ORIGINAL TO GENERAL FILES

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

OFFICE OF DESIGN POLICY & SUPPORT
INTERDEPARTMENTAL CORRESPONDENCE

FILE P.I. # 0012660

OFFICE Design Policy & Support

DeKalb County
GDOT District 7 - Metro Atlanta
Ramp Widening: SR 141/Peachtree
Industrial Boulevard SB @ I-285 WB

DATE 11/13/2014

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:

Glenn Bowman, Director of Engineering
Joe Carpenter, Director of P3/Program Delivery
Genetha Rice-Singleton, Assistant Director of P3/Program Delivery
Bobby Hilliard, Program Control Administrator
Albert Shelby, State Program Delivery Engineer
Cindy VanDyke, State Transportation Planning Administrator
Hiral Patel, State Environmental Administrator
Kathy Zahul, State Traffic Engineer
Angela Robinson, Financial Management Administrator
Lisa Myers, State Project Review Engineer
Charles "Chuck" Hasty, State Materials Engineer
Mike Bolden, State Utilities Engineer
Richard Cobb, Statewide Location Bureau
Andy Casey, State Roadway Design Engineer
Attn: Mac Cranford, Design Group Manager
Rachel Brown, District Engineer
Scott Lee, District Preconstruction Engineer
Patrick Allen, District Utilities Engineer
Carleton Fisher, Project Manager
BOARD MEMBER - 6th Congressional District

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

LIMITED SCOPE PROJECT CONCEPT REPORT

Project Type:	Operational Improvement	**P.I. Number:**	0012660
GDOT District:	Seven	**County:**	Dekalb
Federal Route Number:	N/A	**State Route Number:**	141 and 407

P.I. # 0012660 will widen the ramp from SR 141/Peachtree Industrial Boulevard SB to I-285 WB/NB from one lane to two lanes.

Submitted for approval:

Rachel L. Brown — 08-14-2014
District Seven Engineer — DATE

Albert Shelby KWH — 8/20/2014
State Program Delivery Engineer — DATE

[signature] — 8-14-2014
GDOT Project Manager — DATE

Recommendation for approval:

HIRAL PATEL*/EKP — 8/27/14
State Environmental Administrator — DATE

KATHY ZAHUL*/EKP — 9/17/14
State Traffic Engineer — DATE

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

CINDY VANDYKE*/EKP — 8/26/14
State Transportation Planning Administrator — DATE

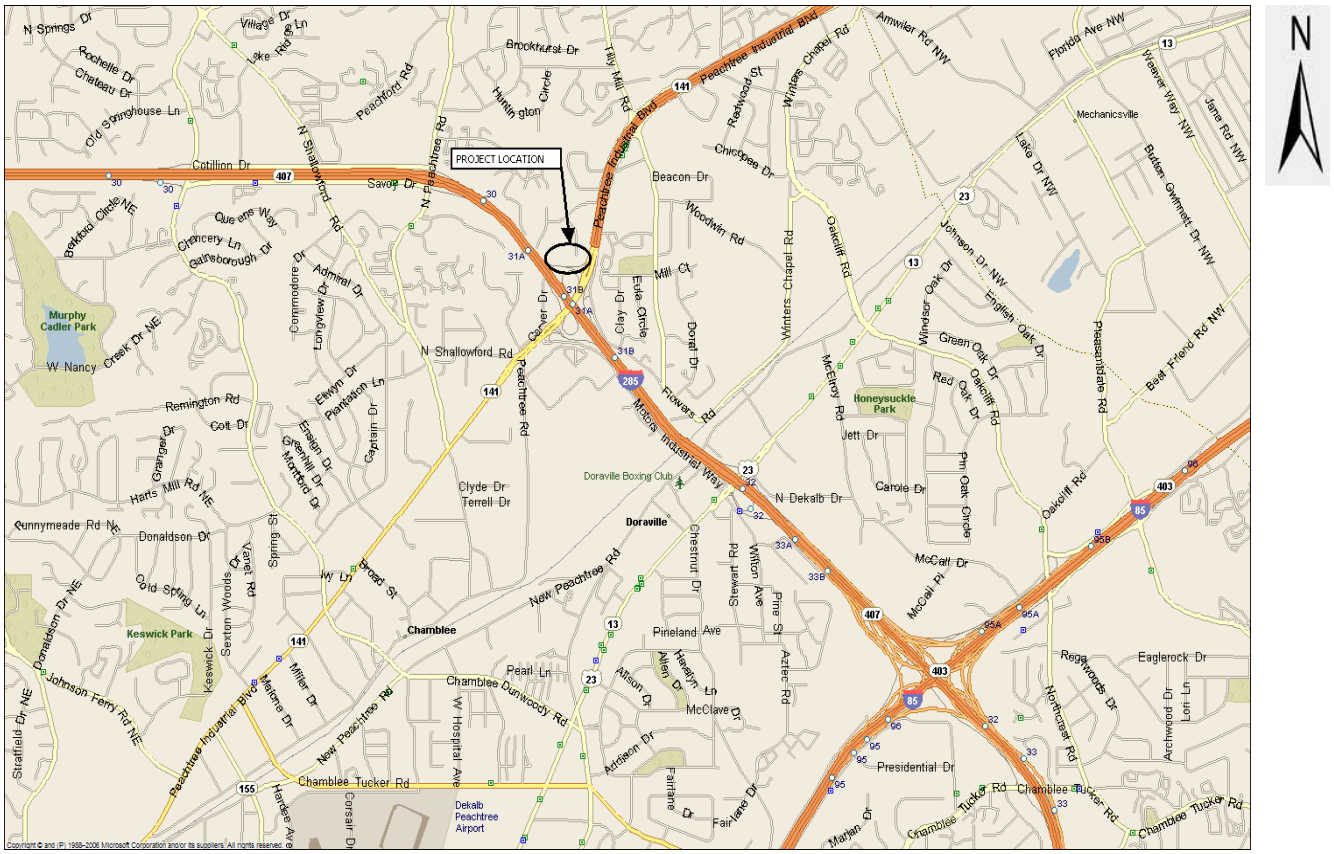
Approval:

Concur: [signature] — 11/6/14
GDOT Director of Engineering — DATE

Approve: [signature] — 11/9/14
GDOT Chief Engineer — DATE

*- RECOMMENDATION ON FILE

PROJECT LOCATION



SR 141/Peachtree Industrial Blvd SB to I-285 WB ramp
P.I. # 0012660
DeKalb County

PLANNING & BACKGROUND DATA

Project Justification Statement:
Interstate 285 at State Route (SR) 141/Peachtree Industrial Boulevard in DeKalb County was identified for minor on-ramp improvements. The proposed project is to be included in the GDOT Operational Improvement Lump Sum Program from the Office of Traffic Operations. This proposed project was presented to and approved by the Operational Improvement Committee, and will be recommended as a QUICK project.

I-285 is classified as an urban interstate principal arterial that encircles the city of Atlanta. SR 141/Peachtree Industrial Blvd north of I-285 is classified as an urban freeway and expressway that runs north/south connecting the cities of Chamblee to Duluth. SR 141/Peachtree Industrial Blvd north of I-285 consists of eight 12-foot lanes, a 16-foot barrier separated median, and variable width shoulders on the east and west sides.

