

ORIGINAL TO GENERAL FILES

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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

**FILE** P.I. #0010033  
SR 5 CONN @ I-575 &  
CR 4661/MALL BLVD  
Cobb County

**OFFICE** Design Policy & Support

**DATE** November 18, 2010

**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:

Bryant Poole, District Engineer  
Genetha Rice-Singleton, Program Control Administrator  
Glenn Bowman, State Environmental Administrator  
Kathy Zahul, State Traffic Engineer  
Ron Wishon, State Project Review Engineer  
Jeff Baker, State Utilities Engineer  
Jonathan Walker, District Utilities Engineer  
Angela Robinson, Financial Management Administrator  
Angela Alexander, State Transportation Planning Administrator

BOARD MEMBER - 11th Congressional District

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

PROJECT CONCEPT REPORT

COBB COUNTY

SR 5 Connector at I-575 and CR 4661/Mall Boulevard

FEDERAL ROUTE NO.: I-575  
STATE ROUTE NO.: 5 CONN  
GADOT P.I. NO.: 0010033

\*\*\*\*\*QUICK PROJECT\*\*\*\*\*

SEE ATTACHED  
LOCATION SKETCH

Date of Report: September 20, 2010

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\_\_\_\_\_  
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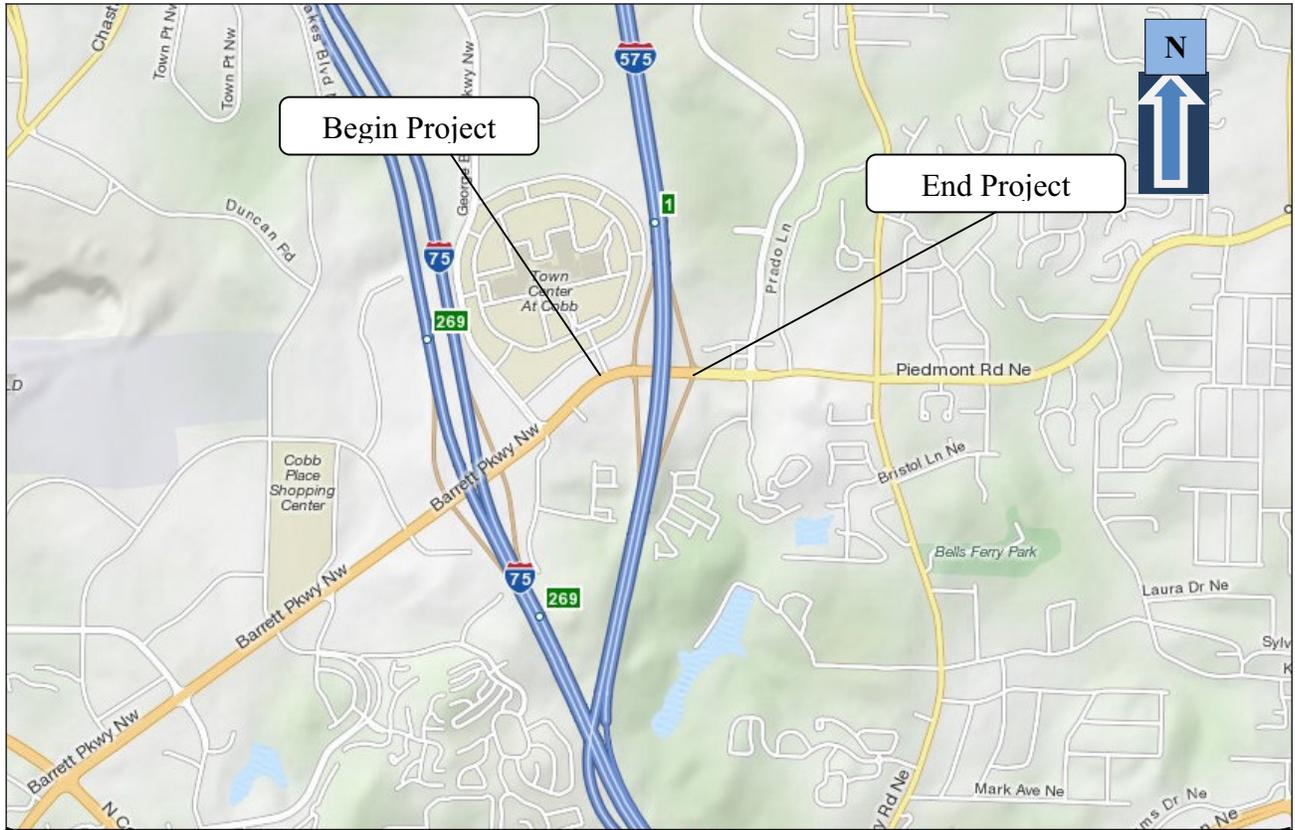
RECOMMENDED: 9/30/2010 W. S. S.  
DATE DISTRICT PRECONSTRUCTION ENGINEER

RECOMMENDED: 10/4/10 Buy Pool  
DATE DISTRICT ENGINEER

RECOMMENDED: 10-12-10 Katman Zahid  
DATE STATE TRAFFIC ENGINEER

APPROVED: 11/16/2010 O. O. M.  
DATE CHIEF ENGINEER

**SR 5 Connector at I-575 and CR 4661/Mall Boulevard**



**LOCATION SKETCH**  
**NOT TO SCALE**

## **PROJECT CONCEPT REPORT**

### **P.I. NO.:**

0010033

### **Route No.:**

Interstate 575 (I-575) at SR 5 Connector/Barrett Parkway

### **Location:**

The project is located in Cobb County at the interchange of I-575 at Barrett Parkway.

### **Description:**

The project consists of intersection improvements along Barrett Parkway at the vicinity of I-575. These intersections include Barrett Parkway at the I-575 northbound on-ramp, Barrett Parkway at the I-575 southbound off-ramp, and Barrett Parkway at Mall Boulevard.

At the intersection of Barrett Parkway at the I-575 northbound ramp, an additional left-turn lane will be provided to create dual left-turn lanes on the eastbound leg of Barrett Parkway to serve traffic heading to I-575 northbound. See typical section no. 3 for the proposed lane configuration. The existing median barrier will be shortened to create this additional left-turn lane. Existing traffic island at the northbound ramp will be reconstructed to receive the additional left turn lane. Existing traffic signals will be modified to accommodate this additional left-turn lane.

At the intersection of Barrett Parkway at the I-575 southbound on-ramp, an additional left-turn lane will be provided to create dual left-turn lanes on the westbound leg of Barrett Parkway to serve traffic heading to I-575 southbound. See typical section no. 2 for the proposed lane configuration. The existing median barrier will be shortened to create this additional left-turn lane. Existing Concrete Island at the southbound on-ramp will be reconstructed to receive the additional left turn lane. At the I-575 southbound off-ramp leg of this intersection, an additional right-turn lane will be provided to create dual right-turn lanes. See typical section no. 5 for the proposed lane configuration. This additional right-turn lane will provide direct access to Mall Boulevard via a proposed median-separated westbound slip lane. This new lane will extend between the I-575 southbound ramp and Mall Boulevard. The existing right-turn lane will be utilized by traffic heading west on Barrett Parkway past Mall Boulevard. See typical section no. 1 for the proposed lane configuration. Existing traffic signals will be modified to accommodate these additional turn lanes at this intersection.

