

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE: NHS00-0001-00(758) Cobb DeKalb Fulton **OFFICE:** Engineering Services
P.I. No.: 0001758
Revive 285 Top End **DATE:** December 13, 2011

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

TO: Darryl D. VanMeter, PE, State Innovative Program Delivery Engineer
Attn.: Marlo Clowers

SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES

The VE Study for the above project was held August 15-18, 2011. Responses were received on October 7, 2011. Revised responses were submitted on December 12, 2011.

After discussions with the Project Manager and with FHWA, it was determined that it will be several months before a preferred alternate can be selected. The Project Manager shall notify the Office of Engineering Services when the preferred alternate has been determined. At that time, a revised VE Implementation letter indicating the preferred alternate will be distributed.

The Project Manager shall incorporate the VE alternatives recommended for implementation to the extent reasonable in the design of the project.

ALTERNATE 4				
ALT #	Description	Potential Savings/LCC	Implement	Comments
L-2	Maintain ramp at GA 400 NB to I-285 EB to eliminate Bridge No. 43	\$6,431,000	No	This would eliminate access from GA 400 NB to the Perimeter Mall area via Ashford Dunwoody Road. Alternate access routes from GA 400 NB via Abernathy Road and Glenridge Connector are not direct routes and require extensive travel on local roads.

L-4	Retain existing GA 400 SB bridge over I-285 and eliminate Bridge Nos. 23A, 23B and 24	Proposed = \$21,187,000 Actual = \$8,321,000	Yes	<p>The existing Georgia 400 SB bridge over I-285 can be retained but will require design exceptions since this bridge doesn't have enough horizontal space underneath to fit all the proposed I-285 improvements required at this location.</p> <p>The existing I-285 WB to GA 400 SB bridge over GA 400 that ties to the existing GA 400 SB bridges must be replaced. In its existing configuration, the I-285 WB to GA 400 SB bridge has excess vertical clearance as it crosses the existing GA 400 NB lanes. Retaining this bridge would require the proposed GA 400 NB bridge as well as GA-400 SB to I-285 EB ramp to be built approximately 14 feet higher than currently proposed. This additional elevation will make it infeasible for GA 400 SB to I-285 EB to vertically fit under the new Hammond Drive Bridge.</p> <p>It is not feasible to just replace the I-285 WB to GA-400 SB ramp while maintaining the existing GA 400 SB bridge. Due to the tight existing configuration where the WB to SB ramp ties in on the left side, the replacement WB to SB ramp must go over the existing GA 400 SB lanes and tie to the right side of GA 400 SB lanes to maintain traffic during construction. In addition, this design will also require the GA 400 SB exit to Glenridge Connector to be separated from the GA 400 SB lanes prior to crossing I-285.</p> <p>The cost for the additional work has been subtracted from the savings proposed by the VE Team.</p>
L-5	Reconfigure EB I-285 ramp to NB GA 400, maintain left-hand merge and eliminate proposed Bridge No. 29	\$16,785,000	No	<p>The intent of this recommendation is to construct a new 2-lane off ramp from I-285 EB to GA 400 NB. This new lane will be constructed to go over the GA 400 SB and NB lanes and tie to the existing GA 400 NB lanes as a right side entrance ramp. It is not feasible to vertically construct this ramp over GA 400 NB and SB lanes and match the grade of GA 400 NB lanes before I-285.</p>
L-8.1	Do not improve the Windy Hill Road interchange	\$77,413,000	No	<p>The existing Windy Hill Road bridge over I-75 does not have enough horizontal space underneath to fit all of the proposed I-75 NB improvements required at this location. Therefore, the bridge would have to be replaced. Since the Windy Hill Road interchange improvement project (PI No. 713600) is a programmed project, a replaced Windy Hill Road bridge would have to be part of the overall interchange improvement.</p>
L-8.2	Eliminate Bridge Nos. 4 and 6 at the Windy Hill Road	\$23,841,000	No	<p>Bridge No. 4 is required to improve the heavy weaving between I-285 to I-75 NB traffic and I-75 NB to Delk Rd traffic. Bridge No. 6 is required to improve the</p>

	interchange			heavy weaving between Windy Hill Road to I-75 NB traffic and I-75 NB to Delk Rd traffic. Elimination of these bridges will result in significant congestion on I-75 NB between I-285 and Windy Hill Rd, which in turn would spill back and impact traffic operations along I-285 WB.
L-9	Eliminate EB I-285 to Chamblee Tucker Road exit ramp and Bridge No. 42	\$3,299,000	No	This proposed Chamblee Tucker Rd ramp is expected to serve approximately 1,600 vehicles during the design peak hour. If this recommendation is implemented, this traffic volume must be combined with I-285 EB to I-85 NB and SB ramps. These I-285 to I-85 ramps are already expected to be utilized by 7,400 vehicles during the peak design hour. The addition of the 1,600 vehicles destined to Chamblee Tucker Rd will cause the I-285 to I-85 ramps to operate at an unacceptable LOS.
L-10	Do not improve the NE quadrant of the I-285/I-85 interchange	\$8,921,000	No	Proposed improvements at this location are intended to improve the existing weaving condition along the I-85 NB C-D between I-285 and Northcrest Rd. Review of the latest five years of crash data for this section indicates that there are 118 crashes annually. Proposed improvements will reduce weaving maneuvers, which are expected to reduce crash frequency in this area. These improvements are also expected to improve the traffic conditions along I-285 EB ramps.
L-11	Eliminate Bridge No. 33 at the Chamblee Dunwoody Road intersection	\$4,523,000	No	Proposed improvements at this location are intended to improve the weaving conditions along I-285 WB between Chamblee Dunwoody Rd and Ashford Dunwoody Rd. The WB on-ramp from Chamblee Dunwoody Rd is expected to serve 2,900 vehicles in the peak design hour, of which 1,500 vehicles are expected to travel along I-285 beyond Ashford Dunwoody Rd. If this recommendation is implemented, an additional 1,500 vehicles will utilize the proposed C-D system, requiring the addition of a C-D lane between Chamblee Dunwoody Rd and Ashford Dunwoody Rd. An additional entrance point along I-285 WB would be needed east of Ashford Dunwoody Rd to serve traffic heading WB on I-285 from Chamblee Dunwoody Rd. This entrance point will cause weaving along I-285 WB between this new entrance point and the exit ramp to GA 400. If implemented, this recommendation will not only impact the operation of the C-D at Chamblee Dunwoody Rd, but will reduce the benefits of operational improvement that are proposed downstream from this location.
SP-1/ RTT-1	Reduce ROW take on Sandy Springs Circle using a Single Point Urban	\$8,009,000	No	A SPUI performs best when opposing left-turn volumes are heavy and are the critical movements. At the Sandy Springs Circle interchange, through vehicles to and from Roswell Road are the heaviest movements.