GDOT Traffic Operations staff performed an engineering study of the SR 141/Peachtree Industrial Blvd southbound to I-285 west entrance ramp operation. Upon review of the AM and PM peak traffic volumes, it was determined that the I-285 west entrance ramp does not provide adequate storage length for the high number of vehicles utilizing the ramp at peak hours. A weave segment density and Level of Service (LOS) analysis, along with field observations concluded that the existing (2012) and 2022 No-Build LOS were both F. Reports claim that due to the length of the queue from the I-285 westbound entrance ramp and mainline, vehicles spill back into the through lanes of SR-141 southbound. Additionally, field observations show that vehicles queue jump or weave at the last second and reduce the operational efficiency of the SR 141 southbound through lanes north of I-285. The weave segment density and Level of Service (LOS) analysis concluded that widening the I-285 west entrance ramp to two lanes would improve the ramp operation to a LOS C. The report indicates that the build alternative would improve the AM (2022) density by 66% and the PM (2022) by 68%. This project proposes to increase the capacity of the westbound entrance ramp by widening from a single 16-foot wide ramp to a double 12-foot lane ramp. This project proposes no impacts outside the existing right of way.

The project lies within the boundaries of the Atlanta Regional Commission (ARC), Atlanta's Metropolitan Planning Organization (MPO). As an operational improvement project, this project is categorized under the "operational improvement lump sum category" in the MPO's RTP or TIP.

Existing conditions:
I-285 is classified as an urban interstate principal arterial that encircles the City of Atlanta. SR 141/Peachtree Industrial Blvd north of I-285 is classified as an urban freeway and expressway that runs north/south connecting the cities of Chamblee to Duluth. SR 141/Peachtree Industrial Blvd SB ramp to I-285 WB consist of one lane that varies from 12 - 16-foot wide and a paved shoulder that varies from 3-10 ft. wide. Also, Peachtree Industrial Blvd NB to I-285 WB consist of two 12-foot lanes that merges into one 12-foot lane to I285 WB with a paved shoulder that varies from 4-10 ft.

Other projects in the area:

PI 0001758 – I-285 FM I-75/Cobb thru Fulton to I-85/DeKalb for HOV
PI 0010782 – I-285 – Variable Speed Limit Signs
PI 0013255 – I-285 FM Ashford Dunwoody Rd to SR 141 – CD Lanes
PI M004124 – I-85 @ 1 Loc & I-285 @ 5 Locs – Bridge Uplifts Retrofits
PI M004417 – I-285 FM Paces Ferry Rd to Henderson Mill Rd

Description of the proposed project:
The proposed project will widen the westbound ramp from Peachtree Industrial Boulevard southbound to I-285 westbound from a single 16 foot wide to a double 12 foot lane ramp. This project proposes to have no impacts on right of way.

MPO: Atlanta TMA **TIP #:** N/A

TIA Regional Commission: Atlanta RC **Project #:** N/A

Congressional District(s): 6

Federal Oversight: ☒ Exempt ☐ State Funded ☐ Other

Projected Traffic: ADT
Current Year: (2014) 24,600 Open Year: (2016) 24,850 Design Year: (2036) 27,450
Traffic Projections Performed by: GDOT Planning

Functional Classification: SR 141 is an Urban Freeway and Expressway
I-285 is an Urban Interstate Principal Arterial

Complete Streets - Bicycle, Pedestrian, and/or Transit Warrants:
Warrants met: ☐ None ☐ Bicycle ☒ Pedestrian ☐ Transit

Mainline Design Features: *Peachtree Industrial Boulevard (SR 141) SB Ramp to I-285 WB.*

Feature	Existing	Standard*	Proposed
Typical Section			
- **Number of Lanes**	**1**	**2**	**2**
- **Lane Width(s)**	**12'**	**12'**	**12'**
- **Outside Shoulder or Border Area Width**	**10'**	**10'**	**10'**
- **Outside Shoulder Slope**	**6.0 %**	**6.0 %**	**6.0 %**
- **Inside Shoulder Width**	**8'**	**8' (4' paved)**	**8 ft. (4' paved)**
Posted Speed	**45 mph**		**45 mph**
Design Speed	**45 mph**	**45 mph**	**45 mph**
Min Horizontal Curve Radius	**730'**	**730'**	**730'**
Maximum Superelevation Rate	**4.0 %**	**4.0 %**	**4.0 %**
Maximum Grade	**4.0 %**	**4.0 %**	**4.0 %**
Access Control	**Limited**	**Limited**	**Limited**
Design Vehicle	**WB-67**	**WB-67**	**WB-67**

*According to current GDOT design policy if applicable

Major Interchanges/Intersections: I-285 @ SR 141 SB

Lighting required: ☒ No ☐ Yes

Transportation Management Plan [TMP] Required: ☐ No ☒ Yes
If Yes: Project classified as: ☒ Non-Significant ☐ Significant
TMP Components Anticipated: ☒ TTC ☐ TO ☐ PI

Will Context Sensitive Solutions procedures be utilized? ☒ None ☐ Yes

Design Exceptions to FHWA/AASHTO controlling criteria anticipated: None

Design Variances to GDOT Standard Criteria anticipated: None

UTILITY AND PROPERTY

Temporary State Route Needed: ☒ No ☐ Yes ☐ Undetermined

Railroad Involvement: None

Utility Involvements: None

SUE Required: ☒ No ☐ Yes

Public Interest Determination Policy and Procedure recommended? ☒ No ☐ Yes

Right-of-Way: Existing width: 64-235 ft. Proposed width: 64-235 ft.
Required Right-of-Way anticipated: ☒ No ☐ Yes ☐ Undetermined
Easements anticipated: ☒ None ☐ Temporary ☐ Permanent ☐ Utility ☐ Other

Anticipated number of impacted parcels:		0
Displacements anticipated:	Total:	0
	Businesses:	0
	Residences:	0
	Other:	0

ENVIRONMENTAL AND PERMITS

Anticipated Environmental Document:
GEPA: ☐ **NEPA:** ☐ CE ☒ PCE

MS4 Compliance – Is the project located in an MS4 area? ☐ No ☒ Yes
Project disturbed area will be less than 1 acre therefore this project is exempted from MS4

Environmental Permits, Variances, Commitments, and Coordination anticipated: None

Air Quality:

Is the project located in a PM 2.5 Non-attainment area?	☐ No	☒ Yes
Is the project located in an Ozone Non-attainment area?	☐ No	☒ Yes
Is a Carbon Monoxide hotspot analysis required?	☐ No	☒ Yes

NEPA/GEPA Comments & Information: None

NEPA/GEPA: A Programmatic Categorical Exclusion (PCE) is anticipated.

Ecology: To Be Determined – No adverse impacts anticipated.

History: To Be Determined – No adverse impacts anticipated.

Archeology: To Be Determined – No adverse impacts anticipated.

Air & Noise: To Be Determined – No adverse impacts anticipated.

Public Involvement: No public meeting is anticipated at this time.

