ORIGINAL TO GENERAL FILES

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

OFFICE OF DESIGN POLICY & SUPPORT
INTERDEPARTMENTAL CORRESPONDENCE

FILE P.I. # 0010411
Hancock County
GDOT District 2 - Tennille
Bridge Replacement
SR16 @ Little Shoulderbone Creek
8.6 miles NW of Sparta

OFFICE Design Policy & Support

DATE July 31, 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
Mike Bolden, State Utilities Engineer
Ken Thompson, Statewide Location Bureau Chief
Andy Casey, State Roadway Design Engineer
Todd Price, Design Engineer
James Smith, District Engineer
Neal O'Brien, District Preconstruction Engineer
Lynn Bean, District Utilities Engineer
George Brewer, Project Manager
BOARD MEMBER - 10th Congressional District

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
PROJECT CONCEPT REPORT

Project Type:	Bridge Replacement	P.I. Number:	0010411
GDOT District:	2	County:	Hancock
Federal Route Number:	None	State Route Number:	16

This project consist of a bridge replacement of on State Route 16 over Little Shoulderbone Creek 8.6 miles Northwest of Sparta in Hancock County.

Submitted for approval:

GDOT Concept/Design Phase Office Head & Office — DATE 6-20-13

EX Office Head *(GDOT Project Manager's Office)* — DATE 6-20-13

GDOT Project Manager — DATE 6/20/13

Recommendation for approval:

* Kathy Zahul /MOA — State Traffic Engineer — DATE 7/2/13

* Glenn Bowman /MOA — State Environmental Administrator *(recommendation required)* — DATE 6/25/13

* Lisa Myers /MOA — Project Review Engineer — DATE 6/24/13

* Lee Upkins /MOA — for State Utilities Engineer — DATE 6/26/13

* Ben Rabun /MOA — State Bridge Design Engineer — DATE 7/12/13

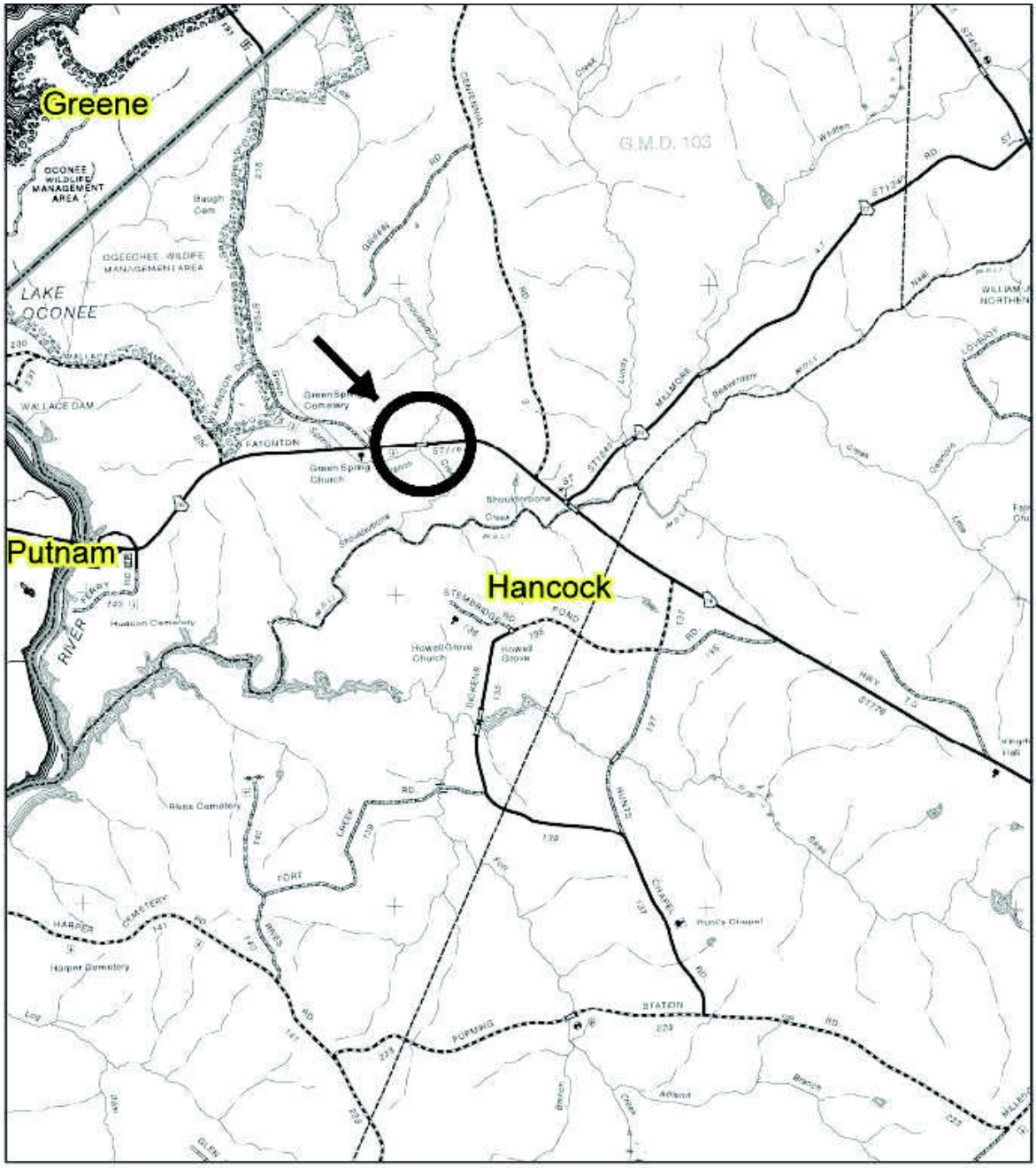
State Transportation Financial Management Administrator — DATE

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

* Cynthia VanDyke /MOA — State Transportation Planning Administrator *(recommendation required)* — DATE 6/21/13

*Recommendation on file – MOA

PROJECT LOCATION



Project Location Map

0 0.250.5 1 Miles

P.I. #0010411
Hancock County
Bridge Replacement
SR 16 at Little Shoulderbone Creek 8.6 Miles NW of Sparta

N

PLANNING & BACKGROUND DATA

Project Justification Statement: This bridge (Structure ID 141-0006-0; SR 16 over Little Shoulderbone Creek) was built in 1959. The bridge consists of three simple reinforced concrete deck girder spans on concrete caps with steel piles. The overall condition of this bridge would be classified as fair to poor. The deck is in poor condition due to advanced deterioration and spalling. Rehabilitation work of the deck would be cost prohibitive due to the design of the RCDG's. The superstructure and substructure elements have minor concrete cracking considered to be classified as fair. Therefore due to the structural integrity particularly in regards to the bridge deck, replacement of this bridge is recommended.

Description of the proposed project: This project consists of the replacement of the structurally deficient bridge over Little Shoulderbone Creek on State Route 16 located 8.6 miles Northwest of Sparta in Hancock County. The length of the project will be 0.34 miles. Traffic will be maintained on an on-site detour during construction with a temporary structure spanning the creek.

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

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

Regional Commission: ☐ N/A ☒ RC – Central Savannah River RC
RC Project ID # N/A

Congressional District(s): 10

Projected Traffic: **ADT**
Current Year (2012): 1200 Open Year (2018): 1350 Design Year (2038): 2000
Traffic Projections Performed by: GDOT Transportation Planning

Functional Classification (Mainline): Rural Major Collector

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

Is this project on a designated Bike Route, Pedestrian Plan, or Transit Network?
CSRA Bicycle and Pedestrian Plan
☐ None ☒ Bike Route ☐ Pedestrian Plan ☐ Transit Network

CONTEXT SENSITIVE SOLUTIONS

Issues of Concern: *N/A*

Context Sensitive Solutions: N/A

DESIGN AND STRUCTURAL DATA

Mainline Design Features:
Roadway Name/Identification: State Route 16

Feature	Existing	Standard*	Proposed
Typical Section			
- Number of Lanes	**2**	**2**	**2**
- Lane Width(s)	**12**	**12**	**12**
- Median Width & Type	**N/A**	**N/A**	**N/A**
- Outside Shoulder Width & Type	**8-ft.**	**8-ft.(6.5-ft paved)**	**8-ft.(6.5-ft paved)**
- 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	**55 MPH**		**55 MPH**
Design Speed	**55 MPH**	**55 MPH**	**55 MPH**
Min Horizontal Curve Radius	**960-ft.**	**960-ft.**	**1060-ft.**
Superelevation Rate	**8%**	**8%**	**8%**
Grade	**6%**	**6%**	**5%**
Access Control	**Permit**	**Permit**	**Permit**
Right-of-Way Width	**100-ft. to 200-ft.**	**100-ft. to 200-ft.**	**100-ft. to 200-ft.**
Maximum Grade – Crossroad	**7%**	**7%**	**7%**
Design Vehicle	**SU**	**SU**	**SU**

*According to current GDOT design policy if applicable

Major Structures:

Structure	Existing	Proposed
141-0006-0 Bridge on SR 16 over Little Shoulderbone Creek	This bridge (Structure ID 141-0006-0; SR 16 over Little Shoulderbone Creek) was built in 1959. The bridge consists of three simple reinforced concrete deck girder spans on concrete caps with steel piles with a total length of 102-ft. The width is 28-ft. consisting of one 12-ft lane in each direction. The current sufficiency rating of this bridge is 54.35	The proposed bridge is estimated to be 230-ft. long x 39-ft 3-in wide. The proposed bridge will have one 12-ft lane in each direction with 6-ft shoulders. The proposed bridge is expected to be at approximately the same elevation it currently is pending the outcome of the hydraulic study.

Major Interchanges/Intersections: N/A

Utility Involvements:

- Telephone: AT&T
- Power: Georgia Power

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

SUE Required: ☐ Yes ☒ No

Railroad Involvement: N/A

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

Warrants met: ☐ None ☒ Bicycle ☐ Pedestrian ☐ Transit

Right-of-Way:
Required Right-of-Way anticipated: ☒ YES ☐ NO ☐ Undetermined
Easements anticipated: ☒ Temporary ☐ Permanent ☐ Utility ☐ Other

Anticipated number of impacted parcels:	4
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 DP ☐ NO
If Yes: Project classified as: ☒ Non-Significant ☐ Significant
TMP Components Anticipated: ☒ TTC ☐ TO ☐ PI

Design Exceptions to FHWA/AASHTO controlling criteria anticipated:

FHWA/AASHTO Controlling Criteria	YES	Appvl Date (if applicable)	NO	Undetermined
1. Design Speed	☐		☒	☐
2. Lane Width	☐		☒	☐
3. Shoulder Width	☐		☒	☐
4. Bridge Width	☐		☒	☐
5. Horizontal Alignment	☐		☒	☐
6. Superelevation	☐		☒	☐
7. Vertical Alignment	☐		☒	☐
8. Grade	☐		☒	☐
9. Stopping Sight Distance	☐		☒	☐
10. Cross Slope	☐		☒	☐
11. Vertical Clearance	☐		☒	☐
12. Lateral Offset to Obstruction	☐		☒	☐

13. Bridge Structural Capacity	☐		☒	☐

Design Variances to GDOT standard criteria anticipated:

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

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

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

Environmental Permits/Variances/Commitments/Coordination anticipated:

Permit/ Variance/ Commitment/ Coordination Anticipated	YES	NO	Remarks
1. U.S. Coast Guard Permit	☐	☒	
2. Forest Service/Corps Land	☐	☒	
3. CWA Section 404 Permit	☒	☐	
4. Tennessee Valley Authority Permit	☐	☒	
5. Buffer Variance	☒	☐	
6. Coastal Zone Management Coordination	☐	☒	
7. NPDES	☒	☐	

8. FEMA	☒	☐	
9. Cemetery Permit	☐	☒	
10. Other Permits	☐	☒	
11. Other Commitments	☐	☒	
12. Other Coordination	☐	☒	

Is a PAR required? ☒ No ☐ Yes ☐ Completed – Date:

NEPA/GEPA: This project will require an individual 404 Permit.

