

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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

**FILE** P.I. #0008690                      **OFFICE** Design Policy & Support  
CSMSL-0008-00(690)  
Chatham County                      **DATE** December 1, 2010  
Jimmy DeLoach Pkwy Extension

**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:**

Genetha Rice-Singleton, Program Control Administrator  
Ron Wishon, State Project Review Engineer  
Glenn Bowman, State Environmental Administrator  
Ken Thompson, Statewide Location Bureau Chief  
Michael Henry, Systems & Classification Branch Chief  
Kathy Zahul, State Traffic Engineer  
Angela Alexander, State Transportation Planning Administrator  
Ben Rabun, State Bridge Engineer  
Bobby Hilliard, State Program Delivery Engineer  
Angela Robinson, Financial Management Administrator  
Jeff Baker, State Utilities Engineer  
Karon Ivery, District 5 Utilities Engineer  
Brad Saxon, District 5 Preconstruction Engineer  
Glenn W. Durrence, District 5 Engineer  
Mike Dover, Project Manager  
BOARD MEMBER - 12th Congressional District

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

PROJECT CONCEPT REPORT

Project Number: CSMSL-0008-00(690)  
County: CHATHAM  
P. I. Number: 0008690  
Federal Route Number: NA  
State Route Number: NA

Jimmy Deloach Connector  
from Bourne Avenue/SR 307 to existing Jimmy Deloach Parkway

Submitted for approval:

DATE \_\_\_\_\_



Aykut Urgan, PE, Parsons

Design Consultant Name & Firm Name

DATE 10/1/2010



Office Head (Innovative Program Delivery)

DATE 9/30/2010



Project Manager

Recommendation for approval:

DATE 10/05/2010

Lee Upkins for Jeff Baker \* /RRP  
State Utilities Engineer

DATE \_\_\_\_\_

Program Control Administrator

DATE 04/15/2010

Glenn Bowman \* /RRP  
State Environmental Administrator

DATE \_\_\_\_\_

State Traffic Operations Engineer

DATE 04/09/2010

Ron Wishon \* /RRP  
Project Review Engineer

DATE \_\_\_\_\_

District Engineer

DATE 04/07/2010

Paul Liles \* /RRP  
State Bridge Design Engineer

DATE \_\_\_\_\_

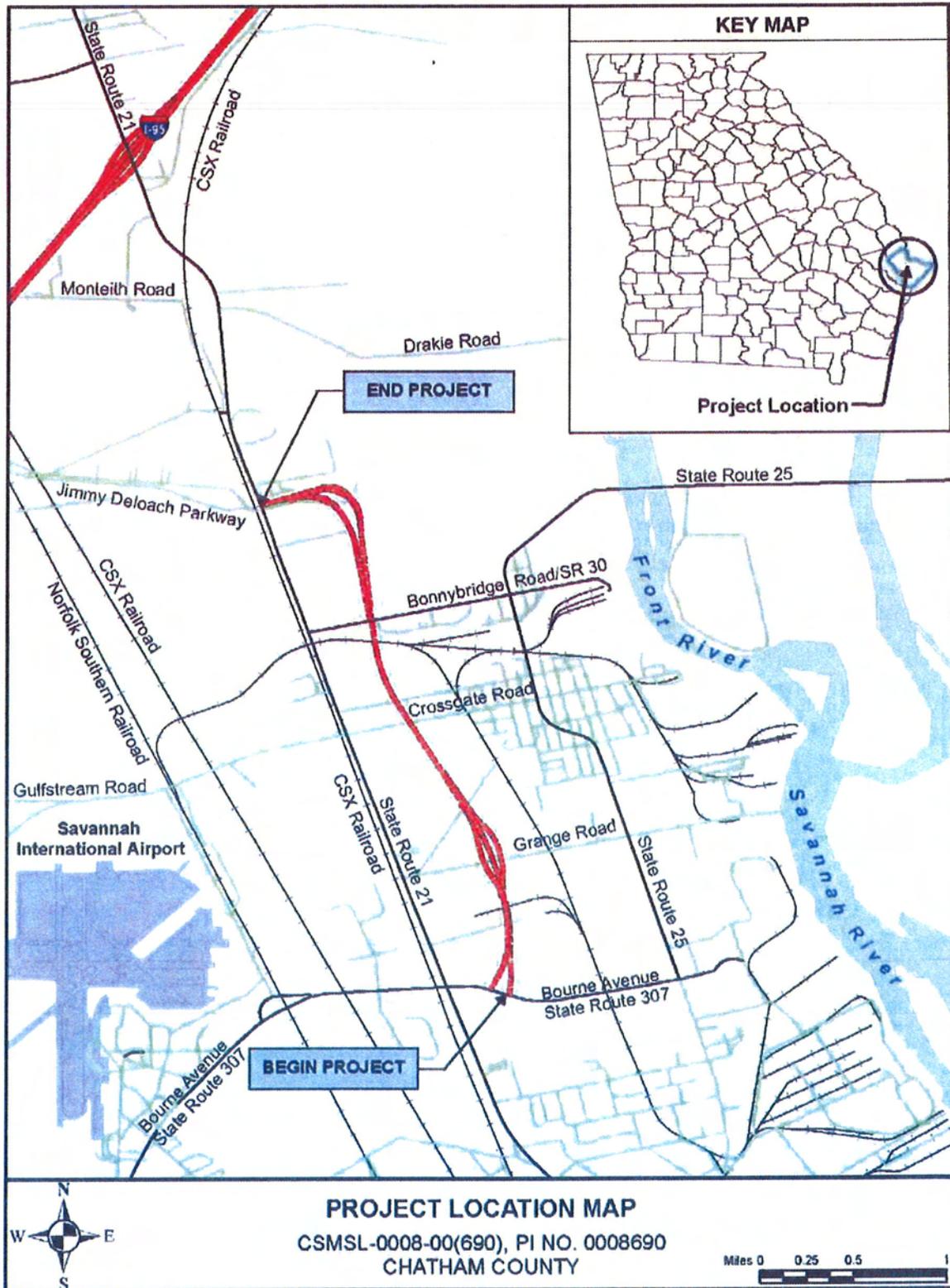
State Transportation Financial Management Administrator

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

DATE 10/27/10

  
State Transportation Planning Administrator

\* Recommendation on file



## **NEED AND PURPOSE**

### **Introduction**

Project CSMSL-0008-00(690) proposes the construction of the Jimmy Deloach Connector, a new roadway alignment that would begin at Bourne Avenue/SR 307 and terminate at the existing eastern end of Jimmy Deloach Parkway. The project is primarily located in Port Wentworth, Chatham County, Georgia. New interchanges would be constructed at both Grange Road and Jimmy Deloach Parkway. The proposed project would be approximately 3.1 miles in length. The typical section of the proposed limited access roadway would consist of four 12-foot wide travel lanes (two in either direction) separated by a median barrier with 4-foot wide inside shoulders, and 6.5 foot wide paved outside shoulders. From north of Bonnybridge Road to Jimmy Deloach Parkway, northbound and southbound lanes would be separated by a depressed median varying in width up to 250 feet. The posted speed limit would be 55 miles per hour (mph).

In the vicinity of the proposed project, SR 21 is a four-lane divided highway (two lanes in either direction) with a variable 16-42 foot wide median, and 10-foot wide paved outside shoulders. The existing right-of-way varies from approximately 175 to 200 feet. There are five traffic signals from the existing Jimmy Deloach Parkway and SR 21 intersection and the SR 21 and Bourne Avenue intersection.

The new location roadway would run parallel to and east of SR 21 for approximately three miles beginning at Jimmy Deloach Parkway. The limited access roadway would have no signalized intersections along the mainline which would allow direct and free flow access into the Savannah Port gates. The purpose of the project is to improve travel time into the Savannah Port from SR 21 and provide an alternate route to accommodate increasing truck traffic entering and exiting the Savannah Port.

The proposed project is primarily needed to provide faster truck movement into and out of the Savannah Port from SR 21 at the Jimmy Deloach Parkway intersection. The project is also needed to accommodate the increase in truck traffic that is expected as a result from the expansion of the Savannah Port and the proposed deepening of the Savannah River Channel, and maintain the economic viability of the Port and southeast region.

### **Planning Basis for the Action**

The proposed project stemmed from the Georgia DOT's Statewide Truck Lanes Identification Study (2007). Within this study, Savannah, a sub-area of Chatham County was studied for potential truck lanes and other truck travel improvements due to the Savannah Port. The Georgia Ports Authority was interested in the construction of a project from Jimmy Deloach Parkway south to the Savannah Port gates that would provide direct access to the Port. As a result, the Georgia DOT and the Georgia Ports Authority have been working together to develop a project that would run parallel to SR 21 from the Jimmy Deloach Parkway intersection and provide direct truck access into the Savannah Port.

## Deficiencies in the System

### Existing Conditions

Along SR 21 in the vicinity of the proposed project, traffic volumes are currently estimated at 24,400 vehicles per day of which 65 percent are passenger vehicles and 35 percent are trucks. Based on the truck and passenger traffic counts conducted in January 2008 along SR-21 and the corridors connecting SR-21 to Savannah Port, it was concluded that approximately 76 percent of the trucks along SR-21 are destined for the Savannah Port. Table 1 shows the Average Annual Daily Traffic (AADT), percentage of trucks and Level of Service (LOS) summary on SR-21 for the existing conditions (Year 2008).

As shown in Table 1, the northbound approach of SR-21 at the intersection of SR-21 and Bourne Avenue currently operates at LOS E in the AM peak period and LOS C in the PM peak period, respectively. SR 21 between Bourne Avenue and Jimmy Deloach Parkway currently operates at a Level of Service (LOS) C in the AM peak period and LOS B in the PM peak period, respectively. The southbound approach of SR-21 at the intersection of SR-21 and Jimmy Deloach Parkway currently operates at LOS C in the AM peak period and LOS A in the PM peak period, respectively.

Roadway Names	AADT (vpd)	Truck Volume (vpd)	Percentage of Trucks	LOS	
				A.M. Peak	P.M. Peak
SR-21 South of Bourne Avenue <i>(northbound approach)</i>	29,070	10,180	35%	E	C
SR-21 between Bourne Avenue & Jimmy Deloach Pkwy <i>(arterial)</i>	24,400	8,540	35%	C	B
SR-21 North of Jimmy Deloach Pkwy <i>(southbound approach)</i>	24,890	8,710	35%	C	A

Table 2 shows the AADT, percentage of trucks and Level of Service (LOS) summary on the corridors that connect to SR 21 and the Savannah Port under existing conditions (Year 2008). The intersection of SR 21 and Bourne Avenue (which is the primary route used to access the Savannah Port from SR 21) fails (LOS F) in the AM peak and operates at above capacity (LOS E) in the PM peak. Therefore, without improvements to SR 21, the intersection LOS shown below in Table 2 would further deteriorate. Similarly, the intersection of SR-21 at Grange Road operates at capacity (LOS D or worse) during both peak hours.

Roadway Names	AADT (vpd)	Truck Volume (vpd)	Percentage of Trucks	A.M. Peak		P.M. Peak	
				Delay (sec)	LOS	Delay (sec)	LOS
Bourne Avenue	7,740	4,390	57%	119.5	F	56.0	E
Grange Road	4,990	1,800	36%	46.9	E	28.6	D
Crossgate Drive	4,480	160	4%	53.7	D	28.8	C
Bonnybridge Road	5,930	2,390	40%	19.0	B	15.3	B
Jimmy Deloach Pkwy	6,540	2,610	40%	22.3	C	14.5	B

Future Conditions

The traffic volumes on SR 21 would be 31,680 and 45,250 vehicles per day with 61 percent passenger vehicles and 39 percent trucks in the open year (2012) and design year (2032) respectively. SR 21, without additional improvements, would not accommodate the projected traffic increase of 20,850 passenger vehicles and trucks per day in the design year. Traffic analysis indicates that the serviceability along SR 21 between Bourne Avenue and Jimmy Deloach Parkway would deteriorate from LOS C in the existing conditions to LOS F in the design year conditions during the AM peak period and from LOS B in the existing conditions to LOS E in the design year conditions during the PM peak period as shown in Table 3 below.

Roadway Names	AADT (vpd)	Truck Volume (vpd)	Percentage of Trucks	LOS	
				A.M. Peak	P.M. Peak
<b><i>Open Year (2012)</i></b>					
SR-21 South of Bourne Avenue <i>(northbound approach)</i>	34,010	13,270	39%	F	E
SR-21 between Bourne Avenue & Jimmy Deloach Pkwy <i>(arterial)</i>	31,680	12,310	39%	F	C
SR-21 North of Jimmy Deloach Pkwy <i>(southbound approach)</i>	29,120	11,360	39%	F	B
<b><i>Design Year (2032)</i></b>					
SR-21 South of Bourne Avenue <i>(northbound approach)</i>	49,510	17,330	39%	F	F
SR-21 between Bourne Avenue & Jimmy Deloach Pkwy <i>(arterial)</i>	45,250	17,580	39%	F	E
SR-21 North of Jimmy Deloach Pkwy <i>(southbound approach)</i>	42,390	16,530	39%	F	E

The northbound approach of SR-21 at the intersection of SR-21 and Bourne Avenue would deteriorate from LOS E (AM peak) and LOS C (PM peak) in the existing conditions to LOS F in the design year conditions during the both peak periods, respectively. The southbound approach of SR-21 at the intersection of SR-21 and Jimmy Deloach Parkway would deteriorate from LOS C in the existing conditions to LOS F in the design year conditions during the AM peak period and from LOS A to LOS E in the design year conditions during the PM peak period.

Table 4 presented below shows the Average Annual Daily Traffic (AADT), percentage of trucks and Level of Service (LOS) summary on the corridors that connect to SR 21 and the Savannah Port for the no-build conditions in the open year (2012) and design year (2032). With additional traffic along SR-21 and on the corridors connecting SR-21 to Savannah Port, most of the intersections will fail in the AM peak hour in the open year (2012). In the year 2032, all intersections along SR-21 will operate at failing level of services during both the AM and PM peak hours as shown in Table 4.