	Interchange (SPUI)			A longer cycle length could result in ramp queues affecting I-285 EB traffic due to heavy ramp volumes (2,200 vehicles per hour).
SP-5	Eliminate ROW take north of Mt. Wilkinson Parkway	\$1,708,000	Yes	This will be done.
ALTERNATE 6 A				
ALT #	Description	Potential Savings/LCC	Implement	Comments
IM-4	Eliminate future transit Bridge No. EB19	\$18,074,000	No	This recommendation would require future transit to be constructed in a tunnel, significantly increasing the construction cost of transit. In addition, construction of this tunnel under I-285 CD lanes would be very complicated, likely causing disruptions to traffic lanes.
IM-9	Use 4-ft inside shoulders and 10-ft outside shoulders for managed lanes only	\$99,332,000	Yes, pending FHWA approval	This will be implemented where sight distances will not be hindered by narrower shoulders. This would require a design exception.
L-4	Retain existing GA 400 SB bridge over I-285 and eliminate Bridge Nos. 23A, 23B and 24	\$21,187,000	No	Managed lanes are proposed in alternate 6A and these managed lanes are proposed to utilize fourth and fifth vertical level at the vicinity of this interchange. This proposed alternate design will require the westbound to southbound ramp to occupy fourth vertical level, which would mean the managed lanes will now occupy the fifth and sixth vertical level. This additional vertical level for the managed lanes will make the elevations and grades extreme to provide managed lanes connection at GA 400 north and Perimeter Center Parkway.
L-8.1	Do not improve the Windy Hill Road interchange	\$77,413,000	No	The existing Windy Hill Road bridge over I-75 does not have enough horizontal space underneath to fit all of the proposed I-75 NB improvements required at this location. Therefore, the bridge would have to be replaced. Since the Windy Hill Road interchange improvement project (PI No. 713600) is a programmed project, a replaced Windy Hill Road bridge would have to be part of the overall interchange improvement.

L-8.2	Eliminate Bridge Nos. 4 and 6 at the Windy Hill Road interchange	\$23,841,000	No	Bridge No. 4 is required to improve the heavy weaving between I-285 to I-75 NB traffic and I-75 NB to Delk Road traffic. Bridge No. 6 is required to improve the heavy weaving between Windy Hill Road to I-75 NB traffic and I-75 NB to Delk Road traffic. Elimination of these bridges will result in significant congestion on I-75 NB between I-285 and Windy Hill Road, which in turn would spill back and impact traffic operations along I-285 WB.
L-9	Eliminate EB I-285 to Chamblee Tucker Road exit ramp and Bridge No. 42	\$3,299,000	No	This proposed Chamblee Tucker Road ramp is expected to serve approximately 1,600 vehicles during the design peak hour. If this recommendation is implemented, this traffic volume must be combined with I-285 EB to I-85 NB and SB ramps. These I-285 to I-85 ramps are already expected to be utilized by 7,400 vehicles during the peak design hour. The addition of the 1,600 vehicles destined to Chamblee Tucker Road will cause the I-285 to I-85 ramps to operate at an unacceptable LOS.
L-10	Do not improve the NE quadrant of the I-285/I-85 interchange	\$8,921,000	No	Proposed improvements at this location are intended to improve the existing weaving condition along the I-85 NB C-D between I-285 and Northcrest Road. Review of the latest five years of crash data for this section indicates that there are 118 crashes annually. Proposed improvements will reduce weaving maneuvers, which are expected to reduce crash frequency in this area. These improvements are also expected to improve the traffic conditions along I-285 EB ramps.
SP-5	Eliminate ROW take north of Mt. Wilkinson Parkway	\$1,708,000	Yes	This will be done.
SP-7.1	Eliminate ROW takes for future transit facility	\$302,219,000	No	Providing ROW for a future transit facility is a major part of this alternate. If implemented, this alternate will not meet the overall goals of the Need and Purpose for this project, or respond to input from the public and key stakeholders.
SP-7.3	Eliminate ROW takes requiring displacements	\$115,681,000	Yes	It is the intention of this alternate to environmentally clear all the ROW required for the project, including transit ROW. Full transit ROW acquisition is not planned; however, GDOT may acquire properties that are already on the market. GDOT may also acquire ROW from properties to accommodate transit when ROW is being acquired for roadway improvements.
SP-8	Place Bridge Nos. EB46, EB47 and EB48 in center of Motors Ind. Way	\$5,124,000	Yes	This will be done.

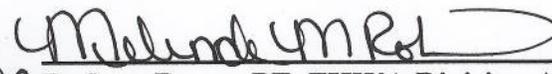
SP-9	Take transit ROW underground just east of Bridge No. WB12 to west of North Shallowford Rd to reduce ROW	\$20,492,000	No	This recommendation would require future transit to be constructed in a tunnel, significantly increasing the construction cost of transit. In addition, construction of this tunnel under I-285 lanes would be very complicated, likely causing maintenance of traffic issues on I-285.
SP-10.1	Realign transit ROW to abut I-285 east of Ashford Dunwoody Road	\$5,817,000	Yes, partially	This will be done to minimize displacements and maximize access to transit.
SP-10.2	Take transit underground east of Ashford Dunwoody Road	\$30,847,000	No	This recommendation would require future transit to be constructed in a tunnel, significantly increasing the construction cost of transit. In addition, construction of this tunnel under I-285 WB CD lanes would be very complicated, likely causing disruptions to traffic lanes.
ALTERNATE 6 B				
ALT #	Description	Potential Savings/LCC	Implement	Comments
IM-2	Reconfigure managed lanes to meet existing grade between Riverside Drive to west of the Chattahoochee River for both EB and WB directions	\$62,918,000	Yes	This will be done. Please note, the VE Study report indicates this recommendation applies to Alternate 6 A; however, after further review and clarification from the VE Team, it was determined this recommendation actually applies to Alternate 6 B.
IM-4	Eliminate future transit Bridge No. EB19	\$18,074,000	No	This recommendation would require future transit to be constructed in a tunnel, significantly increasing the construction cost of transit. In addition, construction of this tunnel under I-285 CD lanes would be very complicated, likely causing disruptions to traffic lanes.
IM-7	Reconfigure WB managed lanes to meet existing grade between just east of the Chattahoochee River to the I-75/I-285 interchange	Proposed = \$28,468,000 Actual = \$0	Yes	This will be done; however, the savings are included in Alternate IM-2.
IM-8	Do not provide managed lanes drop-off at Sandy Springs Circle	\$12,477,000	No	This managed lane interchange is expected to be heavily utilized; 2,100 and 1,800 vehicles are expected to use this interchange during the am and pm design peak hours, respectively.