Ecology: A summary of the federal and state threatened and endangered species listed within a three mile radius of the project, their federal status, and suitable habitat requirements is included in the table below.

Scientific Name	**Common Name**	**State Status**	**Federal Status**	**Type**	**Habitat Requirements**
Aimophila aestivalis	Bachman's Sparrow	R	None	Bird	Mature open pinewoods, regenerating clear-cuts (both pine and hardwoods), utility rights-of-way, and old pastures with a dense ground cover of grasses (particularly wiregrass, bluestem, or broomsedge) and forbs, or palmetto scrub. This sparrow is often associated with open, mature pine forests where red-cockaded woodpeckers are found, since this habitat often provides the thick grassy ground cover this sparrow prefers. However, it will be lost from sites well before red-cockaded woodpeckers where burning is not frequent enough since it does not tolerate encroachment by hardwood trees and shrubs as readily as does the red-cockaded woodpecker.
Clemmys guttata	Spotted Turtle	U	None	Reptile	Heavily vegetated, shallow wetlands with standing or slowly flowing water are the typical habitat for the spotted turtle.
Etheostoma parvipinne	Goldstripe Darter	R	None	Fish	Goldstripe darters are generally found in small streams and spring seeps and runs associated with aquatic vegetation, organic debris (such as wood and leaves), or slow-moving riffle habitats.
Fusconaia masoni	Atlantic Pigtoe	E	None	Mollusk	The preferred habitat for this species is coarse sand and gravel at the downstream end of riffles. This species is rarely found in substrates of fine sand and silt or mud.

Haliaeetus leucocephalus	Bald Eagle	T	None	Bird	Juvenile bald eagles and non-nesting adults can be seen throughout Georgia, but known nesting activity is concentrated mostly along the coast and near major rivers, wetlands, and reservoirs in the southern and central parts of the state. Like other members of the "fish eagle" group, bald eagles almost always nest near open water. The coastal area, including the barrier islands, marsh islands, and nearby mainland, has always provided good eagle nesting habitat historically and still supports the greatest population density. However, construction of reservoirs such as Seminole, Walter F. George, Oconee, Allatoona, Carters, Clarks Hill, Nottley and West Point, has increased suitable inland nesting habitat. Bald eagles prefer isolated sites for nesting but are adapting to the presence of human disturbance in some areas. The nest is usually in a large, open-topped pine near open water, often on high ground if available. Occasionally cypress trees are used.
Amphianthus pusillus	Pool Sprite	T	T	Plant	Shallow, flat-bottomed depressions (solution pits, vernal pools) on granite outcrops, with thin, gravelly soils and winter-spring inundation. Pools must be deep enough to hold water for several weeks and must be in full sun.
Eriocaulon koernickianum	Dwarf Hatpins	E	None	Plant	Seepage areas and wet depressions on Piedmont granite flatrocks, often with horned bladderwort. In other states, dwarf hatpins occurs in wet seeps on sandstone outcrops and in pineland bogs.
Isoetes tegetiformans	Mat-forming Quillwort	E	E	Plant	Shallow pools formed by natural erosion on granite outcrops.
Stewartia malacodendron	Silky Camellia	R	None	Plant	Rich ravine and slope forests; often with beech, oak, basswood, and spruce pine. Lower slopes of sandhills above bogs and creek swamps.

History: The Bridge is not historic.

Archeology: None

Air & Noise:

Air: This project will be evaluated for its consistency with state and federal air quality goals, including CO, Ozone, PM 2.5 and MSATS as part of the assessment.

Noise: This project will be evaluated for the type of Noise Study required. When evaluated this project will be found to meet the criteria for a Type III project established in 23 CFR 722. Therefore, the project requires no analysis for highway traffic noise impacts.

Public Involvement: None

Major stakeholders: Traveling public

CONSTRUCTION

Issues potentially affecting constructability/construction schedule: Migratory birds could affect construction schedule of project if awarded during the nesting season and they are found to be under the existing bridge.

Early Completion Incentives recommended for consideration: ☒ No ☐ Yes

PROJECT RESPONSIBILITIES

Project Activities:

Project Activity	Party Responsible for Performing Task(s)
Concept Development	GDOT – District 2
Design	GDOT – District 2
Right-of-Way Acquisition	GDOT – District 2
Utility Relocation	Utility Owners
Letting to Contract	GDOT
Construction Supervision	GDOT – District 2
Providing Material Pits	Contractor
Providing Detours	Contractor
Environmental Studies, Documents, & Permits	GDOT
Environmental Mitigation	GDOT
Construction Inspection & Materials Testing	GDOT

Lighting required: ☒ No ☐ Yes

Initial Concept Meeting: N/A

Concept Meeting: A concept team meeting was held on 04-24-2013. The meeting minutes are attached.

Other projects in the area: None

Other coordination to date: N/A.

Project Cost Estimate and Funding Responsibilities:

	Breakdown of PE	ROW	Utility	CST*	Environmental Mitigation	Total Cost
By Whom		GDOT	GDOT	GDOT	GDOT	
$ Amount		$118,000.00	$0.00	$2,032,834.44	$100,000.00	$2,250,834.44
Date of Estimate		6/7/2013	3/11/2013	6/19/2013	2/11/2013	

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

ALTERNATIVES DISCUSSION

Alternative selection: Preferred Alternate

Preferred Alternative: On-Site Detour – This Alternative would construct an on-site detour approximately 70-ft. South of the existing roadway of State Route 16. Once the detour construction is complete traffic would be shifted to the detour while the existing bridge and approaches are replaced. After the new bridge and approaches are complete traffic would then be shifted back to their original location and the detour would be removed. The length of the project will be 0.34 miles.			
Estimated Property Impacts:	**4**	**Estimated Total Cost:**	**$ 2,250,834.44**
Estimated ROW Cost:	**$118,000.00**	**Estimated CST Time:**	**18 Months**
Rationale: This Alternate was selected as the preferred alternate as is satisfies the need and purpose of this project while minimizing traffic delays. Commuter travel distance and cost will be significantly less than the off –site detour outlined in Alternative 1. For these reasons the cost of constructing and removing an on-site detour as compared to Alternate 1 has been found to be justified. To impose additional cost to the commuters considering the current state of the economy would cause this project to lose local support of this project.			

No-Build Alternative:			
Estimated Property Impacts:	**N/A**	**Estimated Total Cost:**	**N/A**
Estimated ROW Cost:	**N/A**	**Estimated CST Time:**	**N/A**
Rationale: This alternate would not address the need and purpose of this project.			

Alternative 1: Off-Site Detour – This Alternative would close State Route 16 and detour traffic along an off-site detour during construction. The only suitable routes that can accommodate truck traffic are State Route 24 and State Route 22. This route would begin in Eatonton and cause motorist to travel along State Route 24 to State Route 22 in the City of Milledgeville, then take State Route 22 back State Route 16 in the City of Sparta for a total length of 45.33 miles. The length of the project will be 0.34 miles.			
Estimated Property Impacts:	**4**	**Estimated Total Cost:**	**$ 4,403,409.98**
Estimated ROW Cost:	**$118,000.00**	**Estimated CST Time:**	**12 Months**
Roadway User Cost:	**$2,555,000.00**		
Rationale: This would add additional cost to the commuters by increasing their fuel costs with the additional mileage being traveled. This project would not have local support if implemented.			

Comments: This office recommends that the Preferred Alternate of this concept be approved for implementation.

Attachments:

1. Concept Layout
2. Typical sections
3. Detailed Cost Estimates:
    a. Construction including Engineering and Inspection, Fuel & Asphalt Price Adjustment forms
    b. Right-of-Way
    c. Utilities
    d. Environmental Mitigation (EPD, etc)
4. Corridor Traffic Data
5. Bridge inventory
6. Historic Bridge Inventory Report
7. Justification Statement from Bridge Maintenance
8. Minutes of Concept meetings
9. Roadway User Cost