<b>Table 4: Traffic Volumes and Intersection LOS at SR-21 – Future No-Build Conditions (Open Year/Design Year)</b>							
<b>Roadway Names</b>	<b>AADT (vpd)</b>	<b>Truck Volume (vpd)</b>	<b>Percentage of Trucks</b>	<b>A.M. Peak</b>		<b>P.M. Peak</b>	
				<b>Delay (sec)</b>	<b>LOS</b>	<b>Delay (sec)</b>	<b>LOS</b>
<b><i>Open Year (2012)</i></b>							
Bourne Avenue	9,050	4,980	55%	235.7	F	96.2	F
Grange Road	6,120	3,370	55%	158.3	F	17.2	B
Crossgate Drive	5,490	160	4%	135.4	F	46.9	D
Bonnybridge Road	7,660	2,910	38%	32.4	C	11.5	B
Jimmy Deloach Pkwy	16,060	5,620	35%	68.2	E	21.9	C
<b><i>Design Year (2032)</i></b>							
Bourne Avenue	13,170	7,240	55%	554.4	F	279.3	F
Grange Road	8,910	4,900	55%	743.9	F	948.0	F
Crossgate Drive	8,010	320	4%	346.9	F	188.2	F
Bonnybridge Road	11,150	4,238	38%	135.7	F	55.1	E
Jimmy Deloach Pkwy	22,950	8,030	35%	198.8	F	85.9	F

Intersection LOS presented in Table 4 above clearly indicates that SR-21 corridor will face heavy congestion in the design year. On an average, it would take a vehicle approximately 19.66 minutes to travel between the port entrance on Bourne Avenue and just north of Jimmy Deloach Parkway intersection along SR-21.

Safety

Safety analysis parameters, including total crash rates, fatality rates, and injury rates, were developed for the proposed limits near SR 21. A comparison was made of the rates along SR 21 with corresponding statewide averages for similar corridors. Table 5 below shows the crash and injury rates as compared to a similar facility for the years 2004-2006, the most recent data available.

Item/Year		Year		
		2004	2005	2006
Crash Type	Angle	24	54	33
	Rear-End	137	167	127
	Sideswipe – Same Direction	21	44	22
	Sideswipe – Opposite Direction	3	3	3
	Not a Collision with a Motor Vehicle	19	21	16
	Head-On	3	3	1
Total Crashes		207	292	202
Total Non-Fatal Injuries		92	123	90
Total Fatalities		1	1	0
Average Annual Daily Traffic (AADT)		32,176	26,900	27,360
Crash Rate (per 100 million vehicle miles traveled [mvmt])		331	558	380
Statewide Crash Rate (per 100 mvmt)		342	363	298
Non-Fatality Injury Rate (per 100 mvmt)		146.97	235.04	169.09
Statewide Non-Fatality Injury Rate (per 100 mvmt)		142	151	120
Fatality Rate (per 100 mvmt)		1.60	1.91	0.00
Statewide Fatality Rate (per 100 mvmt)		1.07	1.43	1.33

Table 5 above shows the following:

- The overall crash, injury, and fatality rates in the project area are higher than the corresponding statewide averages;
- On average, 234 crashes, 102 injuries, and 0.67 fatalities per year were observed in the project area;
- Rear-end crashes are the most predominant crashes in the project area, constituting 61 percent of the total crashes; and

- Angle crashes and sideswipe crashes account for approximately 16 percent and 14 percent of the total crashes, respectively;

As the truck and passenger vehicle traffic grows with time, SR-21 corridor is anticipated to face more traffic friction which may result in increased crashes and severities.

### Economic Vitality

Georgia's deepwater ports and inland barge terminals support more than 275,000 jobs throughout the state annually and contribute \$10.8 billion in income, \$35.4 billion in revenue and some \$1.4 billion in state and local taxes to Georgia's economy.

The Savannah Port is the fourth largest container port in the nation and the sixth largest automobile port in the nation. In 2007, 2.6 million Twenty-Equivalent Unit containers (TEU's) were handled through the Port of Savannah, a 20.6 percent increase from previous years. Deepening of the Savannah River channel from 42 feet to 48 feet (to accommodate larger ships) will increase the throughput capacity of the port from 2.6 million TEU's to 6 million TEU's by 2018. The roadway network must be able to keep up with the growth of the port.

The Savannah Port is serviced by approximately 100 trucking companies. The Georgia Ports Authority has two aggressive capital investment programs, one to increase the capacity of an intermodal container transfer facility and the second to construct 42 acres of additional container storage within the Ports Authority property. Both of these improvement projects, according to the Ports Authority, will "continue to stimulate the growth of businesses throughout the state for many years to come."

With this projected growth within the Savannah Port, freight transfer via trucks will greatly increase. The Jimmy Deloach Connector is needed to make ingress and egress of truck traffic to the Savannah Port efficient and be able to keep up with the increasing freight that will need to be distributed. Without the connector, congestion along SR 21 would further slow the ultimate distribution of goods from Georgia's port and potentially decrease the desirability of this port for the shipping industry.

### Logical Termini

All of the truck traffic heading for the Savannah Port from the Jimmy Deloach Connector is using SR 21. Therefore, beginning the project at the SR 21 and existing Jimmy Deloach Parkway would allow for a continuous direct access to the Savannah Port without placing truck traffic onto SR 21.

The terminus of Bourne Avenue was selected because this is the destination point at which the trucks head east into the Savannah Port gates. Construction of the proposed project would not require improvement to any other cross roads in the project corridor in the build year. This project would function with independent utility. However, in the design year, some turning lane improvements may be necessary along SR 21 at some of the cross streets which would be needed with or without the proposed Jimmy Deloach Connector. Any turn lane improvements on SR 21 and cross streets would need to be programmed as separate projects.

### Project Linkages

Below is a list of other projects in the area:

- Project HPP00-0000-00(345), P.I. No. 0000345, SR 307 overpass over New Port Authority Rail Line.
- Project CSMLP-0008-00(276), P.I. No. 0008276, CR 9/Gulfstream Road at Robert Miller Road intersection improvement.
- Project CSMLP-0008-00(275), P.I. No. 0008275, SR 21 at Crossgate Road/Gulfstream Road intersection improvement.
- Project CSNHS-0007-00(885), PI No. 0007885, CS 650/Grange Road Widening/Reconstruction from SR 21 to SR 25.
- Project BRST0-0064-01(049), PI No. 533160, Bridge replacement on SR 25/Ocean Highway over Norfolk Southern Railroad.
- Project CSMSL-0006-00(700), PI No. 0006700, Effingham Parkway from SR 119 to SR 30.
- Project MLP00-0307-00(008), PI No. 562165, SR 307/Dean Forest Road from R.B. Miller Road to SR 21.
- Project NH000-0041-02(048), PI No. 522880, SR 21 from CS 590/Smith Avenue North to SR 307.
- Project STP00-0218-01(001), PI No. 522790, Jimmy Deloach Parkway Extension from I-16 to SR 26/US 80
- Project CSSTP – 0007-00(259), PI No. 0007259, Jimmy Deloach Parkway at SR 17/US 80 Interchange.

### Functional Classification & Access Control

Jimmy Deloach Connector is proposed to have a functional classification of Rural Principal Arterial with full limited access. The need and purpose of this project is to increase mobility for trucks and other users between the port and SR 21 and the exiting Jimmy Deloach Parkway. Driveway access to the proposed Jimmy Deloach Connector will be detrimental to this need and purpose and is not recommended. Access will be controlled via interchanges and ramps along the mainline at existing Jimmy Deloach Parkway, Grange Road & Bourne Avenue/SR 307.

**Description of the proposed project:** Project CSMSL-0008-00(690) proposes the construction of Jimmy Deloach Connector, a new roadway alignment that would begin at Bourne Avenue/SR 307 and terminate at the existing eastern end of Jimmy Deloach Parkway. The project is primarily located in Port Wentworth, Chatham County, Georgia. New interchanges would be constructed at Grange Road and Jimmy Deloach Parkway. The proposed project would be approximately 3.1 miles in length. The typical section of the proposed limited access roadway would consist of four 12-foot wide travel lanes (two in either direction) separated by a median barrier with 4-foot wide inside shoulders, and 6.5-foot wide paved outside shoulders. From north of Bonnybridge Road to Jimmy Deloach Parkway, northbound and southbound lanes will be separated by a depressed median varying in width up to 250 feet. The posted speed limit would be 55 mph. Two diamond ramps are proposed at Bourne Avenue – one southbound exit ramp from Jimmy Deloach Connector and one northbound entrance ramp from Bourne Avenue.

Is the project located in a PM 2.5 Non-attainment area? \_\_\_\_\_ Yes  X  No

Is the project located in an Ozone Non-attainment area? \_\_\_\_\_ Yes  X  No

PDP Classification: Major  X  Minor \_\_\_\_\_

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

Functional Classification:  Rural Principal Arterial with Full Limited Access (Proposed)

U. S. Route Number(s):  NA

State Route Number(s):  NA

Traffic (AADT):

Base Year: (2012)  21,360

Design Year: (2032)  30,520

Existing design features:

**State Route 21**

- Typical Section: Four 12 foot travel lanes with variable 16 – 42 foot depressed median and 10 foot paved outside shoulders.
- Posted speed:  55 mph  Minimum radius for curve:  1,800 ft.
- Maximum super-elevation rate for curve:  6.00 %
- Maximum grade: Mainline:  3.5 % , Cross Roads:  1.7% , Driveways:  10%
- Width of right of way:  varies from 175 ft. to 200 ft.
- Major structures:
  - Bridge carrying Jimmy Deloach Parkway over SR 21  
(Structure ID 051-5060-0) Length = 273 ft, Width = 82.7 ft, Suff. Rating = 87.77
- Major interchanges or intersections along the project:
  - SR 21 at Bourne Avenue/SR 307 – signalized intersection
  - SR 21 at Grange Road – unsignalized intersection
  - SR 21 at Crossgate Road – signalized intersection
  - SR 21 at Bonnybridge Road/SR 30 – signalized intersection

- SR 21 at Jimmy Deloach Parkway – signalized intersection
- Existing length of roadway segment: 2.7 miles along SR 21

### **State Route 307**

- Typical Section: Two 12 foot travel lanes in each direction with continuous 14 foot median left turn lane and 10 foot outside shoulders.
- Posted speed: 45 mph Minimum radius for curve: 1,674 ft.
- Maximum super-elevation rate for curve: 6.00 %
- Maximum grade: Mainline: 1.4 %, Driveways: 1.3%
- Width of right of way: varies from 145 ft. to 160 ft.
- Major structures: None
- Major interchanges or intersections along the project:
  - Bourne Avenue/SR 307 at Norfolk Southern Railroad – at-grade railroad crossing
- Existing length of roadway segment: 0.30 miles

### **Proposed Design Features:**

#### **Jimmy Deloach Connector**

- Proposed typical section(s)
  - From begin project to north of Bonnybridge Road: Four 12-foot wide travel lanes separated by a median barrier, 4-foot wide inside shoulders and 6.5-foot wide paved outside shoulders. A median barrier is recommended for this section to reduce impacts and minimize structure costs.
  - From north of Bonnybridge Road to Jimmy Deloach Parkway: Four 12-foot wide travel lanes separated by a depressed median varying in width up to 250 feet, 4-foot wide paved inside shoulders and 6.5-foot wide paved outside shoulders.
- Proposed Design Speed Mainline: 55 mph
- Proposed Maximum grade Mainline: 3.0 %
- Maximum grade allowable: 4.0 %
- Proposed Maximum grade Side Street: 3.0 %
- Maximum grade allowable: 6 %
- Proposed Maximum grade driveway: NA
- Proposed Minimum radius for curve: 1060 ft
- Minimum radius allowable: 1060 ft
- Proposed Maximum degree of curve: 5.41°
- Maximum degree allowable: 5.41°
- Maximum super-elevation rate: 6.00 %

### **Ramps**

- Proposed typical section
  - Bourne Avenue/SR 307 Interchange: (3) 12-foot wide travel lanes, 10-foot wide paved outside shoulder and 2-foot wide paved inside shoulder.
  - Grange Road Interchange: (1) 16-foot wide travel lane on each ramp, additional turn lane at each exit ramp-head, 10-foot wide paved outside shoulders and 2-foot wide paved inside shoulders.

- Jimmy Deloach Parkway Interchange: (1) 16-foot wide travel lane on each ramp, additional turn lane at each exit ramp-head, 10-foot wide paved outside shoulders and 2-foot wide paved inside shoulders.
- Proposed Design Speed Ramp : 45 mph
- Proposed Maximum grade Ramp: 4 %
- Maximum grade allowable: 5 %
- Proposed Minimum radius for curve: 700 ft
- Minimum radius allowable: 587 ft
- Proposed Maximum degree of curve: 8.19°
- Maximum degree allowable: 9.76°
- Maximum super-elevation rate: 8.00 %
- Right of Way:
  - Width: Varies from 200 feet along mainline, up to 820 feet at interchange locations
  - Easements: Temporary ( X ), Permanent ( X ), Utility ( X ), Other ( ).
  - Type of access control: Full ( X ), Partial ( ), By Permit ( ), Other ( ).
  - Number of parcels: 46                      Number of displacements:
    - Businesses: 6
    - Residences: 5
- Structures:
  - Bridge carrying proposed Jimmy Deloach Connector over Grange Road – will approximately be 112 feet long by 74.5 feet wide, single span, concrete bridge with PSC Bulb-T 63” beams and MSE walls at begin and end bridge.
  - Bridge carrying proposed Jimmy Deloach Connector over Crossgate Road – will approximately be 103 feet long by 74.5 feet wide, single span, concrete bridge with PSC Bulb-T 63” beams and MSE walls at begin and end bridge.
  - Bridge carrying proposed Jimmy Deloach Connector over Norfolk Southern Railroad – will approximately be 95 feet long by 74.5 feet wide, single span, concrete bridge with PSC Bulb-T 54” beams and MSE walls at begin and end bridge. One future track is assumed to be located on either side of existing track.
  - Bridge carrying proposed Jimmy Deloach Connector over Bonnybridge Road/SR 30 – will approximately be 103 feet long by 78.25 feet constant width, single span, concrete bridge with Bulb-T 63” beams and MSE walls at begin and end bridge.
  - Bridge carrying proposed Jimmy Deloach Connector (southbound lanes) over wetlands – the proposed concrete bridge will approximately be 600 feet long by 63.625 feet constant width, 12 equal spans with AASHTO Type 2 beams.
  - Bridge carrying proposed Jimmy Deloach Connector (northbound lanes) over wetlands – the proposed concrete bridge will approximately be 528 feet long by 36 feet wide, 11 equal spans with AASHTO Type 2 beams.
  - Bridge carrying proposed Jimmy Deloach Connector (southbound lanes) over existing Jimmy Deloach Parkway – will approximately consist of 122 feet long by 36 feet wide, single span, concrete bridge with PSC Bulb-T 72” beams and MSE walls at begin and end bridge.