IM-9	Use 4-foot inside shoulders and 10-foot outside shoulders for managed lanes only	\$99,332,000	Yes, pending FHWA approval	This will be implemented where sight distances will not be hindered by narrower shoulders. This would require a design exception.
L-4	Retain existing GA 400 SB bridge over I-285 and eliminate Bridge Nos. 23A, 23B and 24	\$21,187,000	No	Managed lanes are proposed in alternate 6B and these managed lanes are proposed to utilize fourth and fifth vertical level at the vicinity of this interchange. This proposed alternate design will require the westbound to southbound ramp to occupy fourth vertical level, which would mean the managed lanes will now occupy the fifth and sixth vertical level. This additional vertical level for the managed lanes will make the elevations and grades extreme to provide managed lanes connection at GA 400 north and Perimeter Center Parkway.
L-8.1	Do not improve the Windy Hill Road interchange	\$77,413,000	No	The existing Windy Hill Road bridge over I-75 does not have enough horizontal space underneath to fit all of the proposed I-75 NB improvements required at this location. Therefore, the bridge would have to be replaced. Since the Windy Hill Road interchange improvement project (PI No. 713600) is a programmed project, a replaced Windy Hill Road bridge would have to be part of the overall interchange improvement.
L-8.2	Eliminate Bridge Nos. 4 and 6 at the Windy Hill Road interchange	\$23,841,000	No	Bridge No. 4 is required to improve the heavy weaving between I-285 to I-75 NB traffic and I-75 NB to Delk Road traffic. Bridge No. 6 is required to improve the heavy weaving between Windy Hill Road to I-75 NB traffic and I-75 NB to Delk Road traffic. Elimination of these bridges will result in significant congestion on I-75 NB between I-285 and Windy Hill Road, which in turn would spill back and impact traffic operations along I-285 WB.
L-9	Eliminate EB I-285 to Chamblee Tucker Road exit ramp and Bridge No. 42	\$3,299,000	No	This proposed Chamblee Tucker Road ramp is expected to serve approximately 1,600 vehicles during the design peak hour. If this recommendation is implemented, this traffic volume must be combined with I-285 EB to I-85 NB and SB ramps. These I-285 to I-85 ramps are already expected to be utilized by 7,400 vehicles during the peak design hour. The addition of the 1,600 vehicles destined to Chamblee Tucker Road will cause the I-285 to I-85 ramps to operate at an unacceptable LOS.

L-10	Do not improve the NE quadrant of the I-285/I-85 interchange	\$8,921,000	No	Proposed improvements at this location are intended to improve the existing weaving condition along the I-85 NB C-D between I-285 and Northcrest Road. Review of the latest five years of crash data for this section indicates that there are 118 crashes annually. Proposed improvements will reduce weaving maneuvers, which are expected to reduce crash frequency in this area. These improvements are also expected to improve the traffic conditions along I-285 EB ramps.
SP-5	Eliminate ROW take north of Mt. Wilkinson Parkway	\$1,708,000	Yes	This will be done.
SP-7.1	Eliminate ROW takes for future transit facility	\$310,042,000	No	Providing ROW for a future transit facility is a major part of this alternate. If implemented, this alternate will not meet the overall goals of the Need and Purpose for this project, or respond to input from the public and key stakeholders.
SP-7.3	Eliminate ROW takes requiring displacements	\$123,504,000	Yes	It is the intention of this alternate to environmentally clear all the ROW required for the project, including transit ROW. Full transit ROW acquisition is not planned; however, GDOT may acquire properties that are already on the market. GDOT may also acquire ROW from properties to accommodate transit when ROW is being acquired for roadway improvements.
SP-8	Place Bridge Nos. EB46, EB47 and EB48 in center of Motors Industrial Way	\$5,124,000	Yes	This will be done.
SP-9	Take transit ROW underground just east of Bridge No. WB12 to west of North Shallowford Road to reduce ROW	\$21,824,000	No	This recommendation would require future transit to be constructed in a tunnel, significantly increasing the construction cost of transit. In addition, construction of this tunnel under I-285 lanes would be very complicated, likely causing maintenance of traffic issues on I-285.
SP-10.1	Realign transit ROW to abut I-285 east of Ashford Dunwoody Road	\$6,179,000	Yes, partially	This will be done to minimize displacements and maximize access to transit.
SP-10.2	Take transit underground east of Ashford Dunwoody Road	\$31,816,000	No	This recommendation would require future transit to be constructed in a tunnel, significantly increasing the construction cost of transit. In addition, construction of this tunnel under I-285 WB CD lanes would be very complicated, likely causing disruptions to traffic lanes.

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

Approved:  Date: 12/15/11
Gerald M. Ross, PE, Chief Engineer

Approved:  Date: 4/17/12
Rodney Barry, PE, FHWA Division Administrator

Additional responses submitted
March 15, 2012 at the
request of FHWA after
meeting on
2/10/12.

REW/LLM
Attachments

- c: Dana Robbins/Mindy Roberson/Jennifer Giersch/Kelly Wade - FHWA
Russell McMurry
Darryl VanMeter/Mike Dover/Marlo Clowers
Paul Liles/Ben Rabun/Bill Duvall
Mike Murdoch
Lee Upkins
Ken Werho
Lisa Myers
Matt Sanders

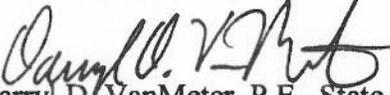
DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE NHS00-0001-00(758)
Cobb, Fulton, and DeKalb Counties
I-285 North Managed Lanes
P.I. # 0001758

OFFICE Innovative Program Delivery

DATE December 14, 2011


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

TO Ronald E. Wishon, Project Review Engineer
Attention: Lisa Myers

SUBJECT Value Engineering Study – Revised Response to Final Report

The final report for the Value Engineering Study conducted on August 15 - 18, 2011 for the above listed project has been reviewed by this Office. Revised responses to the final report are included in the attachment. The Office of Innovative Program Delivery is in agreement with the revised responses. If you have any questions or require additional information, please contact Marlo Clowers at (404) 631-1713 or email.

DVM:MLC

Attachments

cc: Russell McMurry



Infrastructure Water Environment Buildings

Ms. Marlo L. Clowers, PE
Project Manager
Georgia Department of Transportation
Office of Innovative Program Delivery
One Georgia Center, Suite 2700
600 West Peachtree Street NW
Atlanta, Georgia 30308

Subject:
Value Engineering Report Responses
revive285 top end
Cobb, DeKalb and Fulton Counties
NHS00-0001-00(758), PI No. 0001758

Dear Ms. Clowers

ARCADIS U.S., Inc. has reviewed the Value Engineering (VE) Report prepared by VMS, Inc. and provides the following responses:

Idea IM-2: Reconfigure managed lanes to meet existing grade between Riverside Drive to west of the Chattahoochee River for both eastbound and westbound directions (Applicable to Build Alternative 6A 6B only)

ARCADIS Response – Will Implement.

