

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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

**FILE** P.I. # 0007157  
CSBRG-0007-00(157)  
Banks County  
GDOT District 1 - Gainesville  
SR 323 Bridge Replacement @  
Grove Creek

**OFFICE** Design Policy & Support

**DATE** January 15, 2013

**FROM**   
for Brent Story, State Design Policy Engineer

**TO** SEE DISTRIBUTION

**SUBJECT** APPROVED CONCEPT REPORT

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

Attachment

**DISTRIBUTION:**

Bobby Hilliard, Program Control Administrator  
Genetha Rice-Singleton, State Program Delivery Engineer  
Glenn Bowman, State Environmental Administrator  
Cindy VanDyke, State Transportation Planning Administrator  
Ben Rabun, State Bridge Engineer  
Kathy Zahul, State Traffic Engineer  
Angela Robinson, Financial Management Administrator  
Lisa Myers, State Project Review Engineer  
Charles "Chuck" Hasty, State Materials Engineer  
Jeff Baker, State Utilities Engineer  
Ken Thompson, Statewide Location Bureau Chief  
Andy Casey, State Roadway Design Engineer  
Attn: Chris Rudd, Design Group Manager  
Bayne Smith, District Engineer  
Brent Cook, District Preconstruction Engineer  
Neil Kantner, District Utilities Engineer  
Suzanne Dunn, Project Manager  
BOARD MEMBER - 10th Congressional District

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

Project Type: Bridge Replacement P.I. Number: 0007157  
 GDOT District: One County: Banks  
 Federal Route Number: \_\_\_\_\_ State Route Number: SR 323

**Project Description :**  
*The proposed project will replace the bridge located on SR 323 at Grove Creek.*

**Submitted for approval:**

<u><i>C. Andy Cury</i></u> State Roadway Design Engineer	<u><del>9/10/12</del> 10/9/12</u> DATE
<u><i>Renita Rice</i></u> State Program Delivery Engineer	<u>10/11/2012</u> DATE
<u><i>Suzanne Dunn</i></u> GDOT Project Manager	<u>10/9/12</u> DATE

**Recommendation for approval:**

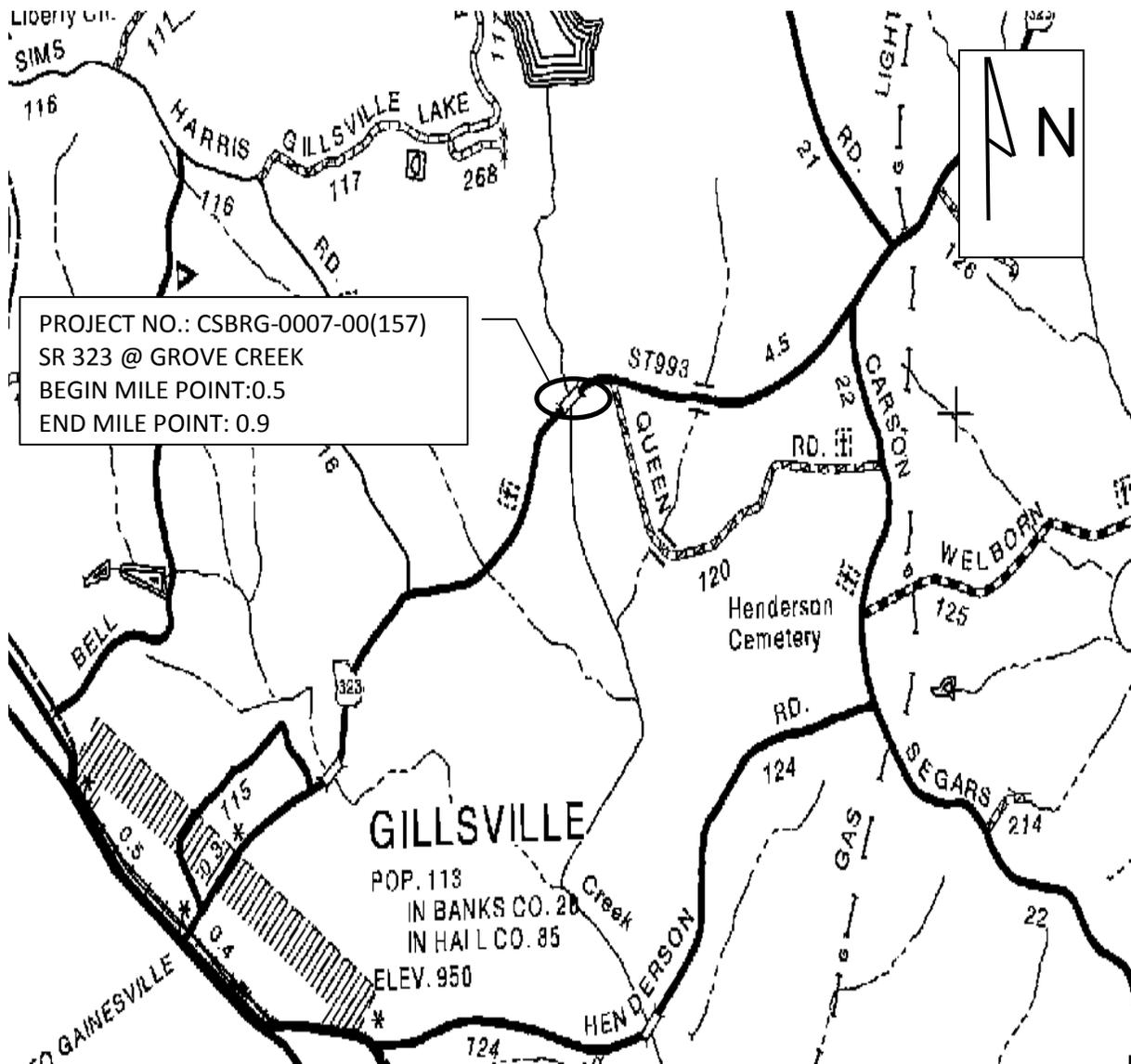
_____ Program Control Administrator	_____ DATE
<u><i>GLENN BOWMAN*/EKP</i></u>	<u>10/23/2012</u>
_____ State Environmental Administrator	_____ DATE
<u><i>KATHY ZAHUL*/EKP</i></u>	<u>10/15/2012</u>
_____ State Traffic Engineer	_____ DATE
<u><i>LISA MYERS*/EKP</i></u>	<u>10/12/2012</u>
_____ Project Review Engineer	_____ DATE
<u><i>PATRICK ALLEN*/EKP</i></u>	<u>10/23/2012</u>
<i>For</i> _____ State Utilities Engineer	_____ DATE
_____ District One Engineer	_____ DATE
<u><i>BEN ROBUN*/EKP</i></u>	<u>11/16/2012</u>
_____ State Bridge Design Engineer	_____ DATE
_____ State Transportation Financial Management Administrator	_____ DATE

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

<u><i>CINDY VON DYKE*/EKP</i></u> State Transportation Planning Administrator	<u>10/15/2012</u> DATE
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*\* - RECOMMENDATION ON FILE*

### PROJECT LOCATION



Location Map for PI 0007157, Banks County, SR 323 @ Grove Creek

## PLANNING & BACKGROUND DATA

**Project Justification Statement:** This Bridge (Structure ID 011-0022-0; SR 323 over Grove Creek) was built in 1952. The bridge consists of five spans of Reinforced Concrete Deck Girders on concrete caps and pile bents. The bridge was designed using truck configurations that weigh less than the current legal state truck weights. This bridge is currently posted. The overall condition of this bridge would be classified as satisfactory; with the bottom of the deck, the beams, the caps at bents 2, 3 and 5, and piles at bent 3 exhibiting minor cracking. No rehabilitation work performed on the deck would improve this bridge in so far as the posting of the structure is concerned. Therefore, due to the structural integrity and based on the design, replacement of this bridge is recommended.

**Description of the proposed project:** The proposed project is located along SR 323 at Grove Creek, approximately 6.5 miles west of Homer in Banks County, Georgia. The proposed project will replace the existing 28-ft wide bridge with a new 37.25-ft wide bridge. The new bridge will be shifted parallel (North) of the existing which will minimize environmental impacts. The proposed project length would be approximately 0.40 miles.

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

**MPO:**  N/A  MPO - Choose  
MPO Project TIP #

**Regional Commission:**  N/A  RC – Georgia Mountains RC  
RC Project ID # N/A

**Congressional District(s):** 10

**Projected Traffic: ADT**

Current Year (2011): 1000      Open Year (2017): 1125      Design Year (2037): 1525

**Functional Classification (Mainline):** Rural Major Collector

**Is this project on a designated bike route?**  No  YES

**Is this project located on a pedestrian plan?**  No  YES

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

## CONTEXT SENSITIVE SOLUTIONS

**Issues of Concern:** None

**Context Sensitive Solutions:** N/A

## DESIGN AND STRUCTURAL DATA

### Mainline Design Features:

Roadway Name/Identification: SR 323

Feature	Existing	Standard*	Proposed
<b>Typical Section</b>			
- Number of Lanes	2	2	2
- Lane Width(s)	11	11	11
- Median Width & Type	N/A	NONE	N/A
- Outside Shoulder Width & Type	2-ft grassed	6-ft	2'- pvd, 4'-grsd
- Outside Shoulder Slope	6%	6%	6%
- Inside Shoulder Width & Type	N/A	N/A	N/A
- Sidewalks	N/A	N/A	N/A
- Auxiliary Lanes	N/A	N/A	N/A
- Bike Lanes	N/A	N/A	N/A
Posted Speed	45		45
Design Speed	45	45	45
Min Horizontal Curve Radius	643-ft	643-ft	643-ft
Superelevation Rate	6%	6%	6%
Max Grade	4%	8%	8%
Access Control	By Permit	By Permit	By Permit
Right-of-Way Width	100-ft	100-ft	150-ft
Maximum Grade – Crossroad	N/A	N/A	N/A
Design Vehicle		Single-Unit	WB-67

\*According to current GDOT design policy if applicable

### Major Structures:

Structure	Existing	Proposed
Bridge ID: 011-0022-0 Banks County	The existing two-lane bridge is 150-ft. long and 28-ft. wide, with a sufficiency rating of 55.99.	The proposed structure will retain the 150-ft length. The width will be 37.25-ft. which includes 11-ft. travel lanes, 6-ft. shoulders, and 1.625-ft barriers on each side.