- Bridge carrying proposed Jimmy Deloach Connector (northbound lanes) over existing Jimmy Deloach Parkway – will approximately consist of 123 feet long by 36 feet wide, single span, concrete bridge with PSC Bulb-T 72” beams and MSE walls at begin and end bridge.
- The existing Jimmy Deloach Parkway over SR 21 and CSX railroad will be widened in kind to accommodate proposed roadway width.
- Major intersections, interchanges median openings and signal locations:
  - Jimmy Deloach Connector southbound exit ramp at Bourne Avenue/SR 307 – signalized intersection.
  - Jimmy Deloach Connector northbound entrance ramp at Bourne Avenue/SR 307 – signalized intersection.
  - Jimmy Deloach Connector at Grange Road – grade separated, full diamond interchange.
  - Jimmy Deloach Connector at Jimmy Deloach Parkway – grade separated, full diamond interchange.
- For ITS projects identify physical limits of field device location, location of any control centers and/or brief explanation of new features: N/A
- Transportation Management Plan anticipated: Yes ( X )                      No ( )
- Design Exceptions to controlling criteria anticipated:

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

- Design Variances: None anticipated.
- Environmental concerns: USACE individual permit for wetland impacts.
- Level of environmental analysis:
  - Are Time Savings Procedures appropriate? Yes ( ), No ( X ),
  - Categorical Exclusion anticipated ( ).
  - Environmental Assessment/Finding of No Significant Impact (FONSI) ( X ).
  - Environmental Impact Statement (EIS) ( ).

- Utility involvements: Communications, power, gas and railroads. Following is a list of utility owner along the corridor -
  - Atlanta Gas and Light
  - BellSouth/AT&T
  - Comcast
  - City of Savannah
  - City of Port Wentworth
  - Georgia Power - Distribution
  - Georgia Power - Transmission
  - Level 3 Communications
  - Southern Natural Gas Company
- VE Study held February 2-5, 2010
- Benefit/Cost Ratio: 6.76

**Project Cost Estimates and Funding Responsibilities:**

	PE*	ROW	UTILITY	CST**	MITIGATION
By Whom	GPA	GDOT	GDOT	GDOT	GDOT
\$ Amount	\$2,750,000	\$30,127,000	\$6,452,618	\$91,172,611	\$2,670,000

\* An additional GDOT PE in amount of \$200,000.

\*\* Construction cost includes mitigation cost.

**Project Activities Responsibilities:**

- Concept Design: Georgia Ports Authority (Parsons as consultant)
- Preliminary & Final Design: Design/build team
- Right-of-Way Acquisition: Design/build team
- Right-of-Way funding (real property): GDOT
- Relocation of Utilities: Design/build team
- Letting to contract: GDOT
- Supervision of construction: GDOT
- Providing material pits: Design/build team
- Providing detours: N/A
- Environmental Studies/Documents/Permits: Georgia Ports Authority (Parsons as Consultant)
- Environmental Mitigation: Design/build team

**Coordination:**

- Initial concept team meeting date and brief summary: March 25, 2008. Meeting minutes attached
- Concept team meeting date and brief summary: November 19, 2009. Meeting minutes attached
- PAR meetings, dates and results: PAR submitted to agencies. However, meeting not required. Comment period ended January 8, 2010.
- FEMA, USCG, and/or TVA: Not anticipated
- Public involvement: Public Information Open House (PIOH) held on April 23, 2009 at Groves High School in Garden City, Georgia. A total of 70 people attended the PIOH. Of the comments received, 11 were in support of the project, none opposed, one was uncommitted and five expressed conditional support for the project. Public Hearing to be scheduled as part of the EA/FONSI process.
- Local government comments: None
- Other projects in the area:
  - Project HPP00-0000-00(345), P.I. No. 0000345, SR 307 overpass over New Port Authority Rail Line.
  - Project CSMLP-0008-00(275), P.I. No. 0008275, CR 9/Gulfstream Road at Robert Miller Road intersection improvement.
  - Project CSSTP-0007-00(141), P.I. No. 0007141, SR 21 at Crossgate Road/Gulfstream Road intersection improvement.
  - Project CSNHS-0007-00(885), PI No. 0007885, CS 650/Grange Road Widening/Reconstruction from SR 21 to SR 25.
  - Project BRST0-0064-01(049), PI No. 533160, Bridge replacement on SR 25 Ocean Highway over Norfolk Southern Railroad.
  - Project CSMSL-0006-00(700), PI No. 0006700, Effingham Parkway from SR 119 to SR 30.
  - Project MLP00-0307-00(008), PI No. 562165, SR 307/Dean Forest Road from R.B. Miller Road to SR 21.
  - Project NH000-0041-02(048), PI No. 522880, SR 21 from CS 590/Smith Avenue North to SR 307.
  - Project STP00-0218-01(001), PI No. 522790, Jimmy Deloach Parkway Extension from I-16 to SR 26/US 80
  - Project CSSTP – 0007-00(259), PI No. 0007259, Jimmy Deloach Parkway at SR 17/US 80 Interchange.
- Railroads: CSX Railroad and Norfolk Southern Railroad
- Other coordination to date:
  - Georgia Ports Authority
  - Georgia Department of Transportation
  - Georgia State Road & Tollway Authority

### **Scheduling – Responsible Parties' Estimate**

- Time to complete the environmental process: Begin: 01/2008 End: 04/2011
- Time to complete Design-Build (D-B) costing plans: Begin: 08/2009 End: 03/2011
- Time to complete right of way plans (D-B Firm): Begin: 05/2012 End: 09/2012
- Time to complete the Section 404 Permit (D-B Firm): Begin: 08/2012 End: 08/2013
- Time to complete final construction plans (D-B Firm): Begin: 05/2012 End: 11/2013
- Time to complete the purchase of right-of-way (D-B Firm): Begin: 09/2012 End: 10/2013
- List other major items that will affect the project schedule: Funding availability and surcharge related wait times required during construction.

### **Other Alternates considered:**

**Alternate 1** – this alternate proposes the construction of Jimmy Deloach Connector, a new roadway alignment from State Route 21 (SR 21) near Smith Avenue to SR 21 near Interstate 95 in Savannah, Chatham County, Georgia. New interchanges would be constructed at SR 21 near Smith Avenue, Bourne Avenue/SR 307, Grange Road, Jimmy Deloach Parkway, and SR 21 near I-95. The proposed project would be approximately 5.6 miles in length. Construction of this alternative is expected to attract commuter traffic in large numbers in addition to truck traffic. Since the immediate need of the project is to ensure faster truck movement between the port's Garden City terminal and I-95, the two connections to SR 21 on the north & south ends are largely determined as unnecessary. Higher wetland impacts, impacts to cultural resources and project costs eliminated this alternative from consideration.

**Alternate 2A** – this alternate proposes the construction of the Jimmy Deloach Connector, a new roadway alignment that would begin at Bourne Avenue/SR 307 and terminate at the existing eastern end of Jimmy Deloach Parkway in Savannah, Chatham County, Georgia. New interchanges would be constructed at Grange Road and Jimmy Deloach Parkway. The proposed project would be approximately 3.1 miles in length and allow for future connections to SR 21. This alternate proposes a 'T' type intersection at Bourne Avenue. It was not selected as the preferred alternate due to impacts to cultural resources and smaller travel time savings in comparison to the preferred alternate.

**Alternate 2C** – this alternate is similar to Alternate 2A above, except that it proposes a flyover ramp from southbound Jimmy Deloach Connector to eastbound Bourne Avenue/SR 307. This alternate does not offer any additional travel time savings when compared to the preferred alternate and has higher construction costs associated with the flyover ramp. In addition it would cause impacts to cultural resources. Therefore, it is not selected as the preferred alternate.

**Alternate 2D** – this alternate is similar to Alternate 2A above, except that it proposes a 30 mph loop ramp from southbound Jimmy Deloach Connector to eastbound Bourne Avenue/SR 307 in the southwest quadrant of the interchange. This alternate does not offer any additional travel time savings when compared to the preferred alternate and has higher overall cost. In addition, it would cause impacts to cultural resources. Therefore, it is not selected as the preferred alternate.

**SR 21 Widening** – the existing SR 21 is a 5 lane section. Based on the current traffic data, SR 21 will not have the capacity to support future traffic volumes that are projected as a result of ongoing expansion associated with the Georgia Port. The already high truck traffic and commuter traffic along this route has resulted in safety concerns along this corridor. Many of the intersections along SR 21 are already showing failing levels of service. Consideration was given to widening SR 21, however this corridor is highly developed with both commercial and industrial developments. Many of the commercial developments support the local residents. Widening SR 21 would result in numerous displacements and community impacts. Therefore, widening of existing SR 21 corridor is eliminated from further consideration.

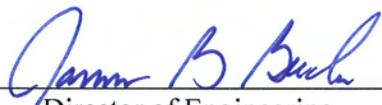
**No Build Alternate** – this alternate was not selected because it does not satisfy the project need and purpose.

**Comments:** None.

**Attachments:**

1. Cost Estimates:
  - a. Construction including E&I
  - b. Asphalt/Fuel Price Index Spreadsheet
  - c. Right of Way
  - d. Utilities
2. Typical Sections
3. Traffic Diagrams
4. Benefit/Cost Analysis
5. Bridge Inventory Data
6. Initial Concept Team Meeting Minutes
7. Concept Team Meeting Minutes
8. VE Implementation Letter

**Exempt Projects**

Concur:   
Director of Engineering

Approve:   
Chief Engineer

Date: 11/22/2010

# **ATTACHMENT 1**

## **Cost Estimates**

# DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

-----  
INTERDEPARTMENT CORRESPONDENCE

**FILE** PROJECT No. CSMSL-08-00(690) , Chatham County **OFFICE** Innovative Program Delivery  
Jimmy Deloach Connector from Bourne Avenue/SR 307 to Jimmy Deloach Parkway **DATE** 08/17/2010

P.I. No. 0008690

**FROM** Darryl D. VanMeter, P.E., State Innovative Program Delivery Engineer

**TO** Ronald E. Wishon, Project Review Engineer

**SUBJECT REVISIONS TO PROGRAMMED COSTS**

PROJECT MANAGER Mike Dover, P.E.

MNGT LET DATE TBD

MNGT R/W DATE TBD

**PROGRAMMED COST (TPro W/OUT INFLATION)**

**LAST ESTIMATE UPDATE**

CONSTRUCTION \$ 82,959,475.30

DATE 01/15/2010

RIGHT OF WAY \$ 31,229,300.00

DATE 05/27/2010

UTILITIES \$ 8,388,403.00

DATE 02/24/2009

**REVISED COST ESTIMATES**

CONSTRUCTION\* \$ 91,172,610.85

RIGHT OF WAY \$ 30,127,000.00

UTILITIES\*\* \$ 6,452,618

\* Costs contain 5 % Engineering and Inspection and 0 % Construction Contingencies.

\*\* Costs contain 0 % contingency.

**REASON FOR COST INCREASE**

Revised quantities from asphalt pavement to concrete pavement along mainline. Added wetland mitigation cost.  
 Changed earthwork slopes from 2:1 max. to 4:1 max.  
 Additional walls to minimize impacts.  
 Removed 3 % Construction Contingencies  
 Removed 30% Utility Contingency

**CONTINGENCY SUMMARY**

Construction Cost Estimate:	\$ <u>80,000,819.50</u>	(Base Estimate)
Engineering and Inspection:	\$ <u>4,000,040.98</u>	(Base Estimate x <u>5</u> %)
Construction Contingency:	\$ <u>0.00</u>	(Base Estimate x <u>0</u> %)
		(The Construction Contingency is based on the Project Improvement Type in TPro.)
Total Fuel Adjustment	\$ <u>5,563,276.30</u>	(From attached worksheet)
Total Liquid AC Adjustment	\$ <u>1,608,474.07</u>	(From attached worksheet)
<b>Construction Total:</b>	\$ <u>91,172,610.85</u>	
Utility Cost Estimate:	\$ <u>6,452,618</u>	
Utility Contingency:	\$ <u>0.00</u>	<u>0</u> %
<b>Utility Total:</b>	\$ <u>6,452,618</u>	

**REIMBURSABLE UTILITY COST**

Utility Owner	Reimbursable Cost
City of Savannah	500,000
Georgia Power Transmission	598,000
Southern Natural Gas	5,354,618

Attachments

c: Genetha Rice-Singleton, State Program Control Administrator

### Estimate Report for file "CSMSL-0008-00(690)"

<b>Section Section 1 - Roadway Items</b>					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
150-1000	1	LS	150000.0	TRAFFIC CONTROL - CSMSL-0008-00(690)	150000.0
153-1300	1	EA	69892.0	FIELD ENGINEERS OFFICE TP 3	69892.0
201-1500	1	LS	3500000.0	CLEARING & GRUBBING - CSMSL-0008-00(690)	3500000.0
205-0001	150000	CY	4.0	UNCLASS EXCAV	600000.0
206-0002	2500000	CY	10.0	BORROW EXCAV, INCL MATL	2.5E
310-1101	164654	TN	20.0	GR AGGR BASE CRS, INCL MATL	3293080.0
400-3624	961	TN	80.0	ASPH CONC 12.5 MM PEM, GP 2 ONLY, INCL POLYMER-MODIFIED BITUM MATL & H LIME	76880.0
402-3121	7688	TN	75.0	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	576600.0
402-3190	40549	TN	75.0	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	3041175.0
402-3600	1922	TN	105.0	ASPH CONC 12.5 MM SMA, GP 2 ONLY, INCL POLYMER-MODIFIED BITUM MATL & H LIME	201810.0
413-1000	18018	GL	2.0	BITUM TACK COAT	36036.0
430-0220	202232	SY	65.0	PLAIN PC CONC PVMT, CL 1CONC, 12 INCH THK	1.31
433-1000	3503	SY	146.0	REINF CONC APPROACH SLAB	511438.0
621-3020	5421	LF	80.0	CONCRETE BARRIER, TYPE 20	433680.0
621-3020	5421	LF	120.0	CONCRETE BARRIER, TYPE 21	650520.0
634-1200	150	EA	96.0	RIGHT OF WAY MARKERS	14400.0
641-1100	600	LF	52.0	GUARDRAIL, TP T	31200.0
641-1200	5500	LF	18.0	GUARDRAIL, TP W	99000.0
641-5001	9	EA	675.0	GUARDRAIL ANCHORAGE, TP 1	6075.0
641-5012	18	EA	1864.0	GUARDRAIL ANCHORAGE, TP 12	33552.0
643-0010	17500	LF	4.67	FIELD FENCE WOVEN WIRE	81725.0
648-1350	2	EA	13460.0	IMPACT ATTENUATOR UNIT, TYPE P -	26920.0
<b>Section Sub Total:</b>					<b>\$51,579,063.00</b>