At the intersection of Barrett Parkway at Mall Boulevard, an additional southbound left-turn lane will be provided on the southbound leg of Mall Boulevard. This new left-turn lane will be created by widening the southbound leg of Mall Boulevard toward

the median and toward the west. A raised median will be maintained at the center to separate the northbound and southbound traffic along Mall Boulevard. New sidewalk will be constructed along the both sides of Mall Boulevard. See typical section no. for proposed lane configuration. Existing traffic signals at this intersection will be modified to convert the split phasing signal operation to protected-permissive type signal phasing.

**Traffic – Current ADT:**

Year	<u>2011</u>	<u>2031</u>
Barrett Parkway:	37,010	48,140
Northbound On-Ramp:	8,260	10,710
Southbound On-Ramp:	5,960	7,840
Southbound Off-Ramp:	8,260	10,710

**Existing Right-of-Way:**

Barrett Parkway:	144 feet
Mall Boulevard:	80 feet

**Existing Traffic Control:**

Traffic signals at each ramp terminal and Mall Boulevard intersection

**Existing Major Structures:**

Bridge carrying I-575 over Barrett Parkway

**Statement of Need and Purpose**

The project is located along a stretch of SR 5 Connector (Barrett Parkway) that runs between I-75 and I-575 and lies just south of Town Center Mall. The intersection of Mall Boulevard at Barrett Parkway serves as one of three main access points for the 1.27-million-square-foot mall. A significant increase in delay is expected in the project area in the future. During the traffic study, it was observed that a significant amount of traffic from the I-575 southbound ramp ultimately turned right onto Mall Boulevard. It was also observed that vehicles exiting I-575 southbound back up on the exit ramp, and in peak periods, the queues reach the I-575 southbound lanes, causing operational issues. Analysis of crash data between 2006 and 2008 indicates that the crash rate and non-fatalities injury rate for the project are significantly higher than statewide averages for similar facilities. Rear-end accidents and sideswipe accidents are the two major types of accidents recorded for the project corridor. Rear-end accidents are typical for congested segments of roadway with frequent stop-and-go maneuvers. Sideswipe accidents are typical for corridors with frequent lane changes where merging and diverging are required.

The purpose of this proposed project is to provide operational improvements to the three intersections along Barrett Parkway as well as the I-575 southbound exit ramp. The construction of additional turn lanes on the I-575 southbound ramp will provide additional right-turning capacity and storage space to eliminate the backup of vehicles on the southbound ramp. This additional lane will also provide exclusive right-turning lane(s), minimizing the weaving traffic volumes along Barrett Parkway westbound between the I-575 southbound ramp and Mall Boulevard. The additional left-turn lanes at Mall Boulevard and Barrett Parkway will also increase the volume of traffic that can proceed through the green cycle of each respective intersection, thereby increasing the operational efficiency of these three intersections.

### **Traffic Analysis**

The traffic analysis for the design year was performed based on projected design year traffic for the three intersections. In addition to weekday a.m. and p.m. peak hours, weekend traffic was also analyzed because of the proximity of the project to the mall. Highway Capacity Manual methodology was utilized for the intersection analysis.

The weekday analysis (Table 1) illustrates that the build scenario provides an average reduction in delay of approximately 66 percent and 58 percent over the no-build scenario at the three study intersections during the morning and afternoon peak hours, respectively. All three intersections operate at LOS F under the no-build conditions during the p.m. peak period and at LOS E or better under the build conditions during the p.m. peak period. The elimination of the split phasing at Mall Boulevard at Barrett Parkway provides additional green time to mainline Barrett Parkway, as indicated in the improved LOS C compared to LOS F under the no-build p.m. peak period. The additional left-turn lane capacity along Barrett Parkway at the I-575 ramps eliminates spillback and improves traffic operations at these intersections.

The weekend analysis (Table 2) shows that the intersections of Barrett Parkway at Mall Boulevard and Barrett Parkway at I-575 southbound will operate at LOS F for no-build and build conditions. However, there is a 46 percent reduction in intersection delay in build conditions when compared to no-build conditions. The reduction in delay is primarily a result of the decreased number of vehicles approaching the I-575 southbound off-ramp approach to Barrett Parkway, which would have a free-flow, barrier-separated lane under build conditions. This would also result in a decrease in the percentage of time that lanes are blocked by traffic headed westbound on Barrett Parkway, which experiences the heavy I-575 southbound off-ramp to Mall Boulevard movement in no-build conditions. The combination of additional capacity for turn lanes on Barrett Parkway for traffic headed to the I-575 mainline and the barrier-separated lane significantly improves traffic operations at this intersection.

**Table 1. LOS and Delay Summary – Design Year (2031) Weekday**

Intersection	No Build (2031)				Build (2031)				Reduction in Delay	
	A.M.		P.M.		A.M.		P.M.		A.M.	P.M.
	LOS	DELAY (sec/veh)	LOS	DELAY (sec/veh)	LOS	DELAY (sec/veh)	LOS	DELAY (sec/veh)	%	%
Barrett Parkway at Mall Boulevard	F	100.8	F	87.1	C	21.3	C	28.5	78.9	67.3
Barrett Parkway at I-575 SB	F	130.7	F	116.1	C	27.3	D	45.5	79.1	60.8
Barrett Parkway at I-575 NB	D	40.9	F	74.9	C	24.4	E	71.7	40.3	46.0

**Table 2. LOS and Delay Summary – Design Year (2031) Weekend Afternoon**

Intersection	No Build		Build		Reduction in Delay	
	LOS	DELAY (sec/veh)	LOS	DELAY (sec/veh)	Sec	%
Barrett Parkway at Mall Boulevard	F	187.0	F	101.6	85.4	45.7
Barrett Parkway at I-575 SB	F	167.4	C	26.3	141.1	84.3

**Accident Data Analysis – Barrett Parkway**

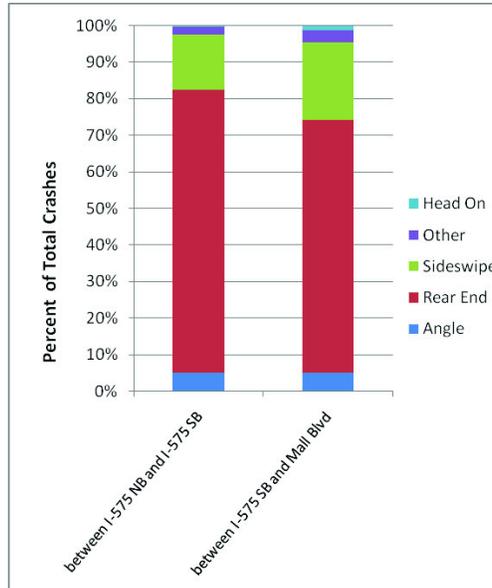
Accident data between 2006 and 2008 were analyzed for the project. Table 3 shows that overall crash and injury rates in the project area are significantly higher than the corresponding statewide averages. Potential causes of rear-end crashes in the study area include lane blockage from spillback as a result of insufficient left-turn storage length from Barrett Parkway onto the I-575 on-ramps and frequent stop-and-go conditions as a result of congestion along Barrett Parkway and the proximity of Mall Boulevard to the I-575 southbound ramps. The proximity of the I-575 southbound ramps to Mall Boulevard causes significant weaving issues along Barrett Parkway, which is evident in the significant proportion of sideswipe crashes.

