

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE: Cobb County **OFFICE:** Engineering Services
P.I. No.: 0010157
Busbee-Frey Connector **DATE:** May 1, 2012

FROM: Lisa L. Myers, State Project Review Engineer *llm*

TO: Bobby K. Hilliard, PE, State Program Delivery Engineer
Attn.: Chandria Brown, PE

SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES

The VE Study for the above project was held February 6-9, 2012. Responses were received on April 25, 2012. 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. Please note, if the implementation of a VE recommendation requires a Design Exception or Design Variance, it (DE or DV) must be requested separately.

ALT #	Description	Potential Savings/ LCC	Implement	Comments
A-1	Reduce the length of the end spans for the new Busbee-Frey Connector bridge over I-75 by moving the toe of slope closer to the edge of the Chastain Road ramps.	\$1,439,000	No	A-1 will not be implemented because A-8 was selected based on the bridge ends were set at the proximity to the right of way lines to allow for flexibility with respect to three other future projects along the I-75 corridor.
A-3	Reduce the sidewalks on the bridge from 15' to 10'.	\$714,000	No	It is anticipated that high pedestrian volumes will utilize this proposed bridge to cross the interstate going to and from KSU. 20% of the 8,000 students that live off campus will be traveling from the east side to get to the main campus. Those wanting to access the Student Center, Soccer Stadium, and retail shopping located on the east side of the interstate are expected to use this route as well.
A-8	Use MSE walls to reduce the length of the bridge end spans by locating the walls closer to the Chastain Road ramps.	\$431,000	Yes	This will be done.

C-1	Re-align the Proposed Connector to Bussbee Drive and eliminate Townpark Lane Tie-In to the Busbee-Frey Connector Extension.	\$1,960,000	No	A traffic analysis was conducted to evaluate the impact of eliminating the Townpark Lane connection and an unacceptable Level of Service was observed. In addition to this analysis, elimination of this tie-in would adversely impact access to the current properties along the existing Townpark Lane.
C-1.1	Eliminate Townpark Lane Tie-In to Busbee-Frey Connector Extension	\$2,060,000	No	A traffic analysis was conducted to evaluate the impact of eliminating the Townpark Lane connection and an unacceptable Level of Service was observed. In addition to this analysis, elimination of this tie-in would adversely impact access to the current properties along the existing Townpark Lane.
C-2	Use 11' lanes for the Busbee-Frey Connector.	\$362,000	Yes	This will be done.
C-3	Use a 16' raised median for the Busbee-Frey Connector.	\$335,000	Yes	This will be done.
C-4	Use a 5-lane, flush median.	\$521,900	No	C-4 will not be implemented because C-3 was selected instead.
C-5	Use a 3-lane, flush median.	\$1,830,000	No	According to the Turn Lane Length analysis a four lane configuration is required. A 3-lane alternative would cause long queues to form at each end of the connector requiring extended right turn lanes of 670' and 380' to be added. Considering the length of the connector, only 250' of an actual 3-lane section could be achieved.
C-6	Use a Roundabout at the Busbee-Frey Connector and Busbee Drive Intersection.	\$75,000	Yes	This will be done.
C-12	Reduce Pavement thickness	\$245,000	No	Office of Materials & Research does not approve of this alternative and has suggested a more conservative design. The pavement analysis used in the VE study had an error in the LDF factor and if the correct factor of 1.00 was used, the conceptual design is more in line with GDOT requirements.

F-6	Reduce the number of culvert cells to two and excavate additional volume for flood storage, if required.	\$321,000	No	At this crossing location the detention pond is classified as a wetland. Further upstream, the wetland turns into a buffered stream so this alternative will not be implemented to avoid any additional impacts to these noted resources. Reservoir routing was utilized to determine the current number of barrels for this structure to achieve a (No Rise) condition and the Office of Design Policy & Support concurs with this response.
M-1	Use standard width (5 feet) sidewalks along the Busbee-Frey Connector.	\$1,560,000	No	It is anticipated that high pedestrian volumes will utilize this proposed bridge to cross the interstate going to and from KSU. 20% of the 8,000 students that live off campus will be traveling from the east side to get to the main campus. Those wanting to access the Student Center, Soccer Stadium, and retail shopping located on the east side of the interstate are expected to use this route as well.

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

Approved:  Date: 5/3/2012
Gerald M. Ross, PE, Chief Engineer

LLM/MJS
 Attachments

- c: Russell McMurry/Paul Liles
- Bobby Hilliard/Stanley Hill/Chandria Brown
- Ben Rabun/Bill Duvall
- Michael Murdoch/Carla Benton-Hooks
- Lee Upkins
- Melissa Harper
- Ken Werho
- Matt Sanders



DEPARTMENT OF TRANSPORTATION

1890 County Services Parkway
Marietta, Georgia 30008-4014

Phone: (770) 528-1600 Fax: (770) 528-1601

March 23, 2012

Chandria L. Brown, P.E.
Project Manager
Office of Program Delivery
Georgia Department of Transportation
600 West Peachtree Street, 25th Floor
Atlanta, GA 30308

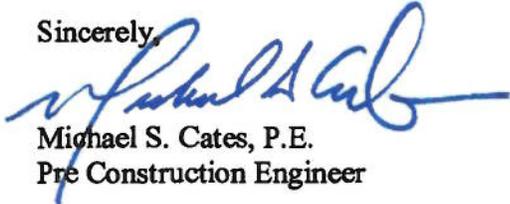
RE: PI 0010157
Busbee Frey Connector

Dear Ms. Brown,

Enclosed are the responses to the Value Recommendations for the above referenced project as prepared by Croy Engineering. Each item contains a response indicating if it will or will not be implemented. Where the response is "will not implement", a complete justification of the response is included. Supporting calculations are included where appropriate.