<b>Section Section 2 - Grading &amp; Drainage</b>					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
207-0203	1200	CY	55.0	FOUND BK FILL MATL, TP II	66000.0
441-0301	20	EA	2034.0	CONC SPILLWAY, TP 1	40680.0
441-0303	12	EA	1901.0	CONC SPILLWAY, TP 3	22812.0
500-3101	1440	CY	294.0	CLASS A CONCRETE	423360.0
500-3201	1155	CY	554.0	CLASS B CONCRETE, RETAINING WALL	639870.0
511-1000	187428	LB	1.0	BAR REINF STEEL	187428.0
550-1180	4000	LF	38.0	STORM DRAIN PIPE, 18 IN, H 1-10	152000.0
550-1240	750	LF	45.0	STORM DRAIN PIPE, 24 IN, H 1-10	33750.0
550-1300	2500	LF	59.0	STORM DRAIN PIPE, 30 IN, H 1-10	147500.0
550-1360	3000	LF	66.0	STORM DRAIN PIPE, 36 IN, H 1-10	198000.0
550-1420	850	LF	86.0	STORM DRAIN PIPE, 42 IN, H 1-10	73100.0
550-1480	650	LF	104.0	STORM DRAIN PIPE, 48 IN, H 1-10	67600.0
550-2180	3500	LF	33.0	SIDE DRAIN PIPE, 18 IN, H 1-10	115500.0
550-2182	5000	LF	32.0	SIDE DRAIN PIPE, 18 IN, H 15-20	160000.0
550-3318	30	EA	551.0	SAFETY END SECTION 18 IN, STORM DRAIN, 4:1 SLOPE	16530.0
550-3324	24	EA	881.0	SAFETY END SECTION 24 IN, STORM DRAIN, 4:1 SLOPE	21144.0
550-3330	12	EA	1329.0	SAFETY END SECTION 30 IN, STORM DRAIN, 4:1 SLOPE	15948.0
550-3336	20	EA	1789.0	SAFETY END SECTION 36 IN, STORM DRAIN, 4:1 SLOPE	35780.0
550-3418	16	EA	545.0	SAFETY END SECTION 18 IN, SIDE DRAIN, 4:1 SLOPE	8720.0
550-4118	8	EA	413.0	FLARED END SECTION 18 IN, SIDE DRAIN	3304.0
550-4124	12	EA	530.0	FLARED END SECTION 24 IN, SIDE DRAIN	6360.0
550-4130	16	EA	500.0	FLARED END SECTION 30 IN, SIDE DRAIN	8000.0
550-4242	4	EA	1362.0	FLARED END SECTION 42 IN, STORM DRAIN	5448.0
577-1100	28	EA	1700.0	METAL DRAIN INLET - COMPLETE ASSEMBLY	47600.0
603-6006	50	SY	119.0	SAND-CEMENT BAG RIP RAP, 6 IN	5950.0
668-2200	8	EA	3135.0	DROP INLET, GP 2	25080.0
668-2231	18	EA	2116.0	DROP INLET, GP 1, MODIFIED TP M-1	38088.0
668-5000	5	EA	1898.0	JUNCTION BOX	9490.0
668-8012	52	SF	52.0	SAFETY GRATE, TP 2	2704.0
960-9999	1	Lump Sum	300000.0	PRECAST CULVERT, DBL BARREL - CONSPAN	300000.0
<b>Section Sub Total:</b>					<b>\$2,877,746.00</b>

<b>Section Section 3 - Erosion Control</b>					
<b>Item Number</b>	<b>Quantity</b>	<b>Units</b>	<b>Unit Price</b>	<b>Item Description</b>	<b>Cost</b>
163-0232	150	AC	375.0	TEMPORARY GRASSING	56250.0
163-0240	3324	TN	165.0	MULCH	548460.0
163-0300	3	EA	1220.0	CONSTRUCTION EXIT	3660.0
163-0503	90	EA	454.0	CONSTRUCT AND REMOVE SILT CONTROL GATE, TP 3	40860.0
163-0520	3000	LF	15.0	CONSTRUCT AND REMOVE TEMPORARY PIPE SLOPE DRAIN	45000.0
163-0522	1500	EA	93.0	CONSTRUCT AND REMOVE TEMPORARY DITCH CHECKS - TYPE A SILT FENCE	139500.0
163-0523	1800	EA	144.0	CONSTRUCT AND REMOVE TEMPORARY DITCH CHECKS - TYPE C SILT FENCE	259200.0
163-0550	32	EA	209.0	CONSTRUCT AND REMOVE INLET SEDIMENT TRAP	6688.0
165-0010	3000	LF	1.0	MAINTENANCE OF TEMPORARY SILT FENCE, TP A	3000.0
165-0030	18000	LF	1.0	MAINTENANCE OF TEMPORARY SILT FENCE, TP C	18000.0
165-0040	1200	EA	55.0	MAINTENANCE OF EROSION CONTROL CHECKDAMS/DITCH CHECKS	66000.0
165-0050	21000	LF	1.0	MAINTENANCE OF SILT RETENTION BARRIER	21000.0
165-0070	12000	LF	2.0	MAINTENANCE OF BALED STRAW EROSION CHECK	24000.0
165-0087	90	EA	112.0	MAINTENANCE OF SILT CONTROL GATE, TP 3	10080.0
165-0101	3	EA	500.0	MAINTENANCE OF CONSTRUCTION EXIT	1500.0
165-0105	32	EA	85.0	MAINTENANCE OF INLET SEDIMENT TRAP	2720.0
167-1000	36	EA	559.0	WATER QUALITY MONITORING AND SAMPLING	20124.0
167-1500	36	MO	746.0	WATER QUALITY INSPECTIONS	26856.0
170-1000	21500	LF	13.0	FLOATING SILT RETENTION BARRIER	279500.0
171-0010	6000	LF	2.0	TEMPORARY SILT FENCE, TYPE A	12000.0
171-0030	36000	LF	3.0	TEMPORARY SILT FENCE, TYPE C	108000.0
441-0204	1200	SY	38.0	PLAIN CONC DITCH PAVING, 4 IN	45600.0
603-2018	200	SY	43.0	STN DUMPED RIP RAP, TP 1, 18 IN	8600.0
603-2180	450	SY	25.0	STN DUMPED RIP RAP, TP 3, 12 IN	11250.0
603-2181	2000	SY	35.0	STN DUMPED RIP RAP, TP 3, 18 IN	70000.0
603-7000	2650	SY	4.0	PLASTIC FILTER FABRIC	10600.0
643-8200	9000	LF	2.0	BARRIER FENCE (ORANGE), 4 FT	18000.0
700-6910	300	AC	824.0	PERMANENT GRASSING	247200.0
700-7000	390	TN	65.0	AGRICULTURAL LIME	25350.0
700-7010	780	GL	22.0	LIQUID LIME	17160.0
700-8000	252	TN	458.0	FERTILIZER MIXED GRADE	115416.0
700-8100	25300	LB	2.0	FERTILIZER NITROGEN CONTENT	50600.0
715-2200	143883	SY	2.0	BITUMINOUS TREATED ROVING, WATERWAYS	287766.0
716-2000	136074	SY	1.0	EROSION CONTROL MATS, SLOPES	136074.0
<b>Section Sub Total:</b>					<b>\$2,736,014.00</b>

<b>Section Section 4 - Signing &amp; Marking</b>					
<b>Item Number</b>	<b>Quantity</b>	<b>Units</b>	<b>Unit Price</b>	<b>Item Description</b>	<b>Cost</b>
636-1072	1314	SF	30.0	HIGHWAY SIGNS, ALUM EXTRUDED PANELS, REFL SHEETING, TP 3	39420.0
636-2080	250	LF	12.0	GALV STEEL POSTS, TP 8	3000.0
636-2090	150	LF	9.0	GALV STEEL POSTS, TP 9	1350.0
638-1001	2	LS	69600.0	STR SUPPORT FOR OVERHEAD SIGN, TP I, STA -	139200.0
638-1007	6	LS	18000.0	STR SUPPORT FOR OVERHEAD SIGN, TP VII, STA -	108000.0
647-1000	6	LS	60000.0	TRAFFIC SIGNAL INSTALLATION NO -	360000.0
653-0120	62	EA	75.0	THERMOPLASTIC PVMT MARKING, ARROW, TP 2	4650.0
653-0140	6	EA	100.0	THERMOPLASTIC PVMT MARKING, ARROW, TP 4	600.0
653-1501	67898	LF	1.0	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	67898.0
653-1502	34425	LF	1.0	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	34425.0
653-3501	51398	GLF	1.0	THERMOPLASTIC SKIP TRAF STRIPE, 5 IN, WHITE	51398.0
653-6004	18690	SY	2.0	THERMOPLASTIC TRAF STRIPING, WHITE	37380.0
654-1003	500	EA	3.0	RAISED PVMT MARKERS TP 3	1500.0
657-1085	4864	LF	5.0	PREFORMED PLASTIC SOLID PVMT MKG, 8 IN, CONTRAST (BLACK-WHITE), TP PB	24320.0
657-1244	204	LF	19.0	PREFORMED PLASTIC SOLID PVMT MKG, 24 IN, WHITE, TP PB	3876.0
657-3085	4864	GLF	4.0	PREFORMED PLASTIC SKIP PVMT MKG, 8 IN, CONTRAST (BLACK-WHITE), TP PB	19456.0
				PREFORMED PLASTIC SOLID PVMT MKG, 8 IN,	

657-6085	4864	LF	5.0	CONTRAST (BLACK-YELLOW), TP PB	24320.0
<b>Section Sub Total:</b>					<b>\$920,793.00</b>

**Section Section 5 - Bridges & Walls**

Item Number	Quantity	Units	Unit Price	Item Description	Cost
500-9999	8034	SF	110.0	BRIDGE NO. 2 - CROSSGATE ROAD OVERPASS	883740.0
500-9999	7410	SF	110.0	BRIDGE NO. 3 - NORFOLK SOUTHERN RR OVERPASS	815100.0
500-9999	8034	SF	110.0	BRIDGE NO. 4 - BONNYBRIDGE ROAD OVERPASS	883740.0
500-9999	8736	SF	110.0	BRIDGE NO. 1 - GRANGE ROAD INTERCHANGE	960960.0
500-9999	40200	SF	110.0	BRIDGE NO. 5 - SB JIMMY DELOACH CONN. OVER WETLANDS	4422000.0
500-9999	20582	SF	110.0	BRIDGE NO. 6 - NB JIMMY DELOACH CONN. OVER WETLANDS	2265120.0
500-9999	4758	SF	110.0	BRIDGE NO. 7 - SB JIMMY DELOACH PKWY. INTERCHANGE	523380.0
500-9999	3240	SF	150.0	BRIDGE NO. 9 - BRIDGE WIDENING JDC OVER SR 21	486000.0
500-9999	4797	SF	110.0	BRIDGE NO. 8 - NB JIMMY DELOACH PKWY. INTERCHANGE	527670.0
627-1000	69200	SF	33.0	MSE WALL FACE, 0 - 10 FT HT, WALL NO -	2283600.0
627-1010	51900	SF	35.0	MSE WALL FACE, 10 - 20 FT HT, WALL NO -	1816500.0
627-1020	25950	SF	38.0	MSE WALL FACE, 20 - 30 FT HT, WALL NO -	986100.0
627-1030	25950	SF	40.0	MSE WALL FACE, STR THAN 30 FT HT, WALL NO -	1038000.0
627-1100	4610	LF	70.15	COPING A, WALL NO -	323391.5
627-1140	4610	LF	191.0	TRAFFIC BARRIER V, WALL NO -	880510.0
627-1130	4800	CY	25.25	ADDITIONAL MSE BACKFILL	121392.0
<b>Section Sub Total:</b>					<b>\$19,217,203.50</b>

**Section Section 6 - Environmental Mitigation**

Item Number	Quantity	Units	Unit Price	Item Description	Cost
005-0004	1	LS	2670000.0	WETLAND MITIGATION	2670000.0
<b>Section Sub Total:</b>					<b>\$2,670,000.00</b>

**TOTAL ESTIMATED COST: \$80,000,819.50**

P.I. Number 8690

County Chatham

Date 8/20/2010

Project Number CSMSL-0008-00(690)

**Special Provision, Section 109-Measurement and Payment  
FUEL PRICE ADJUSTMENT (ENGLISH 125% MAX)**

ENTER FPL DIESEL	3.018
ENTER FPM DIESEL	6.791

ENTER FPL UNLEADED	2.804
ENTER FPM UNLEADED	6.309

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

<b>INCREASE ADJUSTMENT</b>
<b>125.00%</b>

<b>INCREASE ADJUSTMENT</b>
<b>125.00%</b>

ROADWAY ITEMS	QUANTITY	DIESEL FACTOR	GALLONS DIESEL	UNLEADED FACTOR	GALLONS UNLEADED	REMARKS
Excavations paid as specified by Sections 205 (CUBIC YARD)	150000.000	0.29	43500.00	0.15	22500.00	
Excavations paid as specified by Sections 206 (CUBIC YARD)	2500000.000	0.29	725000.00	0.15	375000.00	
GAB paid as specified by the ton under Section 310 (TON)	164654.000	0.29	47749.66	0.24	39516.96	
Hot Mix Asphalt paid as specified by the ton under Sections 400 (TON)	961.000	2.90	2786.90	0.71	682.31	
Hot Mix Asphalt paid as specified by the ton under Sections 402 (TON)	50159.000	2.90	145461.10	0.71	35612.89	
PCC Pavement paid as specified by the square yard under Section 430 (SY)	202232.000	0.25	50558.00	0.20	40446.40	

BRIDGE ITEMS	Quantity	Unit Price	QF/1000	Diesel Factor	Gallons Diesel	Unleaded Factor	Gallons Unleaded	REMARKS
Bridge Excavation (CY) Section 211	1.00	960,960.00	960.9600	8.00	7687.68	1.50	1441.44	Bridge No. 1
Class __Concrete (CY) Section 500	1.00	883,740.00	883.7400	8.00	7069.92	1.50	1325.61	Bridge No. 2
Class __Concrete (CY) Section 500	1.00	815,100.00	815.1000	8.00	6520.80	1.50	1222.65	Bridge No. 3
Class __Concrete (CY) Section 500	1.00	883,740.00	883.7400	8.00	7069.92	1.50	1325.61	Bridge No. 4
Superstru Con Class__(CY) Section 500	1.00	4,422,000.00	4422.0000	8.00	35376.00	1.50	6633.00	Bridge No. 5
Superstru Con Class__(CY) Section 500	1.00	2,265,120.00	2265.1200	8.00	18120.96	1.50	3397.68	Bridge No. 6
Superstru Con Class__(CY) Section 500	1.00	523,380.00	523.3800	8.00	4187.04	1.50	785.07	Bridge No. 7
Concrete Handrail (LF) Section 500	1.00	527,670.00	527.6700	8.00	4221.36	1.50	791.51	Bridge No. 8
Concrete Barrier (LF) Section 500	1.00	486,000.00	486.0000	8.00	3888.00	1.50	729.00	Bridge No. 9