**Table 3. Accident Analysis**

Item/Year		Year		
		2006	2007	2008
Crash Types	Angle	12	22	13
	Rear End	108	97	87
	Sideswipe - Same Direction	31	15	26
	Sideswipe - Opposite Direction	0	1	1
	Not A Collision With A Motor Vehicle	3	7	5
	Head On	3	2	0
Total Crashes		157	144	132
Total Non-Fatal Injuries		40	32	35
Total Fatalities		0	0	0
AADT		30,370	32,740	32,710
Crash Rate (per 100 MVMT)		1,475	1,255	1,152
<i>Statewide Crash Rate (per 100 MVMT)</i>		<i>548</i>	<i>513</i>	<i>469</i>
Non-Fatality Injury Rate (per 100 MVMT)		376	279	305
<i>Statewide Non-Fatality Injury Rate (per 100 MVMT)</i>		<i>208</i>	<i>190</i>	<i>176</i>
Fatality Rate (per 100 MVMT)		0	0	0
<i>Statewide Fatality Rate (per 100 MVMT)</i>		<i>1.55</i>	<i>1.48</i>	<i>1.47</i>

Further analysis of the accidents at the segment level indicates that rear-end crashes are the most predominant crash type, followed by sideswipe type accidents (Figure 1). This is indicative of the weaving occurring from traffic changing lanes to go to the mall (turning right on Mall Boulevard) and traffic changing lanes to go westbound on Barrett Parkway or turning left to go to the shopping areas on the southern side of Barrett Parkway across from the mall. Traffic from the I-575 southbound off-ramp that does not intend to turn right on Mall Boulevard has less than 400 feet to change lanes, while traffic coming from westbound Barrett Parkway intending to turn into the mall must also change lanes in the same short segment.

**Figure 1: Percentage of Total Crashes by Type – Barrett Parkway Segment Level**



**Bicycle and Pedestrian Considerations:**

New pedestrian crosswalks and wheelchair ramps will be placed in raised islands separating the left- and right-turn lanes at the ramp terminals. Actuated pedestrian signals will be placed in the free-flow lane between the I-575 southbound ramp and Mall Boulevard for pedestrian movement. Bicycles are not allowed on the interstate; therefore, no bicycle accommodations are being made for the ramp improvements.

**Length:**

690 feet along southbound off-ramp  
 1,530 feet along Barrett Parkway  
 485 feet along Mall Boulevard

**Termini:**

Barrett Parkway from Mall Boulevard to I-575 northbound on-ramp

**PDP Class:**

Minor

**Functional Class:**

I-575 – Freeway  
 Barrett Parkway – Urban Principal Arterial  
 Mall Boulevard – Urban Local Road

**Design Speed:**

45 mph – Exit Ramps  
45 mph – Barrett Parkway  
25 mph – Mall Boulevard

**Proposed Typical Section:**

- Barrett Parkway
  - Between Mall Boulevard and I-575 SB Ramps, all through lanes and new slip lane will be 12 feet wide except for leftmost through lane in the eastbound direction, which stays as 11 feet wide (See attached).
  - Between I-575 SB Ramps and I-575 NB Ramps, all through lanes and new left-turn lanes will be 11 feet wide. (See attached.)
  
- Mall Boulevard
  - Six-lane urban section with a 4-foot raised median, curb and gutter, and 5-foot sidewalk along the western side. All southbound lanes will be 11 feet wide. All northbound lanes will remain 12 feet wide. (See attached.)
  
- I-575 Southbound Ramp
  - 12-foot lanes with 10-foot right (8-foot paved) and 6-foot (4-foot paved) left shoulders.

**Proposed Major Structures:**

Signal modification

**Type Access:**

Limited-Access Interstate, I-575  
By Permit, Barrett Parkway and Mall Boulevard

**Traffic Control During Construction:**

Stage Construction – Maintain traffic on existing roadway and ramp and construct new widening

**Right-of-Way Requirements:**

3 parcels (right-of-way and easements)

**Utilities:**

Coordination will be done with utility companies during the design phase. Known utilities in the project corridor include:

- Cobb County (water and sewer)
- Cobb County EMC
- Georgia Power Company
- AT&T
- Cobb County DOT ATMS
- Atlanta Gas Light

**Estimated Cost:**

<b><u>Item</u></b>	<b><u>Total Amount</u></b>	
	<b><u>STATE</u></b>	<b><u>LOCAL</u></b>
R/W -----	\$0	\$368,309.62
Utilities -----	\$0	\$15,000.00
Construction -----	\$1,484,416.99	
Fuel/Liquid AC Adjustment -----	\$142,146.42	
E&I 6% -----	\$89,065.02	
Total Construction -----	\$1,715,628.43	

**Permits Required:**

Signal Modification Permit

**Anticipated Level of Environmental Analysis:**

Programmatic Categorical Exclusion (PCE)

**Level of Public Involvement:**

None

**Time-Saving Procedures Appropriate:**

Yes (X)

No ( )

**Design Exceptions Required:**

None

**Alternates Considered:**

No-Build

Project Concept Report  
SR 5 Connector at I-575 and CR 4661/Mall Boulevard  
P.I. No.: 0010033, Cobb County