If you need additional information, please contact the CCDOT Project Manager, Mike Wright at 770-528-4375 or the consultant Project Manager, Chris Rideout at 770-971-5407.

Sincerely,



Michael S. Cates, P.E.
Pre Construction Engineer

MSC/MSW/dlb

cc: Dan McDuff
James Hudgins
Mike Wright
Chris Rideout – Croy Engineering
File

Enclosures

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Office of Program Delivery

Idea A-1: Reduce the length of the bridge end spans.

VE Team Savings: \$ 1,439,000

Response: **Will not implement.** The bridge ends are set at the proximity to the I-75 right of way lines to allow for maximum flexibility with respect to future projects along the I-75 corridor. These projects include:

AR-ML-930, PI# 0008256 – Northwest Corridor (I-75 and I-575) Managed Lanes, GDOT is currently evaluating potential managed lane options along I-75. This additional bridge length will provide flexibility for different managed lanes and general purpose lane improvement options along I-75.

CO-400, PI# 0010157 - Busbee-Frey connector is Phase 1 of a proposed \$40 million dollar split-diamond concept which will ultimately connect to the Wade Green interchange to the north. Maintaining the proposed end bent configuration will allow for flexibility during the future plan development. This project has been included in Cobb County's adopted project list to be funded with the 15% local allocation of the Region Transportation Referendum.

TIA-CO-035 – Enhanced Premium Transit Service project is being considered for the I-75 corridor. Cobb County is currently financing the alternative analysis along the corridor.

ASP-AR-418 – Northwest Corridor High Capacity Rail Service. This project consists of potential high capacity rail service from Southern Polytechnic Institute to the Town Center Area.

Note: The VE study had an error in the cost savings calculations. The length of the recommended bridge is 395'; however 375' was used in the square foot computations. This will result in a potential savings of \$1,125,800, not the \$1,439,000 shown in the report.

Idea A-3: Reduce the bridge sidewalk width from 15 feet to 10 feet.

VE Team Savings: \$ 714,000

Response: **Will not implement.** Based on information obtained from KSU, approximately 8000 students live in off-campus student housing. Large portions, ~20%, of these students live on the east side of I-75. Along with the KSU Student Center, the KSU Soccer Stadium and the existing retail shopping also being located on the east side of I-75, it is anticipated that this project will need to accommodate a high pedestrian volume to and from the KSU main campus. Given the direct connection to the University campus, and the fact that the KSU campus is expanding to all four quadrants of the Chastain Road/I-75 Interchange, it is expected that the growing student population will utilize the proposed bridge to cross the interstate and as a place to congregate, similar to the 5th Street Bridge in downtown Atlanta adjacent to the Georgia Tech Campus.

KSU's student population is expected to grow ~30% over the next few years and the administration is actively seeking locations for additional student housing including sites on the east side of I-75. Currently there is a zoning application to build student housing in the northwest quadrant of the proposed Busbee-Frey and Busbee Drive intersection.

Idea A-8: Use MSE walls to reduce the length of the bridge end spans.

VE Team Savings: \$431,000

Response: ***Will implement.***

Recommendation C-1 & C1.1: Realign Busbee-Frey Connector, Tie in Busbee Drive, and Eliminate Tie-in to Townpark Lane

VE Team Savings: \$ 1,960,000 (C-1)

VE Team Savings: \$ 2,060,000 (C-1.1)

Response: ***Will not implement.***

Approximately 90% of the traffic utilizing the Busbee-Frey Connector consists of vehicles diverted from Chastain Road via Busbee Drive and Townpark Lane. A travel demand model test run was conducted to evaluate the impact of eliminating the Townpark Lane connection. It was seen that the traffic demand stayed essentially the same but the vehicles were now diverted solely to Busbee Drive. At the intersection of Busbee Drive and Chastain Road, an 85% increase in volume was seen for westbound to northbound right turns and southbound to east bound left turn. A Synchro traffic signal analysis was conducted to assess the impact of this increased traffic and the results showed that the resulting signal Level of Service will be unacceptable.

Further analysis was conducted to identify additional improvements required to bring this intersection to an acceptable LOS. It was seen that triple southbound to east bound left-turning lanes with 350 lf of storage and 180 lf of taper will be required. It was also seen that a total of 550 lf right turn lane storage and 100 lf of taper will be required for eastbound to northbound right turn lane.

		Busbee Drive at Chastain Road intersection analysis		
		Under Current Design Delay(sec)/LOS	With VE Recommendation Delay(sec)/LOS	With VE Recommendation including additional improvements Delay(sec)/LOS
Time Period	A.M.	25/C	27/C	26/C
	P.M.	68/E	80/F	68/E

In addition, elimination of this tie-in will adversely impact access to properties along existing Townpark Lane. Existing Townpark Lane is being converted to a right-in/right-out operation at its intersection with Busbee Drive to provide additional southbound left-turn storage for the Busbee Drive and Chastain Road intersection. Under the proposed condition, traffic from properties along Townpark Lane can still access Chastain Road (westbound) and I-75 via the proposed Townpark Lane tie-in. Elimination of this tie-in will force these vehicles to head west and make a large U-turn type movement via Townpark Lane and George Busbee Parkway.