After reviewing the sketch and descriptions included in the VE Report as well as clarification from the VE team, we understand that this recommendation applies to Alternative 6B.

VE Team Savings: \$62,918,000 (taken from VE Study Report)

Idea IM-4 Eliminate future transit Bridge No. EB19 (Applicable to Build Alternatives 6A and 6B)

ARCADIS Response – Will not Implement.

This recommendation if implemented will require future transit to be constructed in a tunnel. This will significantly increase the construction cost of the transit. In addition,

Imagine the result

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TRANSPORTATION

Date:
December 12, 2011

Contact:
Tim Preece

Phone:
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Email:
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arcadis-us.com

Our ref:
GADT0201

construction of this tunnel under I-285 collector-distributor (C-D) lanes will be very complicated, likely causing disruptions to traffic lanes.

Idea IM-7 Reconfigure westbound managed lanes to meet existing grade between just east of the Chattahoochee River to the I-75/I-285 interchange (Applicable to Build Alternative 6B only)

ARCADIS Response – Will implement.

VE Team Savings: \$62,918,000 (taken from VE Study Report)

Actual Savings: \$0. This idea is already included in idea IM-2, which is being implemented.

Idea IM-8: Do not provide managed lanes drop off at Sandy Springs Circle (Applicable to Build Alternative 6B only)

ARCADIS Response – Will not implement.

This managed lane interchange is expected to be heavily utilized; 2,100 and 1,800 vehicles are expected to use this interchange during the a.m. and p.m. design peak hours, respectively.

Idea IM-9 Use 4-foot inside shoulders and 10-foot outside shoulders for managed lanes only (Applicable to Build Alternatives 6A and 6B)

ARCADIS Response – Will implement pending FHWA approval.

This will be implemented where sight distances will not be hindered by narrower shoulder. This will also require a design exception that needs to be approved by FHWA.

VE Team Savings: \$99,332,000 (taken from VE Study report)

Idea L-2 Maintain ramp at GA 400 northbound to I-285 eastbound to eliminate Bridge No. 43 (Applicable to Build Alternative 4 only)

ARCADIS Response – Will not implement.

This change if implemented will eliminate direct access from Georgia 400 northbound to the Perimeter Mall area via Ashford Dunwoody Road. Alternate access routes from Georgia 400 northbound via Abernathy Road and Glenridge Connector are not direct and require extensive travel on local roads.

Idea L-4: Retain existing GA 400 southbound bridge over I-285 and eliminate Bridge Nos. 23A, 23B and 24 (Applicable to Build Alternatives 4, 6A and 6B)

ARCADIS Response – Will Implement for Alt 4 (Requires Design Exceptions). Will not implement for Alt 6A and Alt 6B.

VE Team Savings: \$21,187,000 (taken from VE Study Report)

Actual Savings: \$8,321,000

The existing Georgia 400 southbound bridge over I-285 can be retained but will require design exceptions since this bridge doesn't have enough horizontal space underneath to fit all the proposed I-285 improvements required at this location.

However, the existing I-285 westbound to GA 400 southbound bridge over GA 400 that ties to the existing GA 400 southbound bridges has to be replaced. In its existing configuration, the I-285 westbound to GA 400 southbound bridge has excess vertical clearance as it crosses the existing GA 400 northbound lanes. Retaining this bridge would require the proposed GA 400 northbound bridge as well as GA-400 southbound to I-285 eastbound ramp to be built approximately 14 feet higher than it is currently proposed. This additional elevation will make it infeasible for the GA 400 southbound to I-285 eastbound to vertically fit under the new Hammond Drive Bridge.

It is not feasible to just replace I-285 westbound to GA-400 southbound ramp while maintaining the existing GA 400 southbound bridge. Due to the tight existing configuration where the westbound to southbound ramp ties in on the left side, the replacement westbound to southbound ramp needs to go over the existing GA 400 southbound lanes and tie to the right side of GA 400 southbound lanes to maintain traffic during construction. In addition, this design will also require the GA 400

southbound exit to Glenridge Connector to be separated from the GA 400 southbound lanes prior to crossing I-285.

These improvements will be adopted for Alternate 4, however will not be adopted for Alternates 6A & 6B. Managed lanes are proposed in alternates 6A & 6B and these managed lanes are proposed to utilize fourth and fifth vertical level at the vicinity of this interchange. This proposed alternate design will require the westbound to southbound ramp to occupy fourth vertical level, which would mean the managed lanes will now occupy the fifth and sixth vertical level. This additional vertical level for the managed lanes will make the elevations and grades extreme to provide managed lanes connection at GA 400 north and Perimeter Center Parkway.

Idea L-5: Reconfigure eastbound I-285 ramp to northbound GA 400, maintain left-hand merge and eliminate proposed Bridge No. 29 (Applicable to Build Alternative 4 only)

ARCADIS Response – Will not implement.

After reviewing the sketch included in the VE Report as well as clarification from the VE team, we understand that the intent of this recommendation is to construct a new two-lane off-ramp from I-285 eastbound to Georgia 400 northbound. This new lane will be constructed to go over the Georgia 400 southbound and northbound lanes and tie to the existing Georgia 400 northbound lanes as a right side entrance ramp.

It is not feasible to vertically construct this ramp over Georgia 400 northbound and southbound lanes and match the grade of Georgia 400 northbound lanes before I-285.

Idea L-8.1: Do not improve the Windy Hill Road Interchange (Applicable to Build Alternatives 4, 6A and 6B)

ARCADIS Response – Will not implement.

The existing Windy Hill Road Bridge over I-75 does not have enough horizontal space underneath to fit all the proposed I-75 northbound improvements required at this location. Therefore, this bridge will have to be replaced. Since the Windy Hill Road interchange improvement (P.I. 713600) is a programmed project, a replaced Windy Hill Road Bridge would have to be part of the overall interchange improvement.

Idea L-8.2: Eliminate Bridge Nos. 4 and 6 at the Windy Hill Road Interchange (Applicable to Build Alternatives 4, 6A and 6B)

ARCADIS Response – Will not implement.

Bridge No. 4 is required to improve the heavy weaving between I-285 to I-75 northbound traffic and I-75 northbound to Delk Road traffic. Bridge No. 6 is required to improve the heavy weaving between Windy Hill Road to I-75 northbound traffic and I-75 northbound to Delk Road traffic. Elimination of these bridges will result in significant congestion on I-75 northbound between I-285 and Windy Hill Road, which in turn would spill back and impact traffic operations along I-285 westbound.