BRIDGE ITEMS	Quantity	Unit Price	QF/1000	Diesel Factor	Gallons Diesel	Unleaded Factor	Gallons Unleaded	REMARKS
--------------	----------	------------	---------	---------------	----------------	-----------------	------------------	---------

Stru Steel Plan Quantity (LB) Section 501				8.00		1.50	
Stru Steel Plan Quantity (LB) Section 501				8.00		1.50	
PSC Beams____ (LF) Section 507				8.00		1.50	
PSC Beams____ (LF) Section 507				8.00		1.50	
PSC Beams____ (LF) Section 507				8.00		1.50	
Stru Reinf Plan Quantity(LB) Section 511				8.00		1.50	
Stru Reinf Plan Quantity(LB) Section 511				8.00		1.50	
Bar Reinf Steel (LB) Section 511				8.00		1.50	
Piling__inch (LF) Section 520				8.00		1.50	
Piling__inch (LF) Section 520				8.00		1.50	
Piling__inch (LF) Section 520				8.00		1.50	
Piling__inch (LF) Section 520				8.00		1.50	
Piling__inch (LF) Section 520				8.00		1.50	
Piling__inch (LF) Section 520				8.00		1.50	
Drilled Caisson,____ (LF) Section 524				8.00		1.50	
Drilled Caisson,____ (LF) Section 524				8.00		1.50	
Drilled Caisson,____ (LF) Section 524				8.00		1.50	
Pile Encasement,____(LF) Section 547				8.00		1.50	
Pile Encasement,____(LF) Section 547				8.00		1.50	
<b>SUM QF DIESEL=</b>		<b>1109197.34</b>		<b>SUM QF UNLEADED=</b>		<b>531410.13</b>	
<b>DIESEL PRICE ADJUSTMENT(\$)</b>				<b>\$3,849,691.21</b>			
<b>UNLEADED PRICE ADJUSTMENT(\$)</b>				<b>\$1,713,585.09</b>			



## ASPHALT CEMENT PRICE ADJUSTMENT FOR BITUMINOUS TACK COAT(Surface Treatment 125% MAX)

APPLICABLE TO CONTRACTS CONTAINING THE 413 SPEC. SECTION 413.5.01 ADJUSTMENTS ASPHALT PRICE ADJUSTMENT FOR BITUMINOUS TACK COAT

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

ENTER APL

ENTER APM

**125.00%**      **INCREASE ADJUSTMENT**

### Use this side for Asphalt Emulsion Only

L.I.N.	TYPE	ASPHALT EMULSION (GALLONS)
TMT = <input style="width: 100px;" type="text"/>		
REMARKS: <input style="width: 90%; height: 20px;" type="text"/>		

### Use this side for Asphalt Cement Only

L.I.N.	TYPE	TACK (GALLONS)
TMT = <input style="width: 100px;" type="text"/>		
REMARKS: <input style="width: 90%; height: 20px;" type="text"/>		

**MONTHLY PRICE ADJUSTMENT(\$)**

### ADJUSTMENT SUMMARY

FUEL PRICE ADJUSTMENT (*ENGLISH 125% MAX*)

DIESEL PRICE ADJUSTMENT(\$) \$3,849,691.21

UNLEADED PRICE ADJUSTMENT(\$) \$1,713,585.09

ASPHALT CEMENT PRICE ADJUSTMENT (**BITUMINOUS TACK COAT 125% MAX**) \$47,269.27

400 / 402 ASPHALT CEMENT PRICE ADJUSTMENT **125% MAX** \$1,561,204.80

ASPHALT CEMENT PRICE ADJUSTMENT FOR BITUMINOUS TACK COAT(**Surface Treatment 125% MAX**)

REMARKS:

<b>TOTAL ADJUSTMENTS</b>	<b>\$7,171,750.37</b>
--------------------------	-----------------------

# Preliminary Right of Way Cost Estimate



**Phil Copeland**  
**Right of Way Administrator**  
 By: LaShone Alexander

**Date:** May 27, 2010

**Project:** CSMSL-0008-00(690) Chatham

**Existing/Required R/W:** Varies/Varies

**Project Termini :** Reconstruction of Jimmy Deloach Connector - ALT 2B

**Project Description:** Georgia Ports Authority Access Project Jimmy Deloach Connector

**P.L Number:** 0008690

**No. Parcels:** 43

**Land:**

Res. R/W: 37.35 acres @ \$ 24,000.00/acre	\$ 896,400.00
Comm. R/W: 47.09 acres @ \$180,000.00/acre	8,476,200.00
Indus. R/W: 38.42 acres @ \$ 24,000.00/acre	<u>922,080.00</u>
	\$ 10,294,680.00

<b>Improvements :</b> signs, fencing, residences, businesses, landscaping misc. site improvements	\$ 898,200
--	------------

<b>Relocation:</b> Residential (4)	\$ 240,000	
Commercial (13)	<u>325,000</u>	
		\$ 565,000

<b>Damage :</b> Proximity (4)	\$ 140,000	
Cost to Cure (5)	\$ 250,000	
		\$ <u>390,000</u>
	Net Cost	\$ 12,147,880

<b>Net Cost</b>		\$ 12,147,880
<b>Scheduling Contingency</b> 55 %		6,681,334
<b>Adm/Court Cost</b> 60 %		<u>11,297,528</u>
		\$ 30,126,742

**Total Cost \$ 30,127,000**

Note: The Market Appreciation (40%) is not included in the updated Preliminary Cost Estimate.

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

FILE CSMSL-0008-00(690) Chatham OFFICE Jesup  
P.I. # 0008690  
DATE 2/24/2009

FROM Karon Ivery  
District Utilities Engineer

TO Rajeev Shah , Parsons Transportation  
ATTN Greg Wiggins, GDOT Project Manager

SUBJECT PRELIMINARY UTILITY COST (ESTIMATE)

As requested by your office, we are furnishing you with a Preliminary Utility Cost estimate for each utility with facilities potentially located within the project limits.

FACILITY OWNER	NON-REIMBURSABLE	REIMBURSABLE
Atlanta Gas Light	\$143,500	0
Bellsouth/ATT	\$51,900	0
Comcast	\$33,900	
City of Savannah	0	\$500,000
City of PortWentworth	\$174,800	0
Georgia Power-Dist.	\$95,000	0
Georgia Power-Transmission	0	\$598,000
Level 3 Communications	\$1,500	0
Southern Natural Gas	0	\$5,354,618
Totals	\$500,600	\$6,452,618
30% Utilities Contingency:		\$ 1,935,785
Total Reimbursement Cost:		\$ 8,388,403

Total reimbursable cost for the above project is \$ 8,388,403.00

If you have any questions, please contact Stephen Thomas at 912-427-5779.

C: Jeff Baker, State Utilities Engineer,  
Angela Whitworth, Office of Financial Management,  
Troy Pittman, Area Engineer  
District Office File  
Utility Office File

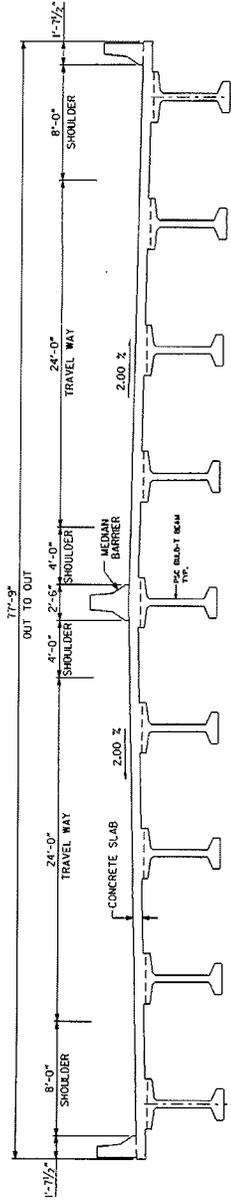
## **ATTACHMENT 2**

### Typical Sections

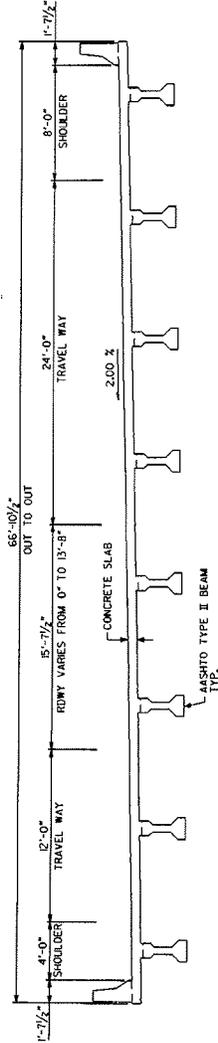




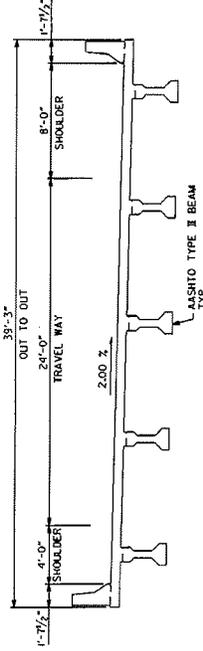
STATE	PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
GA.			



TYPICAL SECTION  
AT SINGLE BRIDGE  
(LOOKING AHEAD)



TYPICAL SECTION  
AT DIVIDED HWY BRIDGES  
(LOOKING AHEAD)



GEORGIA  
DEPARTMENT OF TRANSPORTATION  
PRECONSTRUCTION DIVISION-OFFICE OF BRIDGE DESIGN

BRIDGE CONCEPT

DATE	REVISIONS	BY	BRIDGE SHEET	OF

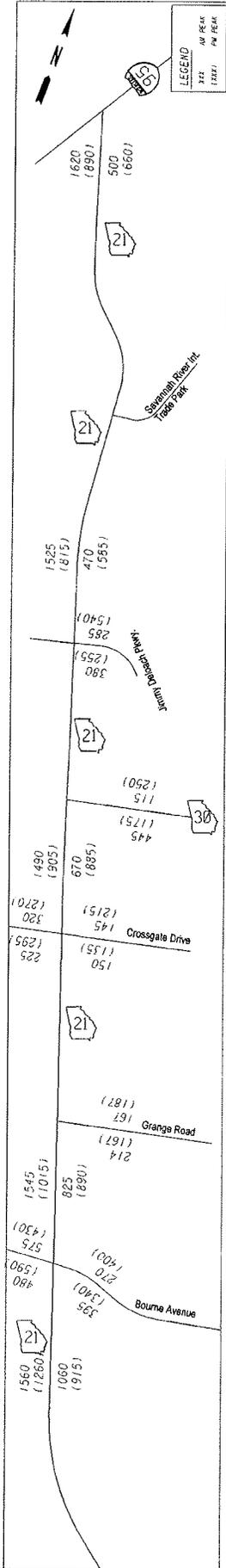
SCALE: \_\_\_\_\_ APRIL 2009

DESIGNED	CHECKED	APPROVED

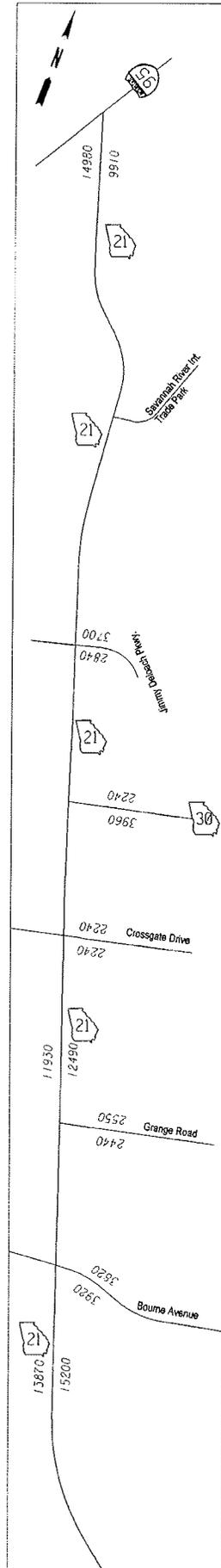
## **ATTACHMENT 3**

### Traffic Diagrams

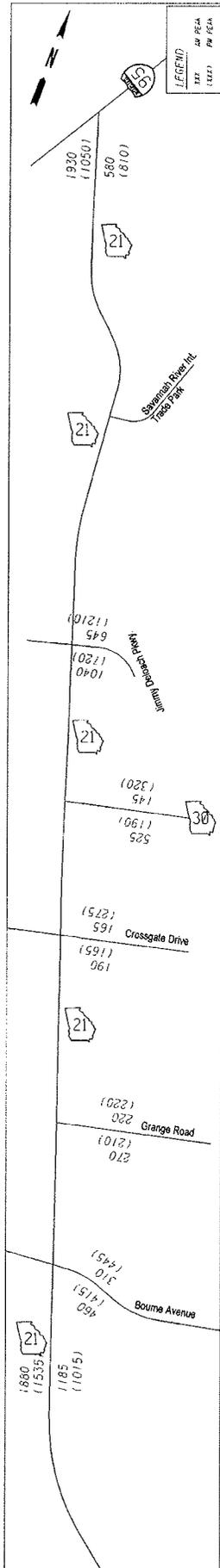
EXISTING CONDITIONS (2008) DAILY HOURLY VOLUMES (DHV)



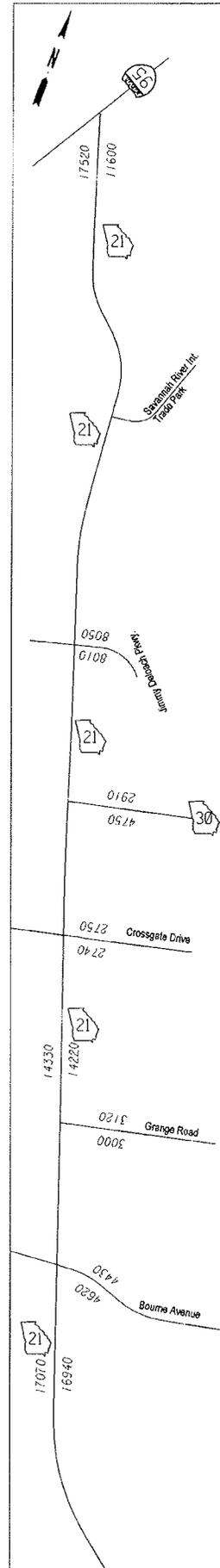
EXISTING CONDITIONS (2008) AVERAGE ANNUAL DAILY TRAFFIC (AADT)