**Major Interchanges/Intersections:** None

**Highway Safety Calculations:** GDOT Office of Roadway Design policy directs that Highway Safety Manual (HSM) analysis is not accomplished for bridge replacement projects with 0.5-mile or less of roadway construction on each bridge approach. This project has less than 0.25-mile of roadway construction proposed on each approach thus a HSM analysis is not included.

**Utility Involvements:** Banks County (Water)  
 Windstream Communications (Telecommunications)

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

**SUE Required:**  Yes  No

**Railroad Involvement:** None

**Right-of-Way:**

Required Right-of-Way anticipated:  YES  NO  Undetermined  
 Easements anticipated:  Temporary  Permanent  Utility  Other  
 Anticipated number of impacted parcels: 3  
 Anticipated number of displacements (Total): 0  
 Businesses: 0  
 Residences: 0  
 Other: 0

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

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

**Transportation Management Plan Anticipated:**  YES  NO

*\*Note: Special Provision 150 will serve as the TTC component of the TMP*

**Design Exceptions to FHWA/AASHTO controlling criteria anticipated:**

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

**Design Variances to GDOT standard criteria anticipated:**

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

VE Study anticipated:  No       Yes       Completed – Date:

**ENVIRONMENTAL DATA**

**Anticipated Environmental Document:**

GEPA:       NEPA:  Categorical Exclusion       EA/FONSI       EIS

**Air Quality:**

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

**Environmental Permits/Variances/Commitments/Coordination anticipated:**

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

Is a PAR required?  No  Yes  Completed – Date:

**NEPA/GEPA:** A historic resource has been identified in the area of the project. Section 4(f) involvement is anticipated. However, because the impacts will be minimal full 4(f) evaluation should not be needed.

**Ecology:** In addition to Grove Creek itself, one stream has been identified on the south side of SR 323 that parallels the road west of Grove Creek. A likely wetland is on the north side of SR 323 west of the creek, and another tributary to the creek is located on the north side of the road east of the bridge approximately 200 feet from the road. Indiana bat habitat is present within the project corridor and an acoustic survey (and possibly netting) is recommended. Additional resources may be identified with the final ecological survey.

**History:** An eligible historic site on the north side of SR 323 across from Queen Road has been identified. The extent of the boundary is to be determined after additional investigation.

**Archeology:** A cemetery is located 0.25 miles west of the bridge on the north side of SR 323. The cemetery is expected to be outside of the project limits.

**Air & Noise:** The Project is not located in any non-attainment areas for air-quality.

**Public Involvement:** A Public Information Open House (PIOH) will be incorporated into the schedule. If the level of public interest is high then there may be the need for a Public Hearing Open House (PHOH). However this is not anticipated.

**Major stakeholders:** The major stakeholders for this project are the traveling public and adjacent property owners.

## CONSTRUCTION

Issues potentially affecting constructability/construction schedule: None

Early Completion Incentives recommended for consideration:  No  Yes

## PROJECT RESPONSIBILITIES

### Project Activities:

Project Activity	Party Responsible for Performing Task(s)
Concept Development	GDOT Roadway Design
Design	GDOT Roadway Design
Right-of-Way Acquisition	GDOT/ District 1 Right of Way
Utility Relocation	Utility Owners
Letting to Contract	GDOT
Construction Supervision	GDOT District 1 Construction
Providing Material Pits	Contractor
Providing Detours	N/A
Environmental Studies, Documents, & Permits	Mulkey Engineers & Consultants
Environmental Mitigation	GDOT Environmental Services
Construction Inspection & Materials Testing	District 1 Construction

Lighting required:  No  Yes

**Concept Meeting:** The concept meeting was held on July, 26, 2012. See attachments for minutes.

**Other projects in the area:**

CSBRG-0007-00(156)	PI 0007156	SR 98 At Hickory Level Creek Bridge Replacement
CSBRG-0007-00(158)	PI 0007158	SR 63 At Middle Fork Broad River Bridge Replace
NH000-0055-01(045)	PI 121190	SR 15/US 441/Homer Bypass Fm CR 7 to CR 105
EDS00-0441-00(030)	PI 121140	SR 15/US 441 Fm m CR 105 to CR 198 N

**Other coordination to date:** See Attachments for meeting minutes.

Initial Scoping Meeting – November 21, 2011  
 Environmental Kick-Off Meeting – April 11, 2012

**Project Cost Estimate and Funding Responsibilities:**

	Breakdown of PE	ROW	Utility	CST*	Environ. Mitigation	Total Cost
By Whom	GDOT	GDOT	Utility Owner**	GDOT	GDOT	
\$ Amount	\$270,519.35	\$104,000.00	\$165,000.00	\$1,293,528.80	\$100,000.00	\$1,768,048.15
Estimate Date	5/6/2009	8/13/2012	5/21/2012	11/8/2012	9/5/2012	

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

\*\* Utility Cost are Non-Reimbursable and not included in the total cost of the project.

**ALTERNATIVES DISCUSSION**

**Alternative selection:**

<b>Preferred Alternative (Alt 1):</b> Shifting Bridge Parallel ( North) of Current Location			
<b>Estimated Property Impacts:</b>	<b>3</b>	<b>Estimated Total Cost:</b>	<b>\$1,768,048.15</b>
<b>Estimated ROW Cost:</b>	<b>\$104,000.00</b>	<b>Estimated CST Time:</b>	<b>18 months</b>
<b>Rationale:</b> This alternate would shift the alignment to the north and maintain traffic on the existing bridge while the new bridge and alignment is constructed. Although this would require more right of way and higher construction costs than alternative 2, this alternative would eliminate the need for an off-site detour and would minimize travel delays during construction. Also, this alternative would limit environmental impacts to the stream located southeast of the existing bridge. Additionally, this alternative would be less costly than alternative 3 while maintaining wider travel lane widths and a wider separation of construction activities from traffic. As a result, this alternate is recommended for implementation.			

<b>Alternative 2:</b> Closing Roadway and Providing an Off-site detour			
<b>Estimated Property Impacts:</b>	<b>None</b>	<b>Estimated Total Cost:</b>	<b>\$1,490,952.69</b>
<b>Estimated ROW Cost:</b>	<b>\$0.00</b>	<b>Estimated CST Time:</b>	<b>12 months</b>
<b>Rationale:</b> This alternate would close the existing bridge section of the roadway and provide an offsite detour during construction. The proposed detour would be about 17.32 miles. Because of the additional impacts to the traveling public with very minimal cost savings compared with the preferred alternative, this alternative is not recommended for implementation.			

<b>Alternative 3: Temporary Bridge Construction</b>			
<b>Estimated Property Impacts:</b>	<b>2</b>	<b>Estimated Total Cost:</b>	<b>\$2,202,424.56</b>
<b>Estimated ROW Cost:</b>	<b>\$78,000.00</b>	<b>Estimated CST Time:</b>	<b>18 months</b>
<p><b>Rationale:</b> This alternative would construct a temporary detour bridge which would be parallel to the existing bridge. The detour bridge would allow the existing bridge to be reconstructed in the existing location. In an effort to minimize the construction costs of this alternate, the temporary detour bridge would be constructed with an offset of 10 feet and allow for just 10 foot travel lanes. Because the total costs for this alternate exceeded the cost of alternate 1 and proposed smaller travel lanes, this alternate is not recommended for implementation.</p>			

<b>No-Build Alternative (Alt 4): No-Build</b>			
<b>Estimated Property Impacts:</b>	<b>None</b>	<b>Estimated Total Cost:</b>	<b>\$0.00</b>
<b>Estimated ROW Cost:</b>	<b>\$0.00</b>	<b>Estimated CST Time:</b>	<b>N/A</b>
<p><b>Rationale:</b> This alternative would leave the existing bridge in place with no plans for replacement. The structural integrity of the bridge is insufficient. As a result, this option is not recommended for implementation.</p>			