**C-1 & C-1.1 – Intersection Analysis - Proposed Intersection Configuration with Townpark Lane in place
(Currently proposed design)**

Scenario-I (W/O Townpark Conn-Dual Left Turn)
6: Chastain Rd & Busbee Dr

Year 2034 PM Peak Hour
3/13/2012

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	165	1425	420	105	1750	190	520	130	100	15	425	50	55
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Ideal Flow (voph)	12	12	12	12	12	12	12	12	12	12	12	12	
Lane Width (ft)	200	180	0	270	470	0	2	0	0	2	0	0	
Storage Length (ft)	75	75	75	75	75	75	75	75	75	75	75	75	
Taper Length (ft)	0.97	0.91	1.00	1.00	0.95	1.00	0.97	1.00	1.00	0.97	1.00	1.00	
Lane Util. Factor	0.850		0.850		0.850		0.850		0.850		0.850		
Fit Protected	0.950		0.950		0.950		0.950		0.950		0.950		
Satd Flow (prot)	3155	4673	1455	1626	3252	1455	3155	1600	0	0	3155	1712	1455
Fit Permitted	0.950		0.950		0.950		0.950		0.950		0.604		
Satd Flow (perm)	3155	4673	1455	1626	3252	1455	3155	1600	0	0	2006	1712	1455
Right Turn on Red			Yes		Yes				Yes			Yes	
Satd Flow (RTOR)			364		146			26				60	
Link Speed (mph)		45			45							35	
Link Distance (ft)		451			838			35				162	
Travel Time (s)		6.8			12.7			15.0				3.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	179	1549	457	114	1902	207	565	141	109	16	462	54	60
Shared Lane Traffic (%)													
Lane Group Flow (vph)	179	1549	457	114	1902	207	565	250	0	0	478	54	60
Turn Type	Prot		Perm		Prot		Perm			Custom		Prot	
Protected Phases	1	6		5	2		7	4			3	8	8
Permitted Phases			6		2		2				3		8
Detector Phase	1	6	6	5	2	2	7	4		3	3	8	8
Switch Phase													
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	8.0	15.0		8.0	8.0	15.0	15.0
Total Split (s)	12.0	62.0	62.0	14.0	64.0	64.0	24.0	18.0	0.0	26.0	26.0	20.0	20.0
Total Split (%)	10.0%	51.7%	51.7%	11.7%	53.3%	53.3%	20.0%	15.0%	0.0%	21.7%	21.7%	16.7%	16.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Synchro 7 - Report
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Scenario-I (W/O Townpark Conn-Dual Left Turn)
6: Chastain Rd & Busbee Dr

Year 2034 PM Peak Hour
3/13/2012

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	Min	Min	None	C-Min	C-Min	None	None		None	None	None
Act Effct Green (s)	8.0	54.6	54.6	13.4	60.0	60.0	24.0	14.0		22.0	13.9	13.9
Actuated g/C Ratio	0.07	0.46	0.46	0.11	0.50	0.50	0.20	0.12		0.18	0.12	0.12
v/c Ratio	0.85	0.73	0.52	0.63	1.17	0.26	0.90	1.19		1.30	0.27	0.27
Control Delay	72.2	16.3	2.9	53.6	100.5	2.3	66.1	164.0		192.9	50.6	14.8
Queue Delay	0.0	0.8	0.7	0.0	27.6	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	72.2	17.2	3.6	53.6	128.1	2.3	66.1	164.0		192.9	50.6	14.8
LOS	E	B	A	D	F	A	E	F		F	D	B
Approach Delay		16.8			112.8			96.1			161.8	
Approach LOS		B			F			F			F	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 16 (13%), Referenced to phase 2:WBT, Start of Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.30

Intersection Signal Delay: 80.1

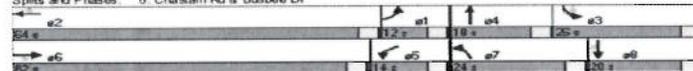
Intersection LOS: F

Intersection Capacity Utilization: 91.9%

ICU Level of Service: F

Analysis Period (min): 15

Splits and Phases: 6: Chastain Rd & Busbee Dr



C-1 & C-1.1 – Intersection Analysis - Proposed Intersection configuration without Townpark Lane in place (VE Recommendation)

Scenario#II(With Townpark Connection)
6: Chastain Rd & Busbee Dr

Year 2035 PM Peak Hour
3/13/2012

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	
Volume (vph)	165	1425	420	55	1625	35	520	130	100	15	290	125	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12	
Storage Length (ft)	200		180	0		270	470		685	0		0	
Storage Lanes	2		1	1		1	1		0		2	1	
Taper Length (ft)	75		75	75		75	75		75		75	75	
Lane Util. Factor	0.97	0.91	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	0.97	1.00	
Frt			0.850			0.850		0.935				0.850	
Flt Protected	0.950			0.950			0.950				0.950		
Satd Flow (prot)	3127	4631	1442	1612	3223	1442	3127	1586	0	0	3127	1696	1442
Flt Permitted	0.950			0.950			0.950				0.604		
Satd Flow (perm)	3127	4631	1442	1612	3223	1442	3127	1586	0	0	1968	1696	1442
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd Flow (RTOR)			384			29			27			102	
Link Speed (mph)		45			45			35				35	
Link Distance (ft)		451			838			769				162	
Travel Time (s)		6.8			12.7			15.0				3.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	179	1549	457	60	1766	38	565	141	109	16	315	136	114
Shared Lane Traffic (%)													
Lane Group Flow (vph)	179	1549	457	60	1766	38	565	250	0	0	331	136	114
Turn Type	Prot		Perm	Prot		Perm	Prot			custom	Prot		Perm
Protected Phases	1	6		5	2		7	4			3	8	
Permitted Phases			6			2				3		8	
Detector Phase	1	6	6	5	2	2	7	4		3	3	8	
Switch Phase													
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0		8.0	8.0	20.0	
Total Split (s)	11.0	62.0	62.0	14.0	65.0	65.0	24.0	21.0	0.0	23.0	23.0	20.0	
Total Split (%)	9.2%	51.7%	51.7%	11.7%	54.2%	54.2%	20.0%	17.5%	0.0%	19.2%	19.2%	16.7%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Baseline
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Synchro 7 - Report
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Scenario#II(With Townpark Connection)
6: Chastain Rd & Busbee Dr