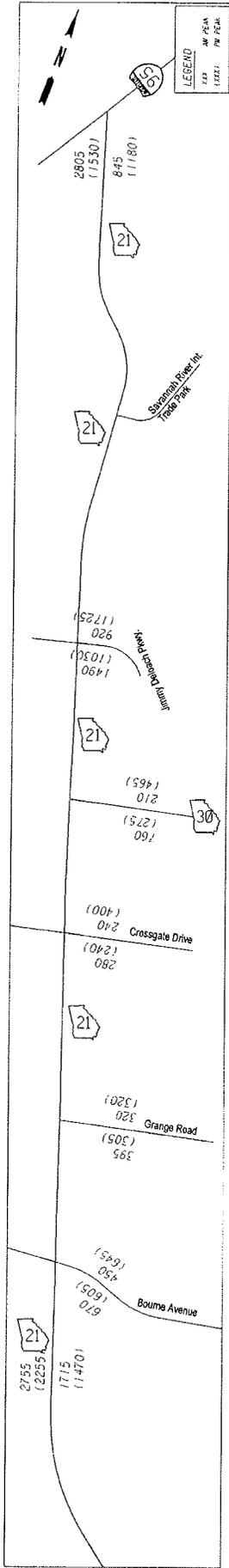
OPEN YEAR (2012) NO-BUILD CONDITIONS DAILY HOURLY VOLUMES (DHV)



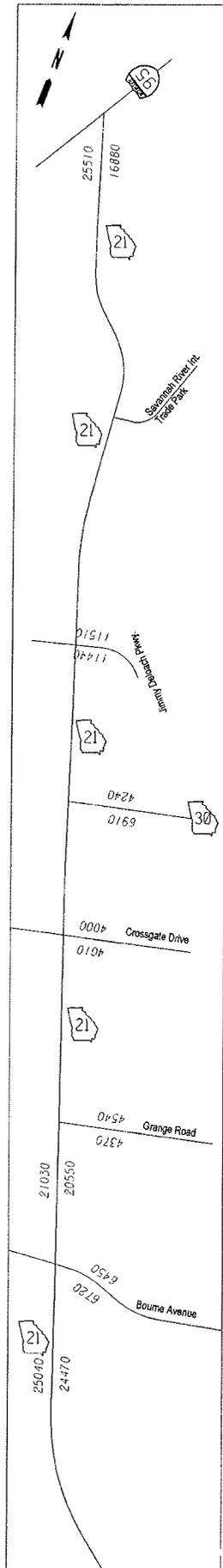
OPEN YEAR (2012) NO-BUILD CONDITIONS AVERAGE ANNUAL DAILY TRAFFIC (AADT)



DESIGN YEAR (2032) NO-BUILD CONDITIONS DAILY HOURLY VOLUMES (DHV)

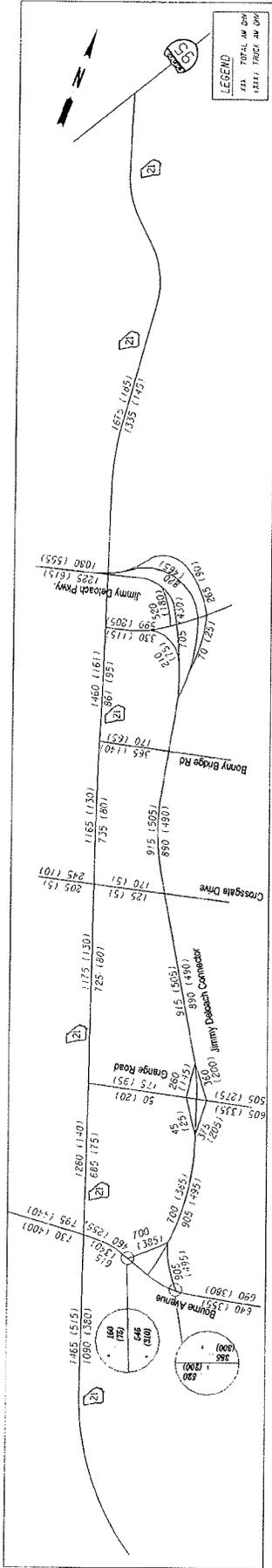


DESIGN YEAR (2032) NO-BUILD CONDITIONS AVERAGE ANNUAL DAILY TRAFFIC (AADT)

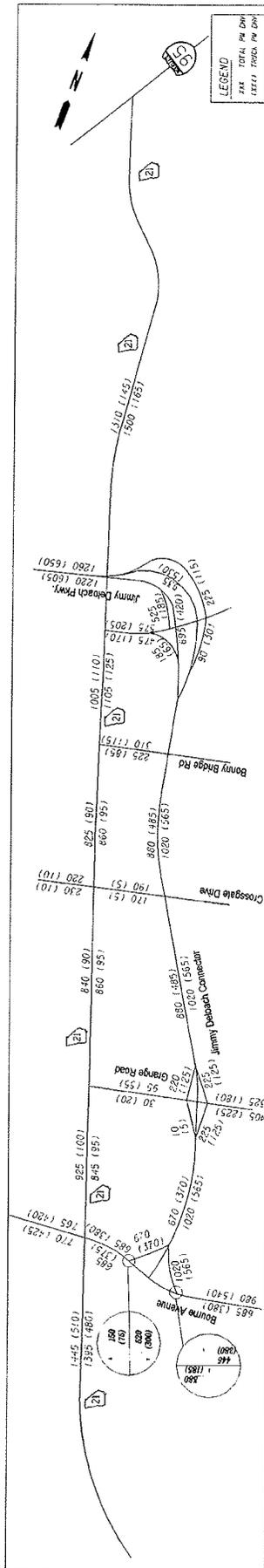




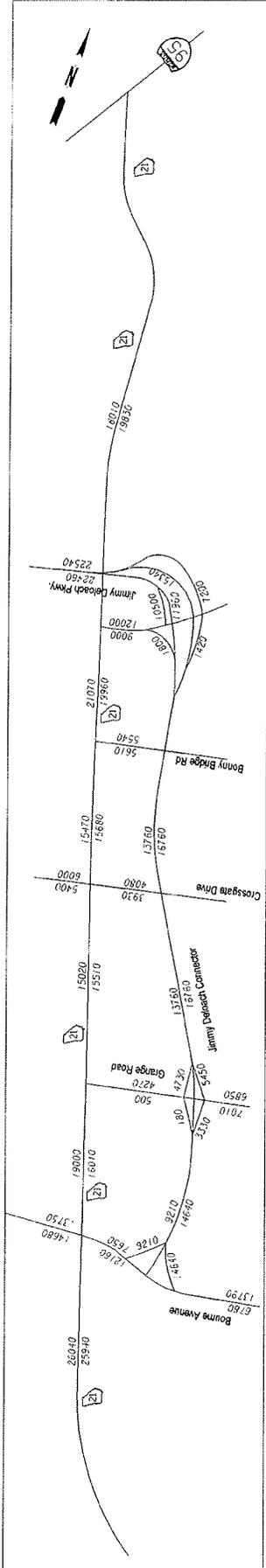
ALTERNATE 2B - OPEN YEAR (2012) - BUILD CONDITIONS - AM PEAK DAILY HOURLY VOLUMES (DHV)



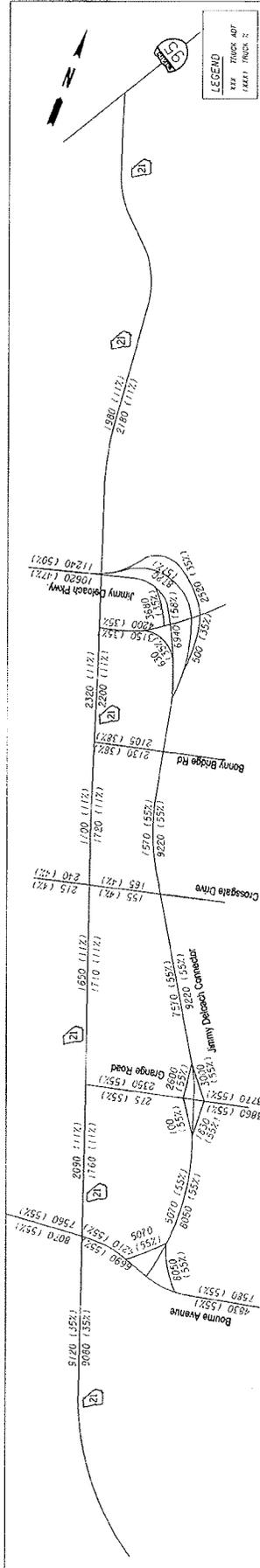
ALTERNATE 2B - OPEN YEAR (2012) - BUILD CONDITIONS - PM PEAK DAILY HOURLY VOLUMES (DHV)



ALTERNATE 2B - DESIGN YEAR (2032) - BUILD CONDITIONS - AVERAGE ANNUAL DAILY TRAFFIC (ADT)



ALTERNATE 2B - DESIGN YEAR (2032) - BUILD CONDITIONS - TRUCK AVERAGE ANNUAL DAILY TRAFFIC (TRUCK ADT)





**ATTACHMENT 4**

**Benefit/Cost Analysis**

Benefit/Cost (B/C)

A benefit/cost (B/C) analysis was performed to determine the total benefit of the project compared to the total cost incurred by the project. The Georgia DOT B/C methodology was employed to calculate B/C ratios. The primary benefit of implementing a congestion project is a reduction in delay. Reduction in delay, or delay benefit, can be defined as the difference between the peak hour travel time through the corridor without the proposed improvement and the peak hour travel time through the corridor with the proposed improvement. This delay benefit was factored to calculate the time benefit, which takes the value of time into account, and the commercial benefit, which takes the cost of delay to commercial vehicles into account. The design year projected volumes were considered in determining the travel time through the corridor. The travel time was estimated between Bourne Avenue east of the Jimmy Deloach Connector and the north end of Jimmy Deloach Parkway.

A B/C ratio, which is the ratio of the congestion benefit to the project cost, was determined for each alternative. A B/C ratio greater than 1.0 indicates that the calculated dollar value of congestion benefits exceeds the estimated dollar cost of the project. Table A4.1 below indicates that B/C ratios for all of the alternatives is comparable and range from 6.16 to 6.76.

Table A4.1: Time Savings and Benefit to Cost Ratios							
Scenario	Travel Time (min/veh)		Wt. Average Travel Time (min/veh)	Time Savings (min/veh)	Benefit (\$)	*Cost (\$)	B/C
	SR 21	JDC					
No-Build Conditions	19.66	---	19.66	---	---	---	---
Alternate 2A (T-Intersection at SR 307)	13.21	4.62	9.40	10.26	780,372,624	122,369,641	6.38
Alternate 2B (Half-diamond interchange at SR 307)	11.43	4.39	8.31	11.35	863,444,570	127,752,229	6.76
Alternate 2C (Flyover ramp at SR 307 interchange)	12.14	4.21	8.62	11.04	839,478,145	136,369,641	6.16
Alternate 2D (30 mph loop ramp at SR 307 interchange)	12.14	4.11	8.58	11.08	842,852,312	131,369,641	6.42

\* Cost includes construction, right of way, utilities and wetland mitigation. Wetland mitigation cost assumed constant at \$2,670,000 across all build alternatives for purpose of B/C analysis.

**ATTACHMENT 5**

Bridge Inventory Data

# GEORGIA DEPARTMENT OF TRANSPORTATION

## Bridge Inspection Report

**District:** 5  
**Bridge Inspector:** Gene Palmer  
**Location ID:** 051-00984X-008.25E  
**Structure ID:** 051-5060-0

**Inspection Date:** 7/11/2006  
**Over:** SR 21  
**County:** Chatham  
**Road Name:** JIMMY DELOACH PKY

**Inspection Area:** 05  
**Bridge Status:** 01

### EVALUATION & DEFICIENCIES

**SubStructure:**

**Year Painted:** 0000

4 concrete caps, abutment foundation is sitting on Ga. Earth Wall. Bents 2 & 3 have four columns per bent.

Deficiencies noted:

1-none

**SuperStructure:**

**Year Painted:** 0000

3 spans , spans 1 & 3 has 10 Type IV and span 2 has 10 type V PSC 1 beams.

Deficiencies noted:

1- Abutment 4 between beams 4 & 5, and beams 6 & 7, back wall spalling, hasn't fell off yet. ( 14"X14")

**Deck:**

8" Cast in place deck with metal stay in place forms.

Deficiencies noted:

1- None

**General:**

Bridge built in 2001.  
 2 Approach slabs, both in good condition.  
 Design load HS20+.  
 This bridge is over SR. 21 and 2 R/R tracks.  
 Bridge has Ga. Earth Walls on both abutments.

Recommended repairs:

1- Repair back wall at abutment 4.

Ladder used.

**Condition Rating**

Temp Shored: No

Component	Material	Rating	Truck Type	Gross/H-Mod	HMod	Tand	3-S-2	Log	Piggy
Substructure	Concrete	8	Calculated Posting	20	25	28	40	36	40
Superstructure	Concrete	8	Posting Required	No	No	No	No	No	No
Deck	Concrete	8	Existing Posting	00	00	00	00	00	00

\*\*\*School Bus Route.\*\*\*

**Structure Does Not Require Posting**

**BRIDGE INVENTORY DATA LISTING GEORGIA DEPARTMENT OF TRANSPORTATION**

Structure ID: 051-5060-0      Chatham      SUFF. RATING      87.77

**Location & Geography**

\* Structure I.D.No.: 051-5060-0  
 \* 200 Bridge Information  
 \* 6A Feature Int: SR 21  
 \* 6B Critical Bridge: 0  
 \* 7A Route Number Carried: CR00984  
 \* 7B Facility Carried: JIMMY DELOACH PKY  
 \* 9 Location: PORT WENWORTH C L  
 2 DOT District: 5  
 207 Year Photo: 2006  
 \* 91 Inspection Frequency: 24 Date: 07/11/2006  
 92A Fract Crit Insp Freq: 00 Date: 02/01/1901  
 92B Underwater Insp Freq: 00 Date: 02/01/1901  
 92C Other Spec. Insp Freq: 00 Date: 02/01/1901  
 \* 4 Place Code: 62328  
 \* 5 Inventory Route (O/U): 1  
 Type: 4  
 Designation: 6  
 Number: 00984  
 Direction: 0  
 \* 16 Latitude: 32-09.8020 MMS Prefix: 00  
 \* 17 Longitude: 81-11.0960 MMS Suffix: 00 MP: 0.00  
 98 Border Bridge: 000 %Shared: 00  
 99 ID Number: 0000000000000000  
 \* 100 STRAHNET: 0  
 12 Base Highway Network: 0  
 13A LRS Inventory Route: 0  
 13B Sub Inventory Route: 0  
 \* 101 Parallel Structure: N  
 \* 102 Direction of Traffic: 2  
 \* 264 Road Inventory Mile Post: 012.55  
 \* 208 Inspection Area: 05 Initials: EEP  
 Engineer's Initial: sgm  
 \* Location I.D. No.: 051-00984X-008.25E