**Attachments:**

1. Design sketch
2. Typical section
3. Cost estimate
4. Concept team meeting minutes

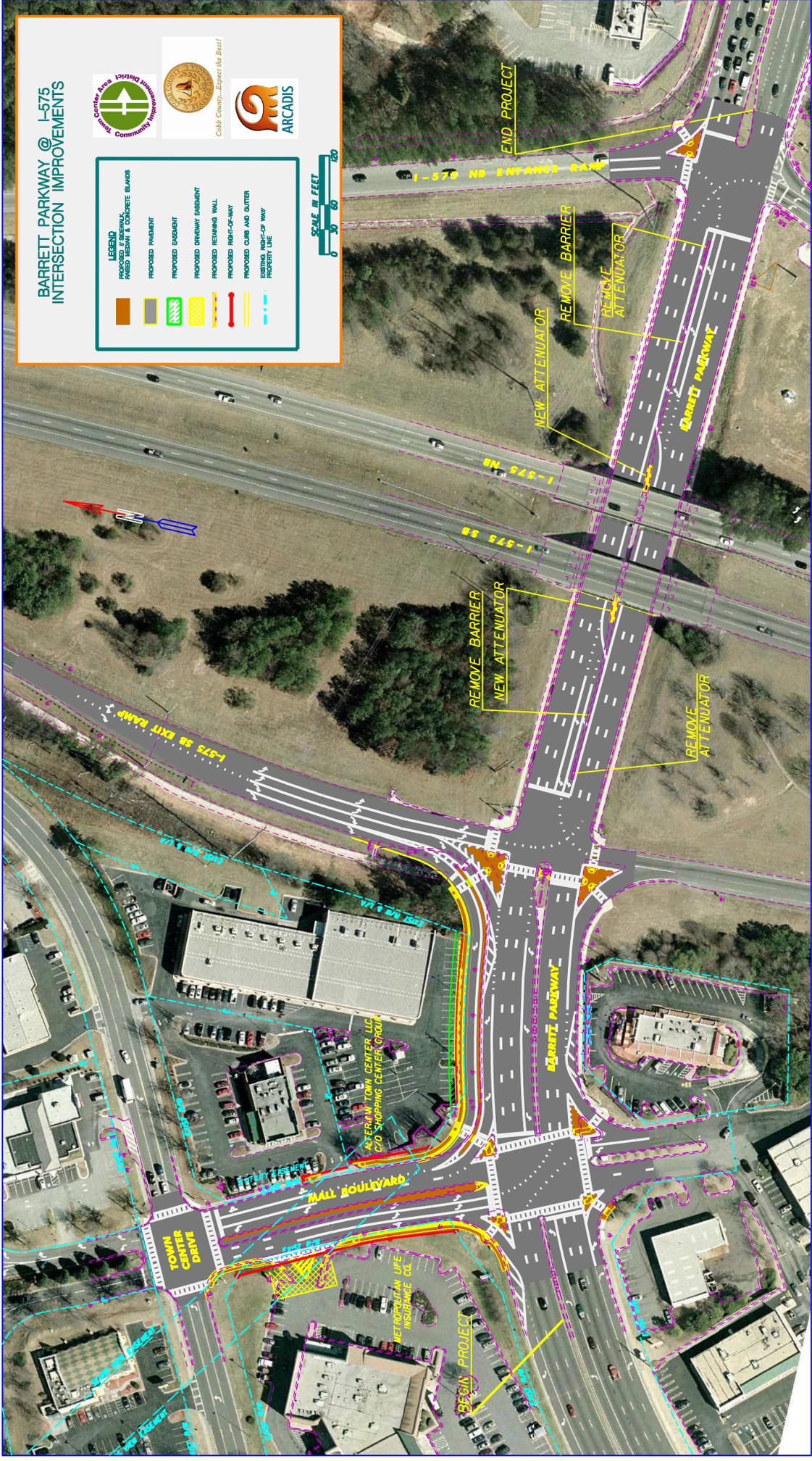
# BARRETT PARKWAY @ I-575 INTERSECTION IMPROVEMENTS



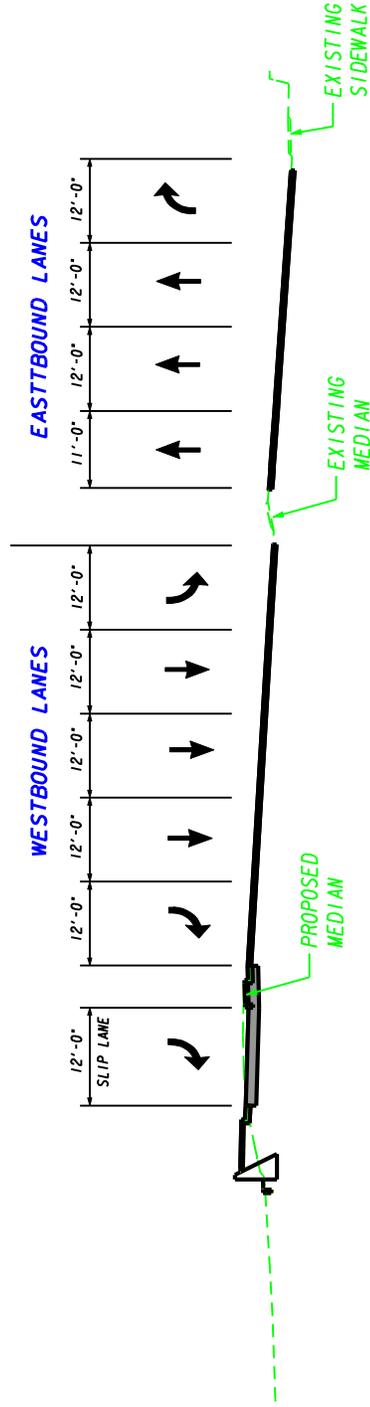
Cobb County...Expect the Best!



LEGEND	
	PROPOSED ASPHALT PAVED MEDIAN OR CONCRETE ISLANDS
	PROPOSED PAVEMENT
	PROPOSED EASEMENT
	PROPOSED DRIVEWAY EASEMENT
	PROPOSED RETAINING WALL
	PROPOSED RIGHT-OF-WAY
	PROPOSED CURB AND GUTTER
	EXISTING RIGHT-OF-WAY PROPERTY LINE



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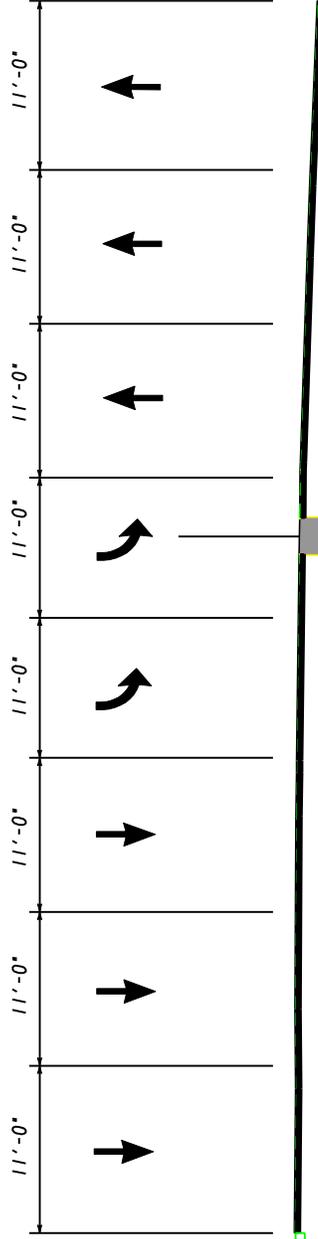
TYPICAL SECTION 1  
SR 5 CONN/BARRETT PKWY  
(BETWEEN MALL BLVD & I-575 SB RAMPS)  
N. T. S.

CONST.