Idea L-9: Eliminate eastbound I-285 to Chamblee Tucker Road exit ramp and Bridge No. 42 (Applicable to Build Alternatives 4, 6A and 6B)

ARCADIS Response – Will not implement.

This proposed Chamblee Tucker Road ramp is expected to serve approximately 1,600 vehicles during the design peak hour. If this recommendation is implemented, this traffic volume will have to be combined with I-285 eastbound to I-85 northbound and southbound ramps. These I-285 to I-85 ramps are already expected to be utilized by 7,400 vehicles during the design peak hour. The addition of the 1,600 vehicles destined to Chamblee Tucker Road will cause the I-285 to I-85 ramps to operate at an unacceptable Level of Service.

Idea SP-1/RTT-1 Reduce right-of-way take on Sandy Springs Circle using a Single Point Urban Interchange (Applicable to Build Alternative 4 only)

ARCADIS Response – Will not implement.

A Single Point Urban Interchange (SPUI) performs best when opposing left-turn volumes are heavy and are the critical movements. At the Sandy Springs Circle interchange, through vehicles to and from Roswell Road are the heaviest movements. A longer cycle length could result in ramp queues affecting I-285 eastbound traffic due to heavy ramp volumes (approximately 2,200 vehicles per hour).

Idea SP-5 Eliminate right-of-way take north of Mt. Wilkinson Parkway

ARCADIS Response – Will implement.

VE Team Savings: \$1,708,000 (taken from VE Study Report)

SP-7.1 Eliminate right-of-way takes for future transit facility (Applicable to Build Alternative 6A – due to ROW unit cost differentials)

ARCADIS Response – Will not implement.

Providing right of way for future facility is a major part of this alternate. If implemented, this alternate will not will not meet the overall goals of the Need and Purpose for this project or respond to input from the public and key stakeholders.

SP-7.1 Eliminate right-of-way takes for future transit facility (Applicable to Build Alternative 6B – due to ROW unit cost differentials)

ARCADIS Response – Will not implement.

Providing right of way for future facility is a major part of this alternate. If implemented, this alternate will not will not meet the overall goals of the Need and Purpose for this project or respond to input from the public and key stakeholders.

SP-7.3 Eliminate right-of-way takes requiring displacements (Applicable to Build Alternative 6A – due to ROW unit cost differentials)

ARCADIS Response – Will Implement.

It is the intention of this alternate to environmentally clear all the right of way required for the project including transit right of way. It is not intended that right of way acquisition for transit properties requiring displacements be made until construction funds are available for transit facility.

SP-7.3 Eliminate right-of-way takes requiring displacements (Applicable to Build Alternative 6B – due to ROW unit cost differentials)

ARCADIS Response – Will Implement.

It is the intention of this alternate to clear all the right of way required for the project including transit right of way. It is not intended that right of way acquisition for transit properties requiring displacements be made until construction funds are available for transit facility.

SP-8 Place Bridge Nos. EB46, EB47 and EB48 in center of Motors Industrial Way (Applicable to Build Alternatives 6A and 6B)

ARCADIS Response – Will implement.

VE Team Savings: \$5,124,000 (taken from VE Study report)

SP-9 Take transit right-of-way underground just east of Bridge No. WB12 to west of North Shallowford Road to reduce right-of-way (Applicable to Build Alternative 6A – due to ROW unit cost differentials)

ARCADIS Response – Will not implement.

This recommendation if implemented will require future transit to be constructed in a tunnel. This will significantly increase the construction cost of the transit. In addition,

construction of this tunnel under I-285 lanes will also be very complicated likely cause maintenance of traffic issues on I-285.

SP-9 Take transit right-of-way underground just east of Bridge No. WB12 to west of North Shallowford Road to reduce right-of-way (Applicable to Build Alternative 6B – due to ROW unit cost differentials)

ARCADIS Response – Will not implement.

This recommendation if implemented will require future transit to be constructed in a tunnel. This will significantly increase the construction cost of the transit. In addition, construction of this tunnel under I-285 lanes will also be very complicated likely cause maintenance of traffic issues on I-285.

SP-10.1 Realign transit right-of-way to abut I-285 east of Ashford Dunwoody Road (Applicable to Build Alternative 6A – due to ROW unit cost differentials)

ARCADIS Response – Will implement.

VE Team Savings: \$5,817,000 (taken from VE Study report)

SP-10.1 Realign transit right-of-way to abut I-285 east of Ashford Dunwoody Road (Applicable to Build Alternative 6B – due to ROW unit cost differentials)

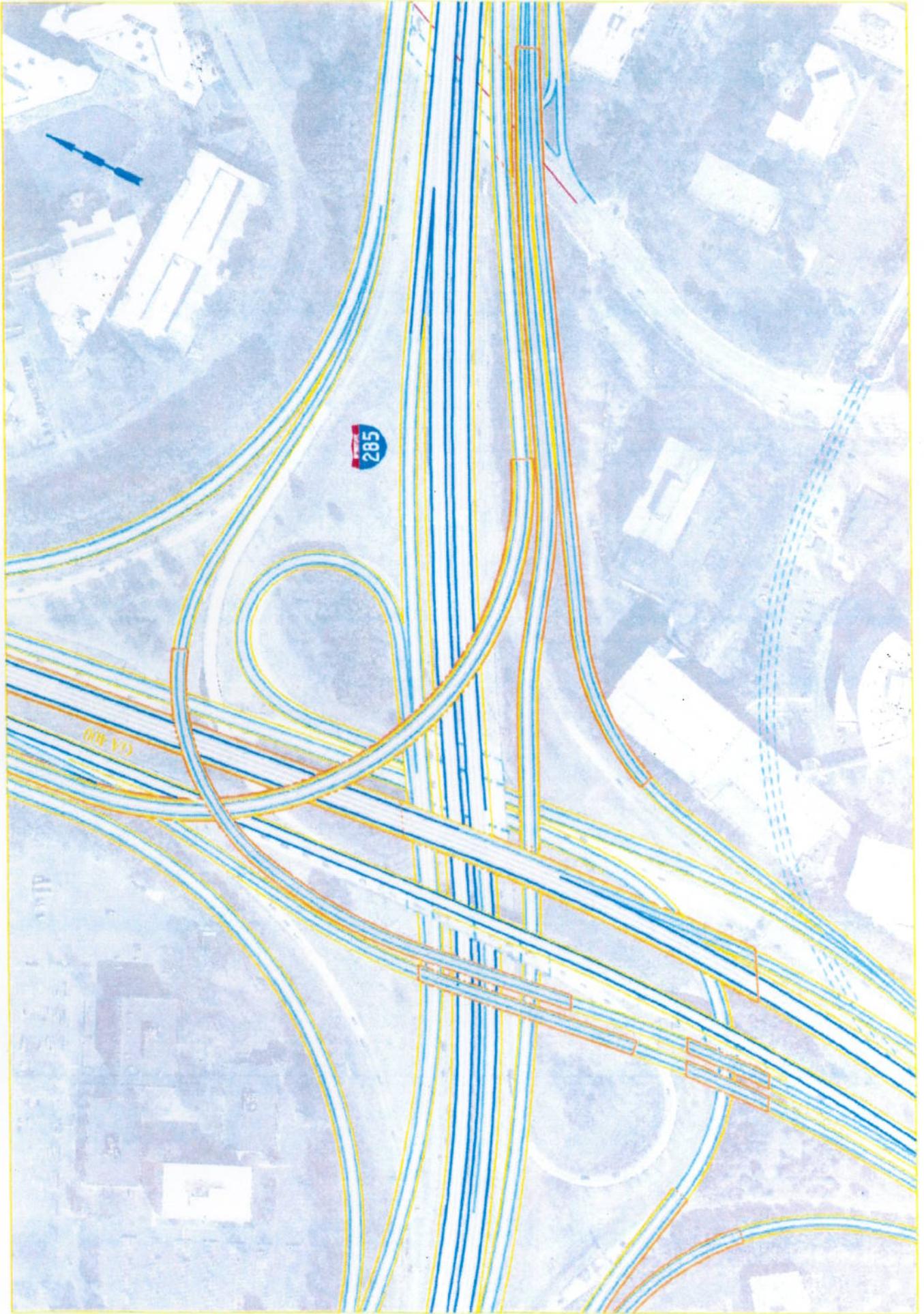
ARCADIS Response – Will implement.