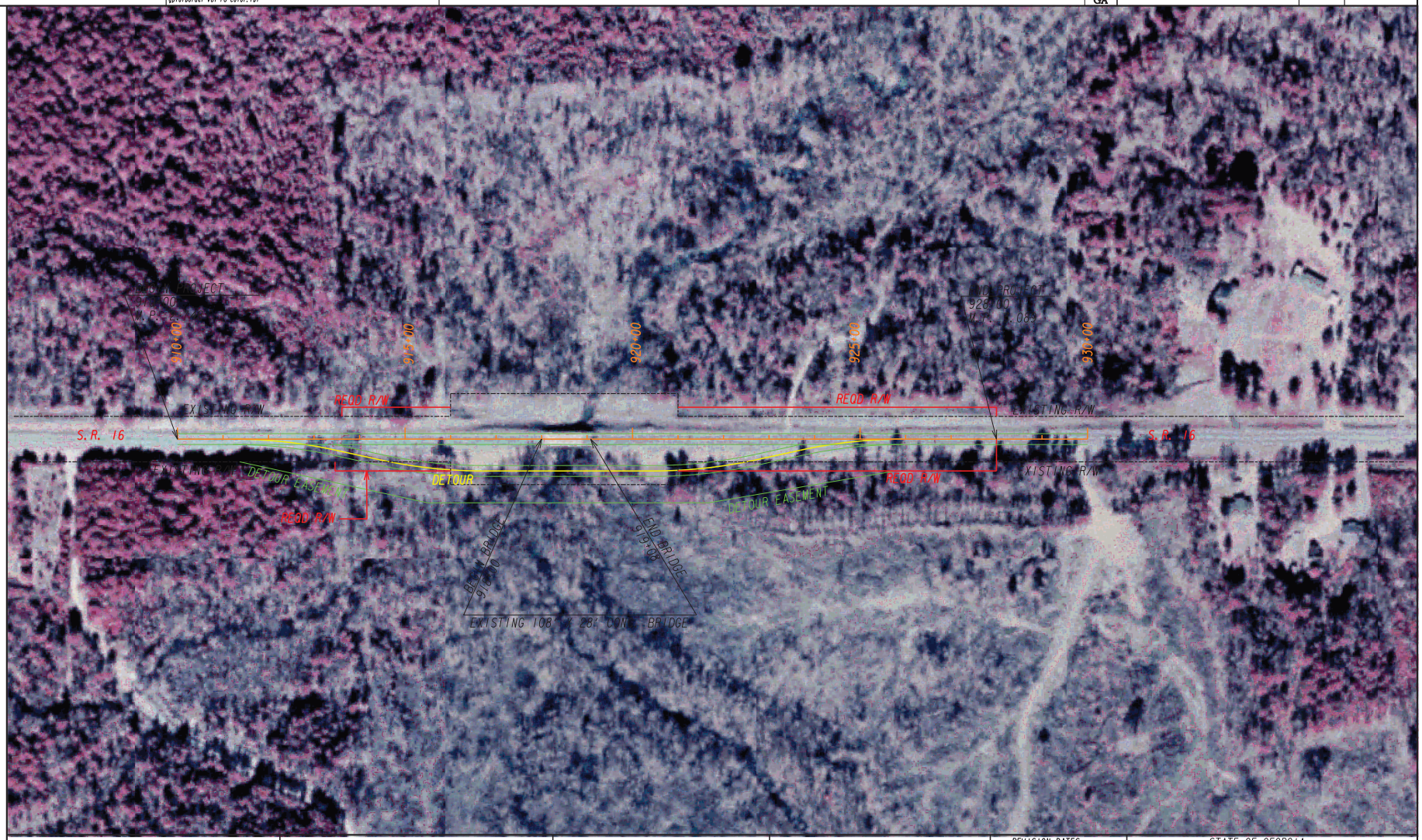
APPROVALS

Concur: K. Joel Carpenter 7/23/2013
Director of Engineering

Approve: Paul R. McMurry 7/29/13
Chief Engineer Date

6/5/2012 12:47:38 PM GPLOT-V8 O:\Hancock\0010411\Construction and RW Plans\InRoads\Concept Files\0010411 Preferred Alternate.dgn
USER:fgrimes gplotborder-V8I-PO-color.tbl

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA			



PROPERTY AND EXISTING R/W LINE	
REQUIRED R/W LINE	
CONSTRUCTION LIMITS	C F
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES	
EASEMENT FOR CONSTR OF SLOPES	
EASEMENT FOR CONSTR OF DRIVES	

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS

GEORGIA
DEPARTMENT OF TRANSPORTATION

SCALE IN FEET
0 100 200 400

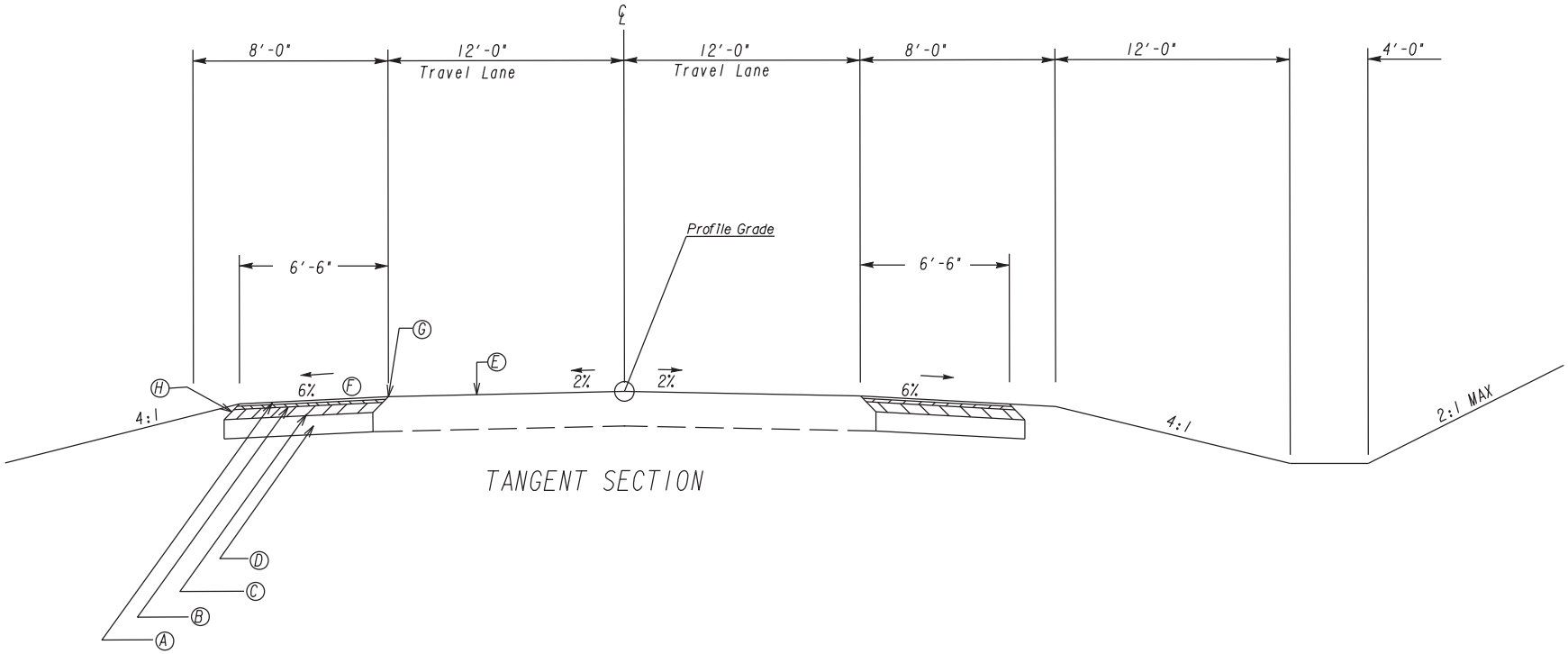
REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: DISTRICT 2 DESIGN

MAINLINE PLAN

DRAWING No.
13-

6/20/2011 GPLN



TANGENT SECTION

REQUIRED PAVEMENT

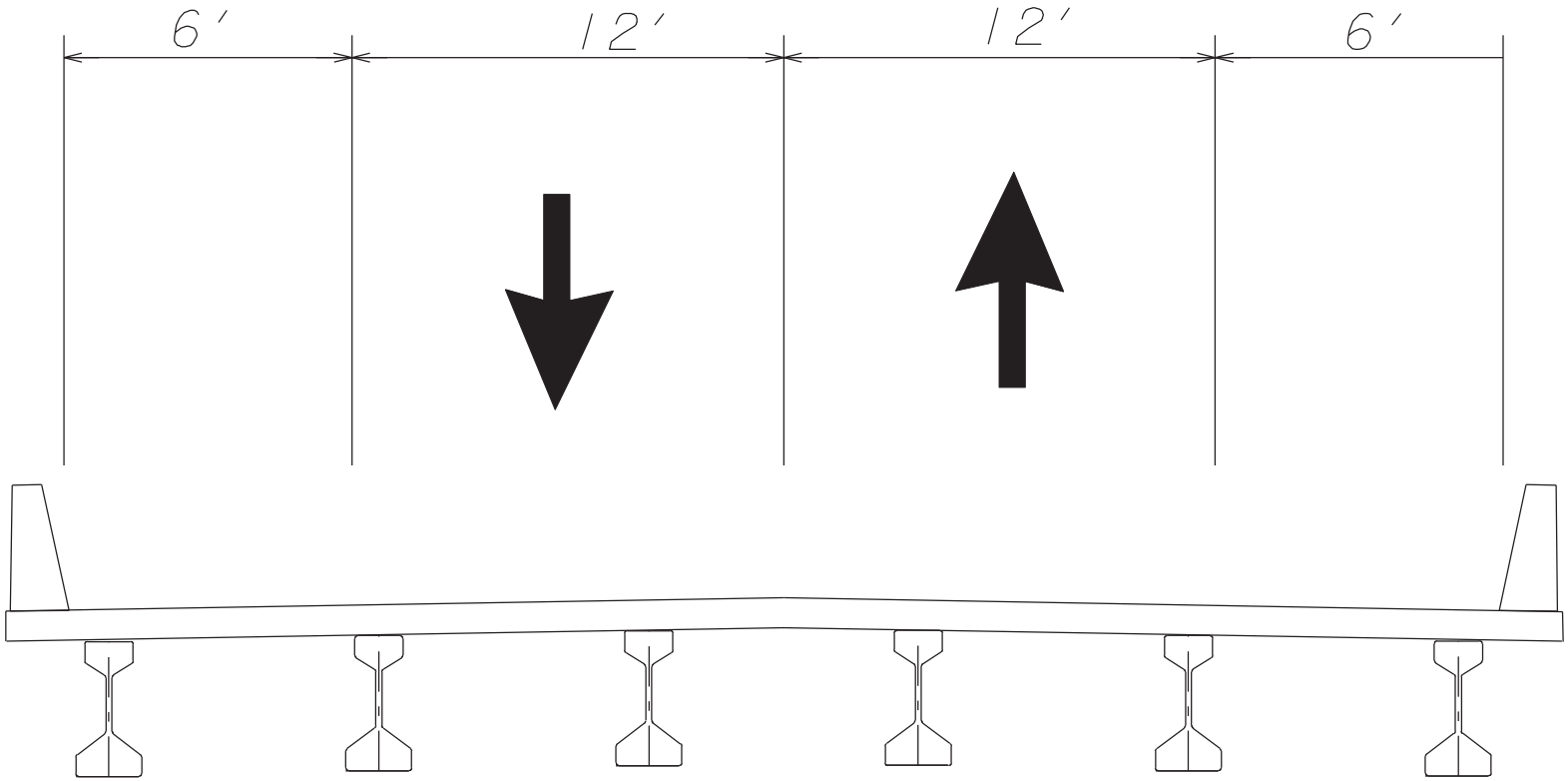
Ⓐ ASPHALTIC CONCRETE 9.5 MM SUPERPAVE, 135 LBS./SQ. YD, TYPE II
Ⓑ ASPHALTIC CONCRETE 19 MM SUPERPAVE, 220 LBS./SQ. YD.
Ⓒ ASPHALTIC CONCRETE 25 MM SUPERPAVE, 440 LBS./SQ. YD.
Ⓓ GRADED AGGREGATE BASE, 8 IN.
Ⓔ ASPHALTIC CONCRETE LEVELING, AS REQ'D
Ⓕ INDENTATION RUMBLE STRIPS - GROUND-IN-PLACE (SKIP)
Ⓖ PVMT REINF FABRIC STRIPS, TP 2, 18 INCH WIDTH
Ⓗ PAVEMENT EDGE TREATMENT(SEE DETAIL P-7)