WESTBOUND LANES

EASTBOUND LANES



EXISTING  
SIDEWALK

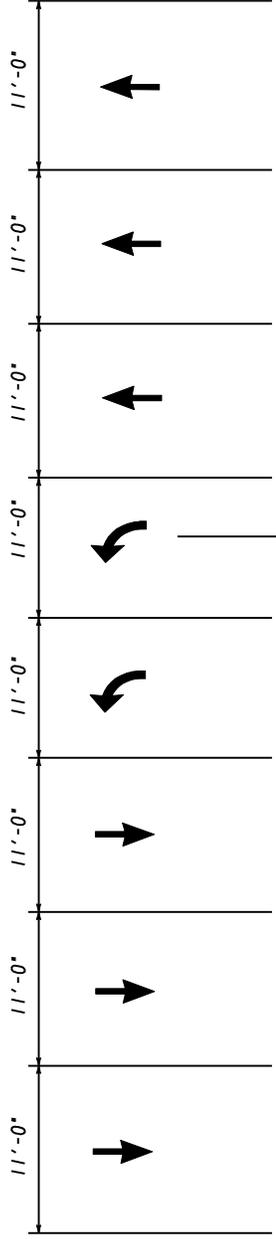
EXISTING  
SIDEWALK

TYPICAL SECTION 2  
SR 5 COMM/BARRETT PKWY  
(BETWEEN I-575 SB RAMPS & I-575 BRIDGE)  
N. T. S.

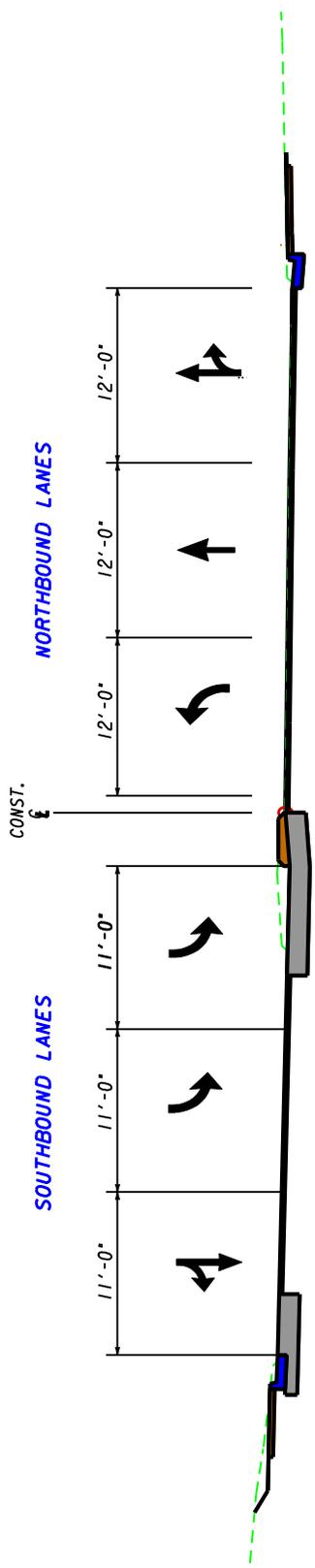
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WESTBOUND LANES

EASTBOUND LANES

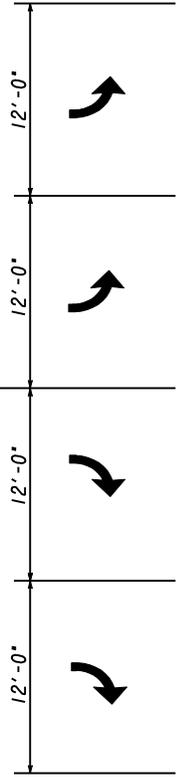


TYPICAL SECTION 3  
SR 5 CONN/BARRETT PKWY  
(BETWEEN I-575 BRIDGE & I-575 NB RAMPS)  
N. T. S.



TYPICAL SECTION 4  
 MALL BOULEVARD  
 (LOOKING NORTH)  
 N. T. S.

CONST.  
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TYPICAL SECTION 5  
I-575 SOUTHBOUND OFF-RAMP  
(LOOKING NORTH)  
N. T. S.

## JOB ESTIMATE REPORT

JOB NUMBER : 0010033                      SPEC YEAR: 01  
 DESCRIPTION: SR 5 CONNECTOR @ I-575 AND CR 4661/MALL BLVD

## ITEMS FOR JOB 0010033

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	150-1000		LS	TRAFFIC CONTROL - PROJECT NO. TCID-23	1.000	250000.00	250000.00
0010	210-0100		LS	GRADING COMPLETE - PROJECT NO. TCID-23	1.000	150000.00	150000.00
0015	310-1101		TN	GR AGGR BASE CRS, INCL MATL	1900.000	18.21	34607.70
0020	402-1812		TN	RECYL AC LEVELING, INC BM&HL	290.000	77.43	22456.21
0025	402-3121		TN	RECYL AC 25MM SP, GP1/2, BM&HL	480.000	69.48	33352.51
0030	402-3130		TN	RECYL AC 12.5MM SP, GP2, BM&HL	2200.000	67.76	149081.75
0035	402-3190		TN	RECYL AC 19 MM SP, GP 1 OR 2 , INC BM&HL	350.000	72.65	25428.81
0040	441-0104		SY	CONC SIDEWALK, 4 IN	500.000	31.10	15554.12
0045	441-0204		SY	PLAIN CONC DITCH PAVING, 4 IN	270.000	32.85	8870.58
0050	441-0303		EA	CONC SPILLWAY, TP 3	1.000	2041.13	2041.14
0055	441-0740		SY	CONC MEDIAN, 4 IN COLORED STAMPED	810.000	46.00	37260.00
0060	441-4030		SY	CONC VALLEY GUTTER, 8 IN	180.000	45.71	8229.49
0064	441-5007		LF	CONC HEADER CURB, 8 IN, TP 7	230.000	15.00	3450.00
0065	441-5052		LF	CONC DWL INT CURB, TP 2, DOWELS	780.000	35.00	27300.00
0070	441-5057		LF	CONC DWL INT CURB, TP 7, DOWELS	1700.000	12.91	21959.44
0075	441-6222		LF	CONC CURB & GUTTER/ 8"X30"TP2	960.000	16.24	15591.90
0080	446-1100		LF	PVMT REF FAB STRIPS, TP2, 18 INCH WIDTH	3400.000	4.17	14208.29
0085	500-3101		CY	CLASS A CONCRETE	4.000	357.49	1429.96
0090	500-3201		CY	CL B CONC, RET WALL	71.000	543.38	38580.57
0095	500-9999		CY	CL B CONC, BASE OR PVMT WIDEN	37.000	156.00	5772.32
0100	550-1180		LF	STM DR PIPE 18", H 1-10	130.000	33.33	4333.90
0105	550-3618		EA	SAFETY END SECTION 18", SD, 6:1	1.000	578.28	578.29
0110	515-1002		LF	FERROUS MET HDRAIL, TWO PIPE	170.000	75.00	12750.00
0115	600-0001		CY	FLOWABLE FILL	45.000	168.20	7569.27
0120	603-2018		SY	STN DUMPED RIP RAP, TP 1, 18"	12.000	47.40	568.85
0125	603-7000		SY	PLASTIC FILTER FABRIC	12.000	3.91	46.93
0130	611-3000		EA	RECONSTR CATCH BASIN, GROUP 1	2.000	2027.50	4055.00
0135	611-9000		EA	CAPPING MINOR STRUCTURE	1.000	819.69	819.69
0140	621-4083		LF	CONC SIDE BARRIER, TYPE 7T, MOD	60.000	65.00	3900.00
0145	634-1200		EA	RIGHT OF WAY MARKERS	12.000	105.25	1263.08
0150	641-1200		LF	GUARDRAIL, TP W	400.000	17.42	6971.29
0155	641-5001		EA	GUARDRAIL ANCHORAGE, TP 1	2.000	648.00	1296.02
0160	650-1100		EA	IMPACT ATTENUATOR UNIT, TYPE P- TYPE P3-B-30	2.000	15000.00	30000.00
0165	668-1100		EA	CATCH BASIN, GP 1	1.000	1987.17	1987.18
0170	163-0232		AC	TEMPORARY GRASSING	1.000	371.18	371.18
0175	163-0240		TN	MULCH	9.000	310.91	2798.19
0180	163-0300		EA	CONSTRUCTION EXIT	1.000	1333.64	1333.65