**Attachments:**

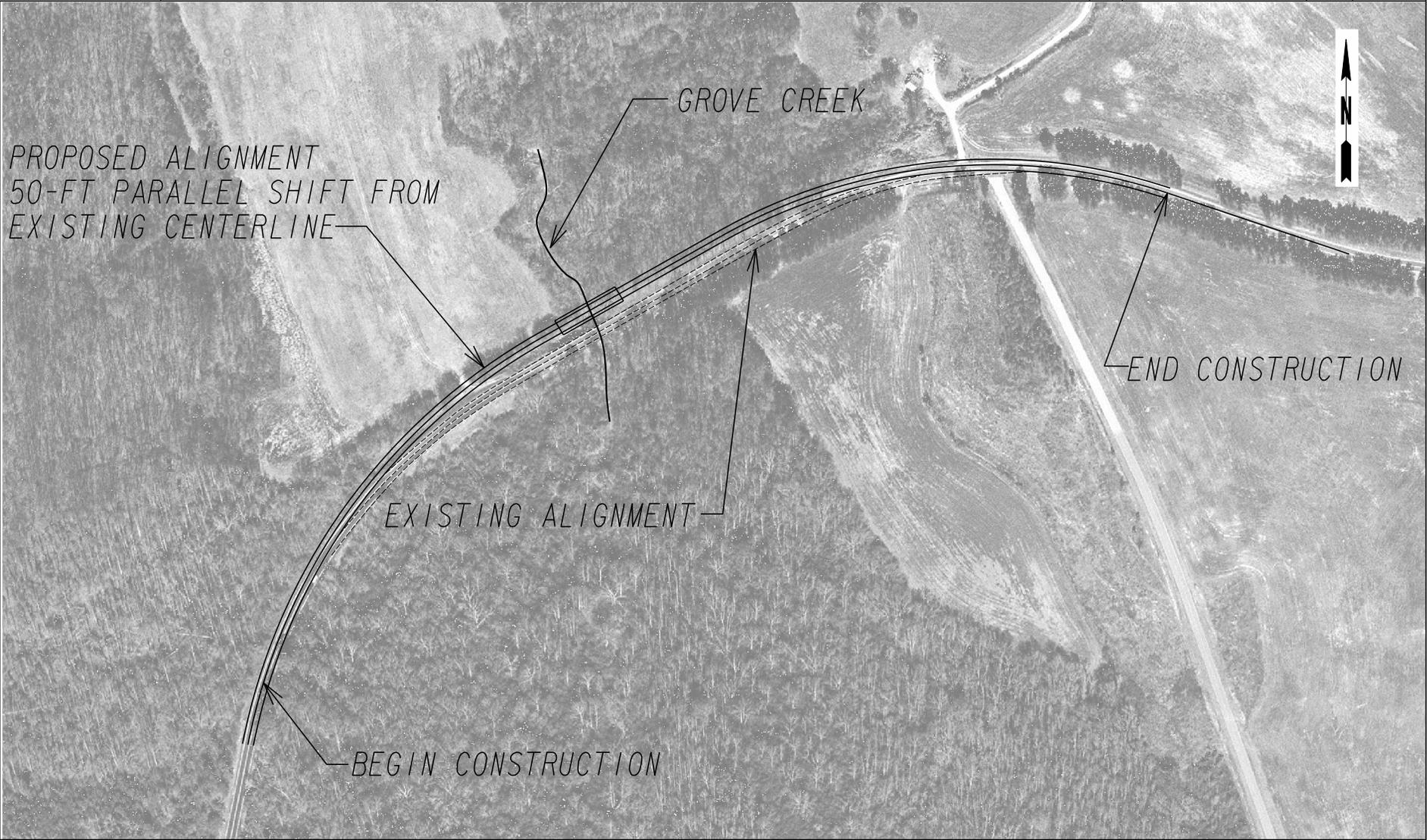
1. Concept Layout
2. Typical Sections
3. Detailed Cost Estimates:
  - a. Construction including Engineering and Inspection
  - b. Completed Fuel & Asphalt Price Adjustment forms
  - c. Right-of-Way
  - d. Utilities
  - e. Environmental Mitigation
4. Traffic Projections
5. Crash Summary Report
6. Bridge inventory
7. Minutes of Concept meetings
8. Minutes of Initial Scoping Meeting
9. Minutes of Environmental Kick-Off Meeting
10. Road User Cost Estimate

**APPROVALS**

Concur: M.A.  
 Director of Engineering

Approve:   
 Chief Engineer

1-14-13  
 Date



ALTERNATE 1

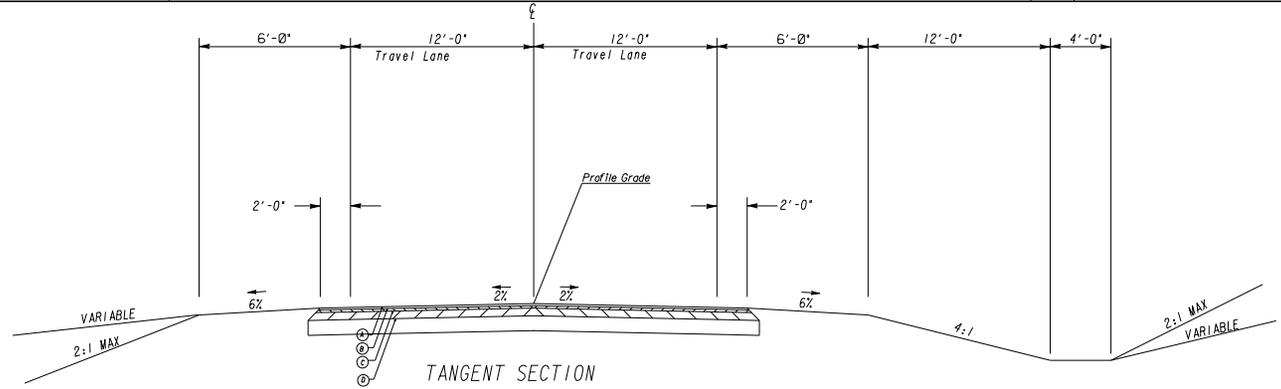


REVISION DATES	

STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
OFFICE: ROADWAY DESIGN  
CONSTRUCTION LAYOUT

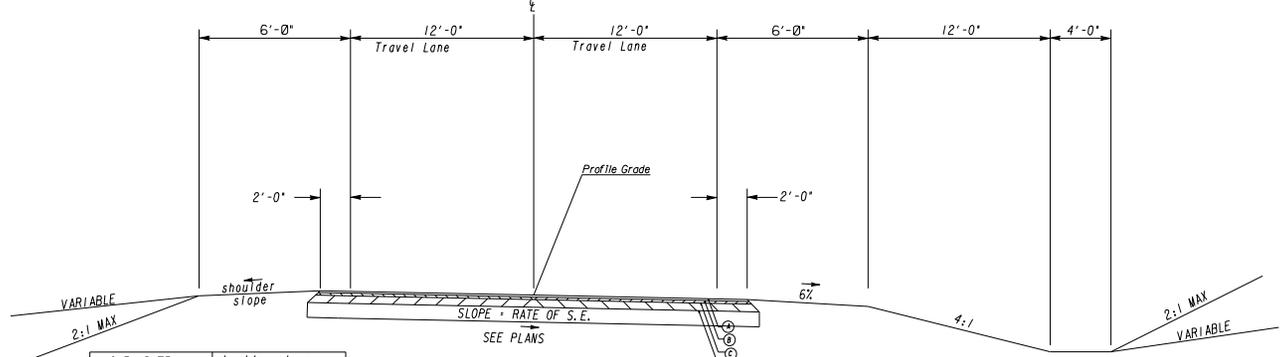
SR 323 @ GROVE CREEK  
BANKS COUNTY

DRAWING No. **11-001**



TANGENT SECTION  
 TYPICAL SECTION NO. 1  
 S. R. 323 TANGENT SECTION

- (A) RECYCLED ASPHALTIC CONCRETE 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME 165 LB/SY
- (B) RECYCLED ASPHALTIC CONCRETE 19 mm SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME 220 LB/SY
- (C) RECYCLED ASPH CONC 25MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME, 300 LB/SY
- (D) GRADED AGGR BASE CRS, 8 INCH INCL MATL



S.E. RATE	shoulder slope
2.0% OR 3.0%	4.0%
4.0% OR 5.0%	2.0%
6.0%	1.0%

TYPICAL SECTION NO. 2  
 S. R. 323 SUPERELEVATION SECTION

**GEORGIA**  
 DEPARTMENT  
 OF  
 TRANSPORTATION

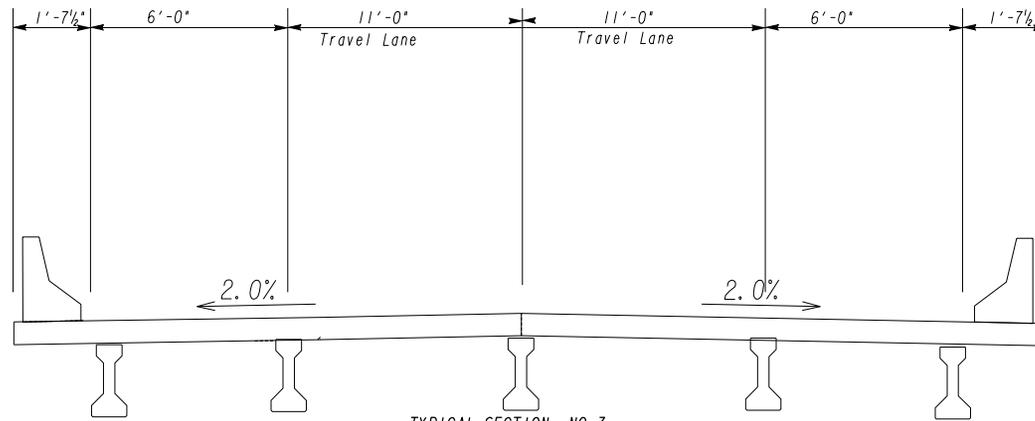
-NOT TO SCALE-

REVISION DATES

STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE: ROADWAY DESIGN  
 TYPICAL SECTIONS