BRIDGE

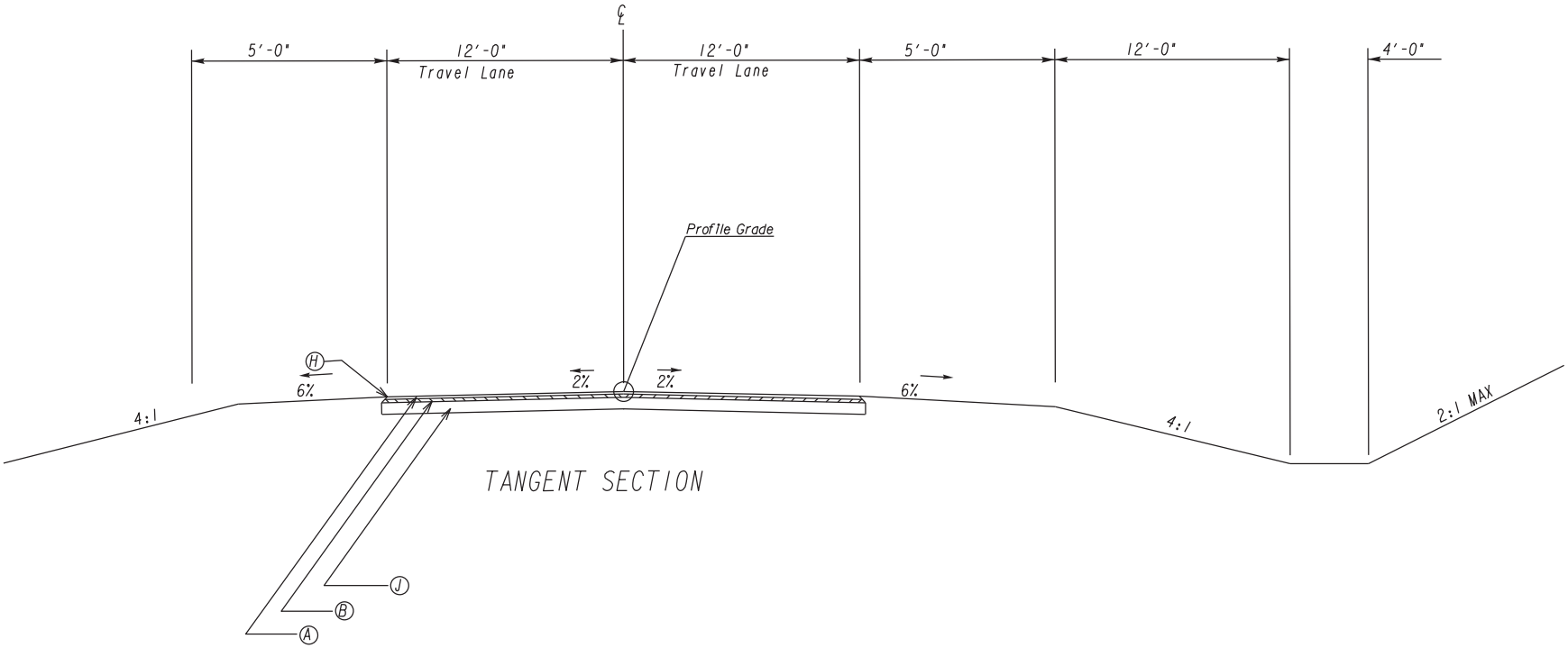
TYPICAL SECTION

PI # 0010411

HANCOCK COUNTY



DETOUR TYPICAL



REQUIRED PAVEMENT

- (A) ASPHALTIC CONCRETE 9.5 MM SUPERPAVE, 135 LBS./SQ. YD, TYPE II
- (B) ASPHALTIC CONCRETE 19 MM SUPERPAVE, 220 LBS./SQ. YD.
- (C) ASPHALTIC CONCRETE 25 MM SUPERPAVE, 440 LBS./SQ. YD.
- (D) GRADED AGGREGATE BASE, 8 IN.
- (E) ASPHALTIC CONCRETE LEVELING, AS REQ'D
- (F) INDENTATION RUMBLE STRIPS - GROUND-IN-PLACE (SKIP)
- (G) PVMT REINF FABRIC STRIPS, TP 2, 18 INCH WIDTH
- (H) PAVEMENT EDGE TREATMENT(SEE DETAIL P-7)
- (J) GRADED AGGREGATE BASE, 6 IN.

NO SUPERELEVATION WILL BE APPLIED TO THE DETOUR

DETAILED COST ESTIMATE

Georgia Department of Transportation

Job: 0010411_FCG

JOB NUMBER *0010411_FCG* **FED/STATE PROJECT NUMBER**

SPEC YEAR: *01*

DESCRIPTION: *SR 16 BRIDGE REPLACMENT OVER LITTLE SHOULDERBONE CREEK*

ITEMS FOR JOB 0010411_FCG

10 - ROADWAY

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0005	150-1000	1.000	LS	$40,000.00000	TRAFFIC CONTROL - P.I. NO. 0010411	$40,000.00
0010	153-1300	1.000	EA	$59,911.09000	FIELD ENGINEERS OFFICE TP 3	$59,911.09
0015	207-0203	50.000	CY	$50.59020	FOUND BKFILL MATL, TP II	$2,529.51
0020	210-0100	1.000	LS	$180,000.00000	GRADING COMPLETE - P.I. NO. 0010411	$180,000.00
0025	310-1101	1940.000	TN	$20.27954	GR AGGR BASE CRS, INCL MATL	$39,342.31
0030	318-3000	25.000	TN	$22.44681	AGGR SURF CRS	$561.17
0035	402-1812	250.000	TN	$84.67342	RECYL AC LEVELING,INC BM&HL	$21,168.36
0040	402-3103	365.000	TN	$75.45250	REC AC 9.5 MM SP,TPII,GP2, INCL BM & H L	$27,540.16
0045	402-3121	980.000	TN	$67.77415	RECYL AC 25MM SP,GP1/2,BM&HL	$66,418.67
0050	402-3190	480.000	TN	$76.29563	RECYL AC 19 MM SP,GP 1 OR 2 ,INC BM&HL	$36,621.90
0055	413-1000	385.000	GL	$3.04398	BITUM TACK COAT	$1,171.93
0065	436-1000	500.000	LF	$7.48442	ASPH CONC CURB - 6 IN	$3,742.21
0070	441-0303	4.000	EA	$1,606.67038	CONC SPILLWAY, TP 3	$6,426.68
0075	446-1100	3140.000	LF	$4.09193	PVMT REF FAB STRIPS, TP2,18 INCH WIDTH	$12,848.66
0080	456-2015	1.000	GLM	$4,650.88200	INDENT. RUMB. STRIPS - GRND-IN-PL (SKIP)	$4,650.88
0095	550-1180	100.000	LF	$37.92023	STM DR PIPE 18",H 1-10	$3,792.02
0100	550-2180	40.000	LF	$29.19021	SIDE DR PIPE 18",H 1-10	$1,167.61
0105	550-3618	2.000	EA	$540.44673	SAFETY END SECTION 18",SD,6:1	$1,080.89
0110	550-4218	4.000	EA	$520.70442	FLARED END SECT 18 IN, ST DR	$2,082.82
0115	634-1200	16.000	EA	$115.38080	RIGHT OF WAY MARKERS	$1,846.09
0120	641-1100	84.000	LF	$65.64684	GUARDRAIL, TP T	$5,514.33
0125	641-1200	400.000	LF	$15.05585	GUARDRAIL, TP W	$6,022.34
0130	641-5001	2.000	EA	$604.27744	GUARDRAIL ANCHORAGE, TP 1	$1,208.55
0135	641-5012	2.000	EA	$1,800.97830	GUARDRAIL ANCHORAGE, TP 12	$3,601.96
0140	643-8200	1000.000	LF	$2.13511	BARRIER FENCE (ORANGE), 4 FT	$2,135.11
					SUBTOTAL FOR ROADWAY:	**$531,385.25**

20 - PERMANENT EROSION CONTROL

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0060	433-1200	284.000	ST	$141.89600	REF CONC APPR SL/T SLOPED EDGE	$40,296.03
0145	603-2181	100.000	SY	$36.91906	STN DUMPED RIP RAP, TP 3, 18"	$3,691.91
0310	603-7000	100.000	SY	$2.97671	PLASTIC FILTER FABRIC	$297.67
0150	700-6910	7.000	AC	$902.63636	PERMANENT GRASSING	$6,318.45
0155	700-7000	21.000	TN	$81.34865	AGRICULTURAL LIME	$1,708.32
0160	700-8000	12.000	TN	$473.81375	FERTILIZER MIXED GRADE	$5,685.77
0165	700-8100	350.000	LB	$1.94256	FERTILIZER NITROGEN CONTENT	$679.90
0170	710-9000	2500.000	SY	$3.49612	PERM SOIL REINFORCING MAT	$8,740.30
0175	716-2000	2500.000	SY	$1.28633	EROSION CONTROL MATS, SLOPES	$3,215.83
					SUBTOTAL FOR PERMANENT EROSION CONTROL:	**$70,636.80**

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DETAILED COST ESTIMATE

Georgia Department of Transportation

Job: 0010411_FCG

30 - TEMPORARY EROSION CONTROL

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0180	163-0232	21.000	AC	$242.50745	TEMPORARY GRASSING	$5,092.66
0185	163-0240	150.000	TN	$185.10568	MULCH	$27,765.85
0190	163-0300	2.000	EA	$1,204.25100	CONSTRUCTION EXIT	$2,408.50
0195	163-0520	1000.000	LF	$13.41078	CONSTR AND REMOVE TEMP PIPE SLOPE DRAIN	$13,410.78
0200	163-0528	1500.000	LF	$4.23362	CONSTR AND REM FAB CK DAM -TP C SLT FN	$6,350.43
0205	163-0529	500.000	LF	$3.68949	CNST/REM TEMP SED BAR OR BLD STRW CK DM	$1,844.75
0210	165-0030	2500.000	LF	$0.73927	MAINT OF TEMP SILT FENCE, TP C	$1,848.18
0215	165-0041	1500.000	LF	$1.27360	MAINT OF CHECK DAMS - ALL TYPES	$1,910.40
0220	165-0071	250.000	LF	$1.35647	MAINT OF SEDIMENT BARRIER - BALED STRAW	$339.12
0225	165-0101	2.000	EA	$493.21640	MAINT OF CONST EXIT	$986.43
0230	167-1000	2.000	EA	$418.46250	WATER QUALITY MONITORING AND SAMPLING	$836.93
0235	167-1500	12.000	MO	$690.95987	WATER QUALITY INSPECTIONS	$8,291.52
0240	171-0030	5000.000	LF	$2.77792	TEMPORARY SILT FENCE, TYPE C	$13,889.60
					SUBTOTAL FOR TEMPORARY EROSION CONTROL:	**$84,975.15**