## JOB ESTIMATE REPORT

0185	163-0550	EA	CONS & REM INLET SEDIMENT TRAP	17.000	130.62	2220.60
0190	165-0010	LF	MAINT OF TEMP SILT FENCE, TP A	490.000	0.73	358.49
0195	165-0101	EA	MAINT OF CONST EXIT	1.000	506.65	506.65
0200	165-0105	EA	MAINT OF INLET SEDIMENT TRAP	17.000	42.44	721.63
0205	171-0010	LF	TEMPORARY SILT FENCE, TYPE A	980.000	1.90	1867.69
0210	700-6910	AC	PERMANENT GRASSING	1.000	734.14	734.14
0215	700-7000	TN	AGRICULTURAL LIME	1.000	74.89	74.90
0220	700-7010	GL	LIQUID LIME	1.000	25.73	25.73
0225	700-8000	TN	FERTILIZER MIXED GRADE	1.000	429.39	429.39
0230	700-8100	LB	FERTILIZER NITROGEN CONTENT	7.000	2.21	15.51
0235	716-2000	SY	EROSION CONTROL MATS, SLOPES	170.000	1.12	190.92
0240	610-6515	EA	REM HIGHWAY SIGN, STD	14.000	76.19	1066.71
0245	615-1200	LF	DIRECTIONAL BORE - 3 INCH	415.000	10.23	4249.26
0250	615-1200	LF	DIRECTIONAL BORE - 5 INCH	900.000	9.31	8379.64
0255	636-1020	SF	HWY SGN,TP1MAT,REFL SH TP3	129.000	14.76	1904.97
0260	636-1029	SF	HWY SGN,TP2 MATL,REFL SH TP 3	17.000	17.12	291.13
0265	639-2002	LF	STEEL WIRE STRAND CABLE, 3/8"	158.000	3.57	564.88
0270	639-3004	EA	STEEL STRAIN POLE, TP IV	2.000	12000.00	24000.00
0275	639-3004	EA	STEEL STRAIN POLE, TP IV WITH 55' MAST ARM	1.000	14700.70	14700.70
0280	639-3004	EA	STEEL STRAIN POLE, TP IV WITH 65' MAST ARM	1.000	16200.70	16200.70
0285	639-3004	EA	STEEL STRAIN POLE, TP IV WITH 80' MAST ARM	2.000	18500.00	37000.00
0290	639-3004	EA	STEEL STRAIN POLE, TP IV WITH 65' & 70' TANDEM MAST ARMS	1.000	23500.00	23500.00
0295	647-1000	LS	TRAF SIGNAL INSTALLATION NO - NO-1	1.000	125000.00	125000.00
0300	647-1000	LS	TRAF SIGNAL INSTALLATION NO - NO-2	1.000	85000.00	85000.00
0305	647-1000	LS	TRAF SIGNAL INSTALLATION NO - NO-3	1.000	85000.00	85000.00
0310	647-2160	EA	PULL BOX, PB-6	2.000	1096.27	2192.56
0315	647-2170	EA	PULL BOX, PB-7	2.000	1890.63	3781.28
0320	653-0120	EA	THERM PVMT MARK, ARROW, TP 2	32.000	69.07	2210.48
0325	653-0130	EA	THERM PVMT MARK, ARROW, TP 3	4.000	91.46	365.85
0330	653-1501	LF	THERMO SOLID TRAF ST 5 IN, WHI	3100.000	0.42	1326.92
0335	653-1502	LF	THERMO SOLID TRAF ST, 5 IN YEL	1440.000	0.48	692.86
0340	653-1704	LF	THERM SOLID TRAF STRIPE,24",WH	210.000	3.51	738.65
0345	653-1804	LF	THERM SOLID TRAF STRIPE, 8",WH	3440.000	1.72	5927.60
0350	653-0210	EA	THERM PVMT MARK, WORD , TP 1	4.000	103.92	415.69
0355	653-3501	GLF	THERMO SKIP TRAF ST, 5 IN, WHI	2240.000	0.27	606.46
0360	653-6004	SY	THERM TRAF STRIPING, WHITE	565.000	2.94	1664.32
0365	653-6006	SY	THERM TRAF STRIPING, YELLOW	5.000	3.61	18.07
0370	654-1003	EA	RAISED PVMT MARKERS TP 3	110.000	3.91	430.72
0375	682-6120	LF	CONDUIT, RIGID, 2 IN	100.000	11.04	1104.71
0380	682-6233	LF	CONDUIT, NONMETL, TP 3, 2 IN	3500.000	2.96	10374.04
0385	687-1050	LS	TRAFFIC SIGNAL DATABASE CONVERSION	1.000	5000.00	5000.00
0390	935-1115	LF	OUT PLNT FBR OPT CBL,LOOSE TB,SM,48 FBR	855.000	2.10	1799.33

DATE : 10/15/2010

PAGE : 3

JOB ESTIMATE REPORT

0395	935-1511	LF	OUT PLNT FBR OPT CBL,DROP,SM,6 FBR	300.000	1.99	598.97
0400	935-3101	EA	FIBER OPTIC CLOSURE,UNDRGRD,6 FIBER	2.000	631.47	1262.94
0405	935-3105	EA	FIBER OPTIC CLOSURE,UNDRGRD,48 FIBER	2.000	531.90	1063.80
0410	935-3602	EA	FBR. OP. CLOS., FDC PRE-TERM., TYP. A, 6	2.000	478.97	957.95
0415	935-4010	EA	FIBER OPTIC SPLICE, FUSION	156.000	41.80	6521.51
0420	935-8000	LS	TESTING	1.000	1500.00	1500.00
0425	939-2305	EA	FIELD SWITCH, TYPE C	2.000	2357.01	4714.03
0430	939-8000	LS	TESTING	1.000	2250.00	2250.00
0435	938-1100	EA	INT VIDEO DET SYS ASMBLY, TP A	6.000	4989.37	29936.25
0440	938-1101	EA	INT VIDEO DET SYS ASMBLY, TP B	1.000	8602.82	8602.83
0445	938-1200	EA	PROGRAMMING MONITOR, TYPE A	1.000	362.03	362.03
0450	938-1210	EA	OUTPUT EXPANSION MODULE, TP A	2.000	486.45	972.90