SR 323 @ GROVE CREEK  
 BANKS COUNTY

DRAWING No.  
**05-001**



TYPICAL SECTION NO. 3  
S. R. 323 BRIDGE SECTION

ALTERNATE 1

**GEORGIA**  
DEPARTMENT  
OF  
TRANSPORTATION

NOT TO SCALE

REVISION DATES


STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
OFFICE: ROADWAY DESIGN  
TYPICAL SECTIONS

SR 323 @ GROVE CREEK  
BANKS COUNTY

DRAWING No.  
**05-002**

# DETAILED COST ESTIMATE



**Job: 0007157-ALT 1**

JOB NUMBER 0007157-ALT 1

FED/STATE PROJECT NUMBER CSBRG-0007-00(157)

SPEC YEAR: 01

DESCRIPTION: SR 323 @ GROVE CREEK NEW ALIGNMENT

**ITEMS FOR JOB 0007157-ALT 1**

**0010 - ROADWAY ITEMS**

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0005	150-1000	1.000	LS	\$10,000.00000	TRAFFIC CONTROL - CSBRG-0007-00(157)	\$10,000.00
0010	153-1300	1.000	EA	\$77,815.22833	FIELD ENGINEERS OFFICE TP 3	\$77,815.23
0015	210-0100	1.000	LS	\$200,000.00000	GRADING COMPLETE - CSBRG-0007-00(157)	\$200,000.00
0020	310-1101	2424.000	TN	\$19.76621	GR AGGR BASE CRS, INCL MATL	\$47,913.29
0025	402-3121	889.000	TN	\$67.21184	RECYL AC 25MM SP,GP1/2,BM&HL	\$59,751.33
0030	402-3130	480.000	TN	\$70.33394	RECYL AC 12.5MM SP,GP2,BM&HL	\$33,760.29
0035	402-3190	640.000	TN	\$68.65117	RECYL AC 19 MM SP,GP 1 OR 2 ,INC BM&HL	\$43,936.75
0040	413-1000	647.000	GL	\$2.45648	BITUM TACK COAT	\$1,589.34
0049	433-1000	262.000	SY	\$132.07449	REINF CONC APPROACH SLAB	\$34,603.52
0050	620-0100	168.000	LF	\$28.71810	TEMP BARRIER, METHOD NO. 1	\$4,824.64
0055	632-0003	2.000	EA	\$11,244.11111	CHANGEABLE MESS SIGN,PORT,TP 3	\$22,488.22
0160	641-1100	100.000	LF	\$69.36654	GUARDRAIL, TP T	\$6,936.65
0060	641-1200	450.000	LF	\$18.87409	GUARDRAIL, TP W	\$8,493.34
0150	641-5001	2.000	EA	\$667.68651	GUARDRAIL ANCHORAGE, TP 1	\$1,335.37
0065	641-5012	2.000	EA	\$1,925.34426	GUARDRAIL ANCHORAGE, TP 12	\$3,850.69
<b>SUBTOTAL FOR ROADWAY ITEMS:</b>						<b>\$557,298.66</b>

**0020 - EROSION CONTROL ITEMS**

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0070	163-0300	2.000	EA	\$1,510.09036	CONSTRUCTION EXIT	\$3,020.18
0075	165-0030	2600.000	LF	\$0.94026	MAINT OF TEMP SILT FENCE, TP C	\$2,444.68
0080	165-0101	2.000	EA	\$680.06893	MAINT OF CONST EXIT	\$1,360.14
0085	171-0030	5200.000	LF	\$3.47488	TEMPORARY SILT FENCE, TYPE C	\$18,069.38
0090	716-2000	1200.000	SY	\$1.04799	EROSION CONTROL MATS, SLOPES	\$1,257.59
<b>SUBTOTAL FOR EROSION CONTROL ITEMS:</b>						<b>\$26,151.97</b>

**0030 - SIGNING AND MARKING ITEMS**

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0095	636-1020	22.000	SF	\$15.79168	HWY SGN,TP1MAT,REFL SH TP3	\$347.42
0100	636-1033	56.000	SF	\$20.92791	HWY SIGNS, TP1MAT,REFL SH TP 9	\$1,171.96
0105	653-1501	4800.000	LF	\$0.41390	THERMO SOLID TRAF ST 5 IN, WHI	\$1,986.72
0110	653-1502	4800.000	LF	\$0.38552	THERMO SOLID TRAF ST, 5 IN YEL	\$1,850.50
0115	657-1085	420.000	LF	\$5.65089	PRF PL SD PVT MKG,8",B/W,TP PB	\$2,373.37
0120	657-6085	420.000	LF	\$6.01436	PRF PL SD PVMT MKG,8",B/Y,TPPB	\$2,526.03
<b>SUBTOTAL FOR SIGNING AND MARKING ITEMS:</b>						<b>\$10,256.00</b>

**0040 - BRIDGE ITEMS**

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0125	540-1102	1.000	LS	\$86,841.96000	REM OF EX BR, BR NO - 011-0022-0	\$86,841.96
0130	543-9000	1.000	LS	\$502,920.00000	CONSTR OF BRIDGE COMPLETE - CSBRG-0007-00(157)	\$502,920.00
<b>SUBTOTAL FOR BRIDGE ITEMS :</b>						<b>\$589,761.96</b>

**0050 - DRAINAGE ITEMS**

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0140	207-0203	6.000	CY	\$64.37041	FOUND BK FILL MATL, TP II	\$386.22
0145	500-3101	20.000	CY	\$624.84407	CLASS A CONCRETE	\$12,496.88
0135	511-1000	1367.000	LB	\$1.05200	BAR REINF STEEL	\$1,438.08
<b>SUBTOTAL FOR DRAINAGE ITEMS:</b>						<b>\$14,321.18</b>

# DETAILED COST ESTIMATE



**Job: 0007157-ALT 1**

**TOTALS FOR JOB 0007157-ALT 1**

<b>ITEMS COST:</b>	<b>\$1,197,789.77</b>
<b>COST GROUP COST:</b>	<b>\$0.00</b>
<b>ESTIMATED COST:</b>	<b>\$1,197,789.77</b>
<b>CONTINGENCY PERCENT:</b>	<b>0.00</b>
<b>ENGINEERING AND INSPECTION:</b>	<b>0.05</b>
<b>ESTIMATED COST WITH CONTINGENCY AND E&amp;I:</b>	<b>\$1,257,679.26</b>

**PROJ. NO.:** CSBRG-0007-00(157)

**P.I. NO.** 0007157

**DATE:** 11/8/2012

<b>Base Construction Cost</b>		\$	1,197,789.77
E & I	5%	\$	59,889.49
Construction Contingency		\$	-
<b>Subtotal Construction Cost</b>		\$	1,257,679.26
Liquid AC Adjustment (50 % cap)		\$	35,849.54
<b>Total Construction Cost</b>		\$	1,293,528.80

PROJ. NO.

CSBRG-0007-00(157)

CALL NO.

P.I. NO.

0007157

DATE

11/8/2012

INDEX (TYPE)

REG. UNLEADED

DATE	INDEX
Nov-12	\$ 3.337

DIESEL

\$ 3.961
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LIQUID AC

\$ 569.00
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Link to Fuel and AC Index:

<http://www.dot.ga.gov/doingbusiness/Materials/Pages/asphaltcementindex.aspx>

LIQUID AC ADJUSTMENTS

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

Asphalt

Price Adjustment (PA)

34293.63 \$ 34,293.63

Monthly Asphalt Cement Price month placed (APM)

Max. Cap 60% \$ 910.40

Monthly Asphalt Cement Price month project let (APL)

\$ 569.00

Total Monthly Tonnage of asphalt cement (TMT)

100.45

ASPHALT	Tons	%AC	AC ton
Leveling		5.0%	0
12.5 OGFC		5.0%	0
12.5 mm	480	5.0%	24
9.5 mm SP		5.0%	0
25 mm SP	889	5.0%	44.45
19 mm SP	640	5.0%	32
	<b>2009</b>		<b>100.45</b>

BITUMINOUS TACK COAT

Price Adjustment (PA)

\$ 948.73 \$ 948.73

Monthly Asphalt Cement Price month placed (APM)

Max. Cap 60% \$ 910.40

Monthly Asphalt Cement Price month project let (APL)

\$ 569.00

Total Monthly Tonnage of asphalt cement (TMT)

2.778930297

Bitum Tack

Gals	gals/ton	tons
647	232.8234	2.7789303

PROJ. NO.

CSBRG-0007-00(157)

CALL NO.

P.I. NO.

0007157

DATE

11/8/2012

**BITUMINOUS TACK COAT (surface treatment)**

Price Adjustment (PA)

**607.1851541**

\$

**607.19**

Monthly Asphalt Cement Price month placed (APM)

Max. Cap

60%

\$ 910.40

Monthly Asphalt Cement Price month project let (APL)

\$ 569.00

Total Monthly Tonnage of asphalt cement (TMT)

1.77851539

Bitum Tack	SY	Gals/SY	Gals	gals/ton	tons
Single Surf. Trmt.	647	0.20	129.4	232.8234	0.555786059
Double Surf.Trmt.	647	0.44	284.68	232.8234	1.22272933
Triple Surf. Trmt		0.71	0	232.8234	0
					1.77851539

**TOTAL LIQUID AC ADJUSTMENT**

\$

**35,849.54**

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

**FILE** CSBRG-0007-00(157) Banks Co. **OFFICE** Gainesville  
P.I. No. 0007157  
SR 323 @ Grove Creek **DATE** May 21, 2012

**FROM**  Allen Ferguson  
District Utilities Engineer

**TO** Suzanne Dunn, Project Manager

**SUBJECT** PRELIMINARY UTILITY COST ESTIMATE

As requested by your office, we are furnishing you with a Preliminary Utility Cost Estimate for the subject project.

<b>FACILITY OWNER</b>	<b>NON-REIMBURSABLE</b>	<b>REIMBURSABLE</b>
Banks County Water	\$97,500.00	\$0.00
Windstream Communications	\$67,500.00	\$0.00
<b>Totals</b>	<b>\$165,000.00</b>	<b>\$0.00</b>

If you have any questions, please contact Allen Ferguson at 770-532-5510.

RAF

C: Jeff Baker, State Utilities Engineer  
Angie Robinson, Office of Financial Management  
Rob Mabry, Area Engineer  
File

GEORGIA DEPARTMENT OF TRANSPORTATION  
PRELIMINARY ROW COST ESTIMATE SUMMARY

Date: 6/13/2012 Project: Bridge Replacement  
 Revised: 8/13/2012 County: Banks County  
 PI: 0007157

Description: Bridge Replacement  
 Project Termini: Bridge Replacement

Existing ROW: Varies  
 Required ROW: Varies  
 Parcels: 3

Land and Improvements \$26,175.00

*Proximity Damage \$0.00*  
*Consequential Damage \$0.00*  
*Cost to Cures \$0.00*  
*Trade Fixtures \$0.00*  
*Improvements \$10,000.00*

Valuation Services \$3,000.00

Legal Services \$39,525.00

Relocation \$6,000.00

Demolition \$0.00

Administrative \$28,500.00

TOTAL ESTIMATED COSTS \$103,200.00

**TOTAL ESTIMATED COSTS (ROUNDED) \$104,000.00**

Preparation Credits	Hours	Signature

Prepared By: Lashone Alexander CG#: 286999 08/13/2012  
 Approved By: Lashone Alexander CG#: 286999 08/13/2012

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

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

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INTERDEPARTMENT CORRESPONDENCE

**FILE** P.I. No. 007157 **OFFICE** Environmental Services

**DATE** September 5, 2012

**FROM**  Glenn Bowman, P.E., State Environmental Administrator

**TO** Lakeshia Osborn, Design Engineer II

**SUBJECT** Preliminary Mitigation Cost Estimate

As requested by your office, we are furnishing you with a preliminary cost estimate for the subject project. The project is located on SR 323 approximately 6.5 miles west of Homer in Banks County, Georgia. The project will replace the existing bridge over Grove Creek. After reviewing the NWI mapping and based on the information provided, wetlands will be impacted and mitigation will be required. The estimated cost for mitigation is \$100,000.

**DISCLAIMER: This information is based solely on a desktop review of the information available. Only after a field reconnaissance, can a more detailed and accurate cost be estimated.**

Thank you for your cooperation and expeditious handling of this matter. If you have any questions or need additional information, please contact Lisa Westberry (404) 631-1772 of our office.

GB/HDC/lmw

cc: Suzanne Dunn, Project Manager  
General File

**NO BUILD ADT = BUILD ADT**  
**Department of Transportation**  
**State of Georgia**

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INTERDEPARTMENT CORRESPONDENCE

**FILE** CSBRG-0007-00(157), Banks County                      **OFFICE** Planning  
          P.I. # 0007157  
**DATE** May 23, 2012

**FROM** Cindy VanDyke, State Transportation Planning Administrator

**TO** Bobby Hilliard, P.E., State Program Delivery Engineer  
**Attention:** Suzanne Dunn

**SUBJECT** Traffic Assignment for SR 323 @ Grove Creek 6.5 Miles West of Homer.

We are furnishing estimated Traffic Assignment for the above project as follows:

**TC # 0163**  
2011 ADT = 1000  
2017 ADT = 1125  
2037 ADT = 1525  
2011 DHV = 90  
2017 DHV = 110  
2037 DHV = 150  
          K = 9%  
          D = 60%  
          T. = 11%  
          S.U. T. = 7%  
          COMB. T. = 4%  
24 HOUR T. = 10%  
          S.U. = 7%  
          COMB. = 3%

If you have any questions concerning this information please contact Abby Ebodaghe at (404) 631-1923.

## Accident History Report

PI 0007157

Banks County

Year	County	Rt Type	Route Num	Low Milelog	High Milelog	ADT	Distance	Vehicle Miles	No Crashes
2004	Banks	1	032300	0.50	0.90	2,770	0.40	1,108	0
2005	Banks	1	032300	0.50	0.90	1,170	0.40	468	0
2006	Banks	1	032300	0.50	0.90	1,150	0.40	460	0
2007	Banks	1	032300	0.50	0.90	1,130	0.40	452	0
2008	Banks	1	032300	0.50	0.90	1,130	0.40	452	0
2009	Banks	1	032300	0.50	0.90	1,096	0.40	438	0

# Bridge Inventory Data Listing



Parameters: Bridge Serial Num

Structure ID:011-0022-0		Banks		SUFF. RATING: 55.99	
Location & Geography				Signs & Attachments	
<b>Structure ID:</b>	011-0022-0	*104 Highway System:	0	225 Expansion Joint Type:	02
200 Bridge Information:	06	*26 Functional Classification:	07	242 Deck Drains:	1
*6A Feature Int:	GROVE CREEK	*204 Federal Route Type:	S No: 00993	243 Parapet Location:	0
*6B Critical Bridge:	0	105 Federal Lands Highway:	0	Height:	0
*7A Route No Carried:	SR00323	*110 Truck Route:	0	Width:	0
*7B Facility Carried:	SR 323	2006 School Bus Route:	1	238 Curb Height:	1
9 Location:	6.5 MI W OF HOMER	217 Benchmark Elevation:	0000.00	Curb Material:	1
2 Dot District:	1	218 Datum:	0	239 Handrail:	11
207 Year Photo:	2011	*19 Bypass Length:	07	*240 Medium Barrier Rail:	0
*91 Inspection Frequency:	24 Date: 09/16/2011	*20 Toll:	3	241 Bridge Median Height:	0
92A Fract Crit Insp Freq:	0 Date: 02/01/1901	*21 Maintanance:	01	* Bridge Median Width:	0
92B Underwater Insp Freq:	0 Date: 02/01/1901	*22 Owner:	01	230 Guardrail Loc. Dir. Rear:	3
92C Other Spc. Insp Freq:	0 Date: 02/01/1901	*31 Design Load:	2	Fwr:	3
* 4 Place Code:	00000	37 Historical Significance:	5	Oppo. Dir. Rear:	0
*5 Inventory Route(O/U):	1	205 Congressional District:	10	Oppo. Fwr:	0
Type:	3	27 Year Constructed:	1952	244 Aproach Slab:	0
Designation:	1	106 Year Reconstructed:	0000	224 Retaining Wall:	0
Number:	00323	33 Bridge Medium:	0	233Posted Speed Limit:	55
Direction:	0	34 Skew:	00	236 Warning Sign:	1.00
*16 Latitude:	34 19.7343 HMMS Prefix:SR	35 Structure Flared:	0	234 Delineator:	1.00
*17 Longitude:	83 -36.7148 HMMS Suffix:00 MP:2.06	38 Navigation Control:	0	235 Hazzard Boards:	1
98 Border Bridge:	000%Shared:00	213 Special Steel Design:	0	237 Utilities Gas:	00
99 ID Number:	0000000000000000	267 Type of Paint:	0	Water:	00
*100 STRAHNET:	0	*42 Type of Service On:	1	Electric:	00
12 Base Highway Network:	1	Type of Service Under:	5	Telephone:	00
13A LRS Inventory Route:	111032300	214 Movable Bridge:	0	Sewer:	00
13B Sub Inventory Route:	0	203 Type Bridge:	D	247 Lighting Street:	0
101 parallel Structure:	N	259 Pile Encasement:	3	Navigation:	0
*102 Direction of Traffic:	2	*43 Structure Type Main:	1 04	Aerial:	0
*264 Road Inventory Mile Post:	002.07	45 No.Spans Main:	005	*248 County Continuity No.:	00
*208 Inspection Area:	1 Initials: EFP	44 Structure Type Appr:	0 00		
Engineer's Initials:	eep	46 No Spans Appr:	0000		
* Location ID No:	011-00323D-002.06N	226 Bridge Curve Horz	0 Vert: 0		
		111 pier Protection:	0		
		107 Deck Structure Type:	1		
		108 Wearing Structure Type:	6		
		Membrane Type:	0		
		Deck Protection:	8		

# Bridge Inventory Data Listing



Parameters: Bridge Serial Num

**Structure ID:011-0022-0**

Programming Data		Measurements:				
201 Project No:	S-0993 (1)	*29ADT	000970	Year:2010	65 Inventory Rating Method:	1
202 Plans Available:	4	109%Trucks:	0		63 Operating Rating Method:	1
249 Prop Proj No:	BRG-0007-00(157)	* 28 Lanes On:	02	Under:00	66 Inventory Type:	2 Rating: 17
250 Approval Status:	0000	210 No. Tracks On:	00	Under:00	64 Operating Type:	2 Rating: 17
251 PI Number:	0007157	* 48 Max. Span Length	0030		231Calculated Loads:	
252 Contract Date:	02/01/1901	* 49 Structure Length:	150		H-Modified:	21 1
260 Seismic No:	00000	51 Br. Rwdy. Width	23.70		HS-Modified:	30 0
75 Type Work:	34 1	52 Deck Width:	29.70		Type 3:	25 1
94 Bridge Imp. Cost:	\$130	* 47 Tot. Horiz. Cl:	24		Type 3s2:	40 1
95 Roadway Imp. Cost:	46	50 Curb / Sidewalk Width	2.00 / 2.00		Timber:	37 1
96 Total Imp Cost:	243	32 Approach Rdwy. Width	022		Piggyback:	40 0
76 Imp Length:	000361	*229 Shoulder Width:			261 H Inventory Rating:	12
97 Imp Year:	0000	Rear Lt:	6.00	Type:8 Rt:3.00	262 H Operating Rating	21
114Furure ADT:	001455	Fwd. Lt:	4.00	Type:8 Rt:5.50	67 Structural Evaluation:	4
		Permanent Width:			58 Deck Condition:	6
		Rear:	22.50	Type:8	59 Superstructure Condition:	6
			21.60	Type:2	* 227 Collision Damage:	0
		Intersaction Rear:	0	Fwd: 0	60A Substructure Condition:	6
		36Safety Features Br. Rail:	2		60B Scour Condition:	6
		Transition:	2		60C Underwater Condition	N
		App. G. Rail:	1		71 Waterway Adequacy:	9
		App. Rail End:	1		61 Channel Protection Cond.:	6
		53 Minimum Cl. Over:	99' 99 "		68 Deck Geometry:	4
		Under:			69 UnderClr. Horz/Vert:	N
		*228 Minimum Vertical Cl			72 Appr. Alignment:	6
		Act. Odm Dir.:	99' 99"		62 Culvert:	N
		Oppo. Dir:	99' 99"		<b>Posting Data</b>	
		Posted Odm. Dir:	00' 00"		70 Bridge Posting Required	4
		Oppo. Dir:	00' 00"		41 Struct Open, Posted, CL:	P
		55 Lateral Undercl. Rt:	N 0 0		* 103 Temporary Structure:	0
		56 Lateral Undercl. Lt:	0.00		232 Posted Loads	
		*10 Max Min Vert Cl:	99' 99" Dir:0		H-Modified:	21
		39 Nav Vert Cl:	000 Horiz:0000		HS-Modified:	00
		116 Nav Vert Cl Closed:	000		Type 3:	25
		245 Deck Thickness Main	6.00		Type 3s2:	40
		Deck Thick Approach:	0.00		Timber:	37
		246 Overlay Thickness:	4.00		Piggyback	00
		212 Year Last Painted:	Sup:0000Sub:0000		253 Notification Date:	02/01/1901
					258 Fed Notify Date:	2/1/1901 12:00:00AM

# Meeting Minutes – Rev 1

**BY:** Suzanne Dunn  
**DATE:** July 26, 2012  
**SUBJECT:** Draft Concept Report Review PI#0007157, Banks County

## ATTENDEES:

Suzanne Dunn	GDOT Program Delivery	Aaron Caldwell	Mulkey- Ecologist
Chris Rudd	GDOT Roadway Design	Heather Perrin	Mulkey- NEPA Lead
Lakeshia Osborn	GDOT Roadway Design	Erin Decker	Banks County
Courtney Lovelace	GDOT Rdway Design	Robin Thomas	Banks County
Kevin York	GDOT D1 Right of Way	<b>Conference Call:</b>	
Lisa Deaton	GDOT D1 Environmental	Ben Rabun	GDOT Bridge Design

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This meeting is being held to review the Draft Concept Report for the Bridge replacement project located on SR 323 @ Grove Creek 6.5 miles west of Homer in Banks County.

- Chris Rudd presented the Draft Concept Report, reviewing the Project Justification Statement and the Description of the Proposed project.
- There is a historic property located Northwest of the actual bridge, approximately 150 feet back from the current road location, but not directly next to the proposed bridge. The structure has been identified as a hunting cabin.
- There is a water line located on the East side of the proposed bridge.
- Roadway design prefers the option of replacing the existing bridge on a parallel alignment just northwest of the existing alignment, keeping traffic on the existing bridge until the new bridge has been completed, then removing the old bridge.
- If the bridge were to be replaced on the existing alignment, with an off-site detour, the detour would be approximately 4 miles long.
- BRabun asked CRudd if an option of building a temporary bridge to the northwest of the existing structure to be used as an on-site detour while the existing bridge was removed and replaced on the same alignment was considered. BRabun stated that less right-of-way would be required and less height for the temporary bridge would be required as it would only be required to meet the 10 year storm requirements, which would lower the cost of the temporary bridge.

- CRudd stated that Roadway Design had investigated the option suggested by BRabun, however they decided early on that the cost for the temporary structure found in GDOT's database was extremely expensive, so the option was not pursued.
- BRabun stated that the price of a temporary bridge should be less expensive, as contractors have temporary structures pre-made and are able to re-use them on multiple sites. BRabun requested that CRudd investigate the option further and include documentation of the option in the Final Concept Report.
- BRabun stated that if the current preferred option becomes the final recommendation, then the geometry currently shown is acceptable.
- SCaldwell stated that there is a large wetland located to the west of the existing site and asked if the tie-in could be shorter to avoid the wetland.
- HPerrin stated that this project may require an individual permit which would in-turn require a PAR. Mulkey will continue investigating to determine exactly what is required.
- HPerrin explained that the overall acreage of impact is what determines if an individual permit is required. The threshold is one acre. Mulkey will forward their latest aerial photo for GDOT to use to try to avoid the wetlands.
- The utilities group was only represented by Banks County, Windstream Communications and GDOT utilities group were not present, however it was noted that there is water service to a home that is located just northwest of the project site.
- Mulkey also pointed out that there is a steep driveway located southwest of the existing bridge that provides access to agricultural land. This drive will most likely need to be relocated.
- CRudd reminded Mulkey that the cost of Mitigation will be required for the Final Concept Report.
- CRudd will also contact the GDOT Construction department for clarifications on crane locations that will be required during construction.

Please review these meeting minutes and advise of any inaccuracies or additions that you require to be documented. Please respond by Friday, August 17<sup>th</sup>, 2012 or it will be assumed the minutes are accurate as distributed.

# Meeting Minutes- Rev 1

**BY:** Suzanne Dunn  
**DATE:** November 21, 2011  
**SUBJECT:** Scoping Meeting for PI#0007156, 0007157 and 0007158, Banks County

## ATTENDEES:

Suzanne Dunn	Program Delivery	District One By Video:	
Russell McMurry	Engineering	Kim Coley	D1- Planning / Env. Services
Ken Thompson	State Location Bureau	Lisa Deaton	D1- Environmental Services
Jeff Fletcher	State Location Bureau	Robert Mahoney	D1- Preconstruction
Jan Hilliard	Roadway Design		
Tori Brinkley	Roadway Design		
Teresa Lannon	Roadway Design		
Albert Welch	Roadway Design		
Brent Story	Design Policy & Support		
Andy Casey	Roadway Design		
Darrell Richardson	Roadway Design		
Ben Rabun	Bridge Design		

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This meeting was being held to discuss the scoping of three bridges in Banks County, it was agreed to discuss each bridge individually.

## Bridge PI# 0007156:

- It was previously decided that Design will be performed in house. This bridge is assigned to Jan Hilliard's group.
- Design showed two potential detour options, one approximately 14 miles heading North and one approximately 13 miles heading south. Neither include dirt roads.
- The 2011 ADT is 1450.
- The existing road and bridge alignment is very straight, so it would be preferred not to build the replacement bridge offset from the existing as this would cause the new alignment to have a kink in it.
- Design will look at the impact of a detour on school buses and emergency vehicles.
- Survey stated that the project would require the standard bridge survey of 1000 feet each direction from the end of the existing bridge and 500 feet up and down stream.
- There is also a stream parallel to the NW side which will have to be considered.
- The current ROW budget is \$23,000, if an onsite temporary bridge is built the ROW budget will need to increase.
- District stated that parcels close to the bridge may have driveway access issues.
- Environmental Services plans to have the work completed by Task Order.
- Environmental stated that Ecology was probably their highest risk component.

- A public meeting would need to be held if a detour is used, otherwise no PIOH would be required.
- It appears from photographs and the Bridge Inventory Data Listing sheet that there are no utilities attached to the bridge. This will be confirmed with site visit.
- It was agreed that if a long detour is required, that it would be best to try to schedule the bridge closure to coincide with the school summer holiday as much as possible to minimize the impact on the school buses.

**Bridge PI# 0007157:**

- It was previously decided that Design will be performed in house. This bridge is assigned to Fletcher Miller's group.
- The design group was not represented at this meeting.
- Ben Rabun discussed the current condition of the bridge and the fact that there is no cost effective way to renovate a bridge of this type.
- The 2010 ADT is 1000.
- This bridge is located on a large sweeping curve, therefore a parallel alignment may be appropriate for this bridge. (To the west)
- No potential detour routes were discussed.
- An offsite detour will be investigated.
- There is a landfill located near this bridge, so it has truck traffic.
- Environmental Services plans to have the work completed by Task Order.

**Bridge PI# 0007158:**

- It was previously decided that Design will be performed in house. This bridge is assigned to Albert Welch's group.
- Ben Rabun discussed the current condition of the bridge and the fact that this bridge has a concrete T-Beam design means there is no cost effective way to renovate the bridge.
- The 2010 ADT is 1500.
- No potential detour routes were discussed.
- An offsite detour will be investigated, although the area appears very rural and has the potential for limited routes available.
- This bridge may require a change in the curve, which would then require a larger survey area, more design work and a larger ROW budget.
- It appears from photographs that there are no utilities attached to this bridge. This will be confirmed with a site visit.
- From the photographs it appears as if there is more potential for environmental issues on this project than the other two.
- This bridge may be impacted by hydraulic issues and may need to be longer than the other two.

**All Three Bridges:**

- The current baseline schedule template is yet accurate for dates. The schedule start will depend on Design start availability.
- Survey asked if there was a priority as all three surveys will be completed in sequence and they need to know if one of the three needs to be completed first. They gave a preliminary estimate of the last survey being completed by October of 2012.
- Ben Rabun stated that structurally, none of the bridges required priority over the others.
- Russell stated that the SME's needed to remember to state their available start time in their man-hour estimates. It is permissible to have a gap in the schedule.
- Russell stated that if the SME's do not have the availability to work within a 2016 Let Date that they should recommend the work be contracted to a consultant.
- The Right of Way on all three projects should each take 8-12 months.
- The PE funds should be approved and available shortly as internal approvals are complete and request has been forwarded to FHWA.
- Suzanne will send the Cost Estimate template to Russell for distribution to the attendees.

# Meeting Minutes –Rev 1

**BY:** Suzanne Dunn  
**DATE:** April 11, 2012  
**SUBJECT:** Environmental Kick-off Meeting for PI#0007156, 0007157 and 0007158,  
Banks County

## ATTENDEES:

Suzanne Dunn	GDOT Program Delivery	District One By Video:	
Jan Hilliard	GDOT Rdway Design- 7156	Kim Coley	GDOT Planning/Env. Services
Tori Brinkley	GDOT Rdway Design- 7156	Lisa Deaton	GDOT Environmental Services
Fletcher Miller	GDOT Rdway Design- 7157		
Albert Welch	GDOT Rdway Design- 7158		
Amos Jenkins	GDOT Rdway Design- 7158		
Ted Cashin	GDOT Bridge Design		
Britt Hennessey	Mulkey		
Aaron Caldwell	Mulkey		
Heather Perrin	Mulkey- 7156, 7157		
Mark Ray	Mulkey- 7158		

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This meeting was being held to introduce the Design and Environmental teams to each other and discuss the basic start-up of the three projects, it was agreed to discuss each bridge individually.

Suzanne Dunn is the GDOT Project Manager for all three projects and Lisa Deaton is the GDOT District Environmentalist for all three projects.

Britt Hennessey is the Mulkey Contract Manager for all three projects and Aaron Caldwell from Mulkey is the overall Project Liaison for all three projects.

## Bridge PI# 0007156:

- The GDOT Roadway Design Team for this bridge is Jan Hilliard and Tori Brinkley, the Mulkey Environmentalist will be Heather Perrin.
- This bridge will be replaced using an on-site detour.
- The temporary on-site detour bridge will most likely be placed on the East side of SR98.
- Design is planning on keeping the same centerline for the new bridge.
- Mulkey can start the Ecology and History surveys now.
- Mulkey will require the site survey with the existing bridge location and approximate temporary bridge location before they can complete the Archeology study.
- There is a farm house north of the bridge on SR98 at Quail Road that may be historical.
- Tori will provide Mulkey with the GDOT Bridge Inventory Sheet.

- Heather asked for clarification on the schedule as the Concept Approval (03000) is shown as occurring before the PIOH (09300), 10/10/12 vs. 11/22/12. Suzanne will confirm that the PIOH Activity label should actually be for a Detour Open House (if an off-site detour is used), and that a PIOH is not required for a bridge replacement. Confirmation; per initial meeting minutes from 11/21/11 meeting, no PIOH will be required, and if no off-site detour, then no detour meeting is required either.

**Bridge PI# 0007157:**

- The GDOT Roadway Designer for this bridge will be Fletcher Miller, the Mulkey Environmentalist will be Heather Perrin.
- This bridge will be replaced using an on-site detour.
- The temporary on-site detour bridge will most likely be located to the Northwest side of SR323, as there is a stream running parallel to the roadway on the Southeast side of SR323.
- Design is planning on keeping the same centerline for the new bridge.
- Mulkey can start the Ecology and History surveys now.
- Mulkey will require the site survey with the existing bridge location and approximate temporary bridge location before they can complete the Archeology study.
- Mulkey stated that the reservoir north of the bridge location is far enough away it should not have any environmental impact.
- The bridge was built in 1952 so Mulkey will investigate whether it has a historical designation.
- The stream located to the Southeast of SR323 (parallel) creates the potential for wetland impacts on the opposite (Northwest) side of SR323 where the temporary on-site bridge is proposed.

**Bridge PI# 0007158:**

- The GDOT Roadway Design T-team for this bridge will be Albert "Butch" Welch and Amos Jenkins, the Mulkey Environmentalist will be Mark Ray.
- This bridge will be replaced using an off-site detour.
- The preliminary detour route using all State Routes would require the detour to be 19 miles long. Due to this length, GDOT will need to investigate whether it is more appropriate to designate a shorter detour route on local roads and go through the process of having these roads designated as Temporary State Routes for the duration of the project.
- Due to the length of the detour it was also noted that the local Volunteer Fire Services must be consulted to ensure they have acceptable alternate routes.
- Roadway Design will attempt to keep the same centerline for the new bridge, however it may not be possible on this project.

- The site survey for this project has extended limits as there is a culvert just north of the stream crossing and there are also high voltage power lines crossing SR63 just north of the bridge as well.
- Mulkey can start the Ecology and History surveys now.
- Mulkey will require the site survey with the existing bridge location and approximate new bridge location before they can complete the Archeology study.
- The aerial photographs for this project show that there are wetlands and flood plains near the bridge location which will need to be considered.
- As this bridge will most likely be more complicated than the other two, Britt asked whether Mulkey has the Public Meeting/Public Involvement scope for this project. District One stated that Mulkey did not.

**All Three Bridges:**

- The official baseline Schedule in Artemis was not yet available for distribution. Suzanne will distribute when it becomes available.
- Mulkey asked who is responsible for the UST scope. District One stated that GDOT District One will complete the UST scope.
- Mulkey stated that they are able to work on all three projects simultaneously.
- Suzanne will confirm the site survey schedule and distribute as soon as possible.

Please review these meeting minutes and advise of any inaccuracies or additions that you require to be documented. Please respond by Friday, April 27<sup>th</sup>, 2012 or it will be assumed the minutes are accurate as distributed.

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
OFFICE OF ROADWAY DESIGN**

**ROADWAY USER COST for  
Bridge Replacement on SR 323 over Grove Creek**

**Banks County**

**PI No. 0007157**

**November 27, 2012**

### Bridge Replacement on State Route 323 over Grove Creek

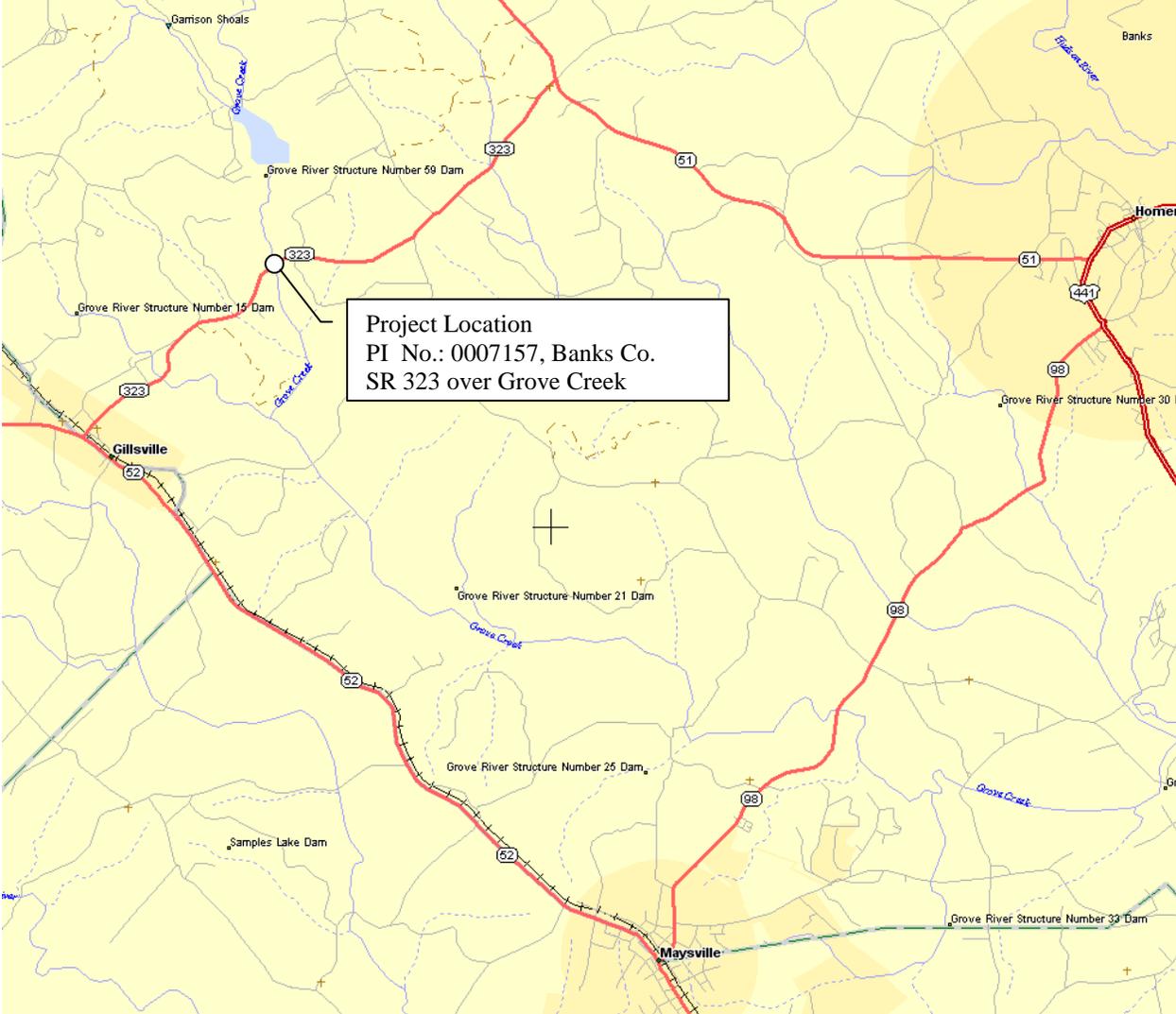


Figure 1: Project Location Map

**General Project Description:**

The proposed project is located along SR 323 at Grove Creek, approximately 6.5 miles west of Homer in Banks County, Georgia. The proposed project will replace the existing 28-ft wide bridge with a new 37.25-ft wide bridge. The new bridge will be shifted parallel (North) of the existing which will minimize environmental impacts. The proposed project length would be approximately 0.40 miles.

**Justification Statement:**

This Bridge (Structure ID 011-0022-0; SR 323 over Grove Creek) was built in 1952. The bridge consists of five spans of Reinforced Concrete Deck Girders on concrete caps and pile bents. The bridge was designed using truck configurations that weigh less than the current legal state truck weights. This bridge is currently posted. The overall condition of this bridge would be classified as satisfactory; with the bottom of the deck, the beams, the caps at bents 2, 3 and 5, and piles at bent 3 exhibiting minor cracking. No rehabilitation work performed on the deck would improve this bridge in so far as the posting of the structure is concerned. Therefore, due to the structural integrity and based on the design, replacement of this bridge is recommended.

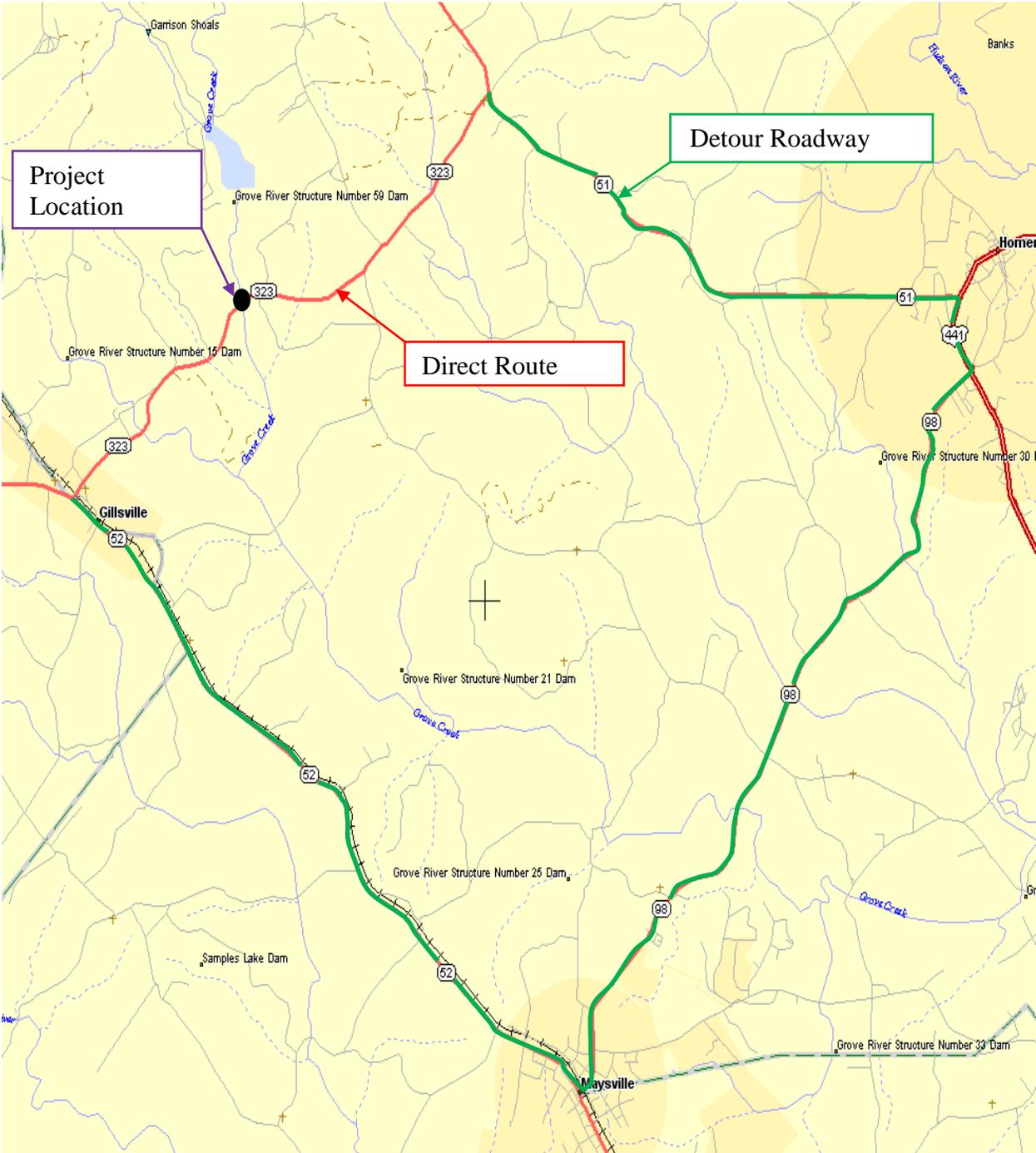


Figure 2: Project Detour Map

**PI 0007157, Banks County  
Bridge Replacement on SR 323 over Grove Creek**

**Summary of calculated Road User Costs (RUC)**

<b>Roadway Closure</b>	<b>Duration</b>	<b>% Traffic that detours</b>	<b>Vehicles affected</b>	<b>Added Time</b>	<b>Adjusted RUC (50% of calculated)</b>	<b>Notes</b>
	hr	%	ea	hr	\$	
<b>Bridge</b>	18 Months	<b>75%</b>	1,000	<b>0.27</b>	<b>548K</b>	



## RUC

## Bridge Replacement on SR 323 over Grove Creek

Reference from another  
cell or sheet

Black

Input  
CalculatedRed  
Blue

Table 3a: Circuity (Detour) Delay

Travel Length without Detour (mile)	Travel Length with Detour (mile)	Added Travel Length (mile)	Travel Time without Detour (hr/veh)	Travel Time with Detour (hr/veh)	Added Time to Travel Detour (hr/veh)
5.06	18.75	13.69	0.09	0.36	0.27

Table 4: Escalation factors

Cost Factors	1970 CPI-U <sup>2</sup>	Current CPI-U <sup>1</sup>	Escalation Factor
Idling & VOC (transportation)	37.5	220	5.87
Time Value (all components)	38.8	231	5.95

<sup>1</sup>From Bureau of Labor Statistics for July 2012 "transportation" and "all components" categories.

<sup>2</sup>As reported in NJ DOT Road User Cost Manual for 1970.

Table 5: Cost Rates

Vehicle Class	1970			Current		
	Time Value Cost Rate <sup>1</sup>	Idling Cost Rate <sup>2</sup>	VOC Cost Rate <sup>2</sup>	Time Value Cost Rate	Idling Cost Rate	VOC Cost Rate
	\$/Veh-hr	\$/Veh-hr	\$/mile	\$/Veh-hr	\$/Veh-hr	\$/mile
Car	3.00	0.1819	0.06	17.86	1.07	0.35
Truck	5.00	0.2092	0.12	29.77	1.23	0.70

<sup>1</sup>From NCHRP Report 133 as indicated in NJ manual

<sup>2</sup>Average of SU and combination truck values from NCHRP as stated in the NJ manual.

## Bridge Replacement on SR 323 over Grove Creek RUC

### Analysis Case - Off-Site Detour

Lakeshia Osborn, 27 November 2012

Cost Component	Vehicle Class	Percent Class	Total Vehicles	Reference from another cell or sheet	Black	Input	Red	
				Added Travel Length	Added Travel Time	Cost Rate	Road User Cost	Total Road User Cost
	mph	%	#	mi/veh	hr/veh	\$/Veh-hr, \$/mi	\$/user	\$/day
Queue Delay (Added time)	Car	84	0		0.00	17.86	0	0
	Truck	16.0	0		0.00	29.77	0	0
Queue Idling VOC (Added cost)	Car	84	0		0.00	1.07	0	0
	Truck	16.0	0		0.00	1.23	0	0
Work Zone Delay (Added Time)	Car	84	0		0.00	17.86	0	0
	Truck	16.0	0		0.00	29.77	0	0
Circuity Delay (Added Time)	Car	84	375		0.27	17.86	4.8	1,523
	Truck	16.0	375		0.27	29.77	8.1	484
Circuity VOC (Added cost)	Car	84	375	13.69		0.35	4.8	1,518
	Truck	16.0	375	13.69		0.70	9.6	578
Total vehicles that travel queue			0	<b>Road User Cost</b>				<b>\$4,000</b>
Total vehicles that travel work zone				<b>Adjusted Road User Cost<sup>3</sup></b>				<b>\$2,000</b>
Total vehicles that travel detour			375	<b>Number of Work Zone Days</b>				<b>548</b>
Percent passenger cars			84	<b>Total Road User Cost</b>				<b>\$1,096,000</b>
Percent Trucks			16	<sup>3</sup> Adjusted down 50% from Road User Cost				

Trucks, % <sup>1</sup>	10
Cars, %	90
75% Traveling Detour ADT, vpd <sup>2</sup>	375

#### Notes:

<sup>1</sup> Corresponds to 24 hour truck percentage in project Traffic Assignments.

<sup>2</sup> Traffic ADT from report provided by State Planning and Programing Engineer. Assumed that 50% of Traffic would use alternate route other than detour.