Year 2035 PM Peak Hour
3/13/2012

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effl Green (s)	7.0	59.6	59.6	10.3	61.0	61.0	20.0	17.0		19.0	16.0	16.0
Actuated g/C Ratio	0.06	0.50	0.50	0.09	0.51	0.51	0.17	0.14		0.16	0.13	0.13
v/c Ratio	0.96	0.67	0.50	0.43	1.06	1.06	1.01	1.01		1.05	0.60	0.41
Control Delay	94.4	15.5	2.6	37.8	73.3	73.3	6.1	111.2	105.3	111.6	59.9	19.1
Queue Delay	0.0	0.6	0.5	0.0	33.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	94.4	16.1	3.2	37.8	107.0	6.1	111.2	105.3		111.6	59.9	19.1
LOS	F	B	A	D	F	A	F	F		F	E	B
Approach Delay		19.8			102.7			109.4			81.3	
Approach LOS		B			F			F			F	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 1 (1%), Referenced to phase 2:WBT, Start of Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.08

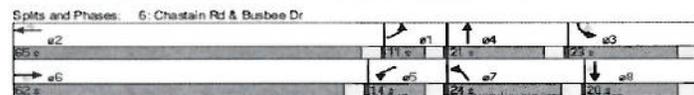
Intersection Signal Delay: 68.2

Intersection Capacity Utilization 84.6%

Analysis Period (min) 15

Intersection LOS: E

ICU Level of Service E



C-1 & C-1.1 – Intersection Analysis - Improved Intersection configuration without Townpark Lane in place (VE Recommendation with necessary improvements)

Scenario-III (W/O Townpark Conn-Triple Left Turn)
6: Chastain Rd & Busbee Dr

Year 2034 PM Peak
3/13/2012

Line Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Line Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	166	1425	420	105	1750	190	520	130	100	15	425	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	200		180	0		270	470		685	0		0
Storage Lanes	2		1	1		1	1		0	3		1
Taper Length (ft)	75		75	75		75	75		75			75
Lane Util. Factor	0.97	0.91	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	0.94	1.00
Ft			0.850			0.850		0.935				0.850
Ft Protected	0.950			0.950		0.950		0.950			0.950	
Satd Flow (prot)	3127	4631	1442	1612	3223	1442	3127	1586	0	0	4545	1696
Ft Permitted	0.950			0.950		0.950		0.950			0.604	
Satd Flow (perm)	3127	4631	1442	1612	3223	1442	3127	1586	0	0	2889	1442
Right Turn on Red			Yes			Yes		Yes			Yes	
Satd Flow (RTOR)			366			157		27				60
Link Speed (mph)		45			45			35				35
Link Distance (ft)		451			838			769				162
Travel Time (s)		6.8			12.7			15.0				3.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	179	1549	457	114	1902	207	565	250	0	0	478	54
Turn Type	Prot		Perm	Prot		Perm	Prot		Custom		Prot	Perm
Protected Phases	1	6		5	2		7	4			3	8
Permitted Phases			6			2				3		8
Detector Phases	1	6	6	5	2	2	7	4		3	3	8
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	8.0	15.0		8.0	8.0	15.0
Total Split (s)	11.0	59.0	59.0	20.0	68.0	68.0	25.0	19.0	0.0	22.0	22.0	16.0
Total Split (%)	9.2%	49.2%	49.2%	16.7%	56.7%	56.7%	20.8%	15.8%	0.0%	18.3%	18.3%	13.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Baseline
%user_name%

Synchro 7 - Report
Page 1

Scenario-III (W/O Townpark Conn-Triple Left Turn)
6: Chastain Rd & Busbee Dr

Year 2034 PM Peak
3/13/2012

Line Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	Min	Min	None	C-Min	C-Min	None	None		None	None	None
Act Effd Green (s)	7.0	52.9	52.9	18.1	64.0	64.0	24.2	15.0		18.0	10.7	10.7
Actuated g/C Ratio	0.06	0.44	0.44	0.15	0.53	0.53	0.20	0.12		0.15	0.09	0.09
v/c Ratio	0.98	0.76	0.54	0.47	1.11	0.25	0.90	1.13		1.10	0.36	0.33
Control Delay	101.5	18.4	3.3	40.2	72.2	1.5	65.9	141.0		121.5	57.4	17.4
Queue Delay	0.0	1.3	0.8	0.0	37.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	101.5	19.7	4.2	40.2	109.3	1.5	65.9	141.0		121.5	57.4	17.5
LOS	F	B	A	D	F	A	E	F		F	E	B
Approach Delay		23.2			95.7			88.9			105.1	
Approach LOS		C			F			F			F	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 16 (13%), Referenced to phase 2 WBT, Start of Green

Normal Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.13

Intersection Signal Delay: 68.5

Intersection Capacity Utilization: 67.7%

Intersection LOS: E

ICU Level of Service: E

Analysis Period (min): 15

Sp/Pls and Phases: 6: Chastain Rd & Busbee Dr

Idea C-2: Use 11 foot lanes for the Busbee-Frey Connector.

VE Team Savings: \$362,000

Response: *Will implement.*

Idea C-3: Reduce the median width from 20 feet to 16 feet on the Busbee-Frey Connector.

VE Team Savings: \$335,000

Response: *Will implement.*

Idea C-4: Use a 5-lane; flush median section for the Busbee-Frey Connector.

VE Team Savings: \$521,900

Response: **Will not implement.**

Idea C-2 & C-3 will be implemented in lieu of Idea C-4. The cost savings associated with Ideas C-2 and C-3 will offset the potential savings resulting from C-4. The raised median will also allow for the installation of landscaping, in keeping with the pedestrian friendly nature of the corridor.

Idea C-5: Use a 3-lane; flush median section for the Busbee Frey Connector.

VE Team Savings: \$1,830,000

Response: **Will not implement.** The current configuration of four-lane divided highway functions as a two through-lane roadway with long right-turn drop lanes in both eastbound and westbound approaches of the bridge.

The right turning drop lanes serve two major purposes:

- I. Accommodating high queue lengths contributed by heavy right turning traffic in the eastbound and westbound approaches of the bridge.
- II. Act as receiving lanes for free flow right turning lanes at the intersections of Busbee Dr and Frey Road.

It is anticipated that under a 3-lane section configuration, long queues will form at each end of the Busbee-Frey Connector. At the western end where the connector intersects Frey Road, the right turn lane will be 670 linear-feet. This length is being dictated by the westbound through lane queues. The right turn lane needs to be longer than the through queues to prevent through lane traffic blocking the right turns. At the eastern end where the connector intersects Busbee Drive, a minimum 380 linear-feet right turn lane will be required. The proposed section between these intersections is approximately 1,300 linear feet. After accommodating these right turn lanes, the remaining 3-lane section available on the connector will only be approximately 250 linear-feet. Therefore, the actual savings in asphalt and earthwork under the proposed recommendation will be approximately \$49,000.

Turn Lane Length analysis						
Parameters	Busbee Frey Conn. @ Frey Rd			Busbee Frey Conn. @ Busbee Dr		
	WBL	WBT	WBR	EBL	EBT	EBR
95 Percentile Queue Length (Maximum of AM & PM)	180	490	200'	80	190	120
Minimum Deceleration Length for Type C Median @ 35mph	200'	N/A	200'	200'	N/A	200'
Taper Length Requirements	180'	N/A	180'	180'	N/A	180'
Recommended Turn lane Length	670' =(490+180)	N/A	670' =(490+180)	460'	N/A	380' =(200+180)

Queuing Analysis- Year 2034 AM Peak Hour – 3 Lane Segment

Intersection: 102: KSU Parking Deck & Frey Rd

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	
Directions Served	L	TR	L	T	R	UL	T	TR	L	T	T	
Maximum Queue (ft)	26	121	72	577	475	238	102	101	51	437	429	
Average Queue (ft)	1	44	27	326	34	101	57	58	21	278	299	
95th Queue (ft)	9	96	72	492	198	172	109	107	46	423	429	
Link Distance (ft)	338	338		1282		335	335	335		1281	1281	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)				300				400				350
Storage Blk Time (%)								7				2
Queuing Penalty (veh)								38				1

Intersection: 140: Connector & Busbee Dr

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB	
Directions Served	L	T	L	TR	UL	TR	L	T	R	
Maximum Queue (ft)	47	50	224	442	422	314	81	143	45	
Average Queue (ft)	10	17	88	325	216	71	24	50	9	
95th Queue (ft)	35	46	204	458	372	180	65	103	35	
Link Distance (ft)		1282		379	731	731		391	391	
Upstream Blk Time (%)										8
Queuing Penalty (veh)										0
Storage Bay Dist (ft)	250		150				300			
Storage Blk Time (%)			2	31						
Queuing Penalty (veh)			9	29						

Queuing Analysis- Year 2034 PM Peak Hour – 3 Lane Segment

Intersection: 102: KSU Parking Deck & Frey Rd

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	T	UL	T	TR	L	T	T	R
Maximum Queue (ft)	377	386	202	255	257	388	366	425	1207	1119	56
Average Queue (ft)	264	310	105	92	136	327	341	416	807	590	4
95th Queue (ft)	390	438	183	185	237	382	373	469	1280	1023	28
Link Distance (ft)	338	338		1290	335	335	335		1285	1285	
Upstream Blk Time (%)	13	33									
Queuing Penalty (veh)	0	0									
Storage Bay Dist (ft)				300				350			
Storage Blk Time (%)								65			
Queuing Penalty (veh)								225			

Intersection: 103: Connector & Busbee Dr

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	TR	UL	TR	L	T
Maximum Queue (ft)	92	279	323	224	377	181	308	52	143
Average Queue (ft)	36	93	13	151	139	97	62	20	60
95th Queue (ft)	82	181	117	239	270	180	176	49	121
Link Distance (ft)		1290			501	355	355		766
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	250		250	150			300		
Storage Blk Time (%)		1		13	9				
Queuing Penalty (veh)		2		25	16				

Idea C-6: Use a roundabout at the Busbee-Frey Connector and Busbee Drive intersection.

VE Team Savings: \$75,000

Response: **Will implement (pending roundabout feasibility study).** The roundabout feasibility study will take into account anticipated large pedestrian volumes in the area as well as traffic benefits including the approach grades of several of the approaches. Per GDOT direction, if feasible, the roundabout will be designed to accommodate "active pedestrian crossings", which may be needed in the future.

Idea C-12: Reduce the pavement thickness.

VE Team Savings: \$245,000

Response: **Will not implement.** The vehicle classification on the Busbee-Frey connector is expected to closely match the current vehicle classification for Frey Road. Since the 9.5 % truck on Frey road closely matches the overall 10% established for the project, the truck volumes will not be modified.

Truck Percentage Comparison Summary						
	Overall Project Area			Frey Road		
	Single Unit (SU)	Combination Unit (Com)	Total Truck	Single Unit (SU)	Combination Unit (Com)	Total Truck
24-Hour Truck	6.7%	3.4%	10.1%	6.1%	3.4%	9.5%

A pavement analysis will be prepared using the traffic numbers and truck percentages approved by GDOT. The analysis will be submitted to the GDOT Office of Material and Research for final approval.