JOB ESTIMATE REPORT

0455	938-8000	LS	TESTING	1.000	2050.00	2050.00
0460	413-1000	GL	BITUM TACK COAT	1900.000	2.71	5153.29
ITEM TOTAL						1484416.96
INFLATED ITEM TOTAL						1484416.96
-----						
TOTALS FOR JOB 0010033						
-----						
ESTIMATED COST:						1484416.99
CONTINGENCY PERCENT ( 0.0 ):						0.00
ESTIMATED TOTAL:						1484416.99
-----						

P.I. Number 0010033

County COBB

Project Number TCID-23

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

ENTER FPL DIESEL	2.89
ENTER FPM DIESEL	6.503

ENTER FPL UNLEADED	2.602
ENTER FPM UNLEADED	5.8545

<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)		0.29		0.15		
Excavations paid as specified by Sections 206 (CUBIC YARD)		0.29		0.15		
GAB paid as specified by the ton under Section 310 (TON)	1900.000	0.29	551.00	0.24	456.00	
Hot Mix Asphalt paid as specified by the ton under Sections 400 (TON)		2.90		0.71		
Hot Mix Asphalt paid as specified by the ton under Sections 402 (TON)	3320.000	2.90	9628.00	0.71	2357.20	
PCC Pavement paid as specified by the square yard under Section 430 (SY)		0.25		0.20		

BRIDGE ITEMS	Quantity	Unit Price	QF/1000	Diesel Factor	Gallons Diesel	Unleaded Factor	Gallons Unleaded	REMARKS
Bridge Excavation (CY) Section 211				8.00		1.50		
Class __ Concrete (CY) Section 500				8.00		1.50		
Class __ Concrete (CY) Section 500				8.00		1.50		
Class __ Concrete (CY) Section 500				8.00		1.50		
Superstru Con Class__(CY) Section 500				8.00		1.50		
Superstru Con Class__(CY) Section 500				8.00		1.50		
Superstru Con Class__(CY) Section 500				8.00		1.50		
Concrete Handrail (LF) Section 500				8.00		1.50		
Concrete Barrier (LF) Section 500				8.00		1.50		

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>10179.00</b>	<b>SUM QF UNLEADED=</b>			<b>2813.20</b>	
<b>DIESEL PRICE ADJUSTMENT(\$)</b>					<b>\$33,829.91</b>			
<b>UNLEADED PRICE ADJUSTMENT(\$)</b>					<b>\$8,417.94</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

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

### Use this side for Asphalt Emulsion Only

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

### Use this side for Asphalt Cement Only

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

<b>MONTHLY PRICE ADJUSTMENT(\$)</b>	
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### ADJUSTMENT SUMMARY

FUEL PRICE ADJUSTMENT ( <i>ENGLISH 125% MAX</i> )	
DIESEL PRICE ADJUSTMENT(\$)	<u>\$33,829.91</u>
UNLEADED PRICE ADJUSTMENT(\$)	<u>\$8,417.94</u>
ASPHALT CEMENT PRICE ADJUSTMENT ( <i>BITUMINOUS TACK COAT 125% MAX</i> )	<u>\$4,680.97</u>
400 / 402 ASPHALT CEMENT PRICE ADJUSTMENT <i>125% MAX</i>	<u>\$95,217.60</u>
ASPHALT CEMENT PRICE ADJUSTMENT FOR BITUMINOUS TACK COAT( <i>Surface Treatment 125% MAX</i> )	

REMARKS:	
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<b>TOTAL ADJUSTMENTS</b>	<b>\$142,146.42</b>
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# Preliminary Right of Way Cost Estimate

Date: August 5, 2010

Project: TCID-23

Existing/Required R/W:

Project Termini:

Project Description:

Land:

P.I. Number: 0010033

No. Parcels: 3

Commercial				
ROW	5767.95 s.f	@	\$25.00/s.f.	= \$144,198.75
Easement	5421.61 s.f	@	\$5.00/s.f.	= \$27,108.05
Industrial				
	s.f	@	\$	/s.f. = \$
Residential				
	s.f	@	\$	/s.f. = \$
Agricultural				
	s.f	@	\$	/s.f. = \$
<b>TOTAL</b>				<b>\$171306.8</b>

## Improvements:

### Relocation:

Commercial	@ \$25,000/parcel	=	\$
Residential	@ \$40,000/parcel	=	\$

**TOTAL** **\$0**

**Damages: Proximity** **\$0**

Consequential	<b>\$0</b>
Cost to Cure	<b>\$0</b>

**TOTAL** **\$0**

**SUB-TOTAL:** **\$171,306.80**

<b>TOTAL</b>	<b>Net Cost</b>		\$171306.80
	<b>Scheduling Contingency</b>	55 %	\$94218.74
	<b>Adm/Court Cost</b>	60 %	\$102,784.08
			\$368,309.62

**Total Cost** **\$368,309.62**

Prepared By: \_\_\_\_\_

Reviewed / Approved: \_\_\_\_\_

LaShone Alexander  
R/W Cost Estimator

Note: Accuracy of estimate is the sole responsibility of the Preparer.

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

**REVISED: 2-8-08**

## Poudel, Shamir

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**From:** Rikard, Andy [Andy.Rikard@cobbcounty.org]  
**Sent:** Tuesday, July 27, 2010 4:23 PM  
**To:** Poudel, Shamir  
**Cc:** Hudgins, James; Wright, Michael  
**Subject:** TR448/ TCID-23, PI 0010033, I-575 @ Barrett Parkway Utility Cost Estimate

Utility Cost Estimate for project TCID 23:

<u>Company</u>	<u>Relocation Cost</u>	<u>Reimbursement Cost</u>	<u>Comments</u>
Atlanta Gas Light	\$ 7,000.00	\$0.00	Minor adjustments/ services
AT&T Networks	\$120,000.00	\$0.00	Copper/ Fiber, aerial/ underground
Cobb EMC fixtures	\$55,000.00	\$15,000.00	Three phase aerial/ underground/ services/ Lighting
Cobb Water System	\$ 5,000.00	\$0.00	Minor adjustments/ Fire Hydrants/ Valves
Comcast	\$16,000.00	\$0.00	Coaxial/ Fiber aerial
Total	\$203,000.00	\$15,000.00	

- 1.) GDOT utility permits will be required for this project.
- 2.) Utility Cost estimate based on preliminary utility information.

Please let me know if you have any questions. Thanks,

Andy Rikard | CCDOT Construction Department |  
[andy.rikard@cobbcounty.org](mailto:andy.rikard@cobbcounty.org) or [andy.rikard@arcadis-us.com](mailto:andy.rikard@arcadis-us.com)  
ARCADIS U.S., Inc. | 1890 County Services Pkwy | Marietta, GA 30008  
T. 770.528.3660 | C. 404.516.4443 | F. 770.528.2129  
[www.arcadis-us.com](http://www.arcadis-us.com)  
Please consider the environment before printing this email.