VE Team Savings: \$5,817,000 (taken from VE Study report)

SP-10.2 Take transit underground east of Ashford Dunwoody Road (Applicable to Build Alternative 6A – due to ROW unit cost differentials)

ARCADIS Response – Will not implement.

This recommendation if implemented will require future transit to be constructed in a tunnel. This will significantly increase the construction cost of the transit. In addition, construction of this tunnel under I-285 westbound C-D lanes will also be very complicated likely causing disruptions to traffic.



VALUE ALTERNATIVE L-4 (Applicable to Build Alternatives 4, 6A and 6B)

Retain Existing Southbound GA 400 Bridge Over I-285 and Eliminate Bridge Nos. 23A, 23B and 24

Initial Costs:

CONSTRUCTION ELEMENT Description	Unit	ORIGINAL CONCEPT			ALTERNATIVE CONCEPT		
		Quantity	Cost/Unit	Total	Quantity	Cost/Unit	Total
ROADWAY ITEMS							
Manhole	LM	1.67	\$1,375,000	\$2,296,250		\$1,375,000	50
Ramps	LM	0.90	\$1,046,000	\$1,085,600	2.41	\$1,046,000	\$2,546,158
ROADWAY SUBTOTAL				\$3,381,850			\$2,546,158
ROADWAY MARK-UP (38.00% for Build Alt 4; 35.70% for Build Alts 6A and 6B)	38.00%			\$1,262,106			\$957,540
ROADWAY TOTAL				\$4,643,956			\$3,503,698
STRUCTURE ITEMS							
Bridge 23A	Sf	21,117	\$96	\$2,027,632	6,038	\$96	\$571,563
Bridge 23B	Sf	93,600	\$76	\$7,113,600	12,563	\$96	\$1,199,438
Bridge 23B Existing Bridge Removal	Sf	20,005	\$25	\$500,125			
Bridge 24	Sf	4,819	\$25	\$120,475	43,225	\$96	\$4,146,375
Bridge 28S WB to GA 400 over 28S	Sf				6,038	\$96	\$571,563
	Sf						
	Sf						
Two soil nail walls under GA 400 over I-285 bridge	Sf				3,300	\$100	\$330,000
STRUCTURE SUBTOTAL				\$12,011,445			\$6,775,939
ROADWAY MARK-UP (38.00% for Build Alt 4; 35.70% for Build Alts 6A and 6B)	38.00%			\$4,571,936			\$2,575,236
STRUCTURE TOTAL				\$16,583,381			\$9,351,174
TOTAL				\$21,227,337			\$12,854,872
TOTAL (Rounded)				\$21,187,000			\$12,866,000
						SAVINGS	\$8,321,000



Ms. Marlo L. Clowers, PE
Project Manager
Georgia Department of Transportation
Office of Innovative Program Delivery
One Georgia Center, Suite 2700
600 West Peachtree Street NW
Atlanta, Georgia 30308

Subject:
Value Engineering Report Responses
revive285 top end
Cobb, DeKalb and Fulton Counties
NHS00-0001-00(758), PI No. 0001758

Dear Ms. Clowers

ARCADIS U.S., Inc. has reviewed the Value Engineering (VE) Report prepared by VMS, Inc. and provides the following responses:

Idea IM-2: Reconfigure managed lanes to meet existing grade between Riverside Drive to west of the Chattahoochee River for both eastbound and westbound directions (Applicable to Build Alternative 6A 6B only)

ARCADIS Response – Will Implement.

After reviewing the sketch and descriptions included in the VE Report as well as clarification from the VE team, we understand that this recommendation applies to Alternative 6B.

VE Team Savings: \$62,918,000 (taken from VE Study Report)

Idea IM-4 Eliminate future transit Bridge No. EB19 (Applicable to Build Alternatives 6A and 6B)

ARCADIS Response – Will not Implement.

This recommendation if implemented will require future transit to be constructed in a tunnel. This will significantly increase the construction cost of the transit. In addition,

Imagine the result

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TRANSPORTATION

Date:
March 15, 2012

Contact:
Tim Preece

Phone:
770.384.6635

Email:
tim.preece@arcadis-us.com

Our ref:
GADT0201

construction of this tunnel under I-285 collector-distributor (C-D) lanes will be very complicated, likely causing disruptions to traffic lanes.

Idea IM-7 Reconfigure westbound managed lanes to meet existing grade between just east of the Chattahoochee River to the I-75/I-285 interchange (Applicable to Build Alternative 6B only)

ARCADIS Response – Will Implement.

VE Team Savings: \$62,918,000 (taken from VE Study Report)

Actual Savings: \$0. This idea is already included in idea IM-2, which is being implemented.

Idea IM-8: Do not provide managed lanes drop off at Sandy Springs Circle (Applicable to Build Alternative 6B only)

ARCADIS Response – Will not implement.