Based on a preliminary analysis, GDOT's Office of Material and Research suggests the following mix design:

- 1.25" - 9.5 mm SP
- 2" - 19 mm SP
- 7" - 25 mm SP
- 12" - GAB

During the preliminary design phase, the pavement design mix will be submitted to OMR for approval.

Note: The pavement design analysis used in the VE study has an error in the LDF factor. Using the correct LDF of 1.00, the proposed pavement design, shown in the plans, will be approximately 0.8% under designed, which is in line with GDOT requirements.

Idea F-6: Use fewer culvert cells at the regional detention pond crossing.

VE Team Savings: \$321,000

Response: **Will not implement.** This recommendation if implemented will cause additional impacts to the wetland and may cause new impacts to the stream and stream buffer.

The crossing in question is along Townpark Lane where it crosses the regional detention pond. This area falls under FEMA Zone A Special Flood Hazard Area. Although FEMA allows up to 1-foot rise in water surface elevation in this type of floodplain, Cobb County requires the proposed crossing result in no increase (No Rise) to the 100-year floodplain elevation.

The project will be placing 3400 CY of fill in this detention pond and will divide regional detention facility with the proposed culverts acting as an outlet structure for the upper portion of the existing facility (upper pond) and the existing regional detention facilities outlet structure acting as the outlet structure for the lower portion of the existing facility (lower pond). Therefore, reservoir routing was utilized to determine the number of culvert barrel required for this project.

The regional detention is also classified as partial wetland and partial stream. At the crossing location, the detention pond is classified as wetland. Further upstream, the wetland turns into a buffered stream. Currently, the project is not impacting the stream or stream buffer. Only 0.40 acre of the wetland impact is being anticipated.

Idea M-1: Use standard width 5 foot sidewalks on the Busbee-Frey Connector.

VE Team Savings: \$1,560,000

Response: **Will not implement.** Based on information obtained from KSU, approximately 8000 students live in off-campus student housing. A large portion, ~20%, of these students live on the east side of I-75. Along with the KSU Student Center, the KSU Soccer Stadium and the existing retail shopping also being located on the east side of I-75, it is anticipated that this project will need to accommodate a high pedestrian volume to and from the KSU main campus. Given the direct connection to the University campus, it is expected that the student population will utilize the proposed bridge to traverse the interstate and as a place to congregate, similar to the 5th Street Bridge in downtown Atlanta adjacent to the Georgia Tech Campus.

KSU's student population is expected to grow ~30 to 40% over the next few years and the administration is actively seeking additional locations for additional housing including sites on the east side of I-75.

The proposed 10' sidewalk is also in line with the goals of both Cobb County and the Town Center Community Improvement District to provide a vast network of sidewalks and multi-use paths throughout the area. Currently, 10' sidewalks are being installed along the Big Shanty Connector and Town Point Parkway projects. Additionally, the Town Center CID has identified Busbee Drive as a LCI focus area. The CID has applied for LCI funds to construct a multi-use path and bicycle lane along the entire Busbee Drive corridor.

Recommendations A-1, A-2 and A-3

Bridge Design Feedback

Brown, Chandria

From: DuVall, Bill
Sent: Thursday, April 19, 2012 2:02 PM
To: Brown, Chandria
Cc: Rabun, Ben; Sanders, Matt
Subject: RE: PI 0010157 - Bridge Design VE Response Concurrences

Chandria,

The bridge office address' the structural related items in the VE Study as you requested as follows:

VE Alternative A-1, Reduce bridge lengths; end spans: Will Not Implement -The Bridge Office agrees with Cobb County regarding the future use of I-75 and the need to provide access beneath the proposed structure.

VE Alternative A-3, Reduce bridge sidewalk width to 10 feet: Will Not Implement – Based on the anticipated pedestrian volumes related to Kennesaw State University provided by Cobb County, the designer requires 15 foot sidewalks. The Bridge Office does not object to the proposed widths.

VE Alternative A-8, Use MSE walls at end bents: Cobb County recommends implementing this alternative. The Bridge Office accepts this recommendation based on the information available. However, this project is in the concept phase. No plans for the bridge, walls, roadway or right of way have been submitted to the Bridge Office for review nor a cost estimate. If it is determined during the development of preliminary or final plans that a 4 span bridge is more economical, then you will need to draft a reversal for this alternative.

If you have any further questions or comments, please let me know.

Thanks,
Bill

From: Brown, Chandria
Sent: Friday, April 13, 2012 10:59 AM
To: DuVall, Bill
Cc: Rabun, Ben
Subject: FW: PI 0010157 - Bridge Design VE Response Concurrences

Mr. DuVall,

I'm following up on my April 2, 2012 e-mail requesting your VE Concurrences for the response for PI 0010157. Please advise as to the status of your review.

Thanks,

Recommendation F-6

Brown, Chandria

Design Policy & Support Feedback

From: McManus, Brad
Sent: Tuesday, April 03, 2012 9:06 AM
To: Brown, Chandria
Cc: Hill, Stanley
Subject: RE: PI 0010157 - Drainage VE Response Concurrence

According to Cobb County the 6 barrel culvert was sized using routing analysis. That is what we asked for about one month ago. I am taking Cobb County at its word and concur with Cobb County's response to the VE study on recommendation F-6.

Brad McManus, PE
Design Group Manager
GDOT, Office of Design Policy and Support
25th floor (Mail to 26th floor)
600 West Peachtree Street
Atlanta, Georgia 30308
Phone 404 631 1630
fax 404 631 1949

From: Brown, Chandria
Sent: Monday, April 02, 2012 4:26 PM
To: McManus, Brad
Cc: Hill, Stanley
Subject: PI 0010157 - Drainage VE Response Concurrence

Mr. McManus,

The VE Study for PI 0010157 – Busbee Frey Connector was held the week of February 6, 2012. This a new location overpass bridge over I-75 north of the I-75 Chastain Road Interchange. Cobb County has provided responses for the VE comments within the attached document. Please provide your feedback and/or concurrence for the Drainage related response by or before COB 04/10/12: **F-6**.

For your immediate reference, I have placed the VE Report, VE Study Package, VE Study Plan Set and the VE Responses at the following location on PCCOMMON.

<\\Gdot-ad\preconstruction\RoadDesign\Pccommon\0010157\VE Study>

Please let me know if you have any questions.

Recommendation C-12

Brown, Chandria

Office of Materials & Research Feedback 1 of 5

From: Jubran, Abdallah (AJ)
Sent: Wednesday, April 04, 2012 10:56 AM
To: Brown, Chandria
Cc: Hill, Stanley; Scruggs, Thomas; Turner, James
Subject: RE: PI 0010157 - Pavement VE Response Concurrences
Attachments: PI 0010157VEResponse.pdf

Chandria,

I see two issues with the VE analysis:

- a. AMEC decided to cut the truck percent in half, and
- b. Erroneously used and LDF of 0.01 instead of 1.0 which should be entered as 100%. This should have been flagged, but apparently not caught in the quality review.

I am presenting two alternates in the attached pdf. They are based on the following

- 1. Used approved traffic volumes on cover sheet
- 2. Used 10% truck percentage as stipulated in the VE report
- 3. Used an ESAL factor of 0.73 as used in VE report. This factor with Item 2 equate to MU=1.5% and SU=3.5%
- 4. Used a 0-5% underdesign for Urban areas with curb and gutter
- 5. Used an LDF of 100% - one lane, all truck traffic in that lane (VE used 0.01)
- 6. The Pavement Sections I came up with are the following:

Surface: 1.25 in 9.5 mm SP This is the surface mix type according to Mix Guidelines
Binder: 2 in 19 mm SP
Base HMA: 6 in 25 m SP
Base: 12 in GAB

This gives a 6.1% underdesign which does not meet the 0-5% guideline but is provided for your information, and

Surface: 1.25 in 9.5 mm SP This is the surface mix type according to Mix Guidelines
Binder: 2 in 19 mm SP
Base HMA: 7 in 25 m SP
Base: 12 in GAB

Recommendation C-12

Office of Materials & Research Feedback 2 of 5

This design gives a 0.8% underdesign which meets the 0-5% guideline.

Please advise if additional information is needed. Thanks. AJ

From: Brown, Chandria
Sent: Monday, April 02, 2012 4:16 PM
To: Jubran, Abdallah (AJ)
Cc: Turner, James; Hill, Stanley
Subject: PI 0010157 - Pavement VE Response Concurrences

Mr. Jubran,

The VE Study for PI 0010157 – Busbee Frey Connector was held the week of February 6, 2012. This a new location overpass bridge over I-75 north of the I-75 Chastain Road Interchange. Cobb County has provided responses for the VE comments within the attached document. Please provide your feedback and/or concurrences for the Pavement related comment by or before COB 04/10/12: **C-12**.

For your immediate reference, I have placed the VE Report, VE Study Package, VE Study Plan Set and the VE Responses at the following location on PCCOMMON.

<\\Gdot-ad\preconstruction\RoadDesign\Pccommon\0010157\VE Study>

Please let me know if you have any questions.

Thanks,
Chandria L. Brown, P.E.
Project Manager
Office of Program Delivery
Georgia Department of Transportation
600 West Peachtree Street, 25th Floor
Atlanta, GA 30308
Phone: (404) 631-1580
Mobile: (404) 357-5049
Fax: (404) 631-1588
E-mail: chbrown@dot.ga.gov

Recommendations C-1, C1.1, C2, C3, C4, C5, C6, M-1

Traffic Operations Feedback

Brown, Chandria

From: Zehngraff, Scott E.
Sent: Monday, April 09, 2012 4:59 PM
To: Lobdell, Mike; Brown, Chandria
Cc: Zahul, Kathy; Werho, Ken; Pass, Daniel; DeNard, Paul
Subject: RE: PI 0010157 - District 7 Traffic Operations VE Response Concurrence

I just spoke with Dan Pass about this, and I wanted to share this with you...

All we are recommending at this time is being able to accommodate "active pedestrian accommodations" in the future...
This will likely be conduit from the shoulder to the splitter islands across all multilane approaches (and exits) to (and from) the roundabout...
The PROWAG (if approved) and ADA regulations may allow the use of RRFBs...

we are not requiring active pedestrian crossings at this time... and will not until we get final determination on what PROWAG decides...

Scott E. Zehngraff, P.E. General Operations Manager Traffic Operations 404-635-8127 cell: 404-805-8016

From: Lobdell, Mike
Sent: Monday, April 09, 2012 11:13 AM
To: Zehngraff, Scott E.; Brown, Chandria
Cc: Zahul, Kathy; Werho, Ken
Subject: RE: PI 0010157 - District 7 Traffic Operations VE Response Concurrence

The rationale for the responses appears reasonable to me. For C6 keep in mind that a pedestrian hybrid beacon will be required on all legs if this is a multi lane roundabout.

