MEETING

JJ&G presented the latest typical section of the HOV concept they are preparing for the Georgia Department of Transportation (GDOT) (see attached drawing). The typical section also includes 2 lanes on each side for Northern Arc ramps. GDOT has indicated that this is the desired typical section, however the concept is not currently approved.

GS&P presented a plan view concept of the bridge(s)/retaining walls that is proposed to accommodate the future typical section. GDOT requested that right turn lanes be added to each approach to the HOV interchange.

I-85 widening will be required to accommodate the bridge, prior to the HOV construction. JJ&G recommended that I-85 be shifted a full 28' of full depth pavement to provide a 12' travel lane, 12' paved shoulder and 4' shift. The 4' shift allows the travel lanes to be constructed in the anticipated location of future lanes. Median drainage should be carefully considered northbound and southbound of the HOV interchange.

This project will require full federal oversight and representatives from FHWA should be included in all future meetings.

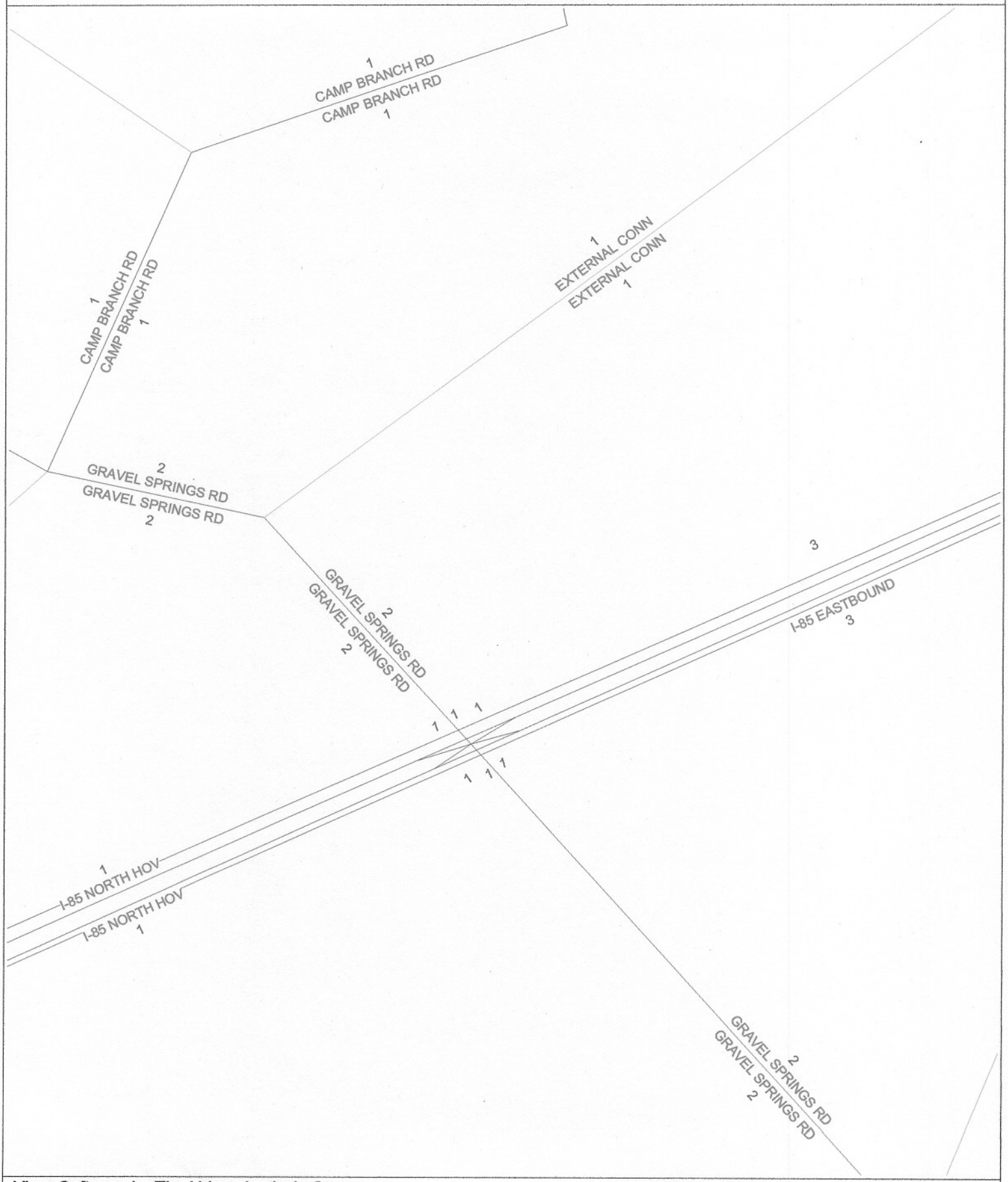
GDOT will consider the options, and will discuss with Gwinnett soon. Gwinnett County desires to hold a PIM as soon as possible for the SR 324 project. Gwinnett directed GS&P to show a "box outline" of the proposed bridge and label "Future HOV Interchange", pending assurances from GDOT. GS&P will show the above and design the concept alignment for the Morgan Road and Camp Branch Road side roads, and will send to HDR to incorporate into their overall concept drawing for the PIM.

This represents our understanding of the items discussed at this meeting. If you have any questions or comments concerning any of the information contained herein, please contact me.

Prepared by: Jody Braswell, P.E.

Copy Participants
Tom Ziegler, P.E., GS&P
Wayne Shackelford, GS&P
File 21932.00/0.1

PI 142285 - SR 324/GRAVEL SPRINGS RD AT I-85 NORTH
DRAFT 2030 RTP - October 28, 2004
2015 Network Year

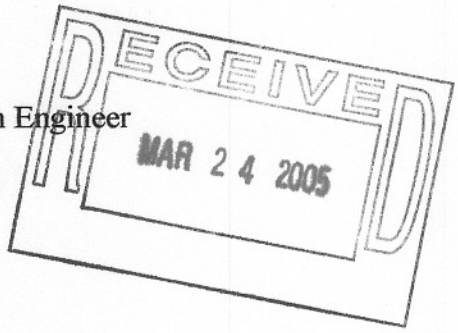


DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE: **P.I. Nos. 142285** **OFFICE:** Environment/Location

DATE: March 23, 2005



FROM: Harvey D. Keepler, State Environmental/Location Engineer

TO: Meg Pirkle, Assistant Director of Preconstruction

SUBJECT: **PROJECT CONCEPT REPORT**
BRST-0998(1) / Gwinnett County
Bridge Replacement SR 324 over I-85

The above subject concept report has been reviewed. This project seems to be part of larger project that would four lane the road. I would anticipate an EA for the project that would begin @ SR 20 and end @ SR 124 including this section. This Unit alone does not have logical termini. If ramps are being added to the over pass, an IJR would be needed.

If you have any questions, please contact me at (404) 699-4401.

HDK/lc

cc: David Mulling, P.E., Project Review Engineer
Russell R. McMurry, P.E., District Preconstruction Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

PROJECT CONCEPT REPORT

BRIDGE REPLACEMENT
SR 324 OVER I-85

Project Number: BRST-0998(1)
County: Gwinnett
P.I. Number: 142285

Federal Route Number: N/A
State Route Number: 324

Recommendation for approval:

DATE 3/21/05 _____
Project Manager

DATE 3/21/05 _____
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 3.22.05 _____
State Environment/Location Engineer

DATE _____
State Traffic Safety and Design Engineer

DATE _____
District Engineer

DATE _____
Project Review Engineer

DATE _____
State Bridge Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

PROJECT CONCEPT REPORT

BRIDGE REPLACEMENT
SR 324 OVER I-85

Project Number: BRST-0998(1)
County: Gwinnett
P.I. Number: 142285

Federal Route Number: N/A
State Route Number: 324

Recommendation for approval:

DATE 3/21/05 _____
Project Manager

DATE 3/21/05 _____
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 4/5/05 _____
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

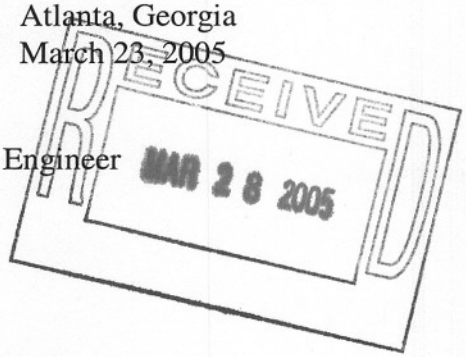
DATE _____
State Bridge Engineer

Department of Transportation
State of Georgia

INTERDEPARTMENTAL CORRESPONDENCE

File: BRST-0998(1), Gwinnett County
P.I. No. 142285

Office: Traffic Safety & Design
Atlanta, Georgia
Date: March 23, 2005



From: KG Keith Golden, P.E., State Traffic Safety and Design Engineer

To: Meg Pirkle, Assistant Director of Preconstruction

Subject: Project Concept Report Review

We have reviewed the above referenced concept report for the proposed bridge replacement and roadway widening along SR 324 in Gwinnett County.

The Office of Traffic Safety and Design finds this report satisfactory for approval because it will improve safety and traffic operations within this area.

KG/SZ/nr

Attachment (signature page)

Cc: Harvey Keepler, State Environment /Location Engineer
Paul Liles, State Bridge and Structural Engineer
Russell McMurry, District Engineer
Attn.: Neil Kantner, District Preconstruction Engineer
Joe Palladi, State Transportation Planning Administrator
David Mulling, Project Review Engineer
Jamine Simpson, Financial Management Administrator
General Files
Office Files

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

PROJECT CONCEPT REPORT

BRIDGE REPLACEMENT
SR 324 OVER I-85

Project Number: BRST-0998(1)
County: Gwinnett
P. I. Number: 142285

Federal Route Number: N/A
State Route Number: 324

Recommendation for approval:

DATE 3/4/05 _____
Project Manager

DATE 3/14/05 _____
Office Head/District Engineer

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

DATE _____ _____
State Transportation Planning Administrator

DATE _____ _____
State Transportation Programming Engineer

DATE _____ _____
State Environmental/Location Engineer

DATE 3-24-05 _____
State Traffic Safety & Design Engineer

DATE _____ _____
District Engineer

DATE _____ _____
Project Review Engineer

DATE _____ _____
State Bridge Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

PROJECT CONCEPT REPORT

BRIDGE REPLACEMENT
SR 324 OVER I-85

Project Number: BRST-0998(1)
County: Gwinnett
P.I. Number: 142285

Federal Route Number: N/A
State Route Number: 324

Recommendation for approval:

DATE 3/21/05 _____
Project Manager

DATE 3/21/05 _____
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 4/7/05 _____
Project Review Engineer

DATE _____
State Bridge Engineer