40 - SIGNING AND MARKING

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0245	636-1020	22.000	SF	$13.88873	HWY SGN,TP1MAT,REFL SH TP3	$305.55
0250	636-1033	18.000	SF	$17.40560	HWY SIGNS, TP1MAT,REFL SH TP 9	$313.30
0255	636-2070	48.000	LF	$7.40919	GALV STEEL POSTS, TP 7	$355.64
0260	636-2090	30.000	LF	$7.17953	GALV STEEL POSTS, TP 9	$215.39
0270	652-5451	3140.000	LF	$0.24930	SOLID TRAF STRIPE, 5 IN, WHITE	$782.80
0265	652-5452	3140.000	LF	$0.29561	SOLID TRAF STRIPE, 5 IN, YELLO	$928.22
0285	654-1001	50.000	EA	$4.65626	RAISED PVMT MARKERS TP 1	$232.81
0280	657-1085	460.000	LF	$5.94884	PRF PL SD PVT MKG,8",B/W,TP PB	$2,736.47
0275	657-6085	460.000	LF	$5.65993	PRF PL SD PVMT MKG,8",B/Y,TPPB	$2,603.57
					SUBTOTAL FOR SIGNING AND MARKING:	**$8,473.75**

50 - BRIDGE

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0290	540-1102	1.000	LS	$74,256.00000	REM OF EX BR, BR NO - 1 (102-FT X 28-FT X $26)	$74,256.00
0295	543-9000	1.000	LS	$786,600.00000	CONSTR OF BRIDGE COMPLETE - 1 (230-FT X 36-FT X $95)	$786,600.00
0300	603-2024	1200.000	SY	$44.96644	STN DUMPED RIP RAP, TP 1, 24"	$53,959.73
0305	603-7000	1200.000	SY	$2.97671	PLASTIC FILTER FABRIC	$3,572.05
					SUBTOTAL FOR BRIDGE:	**$918,387.78**

60 - DETOUR

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0315	310-1101	1575.000	TN	$20.66862	GR AGGR BASE CRS, INCL MATL	$32,553.08
0320	402-3103	240.000	TN	$76.88243	REC AC 9.5 MM SP,TPII,GP2, INCL BM & H L	$18,451.78
0325	402-3121	800.000	TN	$68.59822	RECYL AC 25MM SP,GP1/2,BM&HL	$54,878.58
0330	402-3190	385.000	TN	$77.51058	RECYL AC 19 MM SP,GP 1 OR 2 ,INC BM&HL	$29,841.57
0335	413-1000	280.000	GL	$3.12013	BITUM TACK COAT	$873.64
0340	570-1000	1.000	LS	$132,000.00000	CONST/MAIN/REM DET DR STR, NO- 1	$132,000.00
					SUBTOTAL FOR DETOUR:	**$268.598.65**

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DETAILED COST ESTIMATE

Georgia Department of Transportation

Job: 0010411_FCG

TOTALS FOR JOB 0010411_FCG

ITEMS COST:	$1,882,457.38
COST GROUP COST:	$0.00
ESTIMATED COST:	$1,882,457.38
CONTINGENCY PERCENT:	0.00
ENGINEERING AND INSPECTION:	0.05
ESTIMATED COST WITH CONTINGENCY AND E&I:	$1,976,580.25

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PROJ. NO.			CALL NO.
P.I. NO.	0010411		
DATE	6/19/2013		

INDEX (TYPE)	**DATE**	**INDEX**
REG. UNLEADED	Jun-13	$ 3.424
DIESEL		$ 3.805
LIQUID AC		$ 567.00

Link to Fuel and AC Index:
http://www.dot.ga.gov/doingbusiness/Materials/Pages/asphaltcementindex.aspx

LIQUID AC ADJUSTMENTS

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

Asphalt

Price Adjustment (PA)				**55282.5**	**$**	**55,282.50**
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	$	907.20		
Monthly Asphalt Cement Price month project let (APL)			$	567.00		
Total Monthly Tonnage of asphalt cement (TMT)				162.5		

ASPHALT	**Tons**	**%AC**	**AC ton**
Leveling		5.0%	0
12.5 OGFC		5.0%	0
12.5 mm		5.0%	0
9.5 mm SP	605	5.0%	30.25
25 mm SP	1780	5.0%	89
19 mm SP	865	5.0%	43.25
	3250		**162.5**

BITUMINOUS TACK COAT

Price Adjustment (PA)			**$**	**971.69**	**$**	**971.69**
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	$	907.20		
Monthly Asphalt Cement Price month project let (APL)			$	567.00		
Total Monthly Tonnage of asphalt cement (TMT)				2.856242113		

Bitum Tack Gals	gals/ton	tons
665	232.8234	2.85624211

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)				**0**	**$**	**-**
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	$	907.20		
Monthly Asphalt Cement Price month project let (APL)			$	567.00		
Total Monthly Tonnage of asphalt cement (TMT)				0		

Bitum Tack	SY	Gals/SY	Gals	gals/ton	tons
Single Surf. Trmt.		0.20	0	232.8234	0
Double Surf.Trmt.		0.44	0	232.8234	0
Triple Surf. Trmt		0.71	0	232.8234	0
					0

TOTAL LIQUID AC ADJUSTMENT	**$**	**56,254.19**

GEORGIA DEPARTMENT OF TRANSPORTATION
PRELIMINARY ROW COST ESTIMATE SUMMARY

Date: 6/7/2013
Revised:

Project: Bridge Replacement
County: Hancock County
PI: 0010411

Description: Bridge Replacement
Project Termini: Bridge Replacement

Existing ROW: Varies
Required ROW: Varies

Parcels: 4

Land and Improvements	$29,520.00
Proximity Damage	*$0.00*
Consequential Damage	*$0.00*
Cost to Cures	*$0.00*
Trade Fixtures	*$0.00*
Improvements	*$10,000.00*
Valuation Services	$4,000.00
Legal Services	$40,200.00
Relocation	$8,000.00
Demolition	$0.00
Administrative	$35,500.00
TOTAL ESTIMATED COSTS	$117,220.00
TOTAL ESTIMATED COSTS (ROUNDED)	***$118,000.00***

Preparation Credits	Hours	Signature

Prepared By: LaShone Alexander CG#: 286999 06/07/2013 (DATE)
Approved By: LaShone Alexander CG#: 286999 06/07/2013 (DATE)

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

allsop

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No. 0010411 - Hancock County
State Route 16 at Little Shoulderbone Creek
8.6 Mi. NW of Sparta

OFFICE Tennille Utilities

DATE March 11, 2013

FROM Lynn Bean, District Utilities Engineer

TO Neal O'Brien, District Preconstruction Engineer
Attention: Foster Grimes, Design Engineer III

SUBJECT **Concept Utility Cost Estimate – S.R. 16 at Little Shoulderbone Creek**

As requested contained herein is a Concept Utility Cost Estimate for each known utility facility within the noted project.

FACILITY OWNER	NON-REIMBURSABLE	REIMBURSABLE
Georgia Power (Transmission)	$150,000.00	$0.00
Washington E.M.C.	$90,000.00	$0.00
AT&T	$15,000.00	$0.00

Total Non-Reimbursable Cost:	$255,000.00
Total Reimbursable:	$0.00
Total Potential Relocation Cost:	$255,000.00

This estimate is based on Concept Plans dated June 5, 2012

Please be advised this is an estimate and may be revised when project plans are developed and prior rights research is completed.

Should you have questions, please contact Jimmy Hobby in the Utilities Section of this office at 478-553-2275.

LB: JFH
cc: Mike Bolden, State Utilities Engineer *(via e-mail)*
Terry Brigman, Assistant State Utilities Engineer *(via e-mail)*
Patrick Allen, P.E., State Utilities Preconstruction Engineer *(via e-mail)*
Angela Robinson, Office of Financial Management *(via e-mail)*
Chad White, Project Manager *(via e-mail)*
Chris Holmes, Area Engineer, Sandersville *(via e-mail)*

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No. 0010411 **OFFICE** Environmental Services

DATE February 11, 2013

GB/dc

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

TO Chad White, Project Manager

SUBJECT Preliminary Mitigation Cost Estimate

As requested by your office, we are furnishing you with a revised preliminary cost estimate for the subject project. The project is located at SR 16 at Little Shoulderbone Creek approximately 8.6 miles northwest of Sparta, Georgia in Hancock County. After reviewing the plans and based on the information provided, wetlands will be permanently and temporarily impacted by the proposed project. The revised estimated cost for mitigation is $100,000.00.

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: Neal O'Brien, GDOT
Foster Grimes, GDOT
General File

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

INTERDEPARTMENT CORRESPONDENCE

FILE Hancock County
P.I. # 0010411

OFFICE Planning

DATE July 30, 2012

FROM Cindy VanDyke, State Transportation Planning Administrator

TO Genetha Rice-Singleton, State Program Delivery Engineer
Attention: Chad White

SUBJECT **Traffic Assignments** for SR 16@ Little Shoulderbone Creek in Hancock County (Bridge # 141-0006-0).

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

TC # 141-0138

2012 ADT = 1200
2018 ADT = 1350
2038 ADT = 2000
2012 DHV = 100
2018 DHV = 110
2038 DHV = 160
K = 8%
D = 65%
T. = 18%
S.U. T = 15%
COMB. T = 3%
24 HOUR T = 22%
S.U. = 21%
COMB. = 1%

If you have any questions concerning this information, please contact Dan Funk at (404) 631-1959.