*Cobb County...Expect the Best*

**[www.cobbcounty.org](http://www.cobbcounty.org)**



ARCADIS U.S., Inc.  
2849 Paces Ferry Road  
Suite 400  
Atlanta  
Georgia 30339  
Tel 770.431.8666  
Fax 770.435.2666

## MEETING REPORT

Subject:  
SR 5 Connector at I-575 and  
CR 4661/Mall Boulevard  
Concept Team Meeting

Department:  
Transportation

ARCADIS Project No.:  
GA063867

Place/Date of Meeting:  
GDOT District 7 Office  
September 1, 2010

Minutes by:  
Shamir Poudel

Issue Date:  
September 20, 2010

Participants:  
See Attached List

Copies:  
James Hudgins  
Attendees

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A concept team meeting was held at the Georgia Department of Transportation (GDOT) District 7 office on September 1, 2010 to discuss the Project Concept Report. The following topics were discussed:

1. A basic project overview was provided by ARCADIS U.S., Inc. (ARCADIS) to explain the purpose of the project. This project consists of proposed improvements to three intersections along the SR 5 Connector (Barrett Parkway). These intersections include Barrett Parkway at the I-575 northbound on-ramp, Barrett Parkway at the I-575 southbound off-ramp, and Barrett Parkway at Mall Boulevard. Following is a brief description of the project:
  - a. An additional left-turn lane will be provided at the intersection of Barrett Parkway at the I-575 northbound ramp to create dual left-turn lanes on the eastbound leg of Barrett Parkway to serve traffic heading to I-575 northbound. The traffic signal will be modified to accommodate this additional turn lane.
  - b. An additional left-turn lane will be provided at the intersection of Barrett Parkway at the I-575 southbound on-ramp to create dual left-turn lanes on the westbound leg of Barrett Parkway to serve traffic heading to I-575 southbound. At the I-575 southbound ramp leg of this intersection, an additional right-turn lane will be provided to create dual right-turn lanes. This additional right-turn lane will provide direct access to Mall Boulevard via a proposed median-separated westbound slip lane. The traffic signal will be modified to accommodate this additional turn lane.

- c. An additional southbound left-turn lane will be provided on the southbound leg of Mall Boulevard at the intersection of Barrett Parkway at Mall Boulevard. This new left-turn lane will be created by widening the southbound leg of Mall Boulevard toward the median and toward the west. A raised median will be maintained at the center to separate northbound and southbound traffic along Mall Boulevard. New sidewalk will be constructed along the western side of Mall Boulevard. The existing traffic signal at this intersection will be modified to convert the split-phased signal operation to protected-permissive signal phasing.
  2. Several changes to the project concept layouts were suggested. ARCADIS will investigate these suggestions and incorporate them into the project if feasible.
    - a. It was recommended that more separation distance be provided between left-turning vehicles from Mall Boulevard and Roberts Drive. ARCADIS informed the meeting attendees that there is currently 6 feet of separation between turning vehicles. It was suggested that ARCADIS consider shifting the left-turn lane at the Roberts Drive intersection to the west to create this separation. It was discussed that an existing sign at the median of Roberts Drive would have to be relocated to shift the lane.
    - b. It was recommended that the span length of mast arm poles for signals be kept at the maximum of 65 feet. GDOT suggested that ARCADIS consider shortening this length by modifying the edges of pavement so that mast arms could be placed closer to the existing lanes. It was discussed that a design exception will be required from the Chief Engineer if the length cannot be reduced to 65 feet. Use of span wire instead of mast arms was also discussed.
    - c. It was suggested that overhead signs be considered for the southbound leg of Mall Boulevard because of the dual left-turn lanes. ARCADIS will investigate the possibility of placing the required poles. Right-of-way constraints and overhead utility conflict could be an issue.
  3. The following comments were received for the body of the Project Concept Report:
    - a. The word "Response" should be removed from the type of project in the cover sheet. The format of this report should just say "Quick Project."
    - b. The approvers sequence should be updated. The order should be District Preconstruction Engineer, District Engineer, State Traffic Engineer, and Chief Engineer.
    - c. A header showing the project information should be added to all pages.
    - d. A north arrow and vicinity map should be added to the location sketch.
    - e. The word "Connector" should be added to "SR 5."
    - f. The project description should be broken into several paragraphs with one paragraph describing a single intersection.
    - g. The termini description should be reworded to indicate from and to instead of between.

- h. The ramp speed design should be changed to 45 miles per hour (mph), and Barrett Parkway should be changed to 45 mph. The design speed for Mall Boulevard should be added. The word "posted" should be removed from the Barrett Parkway design speed.
- i. "E&C" under cost estimate should be changed to "E&I."
- j. A signal modification permit should be added under the Permits section.



## Sign-in Sheet

SR 5 Connector at I-575 and  
CR 4661/Mall Boulevard  
Concept Team Meeting  
September 1, 2010

<b>Name</b>	<b>Address and Telephone No.</b>	<b>Email Address</b>	<b>Company/Department</b>
Andre Netterville	770.986.1116	anetterville@dot.ga.gov	GDOT District 7
Kevin Cowan	770.986.1114	kcowan@dot.ga.gov	GDOT District 7
Scott Lee	770.986.1257	slee@dot.ga.gov	GDOT District 7
Mike Cates	1890 County Services Parkway Marietta, GA 30008 770.420.6659	mike.cates@cobbcounty.org	Cobb County DOT
Clyde Cunningham	770.986.1117	ccunningham@dot.ga.gov	GDOT
Mike Wright	770.528.4375	michael.wright@cobbcounty.org	Cobb County DOT
Sherry Phillips	770.986.1556	sphillips@dot.ga.gov	GDOT R/W
Mac Cranford	770.986.1260	mcranford@dot.ga.gov	GDOT District 7
Melanie Nable	404.631.1174	mnable@dot.ga.gov	GDOT Environmental Services
Shamir Poudel	770.431.8666	shamir.poudel@arcadis-us.com	ARCADIS
Koushik Arunachalam	770.431.8666	koushik.arunachalam@arcadis-us.com	ARCADIS
Ted Crabtree	404.631.1767	tcrabtree@dot.ga.gov	GDOT Engineering Services
Steve Carter	404.631.1771	scarter@dot.ga.gov	GDOT Engineering Services
Cynthia Burney	404.635.8149	cburney@dot.ga.gov	GDOT/TO/TMC
Scott Zehngraff	404.635.8127	szehngraff@dot.ga.gov	GDOT/TO/TMC
Edlin Regis	770.986.1775	eregis@dot.ga.gov	GDOT Traffic Operations
Robert Maddux	770.980.0808	rmaddux@popeandland.com	Town Center Area CID
Alex Laffey	404.306.5571	alaffey@dot.ga.gov	GDOT District 7