COORDINATION, ACTIVITIES, RESPONSIBILITIES, AND COSTS

Project Meetings: Pre-surveying meeting held on May 06, 2014

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

Other coordination to date: None

Project Cost Estimate and Funding Responsibilities:

	Breakdown of PE	ROW	Reimbursable Utility	CST*	Environmental Mitigation	Total Cost
Funded By	GDOT			GDOT		
$ Amount	$375,000.00	N/A	N/A	$398,183.97	N/A	$773,183.97
Date of Estimate	4/1/2011			8/4/2014		

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

ALTERNATIVES DISCUSSION

Preferred Alternative:			
Estimated Property Impacts:	**0**	**Estimated Total Cost:**	**$314,000.00**
Estimated ROW Cost:	**$0**	**Estimated CST Time:**	**6 months**
Rationale: *The addition of the two lanes will improve the operational efficiency of the ramp.*			

No-Build Alternative:			
Estimated Property Impacts:	**0**	**Estimated Total Cost:**	**$0**
Estimated ROW Cost:	**$0**	**Estimated CST Time:**	**0**
Rationale: *The No-Build alternative is not recommended for this project. The No-Build alternative will not improve the operation of the ramp and will continue to cause long queue lengths.*			

Comments/Additional Information: None

LIST OF ATTACHMENTS/SUPPORTING DATA

1. Concept Layout
2. Typical sections
3. Cost Estimates
4. Crash summaries
5. Traffic diagrams
6. Operational Improvement Potential Project Summary

10/8/2014 4:08:55 PM GPLOT-V8 S:\0012660\0012660 LAYOUT.dgn

USER:johlgglns gplotborder-v8I-PO.tbl

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	0012660		

GEORGIA
DEPARTMENT
OF
TRANSPORTATION

SCALE IN FEET
0 100 200 400

REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION

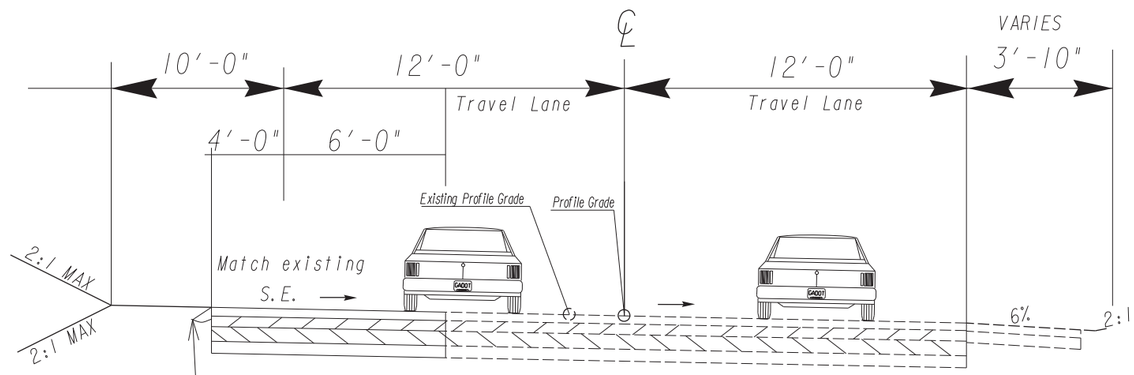
OFFICE: DISTRICT 7 PRECONSTRUCTION

MAINLINE PLAN

I-285 @ SR-141 PEACHTREE IND. BLVD.
SOUTHBOUND RAMP

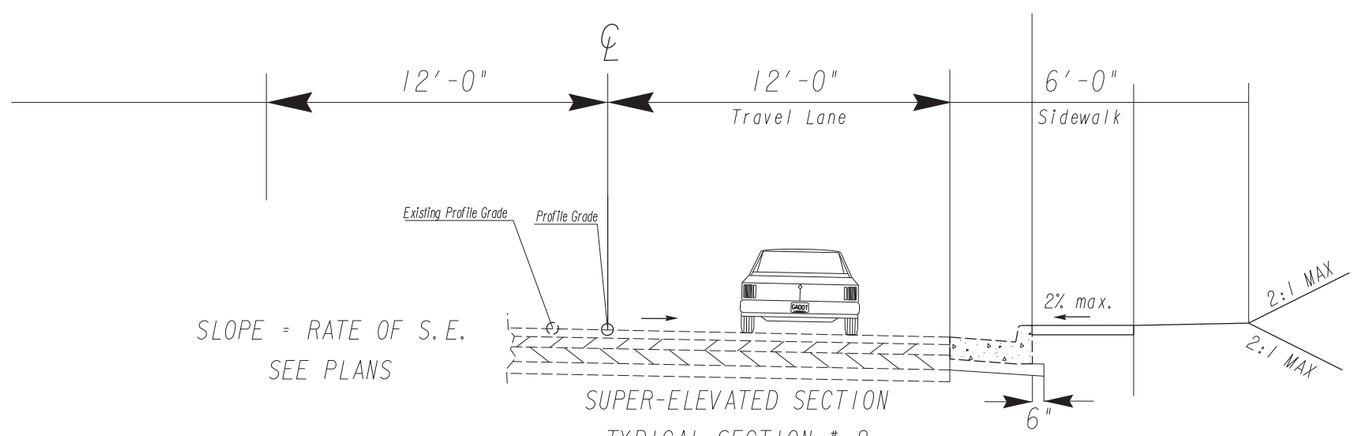
DRAWING No.
13-0001

12/14/2012 GPLN



PEACHTREE INDUSTRIAL BLVD. WB RAMP
SUPER-ELEVATED SECTION
TYPICAL SECTION # 1

REFER TO GDOT DETAIL P-7
FOR SAFETY EDGE



SLOPE = RATE OF S.E.
SEE PLANS

SUPER-ELEVATED SECTION
TYPICAL SECTION # 2
PEACHTREE INDUSTRIAL BLVD. SB

GEORGIA
DEPARTMENT OF TRANSPORTATION

NTS.

REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: DISTRICT 7 PRECONSTRUCTION

TYPICAL SECTIONS

PEACHTREE IND. BLVD. TO I-285 WB
ON RAMP

DRAWING No. 05-001

DETAILED COST ESTIMATE

Georgia Department of Transportation

Job: 0012660_JH

JOB NUMBER *0012660_JH* **FED/STATE PROJECT NUMBER** *0012660*

SPEC YEAR: *13*

DESCRIPTION: *PEACHTREE IND. BLVD. SB RAMP TO I-285 WB ON RAMP*

ITEMS FOR JOB 0012660_JH

10 - ROADWAY

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0003	150-1000	1.000	LS	$50,000.00000	TRAFFIC CONTROL - 0012660	$50,000.00
0009	210-0100	1.000	LS	$50,000.00000	GRADING COMPLETE - 0012660	$50,000.00
0039	310-1101	480.000	TN	$26.45986	GR AGGR BASE CRS, INCL MATL	$12,700.73
0019	402-3121	307.000	TN	$84.17384	RECYL AC 25MM SP,GP1/2,BM&HL	$25,841.37
0014	402-3600	600.000	TN	$106.00000	RECY AC 12.5,SMA,GP2 ON,INCLP-,BM&HL	$63,600.00
0034	402-3606	77.000	TN	$106.00000	ASPH CONC 19MM SMA,GP ONLY, INCLP-MBM&HL	$8,162.00
0044	413-1000	300.000	GL	$3.26413	BITUM TACK COAT	$979.24
0058	432-0205	8596.000	SY	$1.86000	MILL ASPH CONC PVMT/ 1.25 DEP	$15,988.56
0068	441-0106	161.000	SY	$32.10598	CONC SIDEWALK, 6 IN	$5,169.06
0059	444-1000	300.000	LF	$4.28939	SAWED JTS IN EXIST PVMTS - PCC	$1,286.82
0144	446-1100	300.000	LF	$7.20674	PVMT REF FAB STRIPS, TP2,18 INCH WIDTH	$2,162.02
					SUBTOTAL FOR ROADWAY:	**$235,889.80**

20 - DRAINAGE

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0147	611-3000	1.000	EA	$1,908.34675	RECONSTR CATCH BASIN, GROUP 1	$1,908.35
					SUBTOTAL FOR DRAINAGE:	**$1,908.35**

40 - EROSION CONTROL

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0239	163-0232	1.000	AC	$696.08596	TEMPORARY GRASSING	$696.09
0244	163-0240	5.000	TN	$332.89762	MULCH	$1,664.49
0238	163-0529	500.000	LF	$3.93366	CNST/REM TEMP SED BAR OR BLD STRW CK DM	$1,966.83
0258	163-0550	1.000	EA	$155.50751	CONS & REM INLET SEDIMENT TRAP	$155.51
0264	165-0030	250.000	LF	$0.84402	MAINT OF TEMP SILT FENCE, TP C	$211.01
0269	165-0071	500.000	LF	$1.02002	MAINT OF SEDIMENT BARRIER - BALED STRAW	$510.01
0259	165-0105	1.000	EA	$50.03281	MAINT OF INLET SEDIMENT TRAP	$50.03
0274	171-0030	500.000	LF	$2.83507	TEMPORARY SILT FENCE, TYPE C	$1,417.54
0224	603-2024	12.000	SY	$59.07979	STN DUMPED RIP RAP, TP 1, 24	$708.96
0279	700-6910	1.000	AC	$1,289.76924	PERMANENT GRASSING	$1,289.77
0284	700-7000	1.000	TN	$83.49583	AGRICULTURAL LIME	$83.50
0289	700-8000	1.000	TN	$530.00974	FERTILIZER MIXED GRADE	$530.01
0294	700-8100	100.000	LB	$3.03046	FERTILIZER NITROGEN CONTENT	$303.05
					SUBTOTAL FOR EROSION CONTROL:	**$9,586.80**

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DETAILED COST ESTIMATE

Georgia Department of Transportation

Job: 0012660_JH

50 - SIGNING & MARKING

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0299	636-1033	100.000	SF	$18.64179	HWY SIGNS, TP1MAT,REFL SH TP 9	$1,864.18
0304	636-2070	225.000	LF	$5.73325	GALV STEEL POSTS, TP 7	$1,289.98
0309	638-1004	1.000	LS	$75,000.00000	STR SUPPORT OVHD SIGN,TPIV,STA P.I. # 0012660	$75,000.00
0313	647-6300	2.000	EA	$754.15000	LOOP DETECTOR, 6 FT X 40 FT, QUADRUPOLE	$1,508.30
0314	653-1501	3535.000	LF	$0.65228	THERMO SOLID TRAF ST 5 IN, WHI	$2,305.81
0319	653-1502	330.000	LF	$0.98202	THERMO SOLID TRAF ST, 5 IN YEL	$324.07
0323	653-1804	140.000	LF	$2.03496	THERM SOLID TRAF STRIPE, 8,WH	$284.89
0324	653-3501	596.000	GLF	$0.83532	THERMO SKIP TRAF ST, 5 IN, WHI	$497.85
0329	654-1003	56.000	EA	$3.90836	RAISED PVMT MARKERS TP 3	$218.87
					SUBTOTAL FOR SIGNING & MARKING:	**$83,293.95**

TOTALS FOR JOB 0012660_JH

ITEMS COST:	**$330,678.90**
COST GROUP COST:	**$0.00**
ESTIMATED COST:	**$330,678.90**
CONTINGENCY PERCENT:	**0.10**
ENGINEERING AND INSPECTION:	**0.05**
ESTIMATED COST WITH CONTINGENCY AND E&I:	**$380,280.74**

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PROJ. NO.	12660	CALL NO.
P.I. NO.	0012660	
DATE	8/4/2014	

INDEX (TYPE)	**DATE**	**INDEX**
REG. UNLEADED	Jun-14	$ 3.500
DIESEL		$ 3.835
LIQUID AC		$ 591.00

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

LIQUID AC ADJUSTMENTS

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

Asphalt

Price Adjustment (PA)				**17446.32**	**$**	**17,446.32**
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	$	945.60		
Monthly Asphalt Cement Price month project let (APL)			$	591.00		
Total Monthly Tonnage of asphalt cement (TMT)				49.2		

ASPHALT	**Tons**	**%AC**	**AC ton**
Leveling		5.0%	0
12.5 OGFC		5.0%	0
12.5 mm	600	5.0%	30
9.5 mm SP		5.0%	0
25 mm SP	307	5.0%	15.35
19 mm SP	77	5.0%	3.85
	984		**49.2**

BITUMINOUS TACK COAT

Price Adjustment (PA)			**$**	**456.91**	**$**	**456.91**
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	$	945.60		
Monthly Asphalt Cement Price month project let (APL)			$	591.00		
Total Monthly Tonnage of asphalt cement (TMT)				1.288530277		

Bitum Tack Gals	gals/ton	tons	
300	232.8234	1.28853028	742.92

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)				**0**	**$**	**-**
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	$	945.60		
Monthly Asphalt Cement Price month project let (APL)			$	591.00		
Total Monthly Tonnage of asphalt cement (TMT)				0		

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

TOTAL LIQUID AC ADJUSTMENT	**$**	**17,903.23**

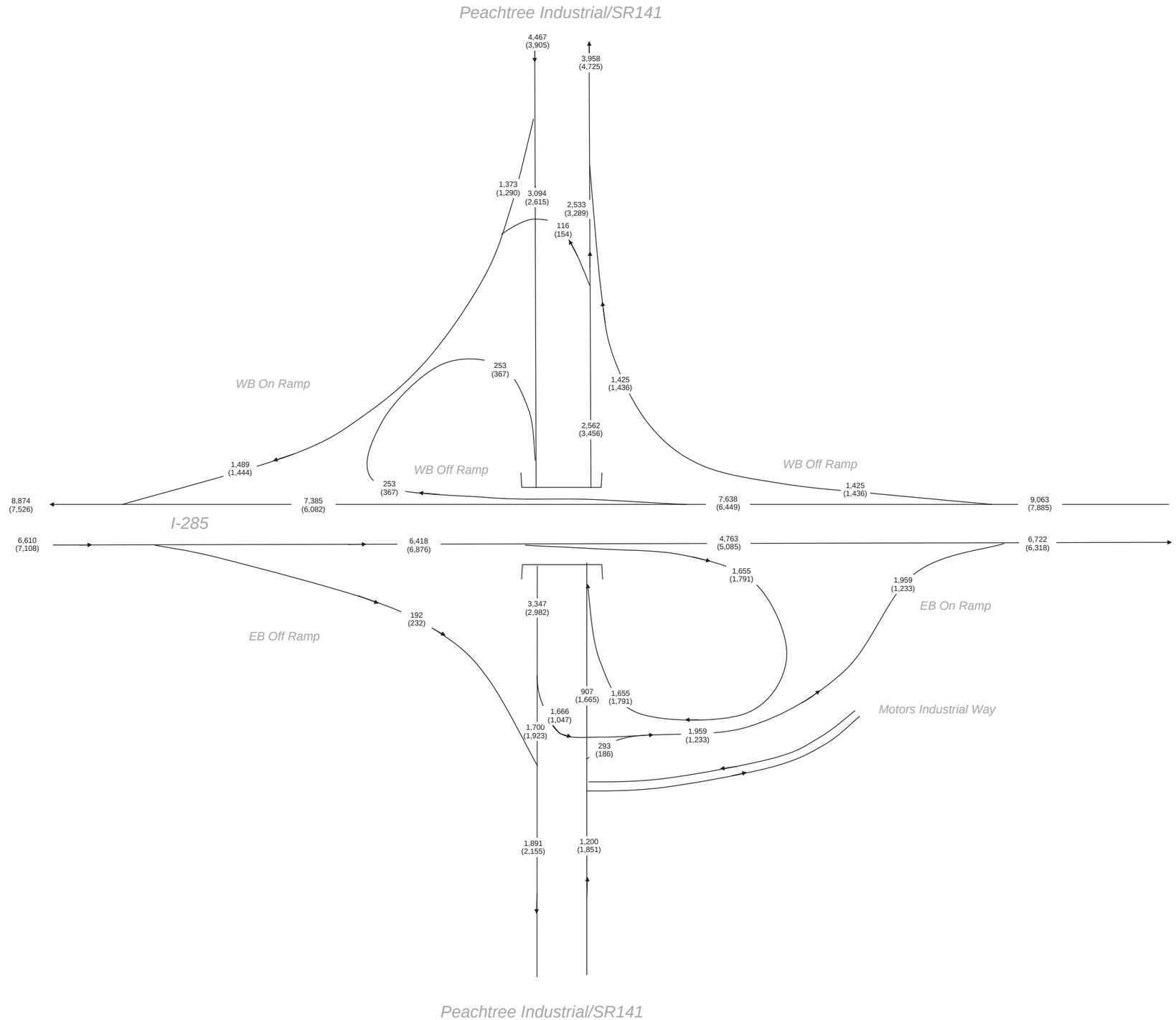
Detailed crash data for Peachtree Industrial Blvd. SB ramp for the past three years is shown in the table below; no fatalities were reported.

TABLE 1. CRASH HISTORY

SR 141 SB/PEACHTREE INDUSTRIAL BLVD. FROM MP 5.55 (PIB) TO MP 3.63 (I-285 WB)

	2011	2012	2013
Rear End	194	187	174
Sideswipe-Same Direction	39	42	55
Angle	25	25	36
Not Collision With Motor Vehicle	9	12	16

Existing (2012) Conditions



I-285 Peakhour Trucks

Peak Hour S.U. Trucks = 2%
Peak Hour Heavy Trucks = 4%

PIB Peakhour Trucks

Peak Hour S.U. Trucks = 1%
Peak Hour Heavy Trucks = 1%

2012 AM DHV = 000
2012 PM DHV = (000)

Contract ID: TOTSDDES100131; P.I. No. 009418

TRAFFIC DIAGRAM
(FTO # 6004: I-285 at SR 141/Peachtree Industrial Boulevard)

ARCADIS

File Name: Z:\REVIVE 285 (ARCADIS)\TMC'S DONE FROM ERIC\#68 PEACHTREEINDBLVD@I285RAMPAM.ppd
Start Date: 11/8/2011
Start Time: 6:30:00 AM
Site Code:
Comment 1: COUNT:
Comment 2: CAMERA:
Comment 3: Select File/Preference in the Main Scree
Comment 4: Then Click the Comments Tab

	PEACHTREE IND BLVD Southbound				I-285 RAMP Westbound				PEACHTREE IND BLVD Northbound				I-285 RAMP Eastbound				Peak Hour
Start Time	Left	Thru	Rght	Peds	Left	Thru	Rght	Peds	Left	Thru	Rght	Peds	Left	Thru	Rght	Peds	
06:30 AM	0	637	443	0	0	0	328	0	17	386	0	1	0	0	75	0	
06:45 AM	0	774	517	0	0	0	384	0	13	436	0	2	0	0	100	0	
07:00 AM	0	836	370	0	0	0	357	0	13	461	0	0	0	0	93	0	
07:15 AM	0	844	318	0	0	0	365	0	18	576	0	0	0	0	92	0	8456
07:30 AM	0	803	362	0	0	0	373	0	24	594	0	0	0	0	64	0	8789
07:45 AM	0	730	331	0	0	0	356	0	35	703	0	0	0	0	54	0	8772
08:00 AM	0	717	362	0	0	0	331	0	39	660	0	0	0	0	43	0	8794
08:15 AM	0	678	359	0	0	0	368	0	28	742	0	0	0	0	46	0	8802
Peak Hour	0	3094	1373	0	0	0	1425	0	116	2533	0	0	0	0	253	0	8794

File Name: Z:\REVIVE 285 (ARCADIS)\TMC'S DONE FROM ERIC\#68 PEACHTREEINDBLVD@I285RAMPPM.ppd
Start Date: 11/8/2011
Start Time: 4:30:00 PM
Site Code:
Comment 1: COUNT:
Comment 2: CAMERA:
Comment 3: Select File/Preference in the Main Scree
Comment 4: Then Click the Comments Tab

	PEACHTREE IND BLVD Southbound				I-285 RAMP Westbound				PEACHTREE IND BLVD Northbound				I-285 RAMP Eastbound				Peak Hour
Start Time	Left	Thru	Rght	Peds	Left	Thru	Rght	Peds	Left	Thru	Rght	Peds	Left	Thru	Rght	Peds	
04:30 PM	0	651	213	0	0	0	501	0	56	769	0	1	0	0	98	0	
04:45 PM	0	600	168	0	0	0	384	0	52	746	0	0	0	0	81	0	
05:00 PM	0	617	215	0	0	0	342	0	42	838	0	2	0	0	91	0	
05:15 PM	0	644	286	0	0	0	353	0	55	880	0	0	0	0	81	0	8766
05:30 PM	0	744	389	0	0	0	366	0	34	801	0	1	0	0	97	0	8909
05:45 PM	0	610	400	0	0	0	375	0	23	770	0	1	0	0	98	0	9155
06:00 PM	0	570	382	0	0	0	376	0	36	704	0	0	0	0	83	0	9159
06:15 PM	0	525	360	0	0	0	377	0	36	729	0	0	0	0	71	0	8958
Peak Hour	0	2615	1290	0	0	0	1436	0	154	3289	0	4	0	0	367	0	9155

File Name: Z:\REVIVE 285 (ARCADIS)\TMC'S DONE FROM ERIC\#69 PEACHTREEINDBLVD@I285RAMPAM.ppd
Start Date: 11/8/2011
Start Time: 6:30:00 AM
Site Code:
Comment 1: COUNT:
Comment 2: CAMERA:
Comment 3: Select File/Preference in the Main Scree
Comment 4: Then Click the Comments Tab

	PEACHTREE IND BLVD Southbound				I-285 RAMP Westbound				PEACHTREE IND BLVD Northbound				I-285 RAMP Eastbound				Peak Hour
Start Time	Left	Thru	Rght	Peds	Left	Thru	Rght	Peds	Left	Thru	Rght	Peds	Left	Thru	Rght	Peds	
06:30 AM	323	314	0	0	0	0	311	0	0	88	46	0	0	0	35	0	
06:45 AM	378	421	0	0	0	0	345	0	0	121	30	0	0	0	41	0	
07:00 AM	514	443	0	0	0	0	365	0	0	109	65	0	0	0	36	0	
07:15 AM	440	495	0	0	0	0	389	0	0	219	74	0	0	0	39	0	5641
07:30 AM	448	429	0	0	0	0	403	0	0	205	72	0	0	0	45	0	6126
07:45 AM	370	402	0	0	0	0	421	0	0	254	68	0	0	0	70	0	6375
08:00 AM	408	374	0	0	0	0	442	0	0	229	79	0	0	0	38	0	6413
08:15 AM	348	400	0	0	0	0	428	0	0	300	81	0	0	0	54	0	6368
Peak Hour	1666	1700	0	0	0	0	1655	0	0	907	293	0	0	0	192	0	6413

File Name: Z:\REVIVE 285 (ARCADIS)\TMC'S DONE FROM ERIC\#69 PEACHTREEINDBLVD@I285RAMPPM.ppd
Start Date: 11/8/2011
Start Time: 4:30:00 PM
Site Code:
Comment 1: COUNT:
Comment 2: CAMERA:
Comment 3: Select File/Preference in the Main Scree
Comment 4: Then Click the Comments Tab

	PEACHTREE IND BLVD Southbound				I-285 RAMP Westbound				PEACHTREE IND BLVD Northbound				I-285 RAMP Eastbound				Peak Hour
Start Time	Left	Thru	Rght	Peds	Left	Thru	Rght	Peds	Left	Thru	Rght	Peds	Left	Thru	Rght	Peds	
04:30 PM	279	405	0	0	0	0	406	0	0	418	86	0	0	0	52	0	
04:45 PM	261	394	0	0	0	0	426	0	0	400	62	0	0	0	47	0	
05:00 PM	239	448	0	0	0	0	443	0	0	424	53	0	0	0	77	0	
05:15 PM	279	495	0	0	0	0	455	0	0	483	56	0	0	0	50	0	6738
05:30 PM	278	505	0	0	0	0	467	0	0	415	39	0	0	0	61	0	6857
05:45 PM	251	475	0	0	0	0	426	0	0	343	38	0	0	0	44	0	6844
06:00 PM	302	474	0	0	0	0	379	0	0	421	47	0	0	0	45	0	6828
06:15 PM	307	385	0	0	0	0	358	0	0	416	44	0	0	0	42	0	6562
Peak Hour	1047	1923	0	0	0	0	1791	0	0	1665	186	0	0	0	232	0	6844

Operational Improvement Potential Project

SR 141/Peachtree Industrial Boulevard at I-285			Date Presented: August 2012
GDOT District:	District 7	**County:**	DeKalb
Project Type:	**Intersection Improvement**	**City:**	Doraville

Description of the Problem:

It was observed that:

- Weaving segment between I-285 EB ramp to SR 141 NB and I-285 WB on-ramp creates additional delay and safety issues.
- SR 141 SB traffic utilizing the ramp I-285 WB back up into the SR 141 though lanes during the peak period.

Eliminate the weaving segments between I-285 EB ramp to SR 141 NB and I-285 WB on-ramp. Evaluate the feasibility of adding dual rights from SR 141 SB to I-285 WB on-ramp by changing the SB 141 NB left turn to a single left turn lane. Evaluate the feasibility of modifying the I-285 bridge bents to provide additional storage for I-285 loop ramps to SR 141 in northbound direction.

Proposed Improvement:

- Provide dual rights from SR 141 SB to I-285 WB on-ramp by changing the SB 141 NB left turn to a single left turn lane.
- Modify I-285 bridge bents to provide additional storage/channelization for I-285 loop ramps to SR 141 in northbound direction along SR 141.

Right of Way acquisition required?

☑ None ☐ Minimal ☐ Yes, 4+ parcels

Initial Envrionmental Concerns?	☐ Yes ☑ No	If yes, describe:
Other programmed projects in the area:		

Traffic Volume	Year	AADT
Existing Conditions	2012	See Attached Sheets for AM/PM Peak Hour Volumes
Open Year		
Design Year		
Pedestrian Activity?		

Initial Project Cost Estimate ($):

PE:	$399,486	*ROW:*	$0	*CST:*	$3,498,653

Anticipated Benefits Table:
(LOS, Delay Reduction, Modeling output, etc.)

Travel Time

Segment	AM Peak Hour Travel Time (min)				PM Peak Hour Travel Time (min)			
	Existing (2012)	No-Build (2022)	Build (2022)	% Decrease	Existing (2012)	No-Build (2022)	Build (2022)	% Decrease
I-285 EB @ SR 141 Off-Ramp to Tilly Mill Rd Overpass	1.5	1.5	1.9	-30%	1.5	1.9	1.9	-2%
Tilly Mill Rd Overpass to I-285 WB @ SR 141 On-Ramp	2.6	5.6	1.9	66%	1.1	1.4	1.1	21%

Anticipated Benefits Table:
(LOS, Delay Reduction, Modeling output, etc.)

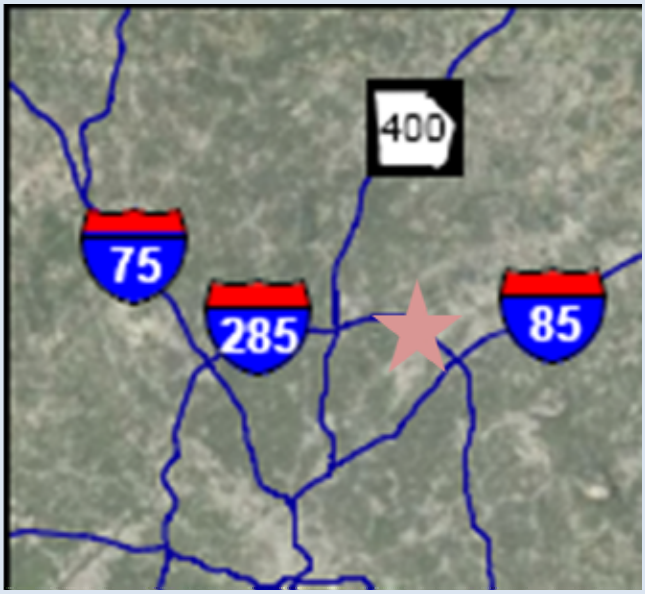
Lane Change Summary

Segment	AM Peak Hour				PM Peak Hour			
	Number of Lane Changes				Number of Lane Changes			
	Existing (2012)	No-Build (2022)	Build (2022)	% Decrease	Existing (2012)	No-Build (2022)	Build (2022)	% Decrease
I-285 EB ramp to SR 141 NB and I-285 WB on-ramp	666	863	348	60%	171	223	68	72%

Weave Segment Density and **Level of Service**

Segment	AM Peak Hour				PM Peak Hour			
	Density (veh/mi/ln)				Density (veh/mi/ln)			
	Existing (2012)	No-Build (2022)	Build (2022)	% Change	Existing (2012)	No-Build (2022)	Build (2022)	% Change
I-285 EB ramp to SR 141 NB and I-285 WB on-ramp	55.83 LOS F	67.9 LOS F	23.1 LOS C	66%	74.7 LOS F	126.1 LOS F	40.7 LOS E	68%

Location: (Attach Map, Image or Sketch):



Proposed Improvement: (Attach Map, Image or Sketch):

- See Attached Sheets

GDOT Benefit-Cost Calculator

enter information in green cells

Project Information

ID	PI#0009418
Description	GDOT OI_Task Order 6; FTO # 6004 SR 141/Peachtree Industrial Blvd at I-285

Cost Estimate

Date of estimate		8/16/12
PE cost	$	399,846
ROW cost		
UTILITY cost	$	166,603
CST cost (In Opean Year @ 3% Inflation)	$	3,332,050
Total	$	3,898,499

Traffic in 2022

Source of traffic data	Collected Traffic Counts projected to year 2022; Analysis in VISSIM; network analysis of both 1 hour peak AM and 1 hour peak PM periods
Without project (nobuild)	
Annual VMT	19,819,245
Annual VHT	803,310
Average speed (mph)	25
With project (build)	
Annual VMT	20,324,213
Annual VHT	771,795
Average speed (mph)	26

Parameters	Default	Override	Used
Analysis year	2035	2022	2022
Discount rate	7.0%		7%
Design life (years)	25	10	10
Fuel price ($/gallon)	3.22		3.22
Fuel economy (mpg)	18.03		18.03
Value of auto travel ($/hr)	13.75		13.75
Value of truck travel ($/hr)	72.65		72.65
Percent trucks	12%	2%	2%
Include GSP benefits	No	No	No

Costs		
Total cost	$	3,898,499
Annualized cost	**$**	**555,059**
Auto Delay Costs		
Nobuild	$	10,824,602
Build	$	10,399,938
Auto delay savings	**$**	**424,665**
Truck Delay Costs		
Nobuild	$	1,167,209
Build	$	1,121,418
Truck delay savings	**$**	**45,791**
Fuel Costs		
Nobuild	$	3,539,543
Build	$	3,629,726
Fuel cost savings	**$**	**(90,183)**
Change in GSP		NA
Auto delay cost adjustment		NA
Truck delay cost adjustment		NA
Fuel cost adjustment		NA
Total benefit adjustment		**NA**
Benefits in 2022	**$**	**380,273**
Benefit-Cost Ratio		**0.69**

Notes

PROPOSED LANES
PROPOSED RETAINING WALL

GDOT
Georgia Department of Transportation
ARCADIS

SCALE IN FEET
0 200 400

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION

SR 141 / PEACHTREE INDUSTRIAL BLVD. @ I-285

FTO No.
6004

Project Cost Estimation Spreadsheet

Project Identification			
	PIB Interchange at I-285		
Description	Widening PIB & Ramp realignment at I-285	Proj. Type	Roadway Widening
From Limit		District	Seven
To Limit			
Notes			
Project Length	1.25 miles		

Cost Summary		per mile	Yr. of Exp.	Inflated Cost	Total Program Cost
Preliminary Engineering	**$399,846**	$ 319,877	2012	**$ 399,846**	**$399,846**
Reimbursable Utility	**$166,603**	$ 133,282	2012	**$ 166,603**	**$166,603**
Right-of-Way	**$0**	$ -	2012	**$ -**	**$0**
Construction	**$3,332,050**	$ 2,665,640	2012	**$ 3,332,050**	**$3,332,050**
Total	**$3,898,499**	$ 3,118,799	**Total**	**$3,898,499**	**$3,898,499**

Construction Costs

Average Per Lane-Mile Components	Unit Cost	Miles	Add Lanes Factor	Lane-Miles		Cost
Ramps or New Surface Street	$ 463,672	0.27	1.50	0.41		$187,787
Ramp or Surface Street Widening	$ 463,672	0.50	1.00	0.50		$231,836
Ramps or Surface Street Overlay	$ 112,552	1.25	2.00	2.50		$281,380
Surface Str. New Cst. base & pave	$ 463,672	0.00	0.00	0.00		$0
Traffic Control	$180,000	1.25	1.00			$225,000
Typical E & S Control Temp&Perm	$135,000	1.25	1.00			$168,750
Typical Earthwork	$500,000	0.77	1.00			$385,000
Typical Drainage - Urban Section	$400,000	0.77	1.00			$308,000
Curb & Gutter per side (mile)	$68,640	0.30	1.00			$20,592
Conc Doweled Integral Curb (mile)	$63,360	0.00	1.00			$0
Signing & Marking	$38,000	1.25	2.00			$95,000
Typical Clear & Grub- (120' per mile)	$116,364	1.25	1.00			$145,455
Typical Guardrail	$40,000	0.15	1.00			$6,000
20ft. Raised median +C&G (mile)	$113,084	0.10	1.00			$11,308
Sidewalks 5 ft. ea.side (mile)	$187,733	0.25	1.00			$46,933
					Subtotal	**$2,113,041**
Additional Components	Unit Cost	Length	factor			Cost
Cl. B Conc. Base or pvmt widening	$15,000	0.50	1.00			$7,500
Paved Shoulders, 6ft, 1 side (mile)	$115,676	1.00	1.25			$144,595
Precast barrier Method 3 (ft)	$40	1500				$60,000
					Subtotal	**$152,095**
Individual Components	Unit Cost	Length (ft)	Width (ft)	Ht (ft)		Cost
Retaining Walls - Under Bridge (SF)	$100	250		20		$500,000
Barrier Topped Retaining Wall (SF)	$60	500		8		$240,000
Large cross drains (LF)	$80	300				$24,000
Traffic Signalization / Upgrade (ea)	$150,000	0				$0
					Subtotal	**$764,000**
					Total Construction Cost	**$3,029,136**
						85%

Right-of-Way Costs

Area Type	Unit Cost (acre)	Miles	Width (ft)	Acres		Cost
Urban Residential	$750,000	0	0	0.00		$0
	$750,000	0	0	0.00		$0
Urban Commercial	$1,000,000	0	0	0.00		$0
	$1,000,000	0	0	0.00		$0
Suburban/Rural Residential	$500,000	0	0	0.00		$0
	$500,000	0	0	0.00		$0
Suburban/Rural Commercial	$750,000	0	0	0.00		$0
	$750,000	0	0	0.00		$0
Displacements		Number	factor			
Residential	$200,000	0	1.00			$0
Business	$800,000	0	1.00			$0
Damages	$0	0	1.00			$0
				ROW multiplier		1.65
					Total Right-of-Way Cost	**$0**
						0%

Reimbursable Utility Costs

		0
		$ 151,457
	Total Reimbursable Utility Cost	**$151,457**
		4.27%

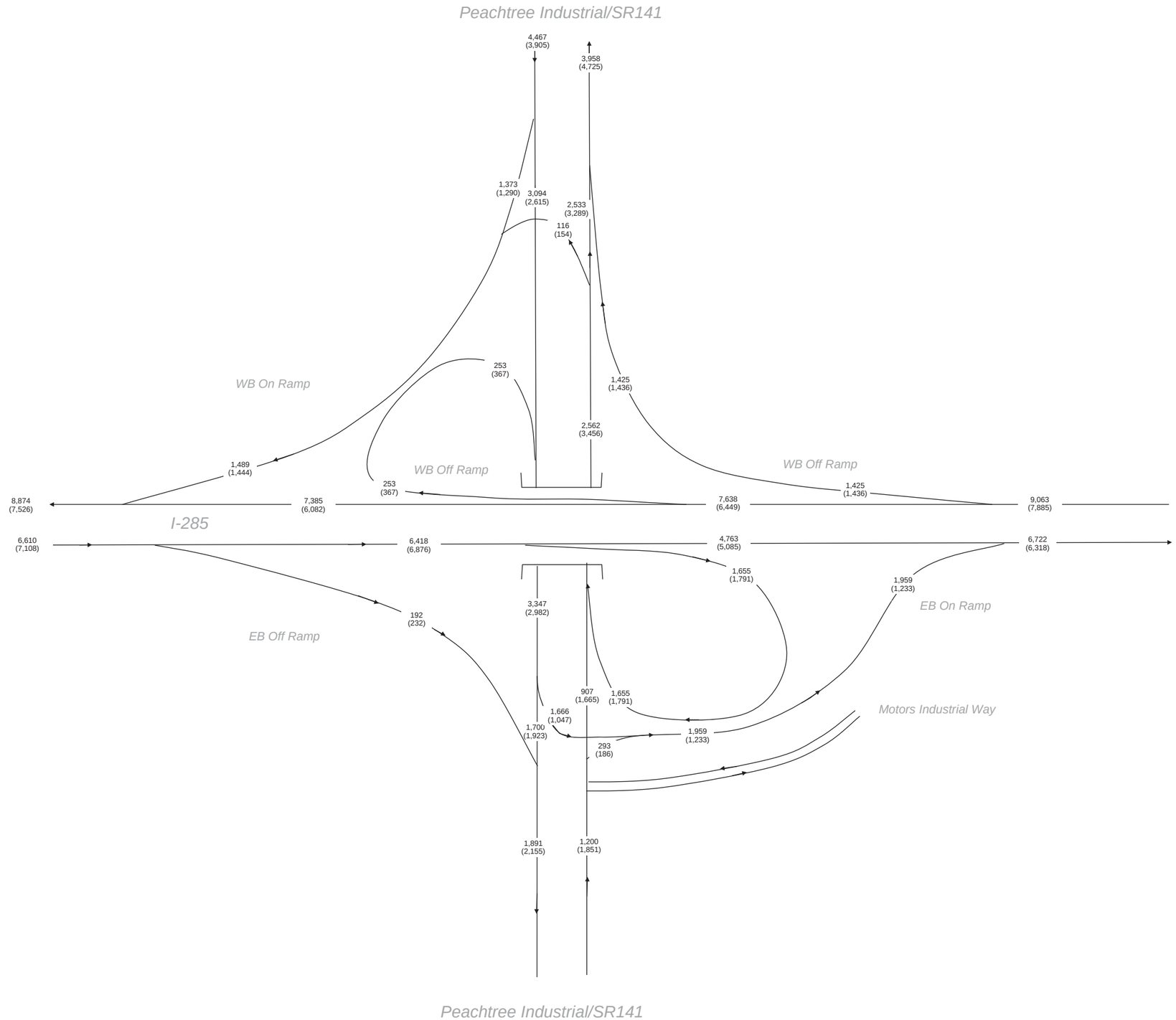
Preliminary Engineering Costs

PE %	12%	**Total Preliminary Engineering Cost**	**$363,496**
			10.26%

Contingency Costs

Contingency %	10%	**Total Contingency Cost**	**$354,409**
		Total (PE+Util.+ROW+CST)	**$3,544,090**
		Grand Total	**$3,898,499**

Existing (2012) Conditions



I-285 Peakhour Trucks

Peak Hour S.U. Trucks = 2%
Peak Hour Heavy Trucks = 4%

PIB Peakhour Trucks

Peak Hour S.U. Trucks = 1%
Peak Hour Heavy Trucks = 1%

2012 AM DHV = 000
2012 PM DHV = (000)

Contract ID: TOTSDDES100131; P.I. No. 009418

TRAFFIC DIAGRAM
(FTO # 6004: I-285 at SR 141/Peachtree Industrial Boulevard)

ARCADIS

File Name: Z:\REVIVE 285 (ARCADIS)\TMC'S DONE FROM ERIC\#68 PEACHTREEINDBLVD@I285RAMPAM.ppd
Start Date: 11/8/2011
Start Time: 6:30:00 AM
Site Code:
Comment 1: COUNT:
Comment 2: CAMERA:
Comment 3: Select File/Preference in the Main Scree
Comment 4: Then Click the Comments Tab

	PEACHTREE IND BLVD Southbound				I-285 RAMP Westbound				PEACHTREE IND BLVD Northbound				I-285 RAMP Eastbound				Peak Hour
Start Time	Left	Thru	Rght	Peds	Left	Thru	Rght	Peds	Left	Thru	Rght	Peds	Left	Thru	Rght	Peds	
06:30 AM	0	637	443	0	0	0	328	0	17	386	0	1	0	0	75	0	
06:45 AM	0	774	517	0	0	0	384	0	13	436	0	2	0	0	100	0	
07:00 AM	0	836	370	0	0	0	357	0	13	461	0	0	0	0	93	0	
07:15 AM	0	844	318	0	0	0	365	0	18	576	0	0	0	0	92	0	8456
07:30 AM	0	803	362	0	0	0	373	0	24	594	0	0	0	0	64	0	8789
07:45 AM	0	730	331	0	0	0	356	0	35	703	0	0	0	0	54	0	8772
08:00 AM	0	717	362	0	0	0	331	0	39	660	0	0	0	0	43	0	8794
08:15 AM	0	678	359	0	0	0	368	0	28	742	0	0	0	0	46	0	8802
Peak Hour	0	3094	1373	0	0	0	1425	0	116	2533	0	0	0	0	253	0	8794

File Name: Z:\REVIVE 285 (ARCADIS)\TMC'S DONE FROM ERIC\#68 PEACHTREEINDBLVD@I285RAMPPM.ppd
Start Date: 11/8/2011
Start Time: 4:30:00 PM
Site Code:
Comment 1: COUNT:
Comment 2: CAMERA:
Comment 3: Select File/Preference in the Main Scree
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	PEACHTREE IND BLVD Southbound				I-285 RAMP Westbound				PEACHTREE IND BLVD Northbound				I-285 RAMP Eastbound				Peak Hour
Start Time	Left	Thru	Rght	Peds	Left	Thru	Rght	Peds	Left	Thru	Rght	Peds	Left	Thru	Rght	Peds	
04:30 PM	0	651	213	0	0	0	501	0	56	769	0	1	0	0	98	0	
04:45 PM	0	600	168	0	0	0	384	0	52	746	0	0	0	0	81	0	
05:00 PM	0	617	215	0	0	0	342	0	42	838	0	2	0	0	91	0	
05:15 PM	0	644	286	0	0	0	353	0	55	880	0	0	0	0	81	0	8766
05:30 PM	0	744	389	0	0	0	366	0	34	801	0	1	0	0	97	0	8909
05:45 PM	0	610	400	0	0	0	375	0	23	770	0	1	0	0	98	0	9155
06:00 PM	0	570	382	0	0	0	376	0	36	704	0	0	0	0	83	0	9159
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07:00 AM	514	443	0	0	0	0	365	0	0	109	65	0	0	0	36	0	
07:15 AM	440	495	0	0	0	0	389	0	0	219	74	0	0	0	39	0	5641
07:30 AM	448	429	0	0	0	0	403	0	0	205	72	0	0	0	45	0	6126
07:45 AM	370	402	0	0	0	0	421	0	0	254	68	0	0	0	70	0	6375
08:00 AM	408	374	0	0	0	0	442	0	0	229	79	0	0	0	38	0	6413
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Start Time	Left	Thru	Rght	Peds	Left	Thru	Rght	Peds	Left	Thru	Rght	Peds	Left	Thru	Rght	Peds	
04:30 PM	279	405	0	0	0	0	406	0	0	418	86	0	0	0	52	0	
04:45 PM	261	394	0	0	0	0	426	0	0	400	62	0	0	0	47	0	
05:00 PM	239	448	0	0	0	0	443	0	0	424	53	0	0	0	77	0	
05:15 PM	279	495	0	0	0	0	455	0	0	483	56	0	0	0	50	0	6738
05:30 PM	278	505	0	0	0	0	467	0	0	415	39	0	0	0	61	0	6857
05:45 PM	251	475	0	0	0	0	426	0	0	343	38	0	0	0	44	0	6844
06:00 PM	302	474	0	0	0	0	379	0	0	421	47	0	0	0	45	0	6828
06:15 PM	307	385	0	0	0	0	358	0	0	416	44	0	0	0	42	0	6562
Peak Hour	1047	1923	0	0	0	0	1791	0	0	1665	186	0	0	0	232	0	6844