Mike Lobdell, P.E.
(770) 986-1765
mlobdell@dot.ga.gov

From: Zehngraff, Scott E.
Sent: Friday, April 06, 2012 3:26 PM
To: Brown, Chandria; Lobdell, Mike
Cc: Zahul, Kathy; Werho, Ken
Subject: RE: PI 0010157 - District 7 Traffic Operations VE Response Concurrence

Mike,
We can work together on the responses for this... please let me know what I can do to help

PRECONSTRUCTION STATUS REPORT FOR PI:0010157

PROJ ID : 0010157
 COUNTY : Cobb
 LENGTH (MI) : 0.50
 PROJ MGR: Brown, Chandria
 AOHD Initials: SSH
 OFFICE : Program Delivery
 CONSULTANT: Local Design, Local PE funds
 SPONSOR : Cobb County
 DESIGN FIRM: Croy Engineering, LLC.

SKIP SPANN CONNECTOR FROM BUSBEE PKWY TO FREY ROAD
 MPO: Atlanta TMA
 TIP #: CO-400
 MODEL YR : 2020
 TYPE WORK: Bridges
 CONCEPT: New Construction
 PROG TYPE: N
 Prov. for ITS:
 BOND PROJ :

MGMT LET DATE : 11/15/2013
 MGMT ROW DATE : 11/16/2012
 BASELINE LET DATE: 11/14/2013
 SCHED LET DATE : 2/17/2014
 WHO LETS?: Local Let
 LET WITH :

BASE START	BASE FINISH	LATE START	LATE FINISH	TASKS	ACTUAL START	ACTUAL FINISH	%	PROGRAMMED FUNDS				STIP AMOUNTS			
								Activity	Approved	Proposed	Cost	Fund	Status	Date Auth	Activity
5/28/2012	7/27/2012	3/1/2009	3/1/2009	Concept Development			0	PE	LOCL	LOCL	4,161,226.00	LOC	AUTHORIZED		
4/3/2012	6/4/2012	6/4/2012	6/4/2012	Concept Meeting			0	PE	2012	2012	75,000.00	LOC	PRECAST		
4/30/2012	6/29/2012	6/29/2012	6/29/2012	PM Submit Concept Report			0	ROW	2012	2013	2,500,000.00	LOC	PRECAST		
5/1/2012	7/2/2012	7/2/2012	7/2/2012	Concept Report Review and Comments			0	CST	2016	2016	19,000,000.00	LOC	PRECAST		
5/28/2012	7/27/2012	7/27/2012	7/27/2012	Management Concept Approval Complete			90								
4/6/2012	5/18/2012	5/18/2012	5/18/2012	Value Engineering Study	10/28/2011		50								
4/30/2012	9/10/2012	9/10/2012	9/10/2012	Environmental Approval	1/1/2010		100								
11/10/2011	6/7/2012	6/7/2012	6/7/2012	Field Surveys/SDE	3/1/2009	6/1/2009	100								
10/8/2012	5/9/2012	5/9/2012	5/9/2012	Preliminary Plans	10/1/2009		48								
12/14/2012	9/2/2013	9/2/2013	9/2/2013	Preliminary Bridge Design	2/1/2010		67								
5/29/2012	7/30/2012	7/30/2012	7/30/2012	Underground Storage Tanks			0								
7/6/2012	10/9/2012	10/9/2012	10/9/2012	404 Permit Obtainment			0								
7/9/2012	11/20/2012	11/20/2012	11/20/2012	PFPR Inspection			0								
8/20/2012	11/21/2012	11/21/2012	11/21/2012	R/W Plans Preparation			0								
8/14/2012	11/15/2012	11/15/2012	11/15/2012	R/W Plans Final Approval			0								
10/19/2012	11/15/2012	11/15/2012	11/15/2012	L & D Approval			0								
2/22/2013	3/7/2013	3/7/2013	3/7/2013	Stake R/W			0								
11/11/2011	8/21/2012	8/21/2012	8/21/2012	R/W Authorization			0								
11/11/2011	8/21/2012	8/21/2012	8/21/2012	Soil Survey			0								
8/15/2012	5/10/2012	5/10/2012	5/10/2012	Bridge Foundation Investigation			0								
10/8/2012	2/22/2013	2/22/2013	2/22/2013	Final Design			0								
3/25/2013	1/25/2013	1/25/2013	1/25/2013	Final Bridge Plans Preparation			0								
4/2/2013	6/26/2013	6/26/2013	6/26/2013	PFPR Inspection			0								
4/15/2013	7/17/2013	7/17/2013	7/17/2013	Submit FFPR Responses (OES)			0								

Bridge: BRIDGE REQUIRED
Design: CobbDOT; VE Study Resp in Prog; CE will be EA, clb 04/24/12
EIS: CE/On sched for Env Baseline 4.30.12/Benton-Hooks 3.08.12
LGPA: PFA SGN COBB DO PEIROWUTIL & CST; INCLUDING \$75K FOR GDOT REVIEW
 11-30-11 NOTIFICATION LETTER SENT TO COBB 11-5-10. LETTER DATED 11-14-11 FROM HILLARD
 ALLOWING FOR THE COLLECTION OF FINAL 25K FOR OVERSIGHT TO BE COLLECTED IN MAY 2012.
Planning: PE-Oversight funded locally (e-mail MF 110910) (HDG)
Programming: 100% LOCAL FUNDED PROJECT - PROGRAMMED AT THE REQUEST OF COBB COUNTY; \$88K
 SETUP IN PE FOR GDOT OVERSIGHT PER PFA ATTACHMENT D. 8-9-11
Utility: CC: NEED PPLANS 11/10
Engr. Services: VE responses rec'd. waiting on Impl Letter Approval

Pred. Parcel CT:	7	Total Parcel in ROW System:	1	Cond. Filled:	0	Acquired by:	LOC	DEEDS CT:	0
Under Review:	0	Options - Pending:	0	Relocations:	0	Acquisition MGR:			
Released:	1	Condemnations- Pend:	0	Acquired:	0	R/W Cert Date:			