This managed lane interchange is expected to be heavily utilized; 2,100 and 1,800 vehicles are expected to use this interchange during the a.m. and p.m. design peak hours, respectively.

Idea IM-9 Use 4-foot inside shoulders and 10-foot outside shoulders for managed lanes only (Applicable to Build Alternatives 6A and 6B)

ARCADIS Response – Will implement pending FHWA approval.

This will be implemented where sight distances will not be hindered by narrower shoulder. This will also require a design exception that needs to be approved by FHWA.

VE Team Savings: \$99,332,000 (taken from VE Study report)

Idea L-2 Maintain ramp at GA 400 northbound to I-285 eastbound to eliminate Bridge No. 43 (Applicable to Build Alternative 4 only)

ARCADIS Response – Will not implement.

This change if implemented will eliminate direct access from Georgia 400 northbound to the Perimeter Mall area via Ashford Dunwoody Road. Alternate access routes from Georgia 400 northbound via Abernathy Road and Glenridge Connector are not direct and require extensive travel on local roads.

Idea L-4: Retain existing GA 400 southbound bridge over I-285 and eliminate Bridge Nos. 23A, 23B and 24 (Applicable to Build Alternatives 4, 6A and 6B)

ARCADIS Response – Will Implement for Alt 4 (Requires Design Exceptions). Will not implement for Alt 6A and Alt 6B.

VE Team Savings: \$21,187,000 (taken from VE Study Report)

Actual Savings: \$8,321,000

The existing Georgia 400 southbound bridge over I-285 can be retained but will require design exceptions since this bridge doesn't have enough horizontal space underneath to fit all the proposed I-285 improvements required at this location.

However, the existing I-285 westbound to GA 400 southbound bridge over GA 400 that ties to the existing GA 400 southbound bridges has to be replaced. In its existing configuration, the I-285 westbound to GA 400 southbound bridge has excess vertical clearance as it crosses the existing GA 400 northbound lanes. Retaining this bridge would require the proposed GA 400 northbound bridge as well as GA-400 southbound to I-285 eastbound ramp to be built approximately 14 feet higher than it is currently proposed. This additional elevation will make it infeasible for the GA 400 southbound to I-285 eastbound to vertically fit under the new Hammond Drive Bridge.

It is not feasible to just replace I-285 westbound to GA-400 southbound ramp while maintaining the existing GA 400 southbound bridge. Due to the tight existing configuration where the westbound to southbound ramp ties in on the left side, the replacement westbound to southbound ramp needs to go over the existing GA 400 southbound lanes and tie to the right side of GA 400 southbound lanes to maintain traffic during construction. In addition, this design will also require the GA 400

southbound exit to Glenridge Connector to be separated from the GA 400 southbound lanes prior to crossing I-285.

These improvements will be adopted for Alternate 4, however will not be adopted for Alternates 6A & 6B. Managed lanes are proposed in alternates 6A & 6B and these managed lanes are proposed to utilize fourth and fifth vertical level at the vicinity of this interchange. This proposed alternate design will require the westbound to southbound ramp to occupy fourth vertical level, which would mean the managed lanes will now occupy the fifth and sixth vertical level. This additional vertical level for the managed lanes will make the elevations and grades extreme to provide managed lanes connection at GA 400 north and Perimeter Center Parkway.

Idea L-5: Reconfigure eastbound I-285 ramp to northbound GA 400, maintain left-hand merge and eliminate proposed Bridge No. 29 (Applicable to Build Alternative 4 only)

ARCADIS Response – Will not implement.

After reviewing the sketch included in the VE Report as well as clarification from the VE team, we understand that the intent of this recommendation is to construct a new two-lane off-ramp from I-285 eastbound to Georgia 400 northbound. This new lane will be constructed to go over the Georgia 400 southbound and northbound lanes and tie to the existing Georgia 400 northbound lanes as a right side entrance ramp.

It is not feasible to vertically construct this ramp over Georgia 400 northbound and southbound lanes and match the grade of Georgia 400 northbound lanes before I-285.

Idea L-8.1: Do not improve the Windy Hill Road Interchange (Applicable to Build Alternatives 4, 6A and 6B)

ARCADIS Response – Will not implement.

The existing Windy Hill Road Bridge over I-75 does not have enough horizontal space underneath to fit all the proposed I-75 northbound improvements required at this location. Therefore, this bridge will have to be replaced. Since the Windy Hill Road interchange improvement (P.I. 713600) is a programmed project, a replaced Windy Hill Road Bridge would have to be part of the overall interchange improvement.

Idea L-8.2: Eliminate Bridge Nos. 4 and 6 at the Windy Hill Road Interchange (Applicable to Build Alternatives 4, 6A and 6B)

ARCADIS Response – Will not implement.

Bridge No. 4 is required to improve the heavy weaving between I-285 to I-75 northbound traffic and I-75 northbound to Delk Road traffic. Bridge No. 6 is required to improve the heavy weaving between Windy Hill Road to I-75 northbound traffic and I-75 northbound to Delk Road traffic. Elimination of these bridges will result in significant congestion on I-75 northbound between I-285 and Windy Hill Road, which in turn would spill back and impact traffic operations along I-285 westbound.

Idea L-9: Eliminate eastbound I-285 to Chamblee Tucker Road exit ramp and Bridge No. 42 (Applicable to Build Alternatives 4, 6A and 6B)

ARCADIS Response – Will not implement.

This proposed Chamblee Tucker Road ramp is expected to serve approximately 1,600 vehicles during the design peak hour. If this recommendation is implemented, this traffic volume will have to be combined with I-285 eastbound to I-85 northbound and southbound ramps. These I-285 to I-85 ramps are already expected to be utilized by 7,400 vehicles during the design peak hour. The addition of the 1,600 vehicles destined to Chamblee Tucker Road will cause the I-285 to I-85 ramps to operate at an unacceptable Level of Service.

Idea L-10: Do not improve the northeast quadrant of the I-285 / I-85 interchange (Applicable to Build Alternatives 4, 6A and 6B)

ARCADIS Response – Will not implement.

Proposed improvements at this location are intended to improve the existing weaving condition along the I-85 northbound C-D between I-285 and Northcrest Road. Review of the latest five years of crash data for this section indicates that there are 118 crashes annually. Proposed improvements will reduce weaving maneuvers, which are expected to reduce the crash frequency in this area.

These improvements are also expected to improve the traffic conditions along I-285 eastbound ramps. Traffic conditions along I-85 northbound are still expected to cause backups along I-285 eastbound to I-85 ramps but these proposed improvements are expected to reduce the duration of the traffic backups.

Idea L-11 Eliminate Bridge No. 33 at the Chamblee Dunwoody Road intersection (Applicable to Build Alternative 4 only)

ARCADIS Response – Will not implement.