**Signs & Attachments**

\* 104 Highway System: 0  
 \* 26 Functional Classification: 14  
 \* 204 Federal Route Type: 0 No.: 00000  
 \* 105 Federal Lands Highway: 0  
 \* 110 Truck Route: 0  
 206 School Bus Route: 1  
 217 Benchmark Elevation: 0014.06  
 218 Datum: 2  
 \* 19 Bypass Length: 04  
 \* 20 Toll: 3  
 \* 21 Maintenance: 01  
 \* 22 Owner: 01  
 \* 31 Design Load: 6  
 37 Historical Significance: 5  
 205 Congressional District: 01  
 27 Year Constructed: 2001  
 106 Year Reconstructed: 0000  
 33 Bridge Median: 2  
 34 Skew: 00  
 35 Structure Flared: 0  
 38 Navigation Control: N  
 213 Special Steel Design: 0  
 267 Type of Paint: 0  
 \* 42 Type of Service on: 1  
 214 Movable Bridge: 0  
 203 Type Bridge: D-O-O-O  
 259 Pile Encasement: 3  
 \* 43 Structure Type Main: 5 02  
 45 No. Spans Main: 003  
 44 Structure Type Appr: 0 00  
 46 No. Spans Appr: 0000  
 226 Bridge Curve Horz: 0 Vert: 1  
 111 Pier Protection: 0  
 107 Deck Structure Type: 1  
 108 Wearing Surface Type: 1  
 Mc 8  
 F 8

225 Expansion Joint Type: 02  
 242 Deck Drains: 0  
 243 Parapet Location: 0  
 Height: 0.00  
 Width: 0.00  
 238 Curb: 0  
 239 Handrail: 9 9  
 \* 240 Median Barrier Rail: 0  
 241 Bridge Median Height: 0.50  
 Width: 8.10  
 \* 230 Guardrail Loc Dir Rear: 5  
 Fwrd: 5  
 Oppo Dir Rear: 5  
 Fwrd: 5  
 244 Approach Slab: 3  
 224 Retaining Wall: 7  
 233 Posted Speed Limit: 55  
 236 Warning Sign: 0  
 234 Delineator: 1  
 235 Hazard Boards: 0  
 237 Utilities Gas: 00  
 W 00  
 Ele 00  
 Telephone: 00  
 Sc 00  
 247 Lighting Street: 0  
 Navigation: 0  
 Aerial: 0  
 \* 248 County Continuity No.: 00

# BRIDGE INVENTORY DATA LISTING GEORGIA DEPARTMENT OF TRANSPORTATION

Structure ID: 051-5060-0

Chatham

SUFF. RATING

87.77

## Programming Data

201 Project No.: TSAP-21 (58) C1  
 202 Plans Available: 3  
 249 Prop. Proj. No.: 0000000000000000  
 250 Approval Status: 0000  
 251 P.I. No.: 522803-  
 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  
 114 Future ADT: 021555 Year: 2020

## Measurements

\* 29 ADT: 014370 Year: 2000  
 109 % Trucks: 10  
 \* 28 Lanes On: 04 Under: 04  
 210 No. Tracks On: 00 Under: 02  
 \* 48 Max. Span Length: 0110 273  
 \* 49 Structure Length: 71.00  
 51 Br. Rwdy. Width: 82.70  
 52 Deck Width: 71.00  
 \* 47 Tot. Horz. Cl: 0.00/0.00  
 50 Curb/Sdewlk Width: 073  
 32 Approach Rdwy Width:  
 \* 229 Shoulder Width:  
 Rear Lt: 2.00 Type: 3 Rt: 9.80  
 Fwd Lt: 2.00 Type: 3 Rt: 10.00

Pavement Width:  
 Rear: 24.70 Type: 2  
 Fwd: 24.50 Type: 2

Intersection Rear: 1 Fwd: 1  
 36 Safety Features Br. Rail: 1  
 Transition: 1

App. G. Rail: 1  
 App. Rail End: 1  
 53 Minimum Cl. Over:  
 Under: H  
 228 Min. Vertical Cl  
 Act. Odm Dir:  
 Opp. Dir:  
 Posted Odm. Dir:  
 Opp. Dir:  
 55 Lateral Underel. Rt: H 34.20  
 56 Lateral Underel. Lt: 8.20  
 \* 10 Max Min Vert Cl: 99 ' 99 " Dir: 0  
 39 Nav Vert Cl: 000 Horz: 0000  
 116 Nav Vert Cl Closed: 000  
 245 Deck Thickness Main:  
 Deck Thick Approach: 8.00  
 Deck Thick Approach: 0.00  
 246 Overlay Thickness: 0.00  
 212 Year Last Painted: Sup: 0000 Sub: 0000

## Hydraulic Data

215 Waterway Data  
 Highway Elev.: 0000.0 Year: 1900  
 Avg. Streambed Elev.: 0000.0 Freq.: 00  
 Drainage Area: 00000  
 Area Of Opening: 000000  
 113 Scour Critical: N  
 216 Water Depth: 00.0 Br. Height: 00.0  
 222 Slope Protection: 0  
 221 Spur Dikes Rear: 0 Fwd: 0  
 219 Fender System: 0  
 220 Dolphin: 0  
 223 Culvert Cover: 000  
 Type: 0  
 No. Barrels: 0  
 Width: 0.00 Height: 0.00  
 Length: 0 Apron: 0 Diver: ZZZ  
 \* 265 U/W Insp. Area: 0  
 \* Location I.D. No.: 051-00984X-008.25E

## Ratings

65 Inventory Rating Method: 2  
 63 Inventory Rating Method: 2  
 66 Inventory Type: 2 Rating: 27  
 64 Operating Type: 2 Rating: 43  
 231 Calculated Loads  
 H-Modified: 20 0  
 HS-Modified: 25 0  
 Type 3: 28 0  
 Type 3s2: 40 0  
 Timber: 36 0  
 Piggyback: 40 0  
 261 H Inventory Rating: 20  
 262 H Operating Rating: 25  
 67 Structural Evaluation: 6  
 58 Deck Condition: 8  
 59 Superstructure Condition: 8  
 \* 227 Collision Damage: 0  
 60A Substructure Condition: 8  
 60B Scour Condition: N  
 60C Underwater Condition: N  
 71 Waterway Adequacy: N  
 61 Channel Protection Cond: N  
 68 Deck Geometry: 9  
 69 UnderClr. Horz/Vert: 9  
 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  
 Type3s2: 00  
 Timber: 00  
 Piggyback: 00  
 253 Notification Date 02/01/1901  
 253 Fed Notify Date: 02/01/1901 0

**ATTACHMENT 6**

Initial Concept Team Meeting Minutes

March 31, 2008

**TO: Meeting Attendees (see attached list)**

**FROM: Aykut Urgen, Parsons**

**SUBJECT: Initial Concept Team Meeting  
Project CSMSL-0008-00(690), PI 0008690, Chatham County  
Jimmy Deloach Connector from SR 21 near Smith Avenue to SR 21  
near I-95**

An Initial Concept Team meeting was held on March 25, 2008 at the Georgia Ports Authority in Garden City, Georgia to review project progress, need and purpose statement and to allow for GDOT input. A list of meeting attendees is attached to these meeting minutes.

Notes below summarize the discussion and decisions at the meeting.

1. Aykut Urgen opened the meeting by providing a general update of work performed since the last project status meeting on February 14, 2008. Parsons Team revised and refined conceptual alternatives, performed preliminary traffic analysis, prepared the draft need and purpose statement, draft concept report and performed coordination with other ongoing design projects in the area.
2. Shawn Reese gave a brief overview of the four project alternatives developed by Parsons based on input received at the last meeting.
  - a. Alternate 1A – this alternative begins at SR 21 near Smith Avenue and ends at SR 21 near the I-95 interchange with intermediate interchanges at SR 307, Grange Road and Jimmy Deloach Parkway. Collector-distributor roads between Crossgate Road and Grange Road have been eliminated. Diagonal ramp for westbound movement on SR 307 from southbound Jimmy Deloach Connector has also been eliminated. Typical section has been updated to include a 24-foot raised median instead of the 20-foot raised median considered earlier. Mainline Jimmy Deloach is designed for 55 mph. Directional ramp at SR 307 is designed for 40 mph while the directional ramp at Jimmy Deloach Parkway is designed for 50 mph.
  - b. Alternate 1B: this alternative is similar to Alternative 1A except that the directional ramp at SR 307 is replaced with a 30 mph loop ramp in the southwest quadrant of the interchange. The inherent free-flow nature of the loop ramp ensures an adequate level of service for truck traffic in the design-year.

- c. Alternate 1C: This alternative is similar to Alternative 1B and shows construction of the project in three phases. Phase 1 includes the construction of Jimmy Deloach Connector from existing Jimmy Deloach Parkway to SR 307. Phases 2 & 3 include the construction of project tie-in to SR 21 in the north and south. This alternative serves the immediate need of the port while accommodating future plans of connectivity with SR 21.
  - d. Alternate 1D: this alternative is similar to Alternative 1B except that the loop ramp at SR 307 is replaced with a standard diamond ramp in the northwest quadrant. This alternative is not desirable from a traffic operations standpoint because heavy truck traffic will result in large start-up delays leading to unacceptable intersection level of service for the design year.
  - e. Brad Saxon recommended that proposed interchange at SR 307 should accommodate port bound traffic from Jimmy Deloach Connector-south.
3. Douglas Tilt gave a brief overview of the preliminary traffic analysis on this project.
- a. Accident rates for the past three years on the concerned SR 21 corridor have been three times higher than the statewide average. Majority of the accidents are rear-end crashes attributable to the existing stop and go conditions on SR 21.
  - b. Average truck traffic on SR 21 is 35%.
  - c. As a result of the proposed project, for year 2032, there will be a 77% reduction in truck traffic and an average reduction of 35% for the total traffic on SR 21. 50% of the trucks accessing the port will come from Jimmy Deloach Connector-north, 30% from Jimmy Deloach Connector-south and approximately 20% from SR 21.
  - d. The traffic model also indicated a regional latent demand of approximately 10,000 additional vehicles that will use the additional capacity on SR 21 and JDC in the year 2032.
  - e. Traffic projections for the model used an average growth rate of 2% per year for the region. As per GDOT's Statewide Truck Lanes Needs Identification Study, a 6% yearly growth rate was used for port related traffic up till year 2018 and 1% per year from then on up till 2032. No projections were developed beyond the 20 year design period.
  - f. All traffic analysis and modeling is based on the non-toll worst case scenario. Travel time studies are currently being performed.
4. Bonnie Peacock gave a brief overview of the need and purpose statement that was submitted to Matthew Fowler at GDOT Office of Planning for review and comments prior to the meeting.
- a. Primary purpose of the project is to reduce travel times for trucks between I-95 and the port. Safety benefits on SR 21 as a result of the project will be an added benefit.
  - b. Logical termini are a challenging aspect of this project. Georgia Ports Authority's primary need is to build the section from Jimmy Deloach Parkway to SR 307 to enable faster truck movement between the port and

- I-95. However, connection to SR 21 in the north and south would enable a whole new market of commuter traffic to use Jimmy Deloach Connector. In addition to improving overall regional connectivity, this would also be favorable for a toll road scenario on Jimmy Deloach Connector.
5. Bonnie Peacock informed the team that background research for various environmental studies is ongoing and windshield surveys are scheduled to be performed in April 2008.
    - a. Information collected this far indicates the presence of a historical Cherokee Hill area near the intersection of SR 21 and Crossgate Road. A revolutionary war encampment of the 60<sup>th</sup> Royal Regiment might be located in the vicinity of the proposed project. The presence of these resources and their significance will need additional research.
    - b. Project area also comprises of numerous structures that are over 50 years old and are eligible to be historic. All structures will be researched further.
    - c. Various wetland resources are located between existing Jimmy Deloach Parkway and the proposed northern tie-in to SR 21. These include the St. Augustine Creek and large marshy/swamp areas.
    - d. An individual permit is anticipated on this project.
  6. Darrell VanMeter pointed out that functionality and financiability are key aspects of this project. This is a project of statewide significance and is a strong contender to be the first PPI project in the state of Georgia. However, GDOT PPI process is still under development and this project should be moved forward in accordance with the conventional plan development process through the concept and environmental documentation phases.
    - a. Project costs will have to be kept at a minimum in order to ensure successful and timely delivery. This should include going to a VE study in the concept development stage.
    - b. Funding option for this project has not been determined yet. All options including availability type payments and tolls are still on the table. A high level board meeting will be held between GDOT and GPA in approximately 2 months to determine funding.
    - c. As per GDOT PPI schedule this project will be let to construction in early 2010 to ensure project completion in December 2012.
    - d. Second level of toll and revenue study has not been initiated yet.
  7. Ben Buchan noted that Benefit/Cost ratios need to be calculated for all alternatives. However alternative selection should not be based on a favorable B/C ratio alone. Costs will be the governing factor on this project.
    - a. GDOT will like to see an alternatives matrix for all 4 alternatives that clearly indicates the associated costs, benefits, risks and impacts. This will help to expedite the selection of a preferred alternative.
  8. Randy Weitman confirmed that December 2012 completion is critical for the port because this coincides with the completion of the harbor deepening project and the area traffic is expected to increase beyond the current growth rate. When the project was originally conceived as a conventional design- bid-build project, GPA committed that it would move forward with the design of the section of the project corridor from existing eastern end of Jimmy Deloach Parkway to SR 307.

If the project is not built as a PPI or design build project, GPA is prepared to move forward with whatever level of design that is needed in order to complete the project by the December 2012 completion date.

9. Aykut Urgen informed that Parsons has calculated preliminary construction cost estimates and that the overall cost matches exactly with the one prepared by HNTB. However, cost estimates for phased construction are quite different. This could be attributed to the different structure configurations considered in different phases of work. Darrell Van Metter stated that GDOT Urban Design has recently developed standard methods of cost estimation and will like to share those with Parsons. Brad Saxon noted that 2 years construction time is an aggressive schedule for this project and will incur additional expense.
10. Next project team meeting is scheduled on April 29, 2008 at the GDOT general office in Atlanta.

**Next Steps**

- Arcadis to complete travel time studies for all alternatives in 2 weeks.
- Parsons to work with GDOT Urban Design Office to refine construction cost estimates.
- Parsons team to develop an alternatives impact matrix that clearly shows costs, benefits, risks and impacts for each alternative.
- Parsons to work with Georgia Ports Authority to incorporate VE study as an additional task item.

**Meeting Attendees:**

Name	Organization	Phone	Email
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**ATTACHMENT 7**

**Concept Team Meeting Minutes**

November 19, 2009

**TO: Meeting Attendees (see attached list)**

**FROM: Aykut Urgen, Parsons**

**SUBJECT: Concept Team Meeting  
Project CSMSL-0008-00(690), PI 0008690, Chatham County  
Jimmy Deloach Connector from Bourne Avenue/SR 307 to Existing Jimmy  
Deloach Parkway**

A Concept Team meeting was held on November 19, 2009 at the Georgia Department of Transportation (GDOT), General Office at One Georgia Center, Atlanta, Georgia. GDOT District 5 personnel attended via video conference. A list of meeting attendees is attached to these meeting minutes.

Notes below summarize the discussion and decisions at the meeting.

Mike Dover opened the meeting by providing a brief description of the project and by asking everyone to introduce themselves.

Aykut Urgen gave an overview of the project location to orient all attendees and followed by a reading of the concept report.

#### FHWA Comments and Responses

1. Wayne Fedora asked for a summary of the project need. Bonnie Peacock responded that the project is needed primarily to improve travel time for trucks between the port and I-95, improve safety along SR 21 and to maintain economic vitality of the port for the state of Georgia and the southeast region.

2. Mr. Fedora asked for confirmation on the beam sizes at proposed bridges. Aykut Urgen responded that beam sizes have been determined by considering approximate span lengths at a conceptual level and these are liable to change during preliminary/final design. However determining beam sizes at conceptual level helped in development of a reliable construction cost estimate for bridges.

3. Mr. Fedora asked if a steel structure was considered for the 2 bridges over wetlands near northern end of the project to maximize spans and minimize impacts. Aykut responded that this has not been evaluated yet.

4. Mr. Fedora commented that traffic and safety analysis for this project should include the two interchanges with I-95 at SR 21 and Jimmy Deloach Parkway. Since the primary goal of the project is to enable faster access to/from I-95, traffic analysis should include information to show that the project is relieving traffic and not merely moving the bottle neck from SR 21-SR 307 intersection to the interchanges at I-95. Prason Sinha explained that traffic data projections and analysis was performed to include SR 21 up to the interchange with I-95. Existing travel patterns

show that majority of the truck traffic uses Jimmy Deloach Parkway interchange to access SR 21. Since proposed Jimmy Deloach Connector ties directly into Jimmy Deloach Parkway, proposed project will encourage further use of this interchange as opposed to the other interchange with SR 21. Based on information available, build year (2032) AADT numbers on SR 21 at I-95 will be similar to the existing 2008 volumes or lower. Parsons team will add additional clarification to the concept report to show effects of proposed Jimmy Deloach Parkway to the existing I-95 Interchange in the north of the project termini.

5. Mr. Fedora inquired if widening of SR 21 was considered as an alternative to the proposed new location roadway. Bonnie Peacock responded that SR 21 is a very developed corridor and that providing the required capacity upgrades on SR 21 will result in large number of displacements and impacts to communities. Furthermore, the proposed project is developed based on the GDOT Statewide Truck Lanes Needs Identification Study that had already eliminated improvements to SR 21 as a viable alternative to a new location roadway in this corridor.

6. Mr. Fedora asked if the potential to increase railroad capacity was explored to reduce the number of trucks on roads. Randy Weitman responded that the Georgia Ports has two ongoing projects addressing railroad capacity. However, local distribution centers and Atlanta bound cargo will not use railroads and the proposed project is needed in addition to the increased rail capacity.

#### Engineering Services Comments and Responses

1. Steve Carter inquired if a value engineering (VE) study has been scheduled for this project. Mike Dover responded that GDOT will coordinate with Georgia Ports Authority (GPA) to set up the meeting in the next few weeks.

#### Planning Office Comments and Responses

No Comments

#### Traffic Operations Comments and Responses

1. Nabil Raad commented that if the proposed road is tolled, accommodation for ITS infrastructure should be included in the concept. Proposed Jimmy Deloach Connector is not anticipated to be a toll road and provision for ITS infrastructure will not be accommodated at this time.

#### Office of Environment/Location Comments and Responses

No Comments

#### Office of Utilities Comments and Responses

1. Allen Ferguson pointed out that Norfolk Southern would like to add additional rail line in the future and proposed bridge should be designed to accommodate this. Saurabh Bhattacharya responded that proposed bridge length accounts for the additional rail line.

2. Additional professional engineering (PE) money will be needed for railroad coordination and this should be included in the project cost estimate. Parsons will include this in the project cost estimate.

#### Office of Road Design Comments and Responses

1. Darrel Richardson pointed out that another existing project – SR 307 Widening from R.B. Miller Road to SR 21 (PI 562165) should be included in the concept report. Prasoon Sinha informed that traffic analysis included the improvements proposed as part of this project. Parsons will add this project to the list of other projects in the area.

2. Darrell Richardson questioned the Urban Freeway functional classification for this project and mentioned that a raised median cannot be proposed for freeways. He recommended changing the functional classification to Urban Arterial with limited access. Darryl VanMeter mentioned that the reason for using an urban freeway classification was to emphasize that mobility (and not access) is the primary purpose of this project. Design team will evaluate Mr. Richardson's comments during the preparation of costing plans.

3. Darrell Richardson questioned the need for 200' right-of-way along the mainline. Saurabh Bhattacharya responded that due to multiple grade crossings along mainline, proposed profile will be as high as 35 feet over existing ground thereby requiring large right-of-way.

4. Darrell Richardson pointed out that 8% maximum superelevation (SE) appears to be excessive for mainline and this should be limited to 6%.

5. Darrell Richardson commented that 3.5% proposed maximum grade and 5% allowable maximum grade for mainline appeared to be excessive. 5% maximum grade is allowed for freeways on rolling terrain and 4% on flat terrain. Parsons will propose a maximum value of 3% to be used in mainline design.

6. Albert Welch noted that improvements to Bourne Avenue should be coordinated with PI 0000345, SR 307 overpass over New Port Authority Line to ensure continuity of typical section. Parsons had obtained electronic copies of proposed design for this project in 2008. The project has since gone through final field plan review (FFPR) and Parsons will request the updated files from Albert.

7. Mr. Welch commented that adequate signal spacing should be provided at Bourne Avenue. As currently proposed, the two new intersections at Bourne Avenue are spaced 500' apart and satisfy the required queuing lengths at these intersections for design year 2032 traffic.

8. Mr. Welch informed that another project, PI 522880 proposes 6-lane widening of SR 21 from Smith Avenue to Bourne Avenue/SR 307. Project is in concept development stage. Parsons will add this project to the list of other projects in the area.

#### District 5 Comments and Responses

1. Brad Saxon pointed out that the Jimmy Deloach Parkway interchange at I-95 is one of the most underutilized interchanges on I-95 in the region and that the proposed project will relieve traffic on SR 21.

2. Brad Saxon noted that an additional typical section will need to be added for the split section of Jimmy Deloach Connector from Bonnybridge Road/SR 30 to Jimmy Deloach Connector. Parsons will add the typical section as requested and update project description accordingly.

3. Keith Jervis from Southern Natural Gas (SNG) informed that the double 30" steel gas line at Jimmy Deloach Parkway is the gas main coming from Elba Island facility and provides natural gas to Georgia and Florida. SNG has a metering station located between Jimmy Deloach Parkway and Pierce Avenue. These gas lines cannot be relocated. Another SNG facility in the corridor is a 14" steel gas line across Bonnybridge Road/SR 30 that provides gas to City of Savannah and other industrial customers.

4. Gena Wilder from Georgia Power pointed out that there are three transmission lines crossing the proposed project between Crossgate Road and Bonnybridge Road and one crossing the project at Grange Road.

5. Jeffery Thornburg from City of Port Wentworth mentioned that there are drainage issues in the project corridor resulting in flooding in certain areas. He will like to discuss existing drainage basins with Parsons. Parsons will coordinate this further.

6. Mr. Thornburg also inquired if adequate access has been provided to Flonell Avenue at the Jimmy Deloach Interchange. Parsons indicated that access is provided from the full diamond interchange. Flonell Avenue also has direct access to SR 21 which will be retained.

Subsurface Utility Office Comments and Responses

1. Jun Birnkammer pointed out that currently Quality Level D SUE survey is complete and questioned if Quality Level B would be completed before this project is let to design/build. Aykut Urgen responded that it may be the design/build contractor’s responsibility to perform Quality Level B SUE survey. Parsons will further coordinate with Subsurface Utility Office to determine what is to be included in costing plans.

**Next Steps**

- GDOT to set up Value Engineering Study for this project in coordination with GPA.
- Parsons to obtain electronic files for PI 0000345 from Albert Welch.
- Parsons to perform further coordination with GDOT on design criteria.
- Parsons to coordinate drainage study with Jeffery Thornburg at City of Port Wentworth.
- Parsons to perform further coordination with Subsurface Utility Office.

**Meeting Attendees:**

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Concept Team Meeting PI 0008690 Chatham  
Jimmy DeLoach Parkway Extension

11/19/2009

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**ATTACHMENT 8**

VE Implementation Letter

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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**INTERDEPARTMENT CORRESPONDENCE**

**FILE:** CSMSL-0008-00(690) Chatham **OFFICE:** Engineering Services  
P.I. No.: 0008690  
Jimmy Deloach Connector **DATE:** March 30, 2010

**FROM:** Ronald E. Wishon, State Project Review Engineer *REW*

**TO:** Darryl D. VanMeter, PE, State Innovative Program Delivery Engineer  
Attn.: Mike Dover

**SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES**

The VE Study for the above project was held February 2-5, 2010. Responses were received on March 26, 2010. Recommendations for implementation of Value Engineering Study Alternatives are indicated in the table below. The Project Manager shall incorporate the VE alternatives recommended for implementation to the extent reasonable in the design of the project.

ALT #	Description	Potential Savings/LCC	Implement	Comments
BR-1	Reduce shoulders on long bridges	\$545,952	No	GDOT Bridge and Structures Design Policy Manual Section 2.9.1 requires bridge width to be based on total travel way plus recommended shoulder widths. This bridge carries multilane divided state route with rural section and design ADT of 16,760 with 55% trucks. Maintaining an 8 ft shoulder will benefit the operation of the system due to the large volume of trucks.
BR-2	Modify span arrangement on wetland bridges	\$422,131	No	With bridge hydraulic studies not yet performed to determine design flood stage elevation, it is not advisable to recommend longer spans for this bridge as longer spans will require deeper beams. In addition, it is unlikely that 20" PSC piles will work on 85 or 88 ft spans with AASHTO Type III beams as recommended by the VE Team. Concrete bents would be required which may require cofferdams to construct the bents in wetlands. Since this project is anticipated to use the design/build delivery method, it is more appropriate to give the contractor flexibility with structure type selection.

RD-1	Use median barrier in lieu of raised grassed median	\$856,196	Yes	This will be done.
RD-2	Construct a typical intersection at Bourne Ave.	\$610,500	No	<p>A typical T-intersection at Bourne Avenue was evaluated during concept development and was not recommended due to the following reasons:</p> <p>(1) Smaller travel time savings. T-intersection will provide travel time savings of 10.26 minutes/vehicle. A half diamond as currently proposed will provide a larger travel time savings of 11.35 minutes/vehicle.</p> <p>(2) Smaller benefit/cost ratio. T-intersection has an overall B/C ratio of 6.66. Half diamond has an overall B/C ratio of 7.04.</p> <p>(3) Larger "throw-away" for future expansion. The Statewide Truck Lane Needs Identification Study recommended Jimmy Deloach Connector to be constructed from SR 21 near Smith Avenue to SR 21 south of I-95. The project as currently proposed is a condensed version that serves the immediate need of the Port. It is consistent with the truck lane study and should not preclude future extension to SR 21. Providing a T-intersection at Bourne Avenue will result in a "throw-away" of \$1.13 million in pavement costs when this extension is executed. The currently proposed half diamond configuration will involve minimal "throw-away" during future extension and simplify maintenance of traffic during construction.</p>

RD-3	Construct a SPUI or TUDI at Grange Ave.	\$1,773,772	No	<p>Approximately 60% of the overall interchange turning movements are composed of trucks and tractor-trailers. Since the average length of these vehicles is two or three times the size of a passenger vehicle, they require a larger turning radius for safe maneuvering. Replacing the proposed spread diamond interchange with a tight diamond interchange would significantly reduce the spacing between the ramp intersections resulting in a small and insufficient turning radius. This may adversely impact the operation and safety of the interchange. Additionally, a SPUI would require a very wide turning radius to accommodate side by side trucks plus a longer bridge, which would not be feasible at this location.</p>
RD-4	Delete northbound (2A) exit and southbound (2D) entrance at Grange Ave.	\$3,896,420	No	<p>Removal of ramps 2A &amp; 2D will limit connectivity from Grange Road to Jimmy Deloach Connector. With the port planning a terminal gate at the east end of Grange Road, these ramps are required to provide adequate access between Jimmy Deloach Connector and Grange Road. A full diamond interchange is also consistent with the GDOT Statewide Truck Lanes Needs Identification Study from 2007 that recommends the extension of Jimmy Deloach Connector up to SR 21 in the north and south direction.</p>
RD-5	Reduce sum of the paved shoulder widths on ramps	\$434,209	Yes	<p>Ramp typical sections will be revised to show 10 ft paved outside shoulder and 2 ft paved inside shoulder.</p>

RD-12	Use SPUI or TUDI at Pierce Ave.	\$794,882	No	The Statewide Truck Lanes Needs Identification Study recommended Jimmy Deloach connector to be constructed from SR 21 near Smith Avenue to SR 21 south of I-95. The project as currently proposed is a condensed version that serves the immediate need of the Port. It is consistent with the truck lane study and should not preclude future extension to SR 21. A tight diamond interchange at Pierce Avenue was evaluated during the concept development and not recommended because of a larger "throw-away" of \$2.6 million when Jimmy Deloach Connector is extended to the north. The currently proposed spread diamond configuration will involve minimal "throw-away" and simplify maintenance of traffic during future extension.
RD-21	Adjust profile to reduce borrow	\$1,169,124	No	Actual vertical clearances at critical points under bridges are consistent with GDOT's Bridge and Structures Design Policy Manual sections 2.3.2 and 2.3.3 which recommend 16'-9" clearance for bridges over roadways and 23' for bridges over railroads. The proposed profile has been set at 3%, which was determined to be the maximum acceptable profile for the mainline due to high truck volumes.

The Office of Engineering Services concurs with the Project Manager's responses.

Approved:  Date: 3/31/10  
 Gerald M. Ross, PE, Chief Engineer

**CSMSL-0008-00(690) Chatham  
Implementation of Value Engineering Study Alternatives**

**P.I. No. 0008690  
Page 5**

REW/LLM

Attachments

c: Ben Buchan  
Darryl VanMeter/Mike Dover  
Paul Liles/Bill Duvall/Bill Ingalsbe  
Paul Alimia  
Brad Saxon/Anthony Cook/Teresa Scott  
Will Murphy/Troy Pittman  
Ken Werho  
Lisa Myers  
Matt Sanders