CLV/DRF

Processed Date:5/31/2012

Parameters: Bridge Serial Num

Bridge Inventory Data Listing

Structure ID:141-0006-0 | **Hancock** | **SUFF. RATING:** 54.35

Location & Geography

Structure ID:	141-0006-0
200 Brdge Information:	06
*6A Feature Int:	LITTLE SHOULDERBONE CR
*6B Critical Bridge:	0
*7A Route No Carried:	SR00016
*7B Facility Carried:	SR 16
9 Location:	8.6 MI NW OF SPARTA
2 Dot District:	2
207 Year Photo:	2010
*91 Inspection Frequency:	24 Date: 07/21/2010
92A Fract Crit Insp Freq:	0 Date: 02/01/1901
92B Underwater Insp Freq:	0 Date: 02/01/1901
92C Other Spc. Insp Freq:	0 Date: 02/01/1901
* 4 Place Code:	00000
*5 Inventory Route(O/U):	1
Type:	3
Designation:	1
Number:	00016
Direction:	0
*16 Latitude:	33 - 20.7395 HMMS Prefix:SR
*17 Longtitude:	83 -05.9595 HMMS Suffix:00 MP:2.89
98 Border Bridge:	000%Shared:00
99 ID Number:	000000000000000
*100 STRAHNET:	0
12 Base Highway Network:	1
13A LRS Inventory Route:	1411001600
13B Sub Inventory Route:	0
101 parellel Structure:	N
*102 Direction of Traffic:	2
*264 Road Inventory Mile Post:	002.88
*208 Inspection Area:	2 Initials: EFP
Engineer's Initials:	sgm
* Location ID No:	141-00016D-002.89E

*104 Highway System:	0
*26 Functional Classification:	07
*204 Federal Route Type:	S No: 00776
105 Federal Lands Highway:	0
*110 Truck Route:	0
2006 School Bus Route:	1
217 Benchmark Elevation:	0000.00
218 Datum:	0
*19 Bypass Length:	24
*20 Toll:	3
*21 Maintanance:	01
*22 Owner:	01
*31 Design Load:	5
37 Historical Significance:	5
205 Congressional District:	12
27 Year Constructed:	1959
106 Year Reconsrtucted:	0000
33 Bridge Medium:	0
34 Skew:	00
35 Structure Flared:	0
38 Navigation Control:	0
213 Special Steel Design:	0
267 Type of Paint:	2
*42 Type of Service On:	1
Type of Service Under:	5
214 Movable Bridge:	0
203 Type Bridge:	E
259 Pile Encasement	2
*43 Structure Type Main:	1 04
45 No.Spans Main:	003
44 Structure Type Appr:	0 00
46 No Spans Appr:	0000
226 Bridge Curve Horz	0 Vert: 0
111 pier Protection	0
107 Deck Structure Type:	1
108 Wearing Structure Type:	1
Membrane Type:	8
Deck Protection:	8

Signs & Attachments

225 Expansion Joint Type:	02
242 Deck Drains:	1
243 Parapet Location:	0
Height:	0
Width:	0
238 Curb Height:	1
Curb Material:	1
239 Handrail	1 1
*240 Medium Barrier Rail:	0
241 Bridge Median Height:	0
* Bridge Median Width:	0
230 Guardrail Loc. Dir. Rear:	3
Fwrd:	3
Oppo. Dir. Rear:	0
Oppo. Fwrd:	0
244 Aproach Slab	3
224 Retaining Wall:	0
233Posted Speed Limit:	55
236 Warning Sign:	0.00
234 Delineator:	1.00
235 Hazzard Boards:	1
237 Utilities Gas:	00
Water:	00
Electric:	00
Telephone:	00
Sewer:	00
247 Lighting Street:	0
Navigation:	0
Aerial:	0
*248 County Continuity No.:	07

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Bridge Inventory Data Listing

Structure ID:141-0006-0

Programming Data

201 Project No:	BA (4) SP 1633-A (12)
202 Plans Available:	4
249 Prop Proj No:	0010411
250 Approval Status:	0000
251 PI Number:	0010411
252 Contract Date:	02/01/1901
260 Seismic No:	00000
75 Type Work:	00 0
94 Bridge Imp: Cost:	$0
95 Roadway Imp. Cost:	0
96 Total Imp Cost:	0
76 Imp Length:	000000
97 Imp Year:	0000
114Furure ADT:	002625 Year:2030

Hydralic Data

215Waterway Data:	
High Water Elev:	0363.2 Year:1900
Flood Elev:	0000.0 Freq:00
Avg Streambed Elev:	0349.7
Drainage Area:	00017
Area of Opening:	000850
113 Scour Critical	U
216Water Depth:	00.5 Br.Height:19.3
222Slope Protection:	1
221Slope Protection	0 Fwd:0
219Fender System	0
220Dolphin:	0
223Current 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 ID No:	141-00016D-002.89E

Measurements:

*29ADT	001750 Year:2007
109%Trucks:	0
* 28 Lanes On:	02 Under:00
210 No. Tracks On:	00 Under:00
* 48 Max. Span Length	0034
* 49 Structure Length:	102
51 Br. Rwdy. Width	28.00
52 Deck Width:	34.30
* 47 Tot. Horiz. Cl:	28
50 Curb / Sidewalk Width	2.00 / 2.00
32 Approach Rdwy. Width	028
*229 Shoulder Width:	
Rear Lt:	2.00 Type:2 Rt:2.00
Fwd. Lt:	2.00 Type:2 Rt:2.00
Permanent Width:	
Rear:	24.00 Type:2
	24.00 Type:2
Intersaction Rear:	0 Fwd: 0
36Safety Features Br. Rail:	2
Transition:	2
App. G. Rail:	2
App. Rail End:	2
53 Minimum Cl. Over:	99' 99 "
Under:	
*228 Minimum Vertical Cl	
Act. Odm Dir::	99' 99"
Oppo. Dir:	99' 99"
Posted Odm. Dir:	00' 00"
Oppo. Dir:	00' 00"
55 Lateral Undercl. Rt:	N 0 0
56 Lateral Undercl. Lt:	0.00
*10 Max Min Vert Cl:	99' 99" Dir:0
39 Nav Vert Cl:	000 Horiz:0000
116 Nav Vert Cl Closed:	000
245 Deck Thickness Main	6.00
Deck Thick Approach:	0.00
246 Overlay Thickness:	0.00
212 Year Last Painted:	Sup:0000Sub:1990

65 Inventory Rating Mathod:	1
63 Operating Rating Method:	1
66 Inventory Type:	2 Rating: 22
64 Operating Type:	2 Rating: 22
231Calculated Loads:	
H-Modified:	21 0
HS-Modified:	30 0
Type 3:	27 0
Type 3s2:	40 0
Timber:	37 0
Piggyback:	40 0
261 H Inventory Rating:	22
262 H Operating Rating	37
67 Structural Evaluation:	5
58 Deck Condition:	4
59 Superstructure Condition:	5
* 227 Collision Damage:	0
60A Substructure Condition:	5
60B Scour Condition:	7
60C Underwater Condition	N
71 Waterway Adequacy:	8
61 Channel Protection Cond.:	5
68 Deck Geometry:	5
69 UnderClr. Horz/Vert:	N
72 Appr. Alignment:	8
62 Culvert:	N

Posting Data

70 Bridge Posting Required	5
41 Struct Open, Posted, CL:	A
* 103 Temporary Structure:	0
232 Posted Loads	
H-Modified:	00
HS-Modified:	00
Type 3:	00
Type 3s2:	00
Timber:	00
Piggyback	00
253 Notification Date:	02/01/1901
258 Fed Notify Date:	2/1/1901 12:00:00AM

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GEORGIA DEPARTMENT OF TRANSPORTATION

HISTORIC BRIDGE INVENTORY REPORT

Serial #: **141-0006-0**

ATTACHMENT NOT FOUND

ATTACHMENT NOT FOUND

County: HANCOCK **Municipality:** **GDOT District** 2 **Owner:** STATE

Location: 8.6 MI NW OF SPARTA

Bridge Name: **UTM:** 17 308839 3675510

Facility Carried: SR 16

Feature Intersected: LITTLE SHOULDERBONE CREEK

Type: T BEAM **Design:**

Material: REINFORCED CONCRETE **# Spans:** 3 **Length:** 102 **Width:** 34.3 **# Lanes:** 2

Railing Type: STANDARD CONCRETE 2 RAIL HIGH

Date of Construction: 1959 **Alteration:** **Source:** GDOT BRIDGE INSPECTION FILE

Designer/Builder: STATE HWY DEPT BRIDGE DEPT

Current National Register Status of Bridge: Not Previously Evaluated

Local, Determined Eligible, or NR Historic District/Status:

Inventory NR Recommendation: **Not Eligible**

Setting/Context:

The bridge carries a 2 lane road over a stream in a sparsely developed, forested setting.

Physical Description:

The 3 span, 102'-long T beam bridge with standard-design concrete 2-rail high on high curb railings is supported on H pile or concrete pile and cap beam bents and abutments at the ends.

Summary of Significance:

The T beam bridge constructed in 1959 continues the state's use of the economical bridge type first built in the state in the 1910s and adopted as a standard design in 1917. It is a very common bridge type with over 1,000 pre-1966 examples remaining. This late example has no innovative or distinctive details and is not historically or technologically significant.

Bibliography:

GADOT. Bridge Inspection File & Plans.

Reviewed By/ Date: MEM

GEORGIA DEPARTMENT OF TRANSPORTATION

HISTORIC BRIDGE INVENTORY REPORT

Serial #: 141-0006-0 **County:** HANCOCK **District** 2 **City:**

Notes/Comments

NO ATTACHMENT

NO ATTACHMENT

NO ATTACHMENT

NO ATTACHMENT

NO ATTACHMENT

NO ATTACHMENT

NO ATTACHMENT

NO ATTACHMENT

PI 0010411

Kevin Schwartz

December 9, 2011

This bridge (Structure ID 141-0006-0; SR 16 over Little Shoulderbone Creek) was built in 1959. The bridge consists of three simple reinforced concrete deck girder spans on concrete caps with steel piles. The overall condition of this bridge would be classified as fair to poor. The deck is in poor condition due to advanced deterioration and spalling. Rehabilitation work of the deck would be cost prohibitive due to the design of the RCDG's. The superstructure and substructure elements have minor concrete cracking considered to be classified as fair. Therefore due to the structural integrity particularly in regards to the bridge deck, replacement of this bridge is recommended.

Meeting Minutes

5-22-2013
0010411, Hancock County
Concept Meeting

Attendees
Chad E. White Sr.-Program Delivery (Project Manager)
Neal O-Brien- District 2 Preconstruction Engineer
Renee Decker- District 2 Roadway Design
Foster Grimes- District 2 Roadway Design
Ben Rabun- Bridge Design- State Bridge Engineer
Melanie Hale DE2-Concept Review
Matt Sanders- VE Specialist
Michelle Pate- Review Engineer II

- The Project Manager (PM) Chad E. White introduced the Project P.I. 0010411 bridge replacement SR16 @ Little Shoulderbone Creek in Hancock (Bridge # 141-0006-0)
- The PM indicated that the schedule is as follows.
    - Right of Way (R/W) 2014
    - Management LET date 2016

- Foster Grimes- D2-Roadway Design Leader reviews the functional Classification of the project to include the project justification. The concept report was review in great detail to include the primary means of constructing the bridge replace using an onsite detour.
- Rabun- Bridge Design- State Bridge Engineer stated for the project that an onsite or an alignment maybe the preferred method on construction due to location and nature of the project. (Due to both project being posted by send truck traffic to another determined state route will 20 plus miles away).
- Chad White explained that the project team would look into a potential detour and to update the traffic data for an analysis by the concept approving authority.
- Alternatives were discussed and rationale for preferred alternative along with constraints was mentioned
- Melanie D. Hale brought up a concern whether or not the complete street warrants were met. Second was SR16 designated a bike right.

    - Mr. Chad White advised that we did not expect to have a sediment basin and BMP's would be placed as required, expected to be within existing ROW.
    -
- Mr. Chad White closed the meeting.

Action Items:

- Traffic analysis data for trucks in the local area
- Confirm if SR 16 as a bike route or not

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF DESIGN – DISTRICT TWO

Roadway User Cost for

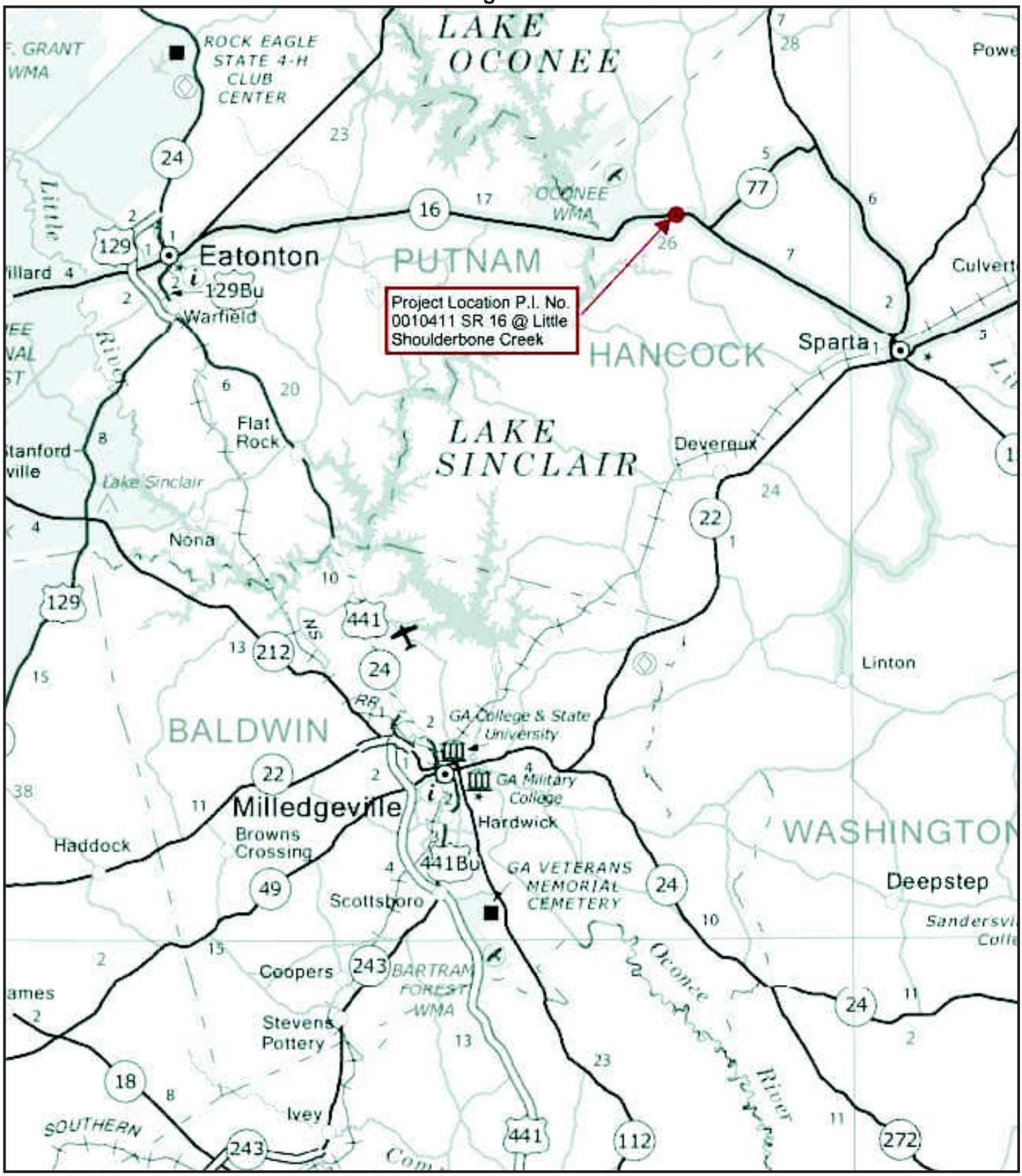
Bridge Replacement on SR 16 over Little Shoulderbone Creek

Hancock County

PI #0010411

April 25, 2013

Bridge Replacement on State Route 116 over Little Shoulderbone Creek
Figure 1



P.I. No. 0010411

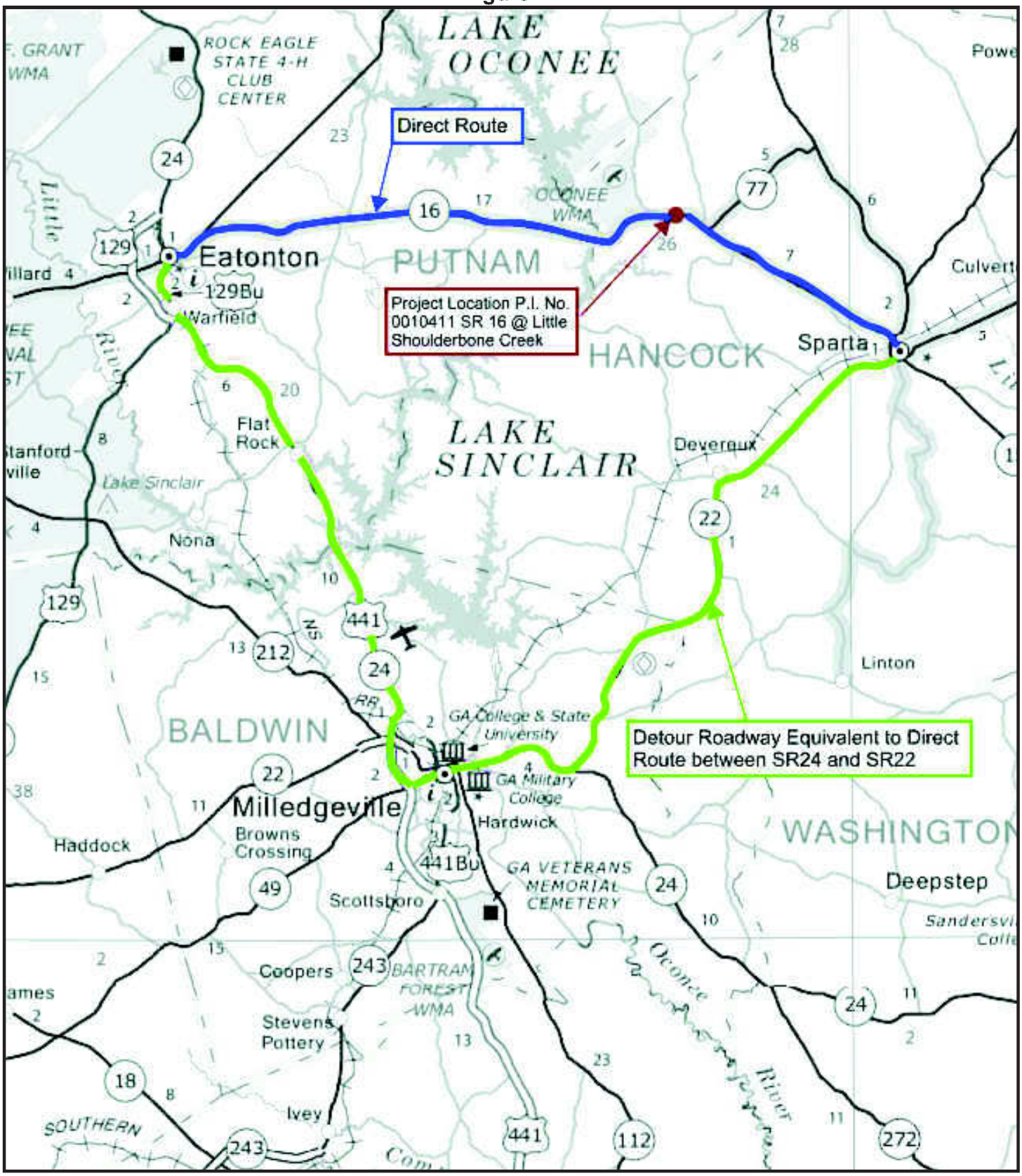
General Project Description:

This project consists of the replacement of the structurally deficient bridge over Little Shoulderbone Creek on State Route 16 located 8.6 miles Northwest of Sparta in Hancock County. The length of the project will be 0.34 miles. Traffic will be maintained on an on-site detour during construction with a temporary structure spanning the creek.

Justification Statement:

This bridge (Structure ID 141-0006-0; SR 16 over Little Shoulderbone Creek) was built in 1959. The bridge consists of three simple reinforced concrete deck girder spans on concrete caps with steel piles. The overall condition of this bridge would be classified as fair to poor. The deck is in poor condition due to advanced deterioration and spalling. Rehabilitation work of the deck would be cost prohibitive due to the design of the RCDG's. The superstructure and substructure elements have minor concrete cracking considered to be classified as fair. Therefore due to the structural integrity particularly in regards to the bridge deck, replacement of this bridge is recommended.

Figure 2


LAKE OCONEE
ROCK EAGLE STATE 4-H CLUB CENTER
Direct Route
OCONEE WMA
Eatonton
129Bu
Warfield
PUTNAM
Project Location P.I. No. 0010411 SR 16 @ Little Shoulderbone Creek
HANCOCK
Sparta
Culvert
Flat Rock
LAKE SINCLAIR
Devereux
Lake Sinclair
Nona
Linton
BALDWIN
GA College & State University
GA Military College
Milledgeville
Browns Crossing
Hardwick
Haddock
441Bu
GA VETERANS MEMORIAL CEMETERY
Scottsboro
WASHINGTON
Deepstep
Detour Roadway Equivalent to Direct Route between SR24 and SR22
Coopers
BARTRAM FOREST WMA
Stevens Pottery
Ivey
SOUTHERN
Oconee River

PI 0010411 Hancock County
Bridge Replacement on SR 16 over Little Shoulderbone Creek

Summary of calculated Road User Costs (RUC)

Roadway Closure	Duration	% Traffic that detours	Vehicles affected	Added Time	Adjusted RUC (50% of calculated)	Notes
	hr	%	ea	hr	$	
Bridge	12 Months	75%	900	0.38	$2,555,000	

RUC

Bridge Replacement on SR 16 over Little Shoulderbone Creek

Table 1: Summary of laneage and relative traffic volumes by roadway segment.

Segment	Segment Description				Laneage	Traffic Volumes - RCDATA Oct 2010			
	County	Mile Post at Beginning of Segment	Segment length	Location at Beginning of Segment	No. of Lanes	Traffic ADT (two way) date?	Posted Speed	Traffic ADT/lane	Travel Time
		mi.	mi		ea	vpd	MPH	vpd/lane	Hr
NORMAL ROUTE	Putnam	9.08	0.22	SR 16 @ SR 44	2	11040	25	5520	0.01
		9.3	0.27	Speed Change	2	11040	35	5520	0.01
		9.57	0.97	Speed Change	2	11040	45	5520	0.02
		10.54	2.41	Traffic Change	2	2100	55	1050	0.04
	Putnam	12.95	10.67	County Line	2	1460	55	730	0.19
	Hancock	0	4.09	County Line to SR 77	2	1460	55	730	0.07
		11.24	7.15	SR 77 to SR15	2	950	55	475	0.13
		11.85	0.61	Traffic Change	2	2030	40	1015	0.02
	Hancock	11.9	0.05	SR 16 @ SR 22	2	2030	40	1015	0.00
	Travel Length without Detour (mile)		26.44					**Travel Time without Detour**	**0.50**
EQUIVALENT DETOUR ROUTE	Putnam	2.23		Begin Detour SR 24BU @ SR 16					
		2.80	0.57	SR 24BU@Imperial Mill Rd Speed Change	2	4,440	35	1,110	0.02
		3.75	0.95	Imperial Mill Rd to SR 24	2	3,735	45	934	0.02
	SR24	9.76	6.08	SR 24 to CR 358	4	4,980	55	623	0.11
		3.68	3.68	SR 24 to County Line	4	11,350	55	2,838	0.07
	Baldwin	23.20		County Line					
		18.06	5.14	County Line to Pearl DR	4	18,680	55	4,670	0.09
		17.91	0.15	Speed Change	4	38,800	45	9,700	0.00
		17.10	0.81	at SR 29/Roberson Mill Rd	4	38,800	45	9,700	0.02
	SR 29	10.23		SR 24 @ SR 29					
		9.16	1.07	SR 29 to SR 22	4	20,160	45	5,040	0.02
		7.30	1.86	SR 22 to SR 49	4	12,600	55	3,150	0.03
	SR 49	9.50		SR 49 @ SR 29					
		10.24	0.74	SR 29 to N Pickens St	2	11,310	40	5,655	0.02
		10.75	0.51	N Pickens St to S Clark St	2	6,070	35	3,035	0.01
		11.24	0.49	S Clark St to SR 22	2	10,530	25	5,265	0.02
	SR 22	11.60		SR 22 @ N Elbert St					
		12.60	1.00	N Elbert St to Kings Rd	4	16,510	45	4,128	0.02
		13.50	0.90	Kings Rd to Lake Laurel Rd	2	11,190	55	5,595	0.02
		15.89	2.39	Lake Laurel Rd to SR 24	2	8,140	55	4,070	0.04
		22.45	6.56	SR 24 to County Line	2	3,450	55	1,725	0.12
	Hancock	0.00		County Line					
		11.53	11.53	County Line to Ingram School Rd	2	3,380	55	1,690	0.21
		12.18	0.65	Ingram School Rd to Dixie St	2	4,410	45	2,205	0.01
		12.43	0.25	Dixie St to SR 16	2	4,410	35	2,205	0.01
	Hancock	12.43		End of Detour SR 16					
	Travel Length with Detour (mile)		45.33					**Travel Time with Detour**	**0.87**
	Added Travel Length (mile)		**18.89**					**Added Travel Time**	**0.38**

Note:
Assume that Detour route segments will not exceed capacity when added traffic volume is in place during time of construction.

RUC

Bridge Replacement on SR 16 over Little Shoulderbone Creel

Reference from another cell or sheet	Black	Input	Red
		Calculated	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)
26.44	45.33	18.89	0.50	0.87	0.38

Table 4: Escalation factors

Cost Factors	1970 CPI-U[2]	Current CPI-U[1]	Escalation Factor
Idling & VOC (transportation)	37.5	221	5.89
Time Value (all components)	38.8	233	6.01

[1]From Bureau of Labor Statistics for March 2013 "transporation" and "all components" categories.

[2] As reported in NJ DOT Road User Cost Manual for 1970.

Table 5: Cost Rates

Vehicle Class	1970			Current		
	Time Value Cost Rate[1]	Idling Cost Rate[2]	VOC Cost Rate[2]	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	18.02	1.07	0.35
Truck	5.00	0.2092	0.12	30.03	1.23	0.71

[1]From NCHRP Report 133 as indicated in NJ manual

[2]Average of SU and combination truck values from NCHRP as stated in the NJ manual.

Bridge Replacement on SR 16 over Little Shoulderbone Creek

RUC

Analysis Case - Off-Site Detour

Foster Grimes, 25 April 2013

Reference from another cell or sheet — Black; Input — Red; Calculated — Blue

Table 6: Road Users Cost Summary

Cost Component	Vehicle Class	Percent Class	Total Vehicles	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	Car	84	0		0.00	18.02	0	0
(Added time)	Truck	16.0	0		0.00	30.03	0	0
Queue Idling VOC	Car	84	0		0.00	1.07	0	0
(Added cost)	Truck	16.0	0		0.00	1.23	0	0
Work Zone Delay	Car	84	0		0.00	18.02	0	0
(Added Time)	Truck	16.0	0		0.00	30.03	0	0
Circuity Delay	Car	84	900		0.38	18.02	6.8	5,117
(Added Time)	Truck	16.0	900		0.38	30.03	11.3	1,624
Circuity VOC	Car	84	900	18.89		0.35	6.7	5,050
(Added cost)	Truck	16.0	900	18.89		0.71	13.4	1,924

Total vehicles that travel queue	0	Road User Cost	$14,000
Total vehicles that travel work zone		**Adjusted Road User Cost[3]**	**$7,000**
Total vehicles that travel detour	900	**Number of Work Zone Days**	**365**
Percent passenger cars	84	**Total Road User Cost**	**$2,555,000**
Percent Trucks	16		

[3]Adjusted down 50% from Road User Cost

Trucks, %[1]	18
Cars, %	82
75% Traveling Detour ADT, vpd[2]	900

Notes:

[1] Corresponds to 24 hour truck percentage in project Traffic Assignments.

[2] Traffic ADT from report provided by State Planning and Programing Engineer, Traffic Assignments Dated 7-30-2012. Assumed that 75% of Traffic would use alternate route other than detour.

Table 1. Consumer Price Index for All Urban Consumers (CPI-U): U.S. city average, by expenditure category and commodity and service group

(1982-84=100, unless otherwise noted)

Item and group	Relative importance, December 2012	Unadjusted indexes		Unadjusted percent change to Mar. 2013 from—		Seasonally adjusted percent change from—		
		Feb. 2013	Mar. 2013	Mar. 2012	Feb. 2013	Dec. to Jan.	Jan. to Feb.	Feb. to Mar.
Expenditure category								
All items	100.000	232.166	232.773	1.5	0.3	0.0	0.7	-0.2
All items (1967=100)	-	695.467	697.284	-	-	-	-	-
Food and beverages	15.261	236.230	236.267	1.5	.0	.0	.1	.1
Food	14.312	236.301	236.332	1.5	.0	.0	.1	.0
Food at home	8.598	234.033	233.777	1.0	-.1	.0	.1	-.1
Cereals and bakery products	1.231	269.304	269.504	.9	.1	.1	-.2	.2
Meats, poultry, fish, and eggs	1.955	233.041	233.294	1.2	.1	.0	.5	.0
Dairy and related products [1]	.905	219.526	218.123	-.5	-.6	.4	-.4	-.6
Fruits and vegetables	1.287	293.742	291.284	4.4	-.8	.3	1.4	-.4
Nonalcoholic beverages and beverage materials	.943	168.977	168.736	-.5	-.1	-.5	.0	-.2
Other food at home	2.278	204.763	205.264	.3	.2	-.2	-.6	.2
Sugar and sweets [1]	.305	212.039	212.165	-1.3	.1	.7	-1.3	.1
Fats and oils	.263	232.036	230.109	-1.4	-.8	-.6	-1.1	-.3
Other foods	1.711	217.052	219.012	.9	.4	-.3	-.4	.3
Other miscellaneous foods [1 2]	.631	128.514	128.841	1.6	.3	-.1	-.6	.3
Food away from home [1]	5.713	240.930	241.409	2.3	.2	.1	.1	.2
Other food away from home [1 2]	.363	168.142	168.816	2.1	.4	.2	.0	.4
Alcoholic beverages	.949	233.898	234.015	1.7	.1	-.1	.4	.2
Housing	41.021	225.382	225.643	1.9	.1	.2	.2	.1
Shelter	31.681	260.720	261.330	2.2	.2	.2	.2	.2
Rent of primary residence [3]	6.545	265.256	265.821	2.8	.2	.2	.3	.2
Lodging away from home [2]	.741	138.380	143.390	1.5	3.6	1.2	.3	.5
Owners' equivalent rent of residences [3 4]	24.041	268.448	268.802	2.1	.1	.2	.2	.1
Owners' equivalent rent of primary residence [3 4]	22.622	268.424	268.778	2.1	.1	.2	.2	.1
Tenants' and household insurance [1 2]	.354	135.459	135.436	4.2	.0	.1	1.1	.0
Fuels and utilities	5.300	220.992	220.251	1.7	-.3	.4	.6	-.1
Household energy	4.099	189.768	188.810	.6	-.5	.5	.6	-.3
Fuel oil and other fuels [1]	.332	346.070	341.601	-4.2	-1.3	.7	2.4	-1.3
Energy services [3]	3.767	189.679	188.856	1.1	-.4	.4	.5	-.2
Water and sewer and trash collection services [2]	1.201	195.505	195.981	5.2	.2	.4	.3	.4
Household furnishings and operations	4.040	125.601	125.330	-.6	-.2	-.1	.0	-.3
Household operations [1 2]	.730	156.730	156.992	1.7	.2	.2	.2	.2
Apparel	3.564	126.303	128.279	.8	1.6	.8	-.1	-1.0
Men's and boys' apparel	.858	119.655	120.427	.9	.6	1.0	-.6	-.7
Women's and girls' apparel	1.495	112.222	115.810	.2	3.2	1.3	-.1	-1.5
Infants' and toddlers' apparel	.200	118.900	117.609	-1.9	-1.1	-.6	.5	-2.3
Footwear	.696	134.158	134.956	3.8	.6	.3	.4	-.7
Transportation	16.846	219.491	221.080	.1	.7	-.9	3.0	-1.3
Private transportation	15.657	214.823	216.167	-.2	.6	-1.0	3.3	-1.5
New and used motor vehicles [2]	5.551	100.345	100.809	.5	.5	.2	.1	.3
New vehicles	3.189	145.925	145.989	1.1	.0	.1	-.3	.1
Used cars and trucks	1.844	146.718	148.753	.1	1.4	.2	.8	1.2
Motor fuel	5.462	316.580	320.739	-3.1	1.3	-3.2	9.0	-4.2
Gasoline (all types)	5.274	315.243	319.523	-3.1	1.4	-3.0	9.1	-4.4
Motor vehicle parts and equipment [1]	.434	147.659	147.916	-.3	.2	-.6	-.2	.2
Motor vehicle maintenance and repair [1]	1.149	260.234	260.156	1.4	.0	.4	.2	.0
Public transportation	1.189	274.684	280.356	4.0	2.1	.8	-.4	1.1
Medical care	7.163	423.221	424.154	3.1	.2	.1	.2	.3
Medical care commodities	1.714	334.405	335.198	.6	.2	.1	-.4	.1
Medical care services	5.448	451.625	452.596	3.9	.2	.2	.3	.3
Professional services	3.010	347.303	348.071	2.6	.2	.2	.1	.4

See footnotes at end of table.