Proposed improvements at this location are intended to improve the weaving condition along I-285 westbound between Chamblee Dunwoody Road and Ashford Dunwoody Road. The westbound on-ramp from Chamblee Dunwoody Road is expected to serve approximately 2,900 vehicles in the peak design hour, of which approximately 1,500 vehicles are expected to travel along I-285 beyond Ashford Dunwoody Road. If this recommendation is implemented, an additional 1,500 vehicles will be utilizing the proposed C-D system, requiring the addition of a C-D lane between Chamblee Dunwoody Road and Ashford Dunwoody Road. An additional entrance point along I-285 westbound would also have to be added east of Ashford Dunwoody Road to serve traffic heading westbound on I-285 from Chamblee Dunwoody Road. This entrance point will cause weaving along I-285 westbound between this new entrance point and I-285 westbound to GA-400 exit ramp. If implemented, this recommendation will not only impact the operation of C-D between Chamblee Dunwoody Road but will reduce the benefits of operational improvement that are proposed downstream from this location.

Idea SP-1/RTT-1 Reduce right-of-way take on Sandy Springs Circle using a Single Point Urban Interchange (Applicable to Build Alternative 4 only)

ARCADIS Response – Will not implement.

A Single Point Urban Interchange (SPUI) performs best when opposing left-turn volumes are heavy and are the critical movements. At the Sandy Springs Circle interchange, through vehicles to and from Roswell Road are the heaviest movements. A longer cycle length could result in ramp queues affecting I-285 eastbound traffic due to heavy ramp volumes (approximately 2,200 vehicles per hour).

Idea SP-5 Eliminate right-of-way take north of Mt. Wilkinson Parkway

ARCADIS Response – Will Implement.

VE Team Savings: \$1,708,000 (taken from VE Study Report)

SP-7.1 Eliminate right-of-way takes for future transit facility (Applicable to Build Alternative 6A – due to ROW unit cost differentials)

ARCADIS Response – Will not Implement.

Providing right of way for future facility is a major part of this alternate. If implemented, this alternate will not will not meet the overall goals of the Need and Purpose for this project or respond to input from the public and key stakeholders.

SP-7.1 Eliminate right-of-way takes for future transit facility (Applicable to Build Alternative 6B – due to ROW unit cost differentials)

ARCADIS Response – Will not Implement.

Providing right of way for future facility is a major part of this alternate. If implemented, this alternate will not will not meet the overall goals of the Need and Purpose for this project or respond to input from the public and key stakeholders.

SP-7.3 Eliminate right-of-way takes requiring displacements (Applicable to Build Alternative 6A – due to ROW unit cost differentials)

ARCADIS Response – Will Implement.

It is the intention of this alternate to environmentally clear all the right of way required for the project including transit right of way. Full transit right-of-way acquisition is not planned. However, the department may acquire properties that are already on the market. The department may also acquire additional right-of-way from properties to accommodate transit when right-of-way is being acquired for roadway improvements.

SP-7.3 Eliminate right-of-way takes requiring displacements (Applicable to Build Alternative 6B – due to ROW unit cost differentials)

ARCADIS Response – Will Implement.

It is the intention of this alternate to environmentally clear all the right of way required for the project including transit right of way. Full transit right-of-way acquisition is not planned. However, the department may acquire properties that are already on the market. The department may also acquire additional right-of-way from properties to accommodate transit when right-of-way is being acquired for roadway improvements.

SP-8 Place Bridge Nos. EB46, EB47 and EB48 in center of Motors Industrial Way (Applicable to Build Alternatives 6A and 6B)

ARCADIS Response – Will implement.

VE Team Savings: \$5,124,000 (taken from VE Study report)

SP-9 Take transit right-of-way underground just east of Bridge No. WB12 to west of North Shallowford Road to reduce right-of-way (Applicable to Build Alternative 6A – due to ROW unit cost differentials)

ARCADIS Response – Will not implement.

This recommendation if implemented will require future transit to be constructed in a tunnel. This will significantly increase the construction cost of the transit. In addition, construction of this tunnel under I-285 lanes will also be very complicated likely cause maintenance of traffic issues on I-285.

SP-9 Take transit right-of-way underground just east of Bridge No. WB12 to west of North Shallowford Road to reduce right-of-way (Applicable to Build Alternative 6B – due to ROW unit cost differentials)**ARCADIS Response – Will not implement.**

This recommendation if implemented will require future transit to be constructed in a tunnel. This will significantly increase the construction cost of the transit. In addition, construction of this tunnel under I-285 lanes will also be very complicated likely cause maintenance of traffic issues on I-285.

SP-10.1 Realign transit right-of-way to about I-285 east of Ashford Dunwoody Road (Applicable to Build Alternative 6A – due to ROW unit cost differentials)**ARCADIS Response – Will partially implement.**

VE Team Savings: \$5,817,000 (taken from VE Study report)

The transit alignment will be modified to about I-285 as much as possible; however the transit alignment along Ashford Dunwoody Road and the transit alignment crossing location with Ashford Dunwoody Road will not be changed. A transit station is envisioned along the transit alignment just east of Ashford Dunwoody Road.

SP-10.1 Realign transit right-of-way to about I-285 east of Ashford Dunwoody Road (Applicable to Build Alternative 6B – due to ROW unit cost differentials)**ARCADIS Response – Will implement.**

VE Team Savings: \$5,817,000 (taken from VE Study report)

The transit alignment will be modified to about I-285 as much as possible; however the transit alignment along Ashford Dunwoody Road and the transit alignment crossing

location with Ashford Dunwoody Road will not be changed. A transit station is envisioned along the transit alignment just east of Ashford Dunwoody Road.

SP-10.2 Take transit underground east of Ashford Dunwoody Road (Applicable to Build Alternative 6A – due to ROW unit cost differentials)

ARCADIS Response – Will not implement.

This recommendation if implemented will require future transit to be constructed in a tunnel. This will significantly increase the construction cost of the transit. In addition, construction of this tunnel under I-285 westbound C-D lanes will also be very complicated likely causing disruptions to traffic.

SP-10.2 Take transit underground east of Ashford Dunwoody Road (Applicable to Build Alternative 6B – due to ROW unit cost differentials)

ARCADIS Response – Will not implement.

This recommendation if implemented will require future transit to be constructed in a tunnel. This will significantly increase the construction cost of the transit. In addition, construction of this tunnel under I-285 westbound C-D lanes will also be very complicated likely causing disruptions to traffic.

Please let me know if you have any questions or need additional information.

Sincerely,

ARCADIS U.S., Inc.



Tim Preece, AICP
Deputy Project Manager

Copies: