

Metro Atlanta



OPERATIONAL PLANNING STUDY

OPS PROJECTS EVALUATED

December 2014

PREPARED FOR



Georgia Department of Transportation

PREPARED BY

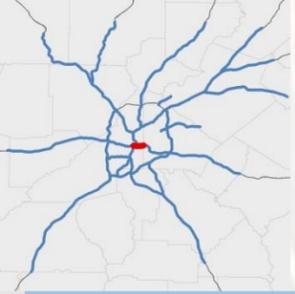
HNTB Corporation

3715 Northside Parkway

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Atlanta, GA 30327

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ID# 1: I-20 East WB from Moreland Ave. to DT Connector

Location: I-20 WB from Moreland Ave. to Downtown Connector (2.2 miles)

Cause of Bottleneck: WB weave from 4 on-ramps and 4 off-ramps within 2.2 miles

Potential Operational Strategies for Evaluation:

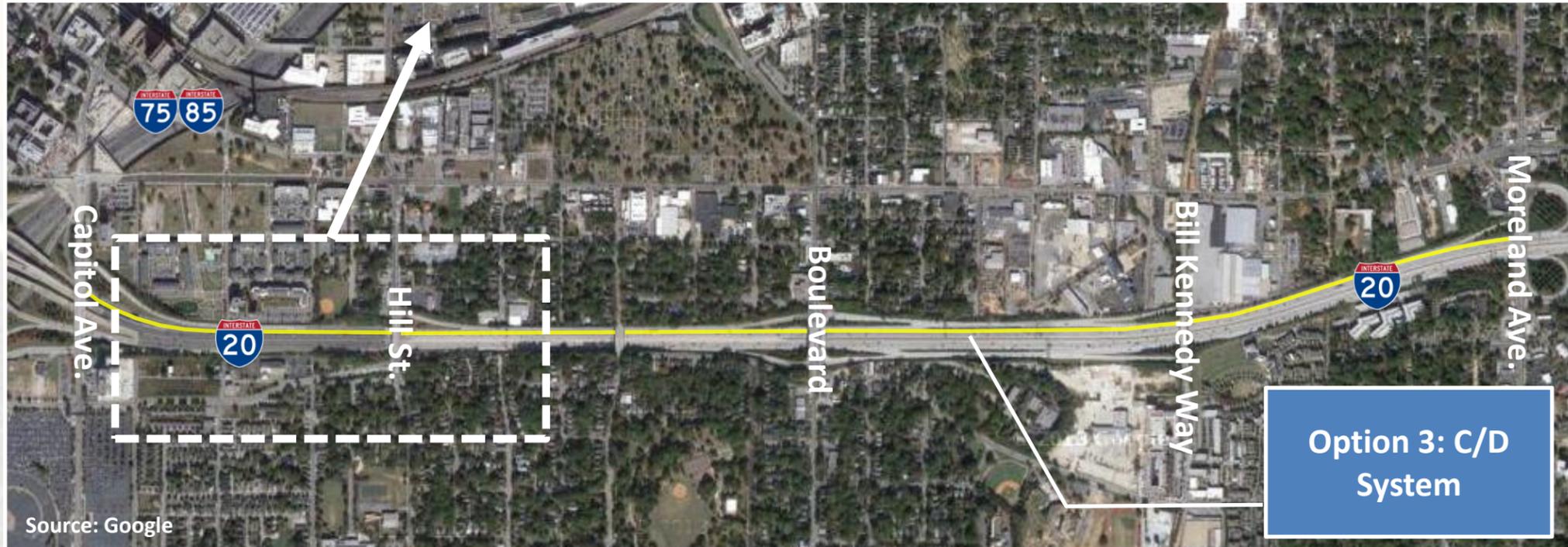
- 1) Dynamically close Capitol Ave. WB Off-Ramp by time of day
- 2) Dynamically close Hill St. WB Off-Ramp by time of day
- 3) WB C/D System from Moreland Ave. to Downtown Connector

Capitol Ave. WB Off-Ramp	AM Peak	PM Peak
Ramp Volume	700	200

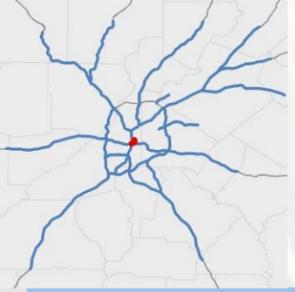
Hill St. WB Off-Ramp	AM Peak	PM Peak
Ramp Volume	1,000	300

I-20 WB @ Boulevard	AM Peak	PM Peak
Mainline	4,200	4,800
Congested Speed	> 45 mph	> 45 mph

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Close Capitol off-ramp	\$48,100	\$0	\$473,590	\$521,690
Close Hill off-ramp	\$45,500	\$0	\$448,045	\$493,545
C/D System	\$38,915,448	\$7,098,000	\$3,892,200	\$49,905,648



Traffic Data Source: TMC Data



ID# 2: Downtown Connector NB from I-20 to International Blvd.

Location: Downtown Connector NB from I-20 to International Blvd.

Cause of Bottleneck: I-20 merging traffic and traffic weaving between MLK Jr. Dr. and Edgewood Ave. on the Downtown Connector

Potential Operational Strategies for Evaluation:

- 1) Close NB exit ramp at Edgewood Ave. to passenger vehicles (transit and emergency vehicles allowed)
- 2) Drop thru lane (dynamically) on Downtown Connector NB south of I-20 to provide I-20 users merging onto Downtown Connector another thru lane (bring all 3 I-20 lanes on to NB Downtown Connector)
- 3) Dynamically close Fulton St. NB on-ramp

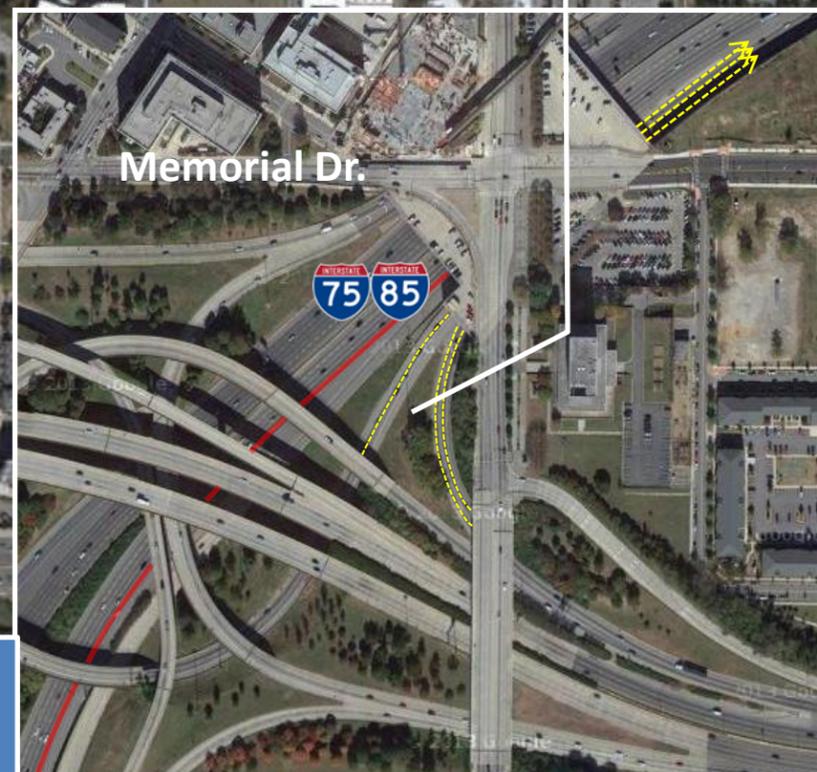
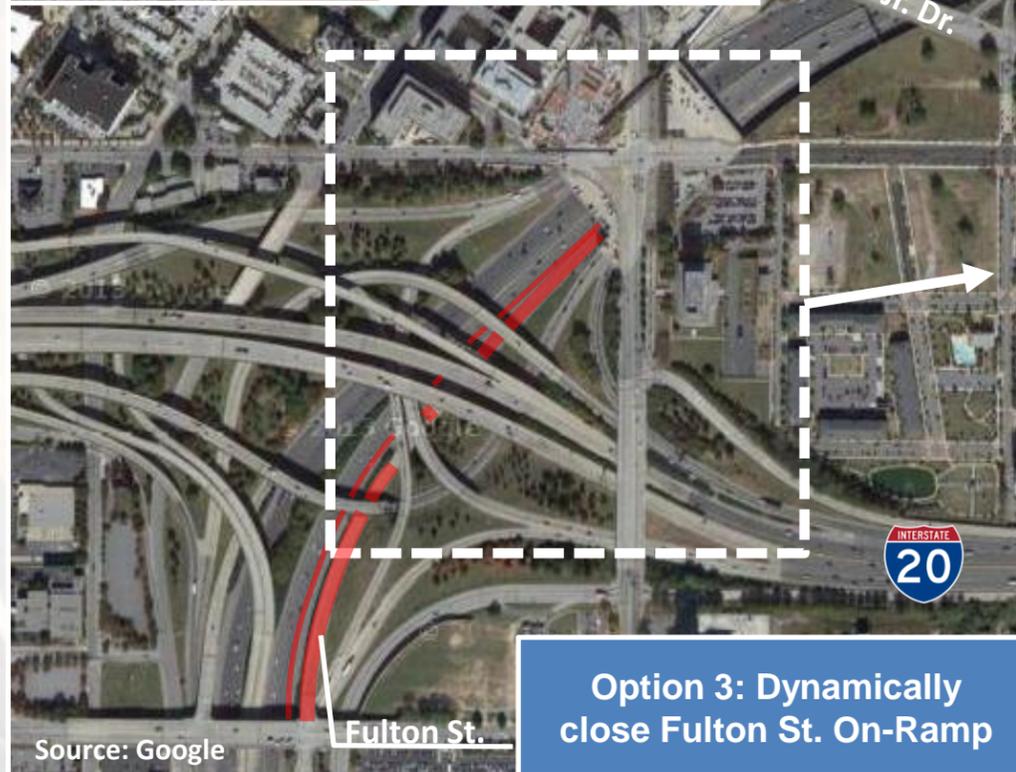
Fulton St. NB On-Ramp	AM Peak	PM Peak
Ramp Volume	600	400

I-75/I-85 NB @ Fulton St.	AM Peak	PM Peak
Mainline	5,500	3,900
Congested Speed	> 45 mph	< 25 mph

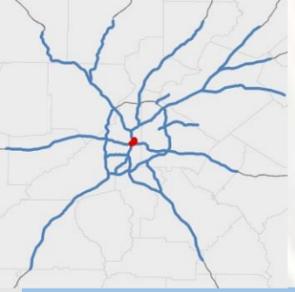
I-20 to NB DT Connector On-Ramp	AM Peak	PM Peak
Ramp Volume	1,900	2,100

Edgewood NB Off-Ramp	AM Peak	PM Peak
Ramp Volume	300	500

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Close Edgewood off-ramp	\$45,500	\$0	\$448,045	\$493,545
Drop thru lane	\$91,000	\$0	\$897,195	\$988,195
Close Fulton on-ramp	\$44,200	\$0	\$438,750	\$482,950



Source: Google



ID# 3: Downtown Connector SB from Freedom Pkwy. to I-20

Location: Downtown Connector from Freedom Pkwy. to I-20

Cause of Bottleneck: Merging and diverging traffic (weave); 3 on-ramps and 2 off-ramps in ¼ mile

Potential Operational Strategies for Evaluation:

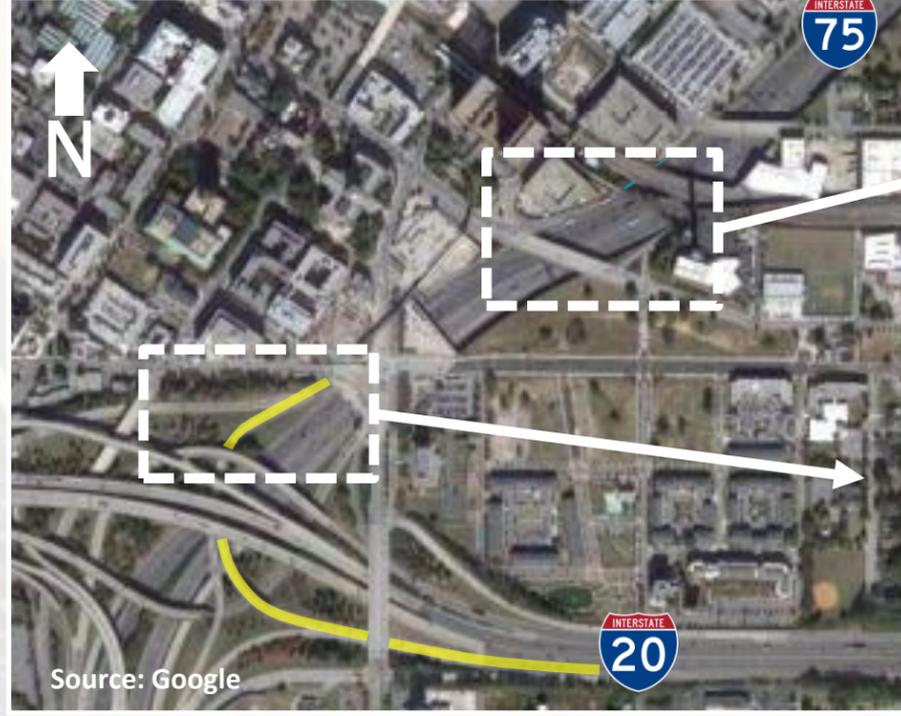
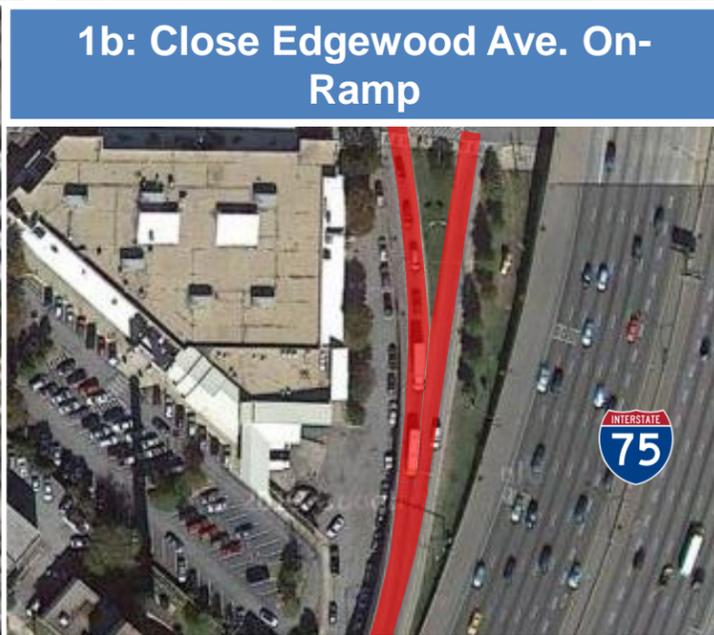
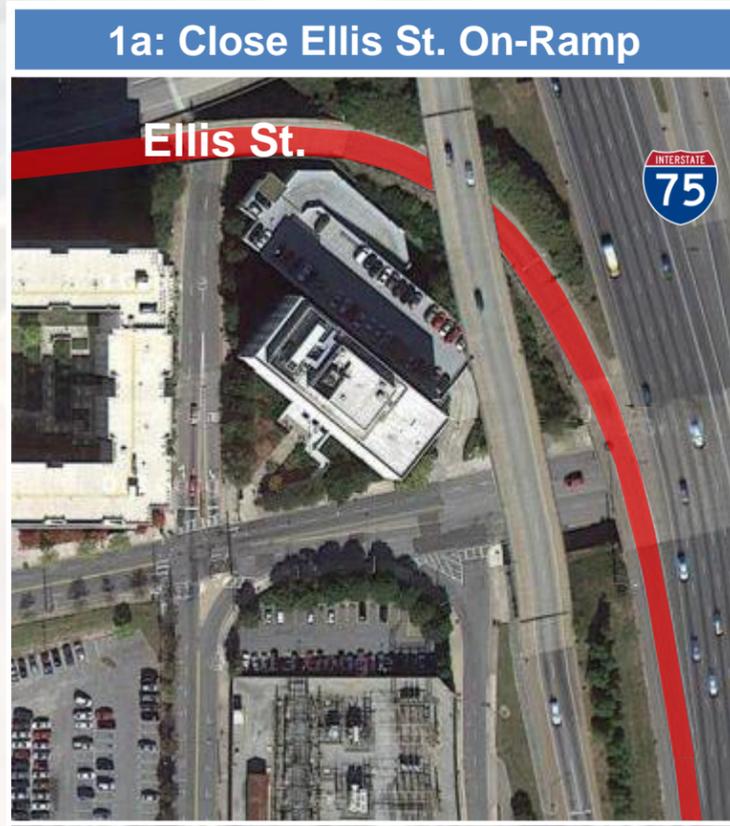
- 1) Close On-Ramp at either:
 - a) Ellis St. ; or
 - b) Edgewood Ave.
- 2) Close MLK Off-Ramp
- 3) Modify DT Connector (to I-20) to 3 lane drop instead of 2

Ellis St. SB On-Ramp	AM Peak	PM Peak
Ramp Volume	300	200

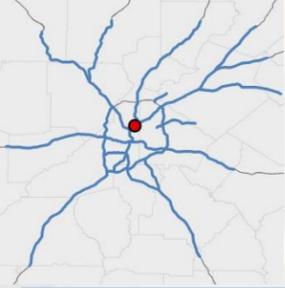
Edgewood Ave. SB On-Ramp	AM Peak	PM Peak
Ramp Volume	400	900

MLK Jr. Dr. SB Off-Ramp	AM Peak	PM Peak
Ramp Volume	900	100

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Close Ellis St.off-ramp	\$23,400	\$0	\$232,895	\$256,295
Close Edgewood Ave. off-ramp	\$23,400	\$0	\$232,895	\$256,295
Close Fulton on-ramp	\$45,500	\$0	\$448,045	\$493,545
Close Fulton on-ramp	\$152,100	\$0	\$1,514,500	\$1,666,600



Source: Google



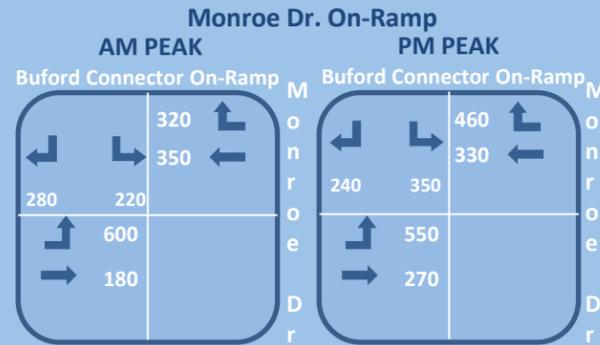
ID# 4: Buford Connector NB @ Monroe Dr.

Location: Monroe Dr. On-Ramp at NB Buford Connector

Cause of Bottleneck: Weaving (Multiple on/ off-ramps in a short distance)

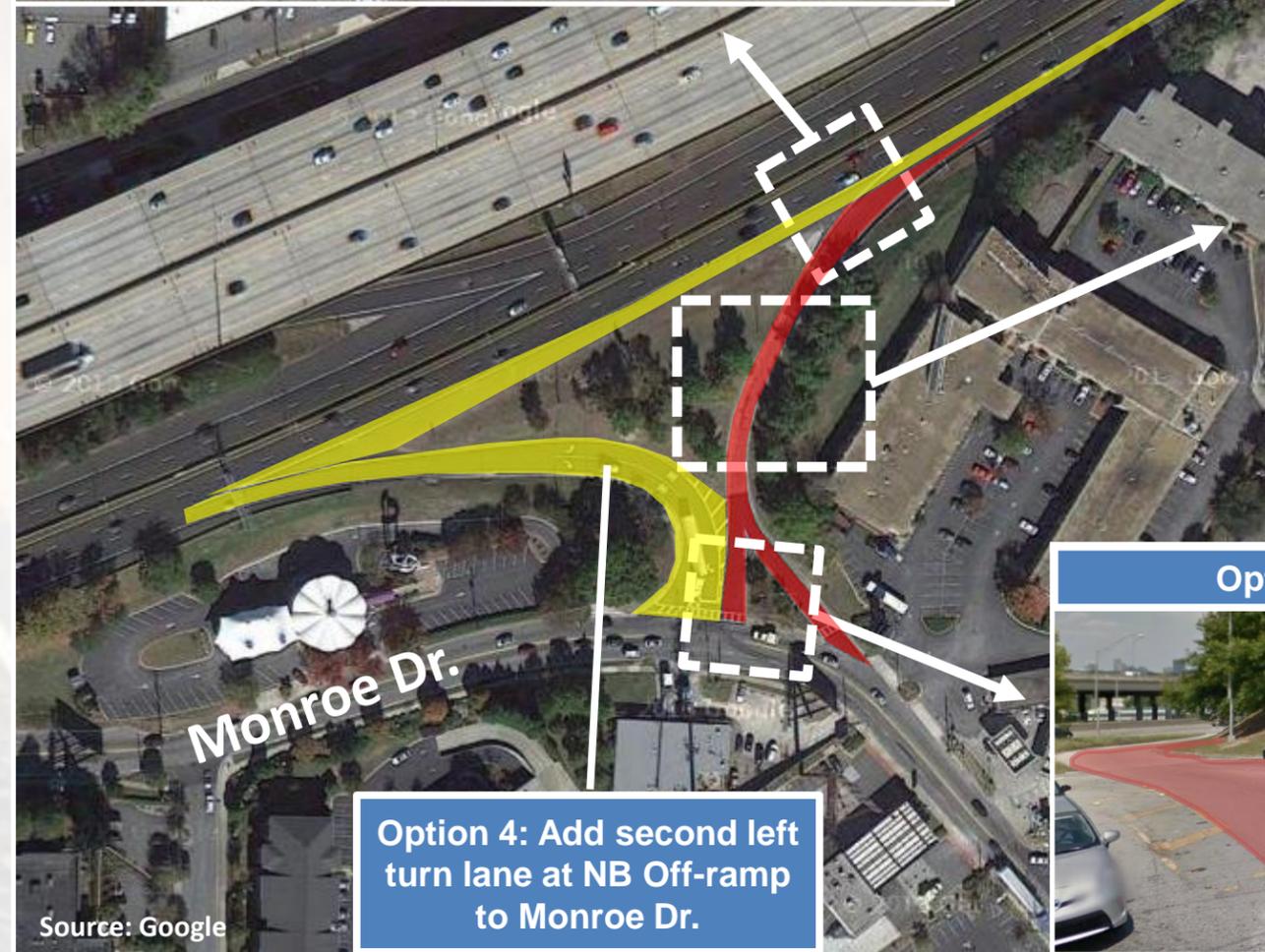
Potential Operational Strategies for Evaluation:

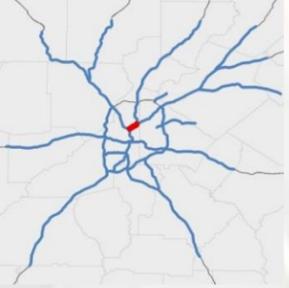
- 1) Close on-ramp from Monroe Dr. onto NB Buford Connector
- 2) Add ramp meter on Monroe Dr. on-ramp to Buford Connector (2 cars per green)
- 3) Use approx. 1 mile of shoulder between Monroe Dr. and I-85 on-ramp
- 4) Add second left turn lane at NB Off-ramp to Monroe Dr.
- 5) NB Auxiliary lane from Piedmont off-ramp to I-85 NB off-ramp



Buford Connector	AM Peak	PM Peak
Mainline	1,710	1,660
NB On-ramp from Monroe Dr.	920	1,010
NB Off-ramp to Monroe Dr.	500	600
NB Off-ramp to I-85	1,250	2,230
NB Off-ramp to Piedmont Rd.	640	560

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Close Monroe Dr. on-ramp	\$6,500	\$0	\$63,895	\$70,395
Add ramp meter	\$5,200	\$0	\$50,245	\$55,445
Extend auxiliary lane	\$614,900	\$0	\$6,141,447	\$6,756,347
Add left turn lane to off-ramp	\$88,400	\$0	\$879,190	\$967,590
Extend auxiliary lane	\$522,600	\$0	\$5,216,317	\$5,738,917





ID# 5: I-85 North SB from SR 400 Merge to Buford Connector

Location: SB I-85 North from SR 400 merge to Buford Connector (1.3 miles)

Cause of Bottleneck: Weaving

Potential Operational Strategies for Evaluation:

- 1) Active Traffic Management (full gantry) including using auxiliary lanes, advance queue warning and variable speed limit strategies for I-85 (carry 2nd lane through at SR 400/I-85 merge SB and carry to I-75 with drop just before Buford Connector on-ramp)



I-85 SB @ Buford Connector	AM Peak	PM Peak
Mainline	7,600	6,000
Congested Speed	> 45 mph	26 – 35 mph

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Aux. lane	\$120,900	\$0	\$1,198,132	\$1,319,032

Traffic Data Source: TMC Data



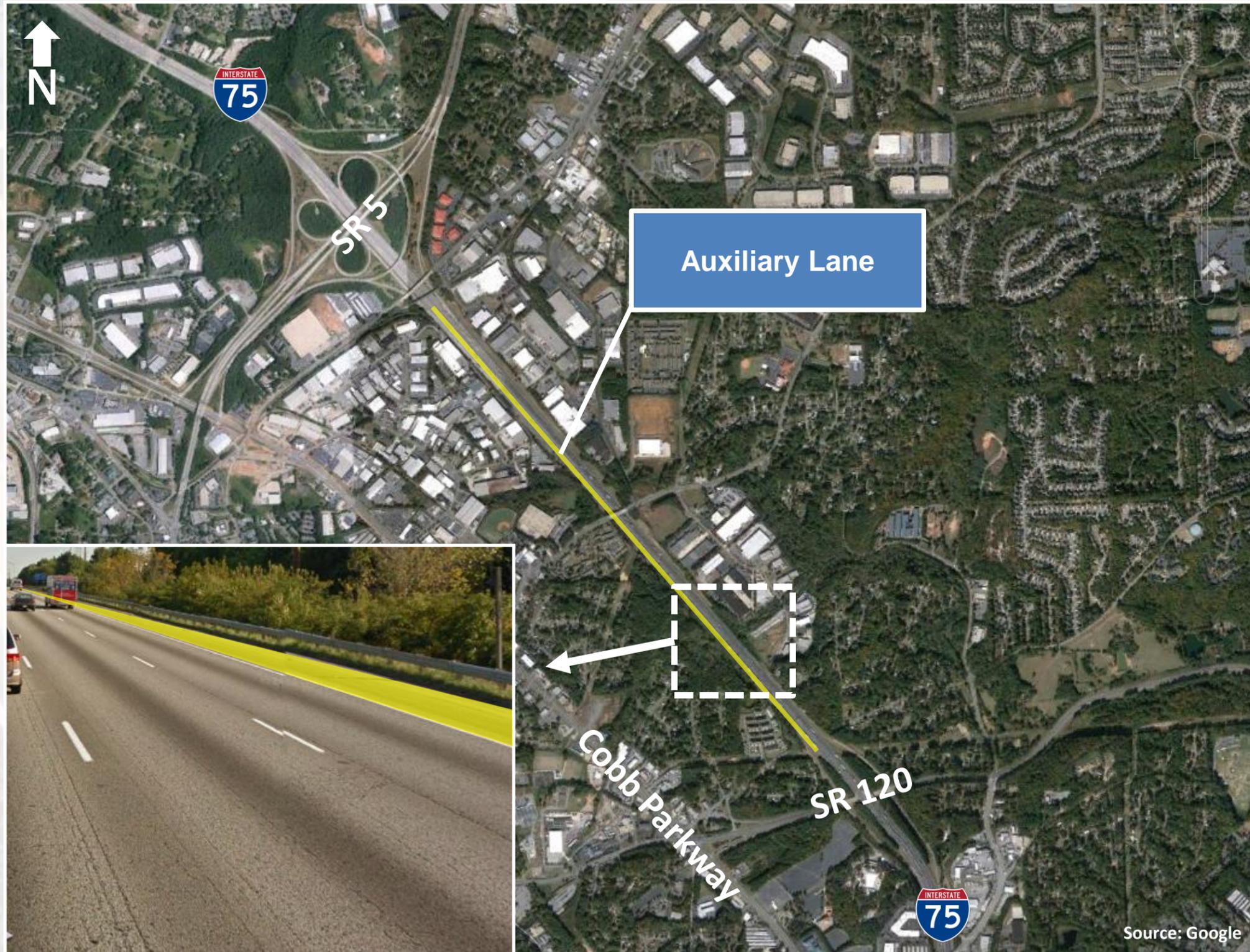
ID# 6: I-75 N SB from SR 5 to SR 120

Location: I-75 N SB between SR 5 to SR 120 (1.5 miles)

Cause of Bottleneck: High volume on-ramps accessing I-75

Potential Operational Strategies for Evaluation:

- 1) Use SB shoulder as an auxiliary lane between SR 5 and SR 120 during AM peak period



I-75 SB	AM Peak	PM Peak
Mainline	8,840	7,410

I-75 SB Ramps	AM Peak	PM Peak
SB On-ramp from SR 5	820	730
SB Off-ramp to SR 120	700	750

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Aux. lane	\$395,200	\$0	\$3,945,825	\$4,341,025

Traffic Data Source: OPS Traffic Counts

Source: Google



ID# 7: I-75 NB from SR 120 to SR 5

Location: I-75 NB between SR 120 to SR 5 (1.5 miles)

Cause of Bottleneck: High volume on-ramps accessing I-75, NB truck restrictions complicate traffic weaving

Potential Operational Strategies for Evaluation:

- 1) Use NB shoulder as an auxiliary lane between SR 5 and SR 120 during PM peak period

I-75 NB	AM Peak	PM Peak
Mainline	6,600	8,990

I-75 NB Ramps	AM Peak	PM Peak
NB On-ramp from SR 120	670	890
NB Off-ramp to SR 5	710	910

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Aux. lane	\$397,800	\$0	\$3,971,175	\$4,368,975



Traffic Data Source: OPS Traffic Counts



ID# 8: I-85 @ SR 316

Location: I-85 @ SR 316

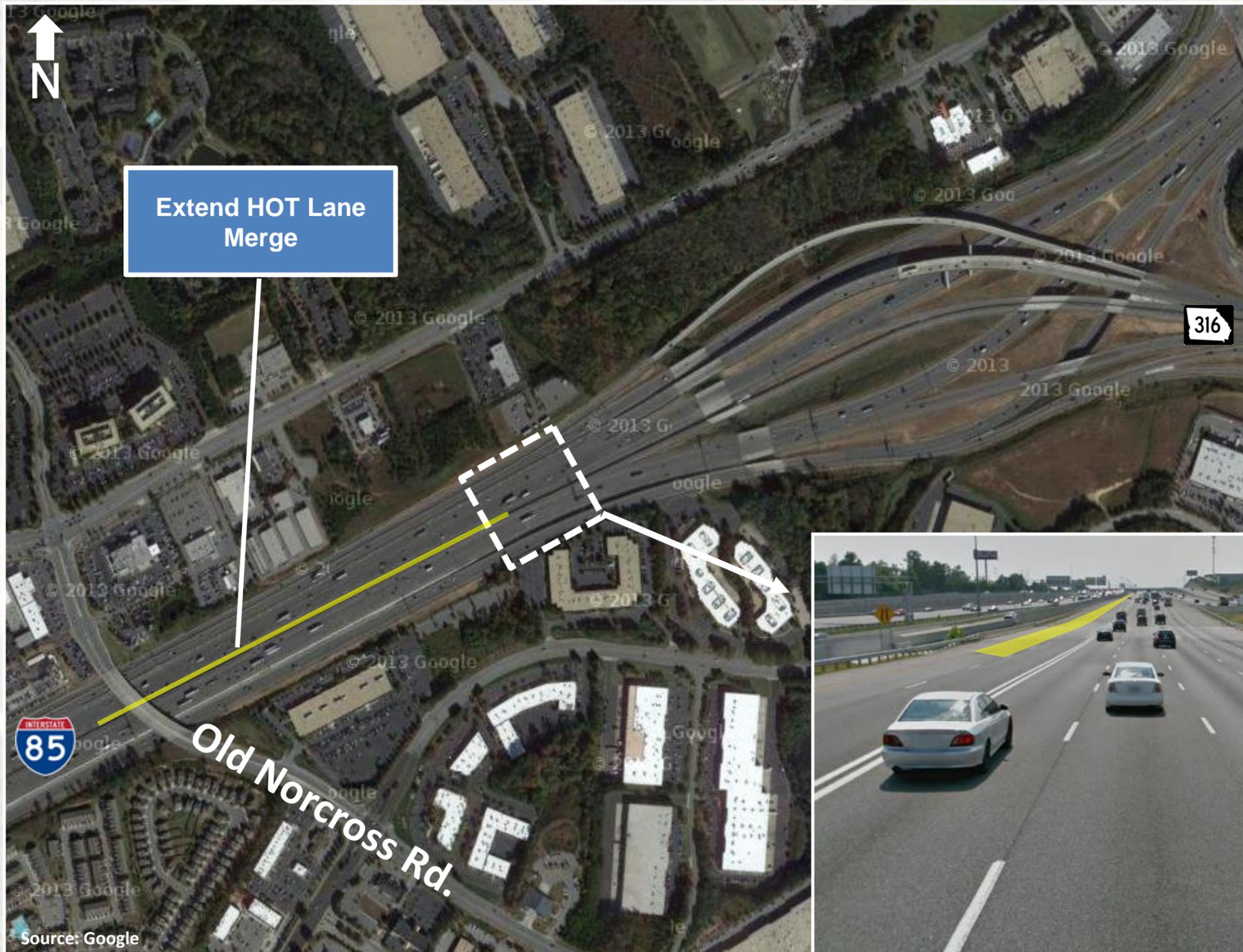
Cause of Bottleneck: Merge distance

Potential Operational Strategies for Evaluation:

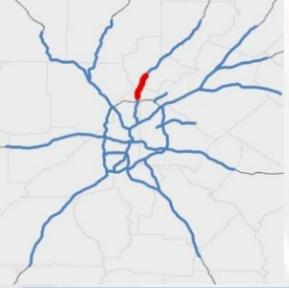
- 1) Re-stripe SR 316 HOT lane on-ramp from 700' to 4000' to allow more merging space for vehicles merging from SR 316 to I-85 HOT lane

I-85 @ SR 316	AM Peak	PM Peak
Mainline	3,000	5,300

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Extend HOT lane merge	\$153,400	\$0	\$1,530,035	\$1,683,435



Source: Google



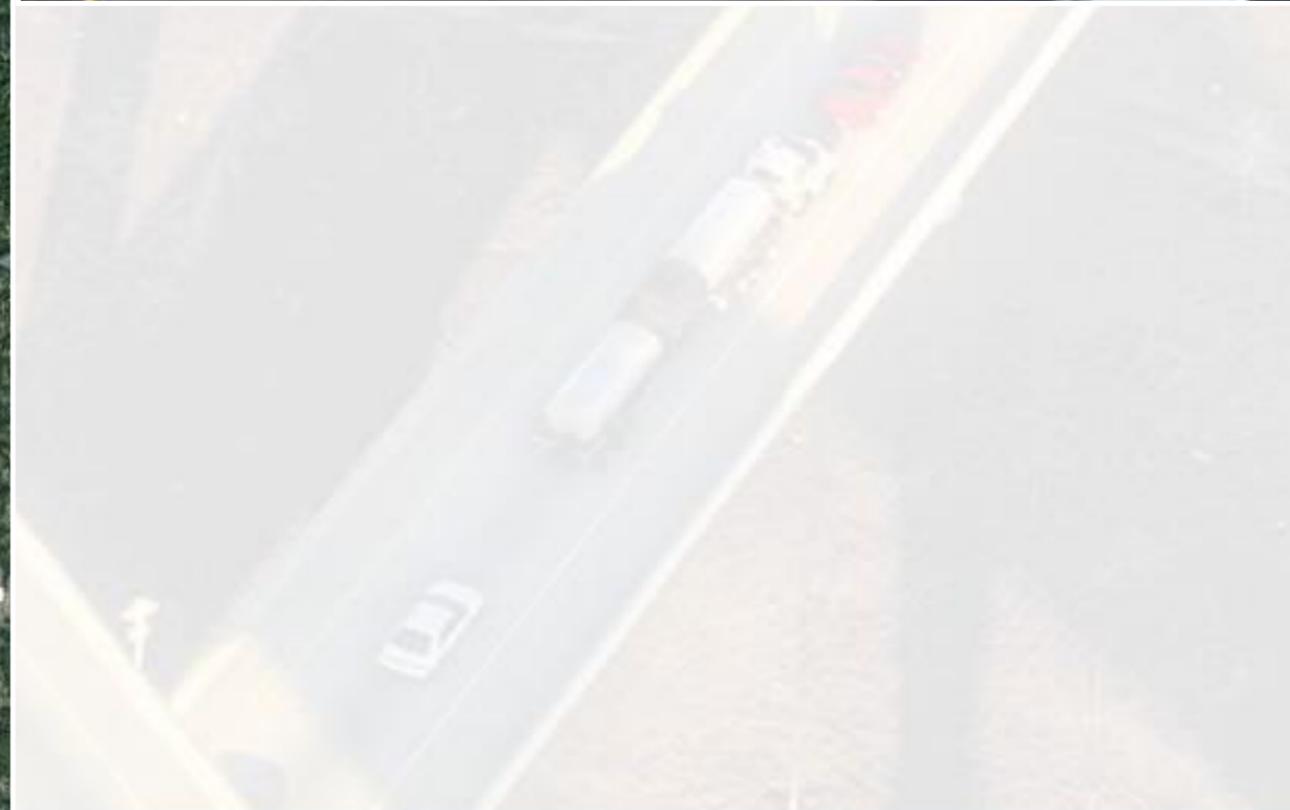
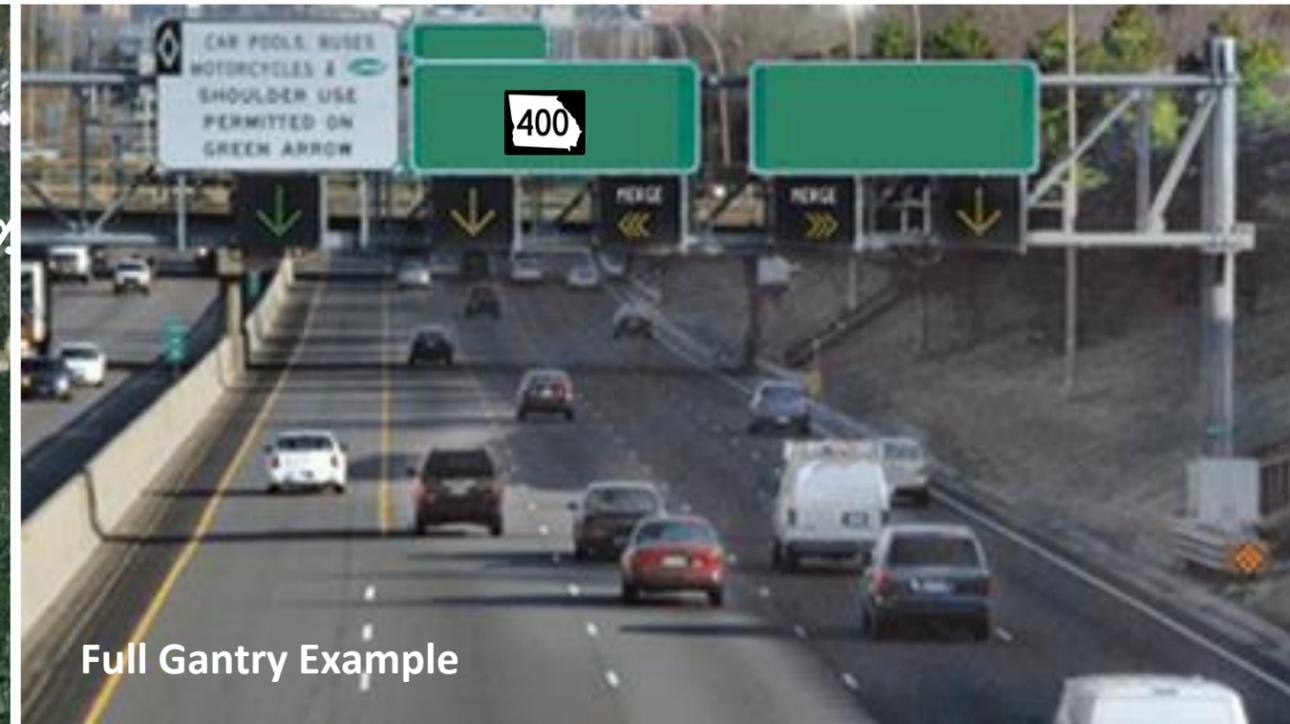
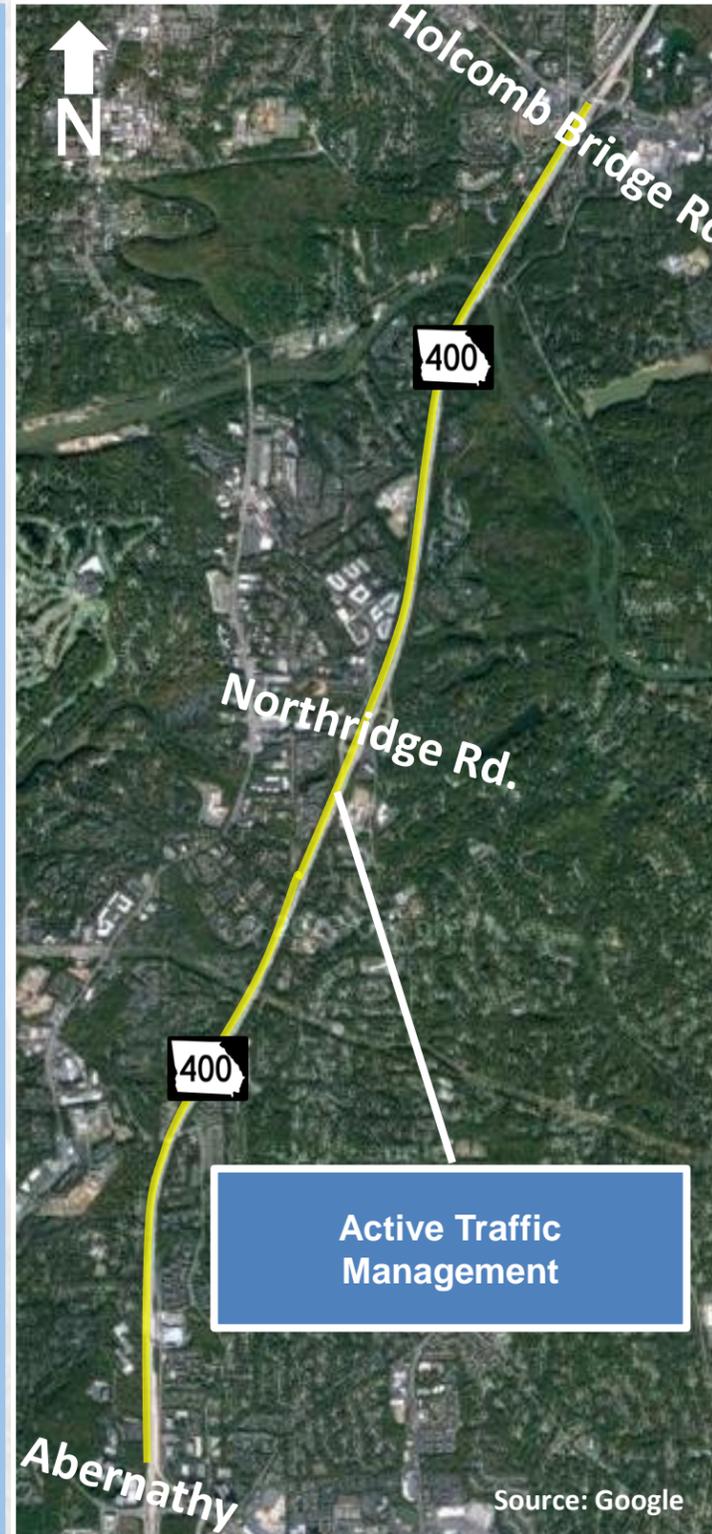
ID# 9: SR 400 SB from Holcomb Bridge Rd. to Abernathy Rd.

Location: SR 400 SB from Holcomb Bridge Rd. to Abernathy Rd. (6.4 miles)

Cause of Bottleneck: High traffic volume

Potential Operational Strategies for Evaluation:

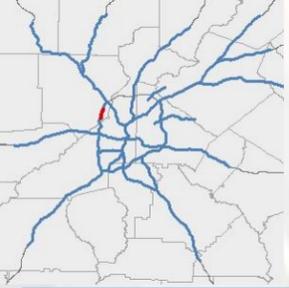
- 1) Upgrade current signage and technology to enhance existing shoulder lane performance (full gantry)



SR 400 SB @ Northridge Rd.	AM Peak	PM Peak
Mainline	5,400	5,500
Congested Speed	35 – 45 mph	35 – 45 mph

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Active Traffic Management	\$179,400	\$0	\$1,794,000	\$1,973,400

Traffic Data Source: TMC Data



ID# 10: I-285 NW NB from S. Cobb Dr. to Paces Ferry Rd.

Location: I-285 NW NB from S. Cobb Dr. to Paces Ferry Rd. (2.5 miles)

Cause of Bottleneck: High traffic volume

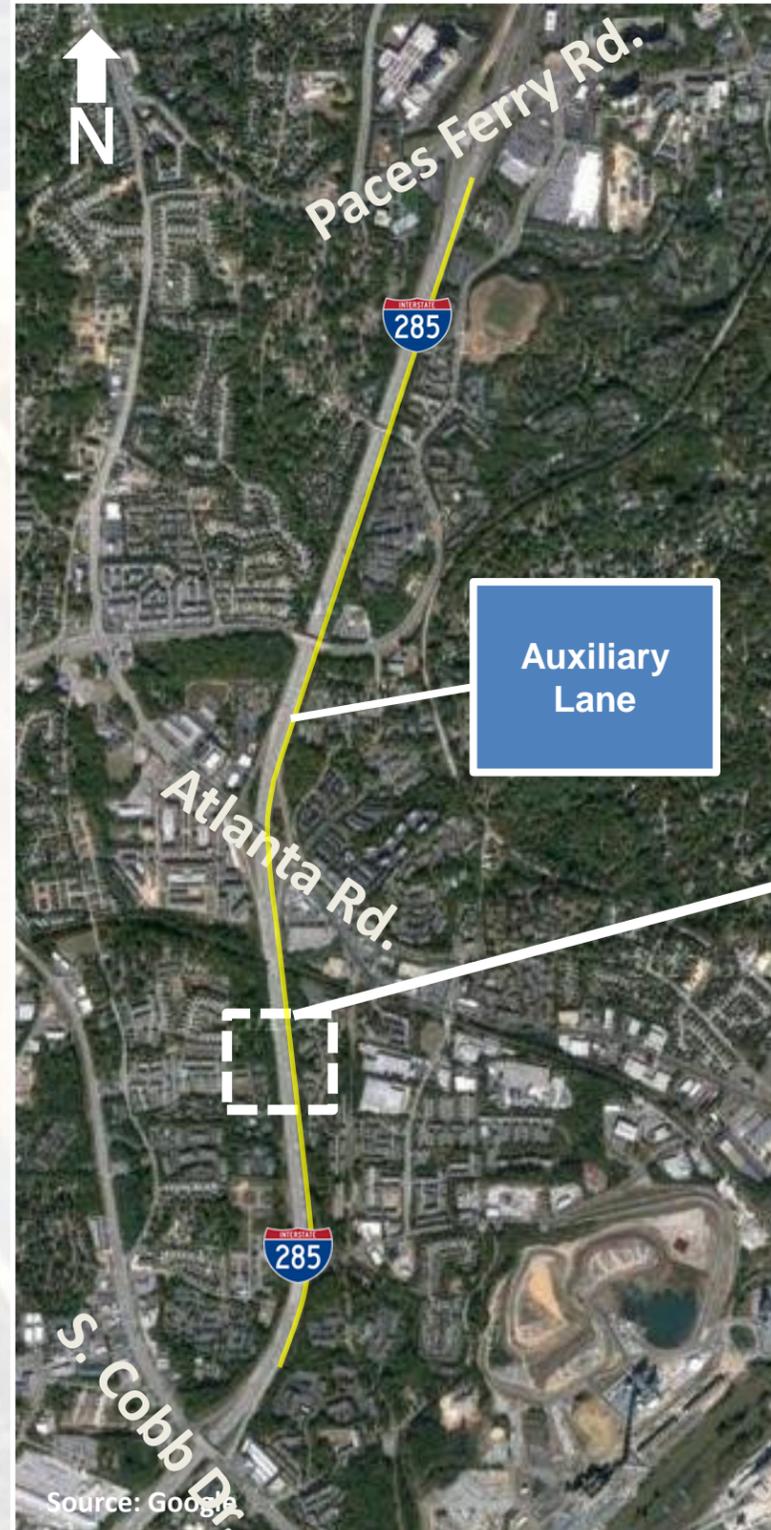
Potential Operational Strategies for Evaluation:

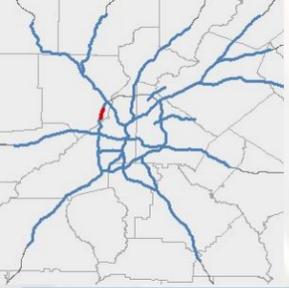
- 1) Use NB shoulder as an auxiliary lane during the peak periods

I-285 NB	AM Peak	PM Peak
Mainline	7,670	5,250

I-285 NB Ramps	AM Peak	PM Peak
NB On-ramp from S. Cobb Dr.	1,570	980
NB Off-ramp to Paces Ferry Rd.	810	630

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Aux. lane	\$629,200	\$0	\$6,283,030	\$6,912,230





ID# 11: I-285 NW SB from Paces Ferry Rd. to S. Cobb Dr.

Location: I-285 NW SB from Paces Ferry Rd. to S. Cobb Dr. (2.5 miles)

Cause of Bottleneck: High traffic volume

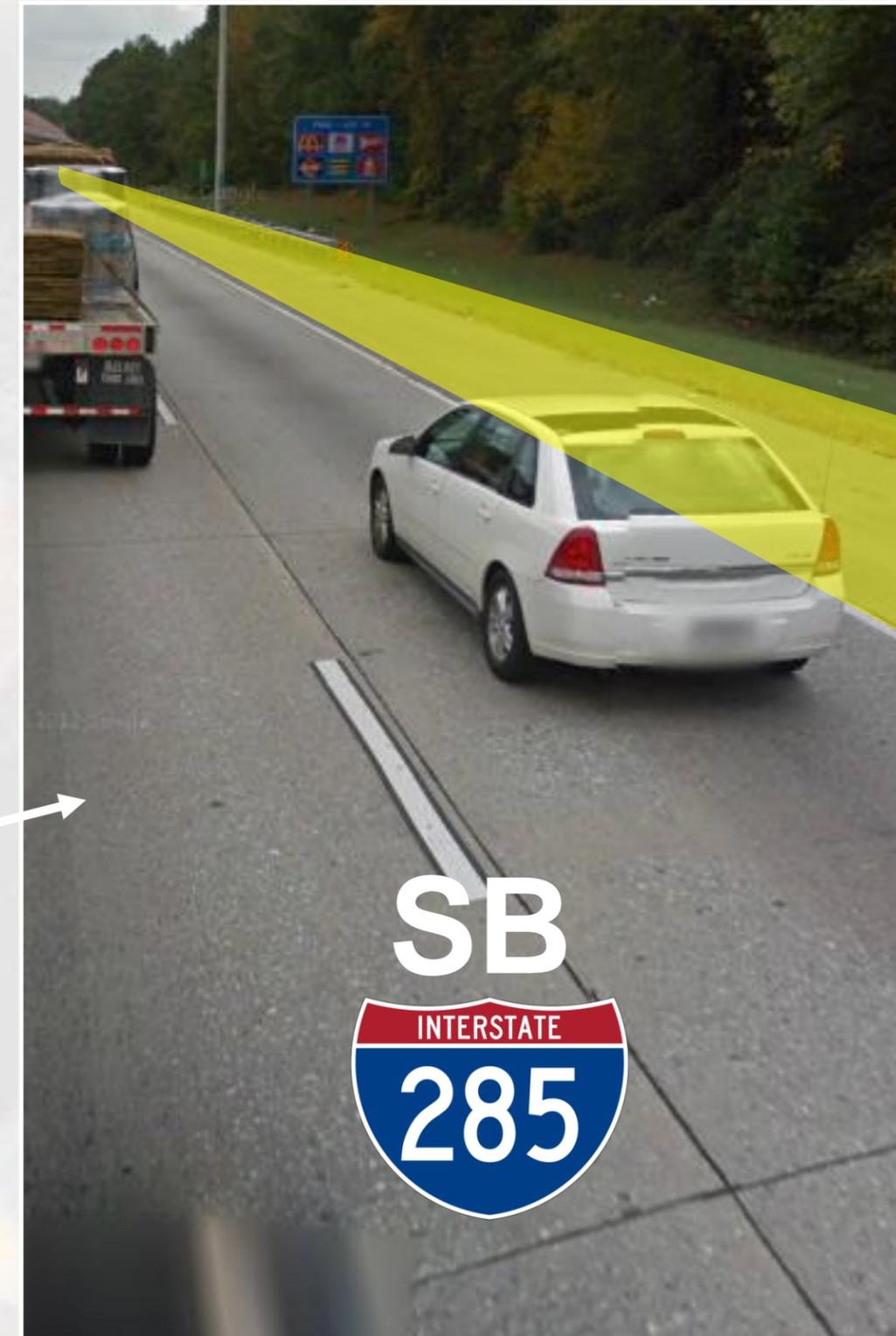
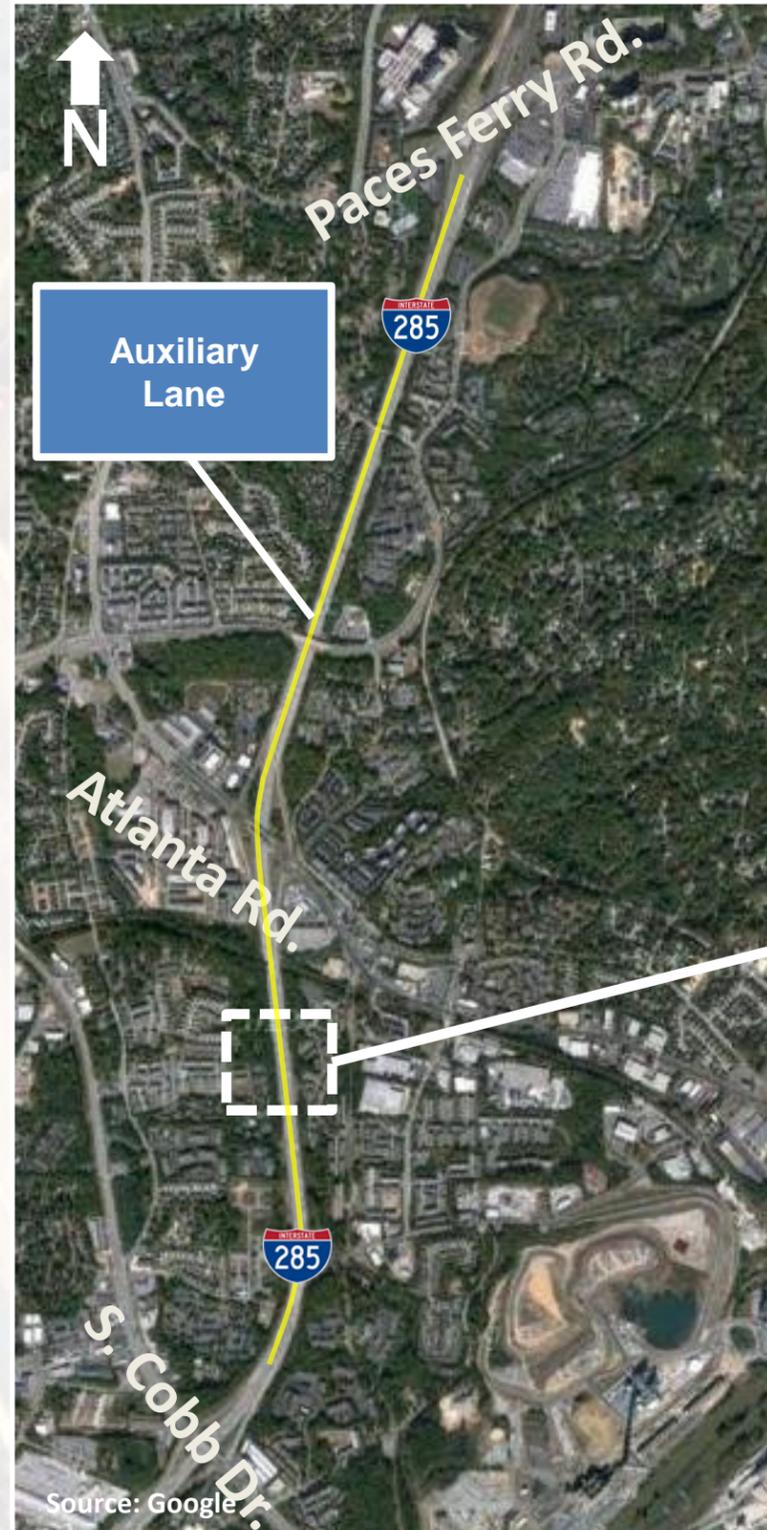
Potential Operational Strategies for Evaluation:

- 1) Use SB shoulder as auxiliary lane during peak periods

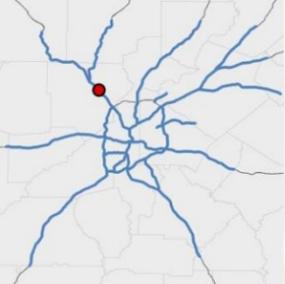
I-285 SB	AM Peak	PM Peak
Mainline	4,750	7,590

I-285 SB Ramps	AM Peak	PM Peak
SB On-ramp from Paces Ferry Rd.	460	810
SB Off-ramp to S. Cobb Dr.	820	1,230

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Aux. lane	\$629,200	\$0	\$6,283,030	\$6,912,230



Traffic Data Source: OPS Traffic Counts



ID# 12: I-75 N @ North Loop/SR 120

Location: I-75 N at North Loop (NB On-ramp)

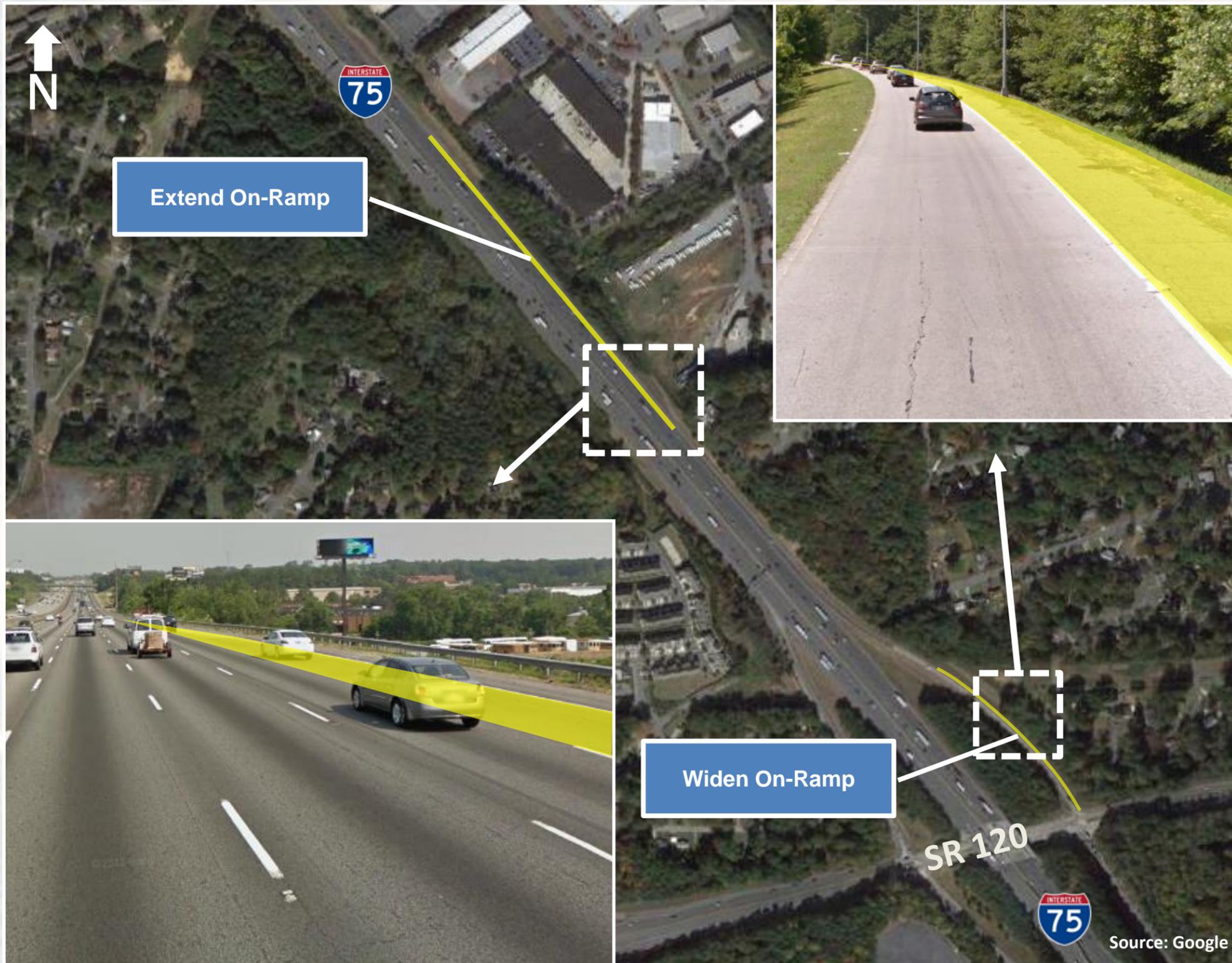
Cause of Bottleneck: Lane drops/weaving/grade

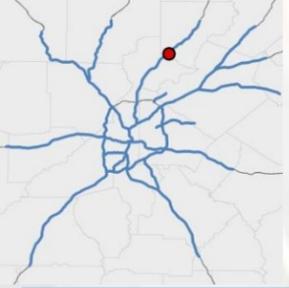
Potential Operational Strategies for Evaluation:

- 1) Use NB shoulder lane to extend on-ramp 1,000 feet
- 2) Widen SR 120 on-ramp to two lanes and merge to one lane before ramp meter

I-75 NB Ramps	AM Peak	PM Peak
NB On-ramp from SR 120	600	800

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Extend on-ramp	\$80,600	\$0	\$803,595	\$884,195
Widen on-ramp	\$117,000	\$0	\$1,159,795	\$1,276,795





ID# 13: SR 400 NB b/w McFarland Rd. and SR 141/Peachtree Pkwy.

Location: SR 400 between McFarland Rd. and SR 141/Peachtree Pkwy. (3.4 miles)

Cause of Bottleneck: Two NB general purpose (GP) lanes drop and merge at McFarland Rd. (Exit 12) on SR 400.

Recently completed GDOT project extending one NB GP lane north of McFarland Rd. interchange (now merges 4 to 3 to 2 lanes in less than 1 mile).

Potential Operational Strategies for Evaluation:

- 1) Use shoulder as an auxiliary lane between McFarland Rd. and Peachtree Pkwy.

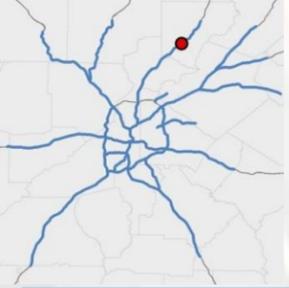
SR 400 @ McFarland	AM Peak	PM Peak
Mainline	1,620	3,590

SR 400 Ramps	AM Peak	PM Peak
NB On-ramp from McFarland Rd.	380	1,180
NB Off-ramp to Peachtree Pkwy.	650	1,110

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Aux. lane	\$604,500	\$0	\$6,038,500	\$6,643,000



Source: Google



ID# 14: SR 400 SB b/w SR 141/Peachtree Pkwy. and McFarland Rd.

Location: SR 400 between SR 141/Peachtree Pkwy. and McFarland Rd. (3.4 miles)

Cause of Bottleneck: SB On-Ramp

Potential Operational Strategies for Evaluation:

- 1) Use shoulder as an auxiliary lane from Peachtree Parkway to McFarland Rd.

SR 400 @ McFarland Pkwy.	AM Peak	PM Peak
Mainline	4,470	1,870

SR 400 Ramps	AM Peak	PM Peak
SB On-ramp from Peachtree Pkwy.	1,850	780
SB Off-ramp to McFarland Rd.	870	390

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Aux. lane	\$604,500	\$0	\$6,038,500	\$6,643,000





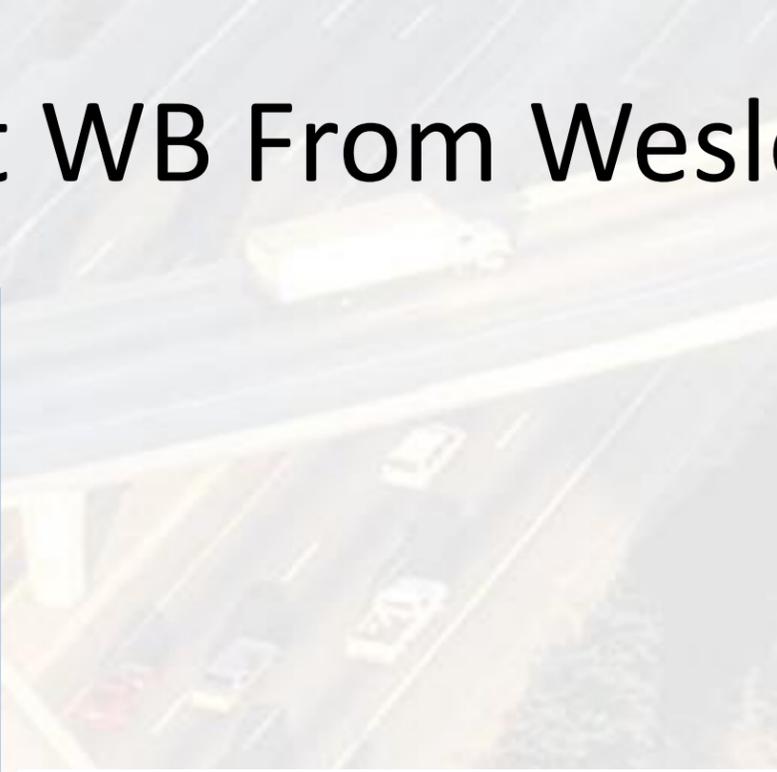
ID# 15: I-20 East WB From Wesley Chapel Rd. to I-285 (0.9 miles)

Location: I-20 E WB from Wesley Chapel Rd. to I-285 (0.9 miles)

Cause of Bottleneck: Weaving/Turning radius (especially for heavy trucks); High volume

Potential Operational Strategies for Evaluation:

- 1) Use shoulder as an auxiliary lane during AM peak period

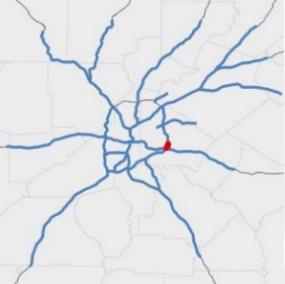


I-20 WB	AM Peak	PM Peak
Mainline	7,750	4,830

I-20 WB Ramps	AM Peak	PM Peak
WB On-ramp from Wesley Chapel Rd.	2,530	1,260
WB Off-ramp to I-285 NB	2,780	1,780

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Aux. lane	\$189,800	\$0	\$1,891,435	\$2,081,235

Source: Google



ID# 16: I-285 East NB from I-20 to Glenwood Rd.

Location: I-285 E NB from I-20 to Glenwood Rd. (1.2 miles)

Cause of Bottleneck: Weaves

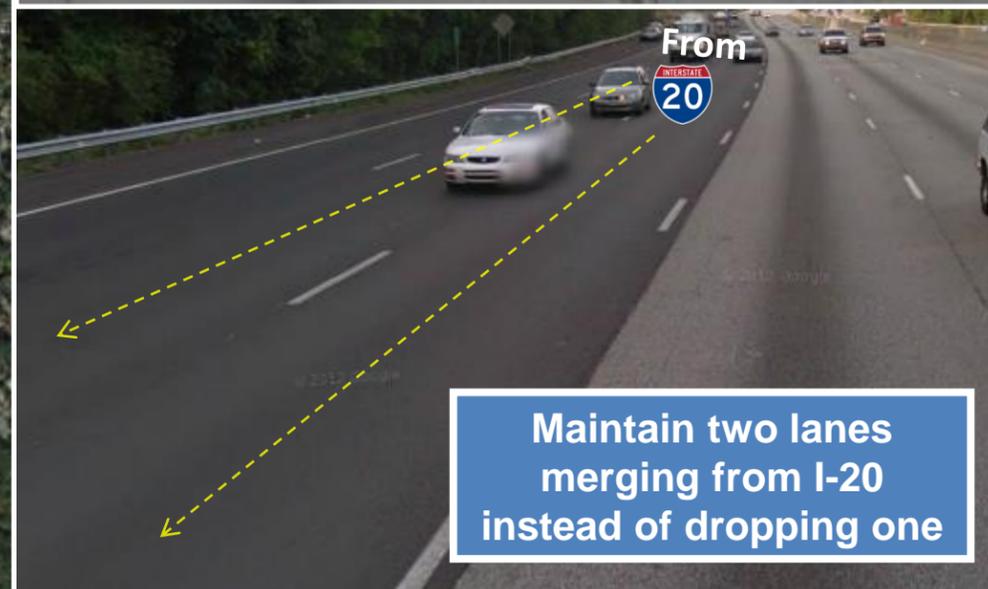
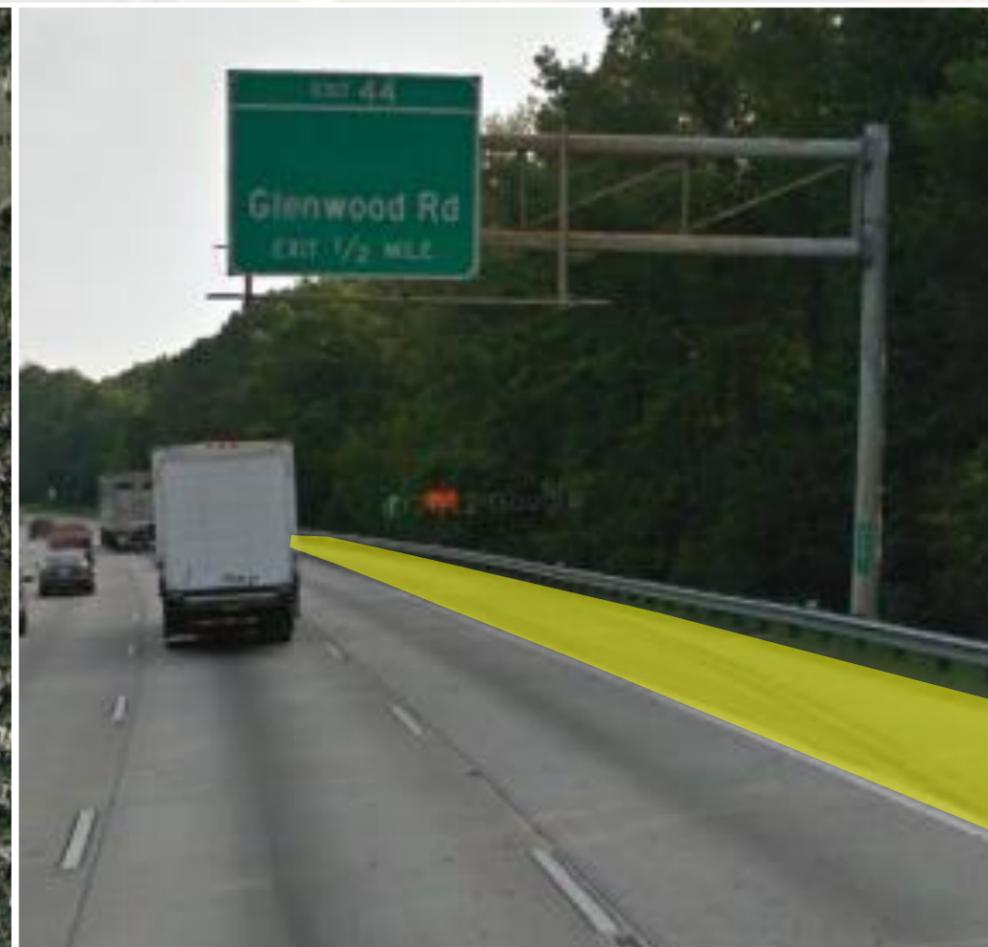
Potential Operational Strategies for Evaluation:

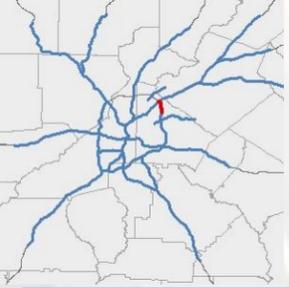
- 1) Use NB shoulder as an auxiliary lane to maintain an additional lane from I-20 onto I-285 NB

I-285 NB	AM Peak	PM Peak
Mainline	6,340	6,160

I-285 NB Ramps	AM Peak	PM Peak
NB On-ramp from I-20	1,280	2,230
NB Off-ramp to Glenwood Rd.	240	680

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Aux. lane	\$208,000	\$0	\$2,078,960	\$2,286,960





ID# 17: I-285 East NB from Northlake Pkwy. to I-85

Location: I-285 East NB from Northlake Pkwy. to I-85

Cause of Bottleneck: High traffic volume

Potential Operational Strategies for Evaluation:

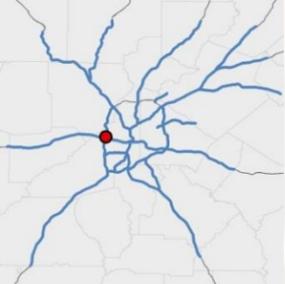
- 1) Use NB shoulders as auxiliary lanes during the peak periods

I-285 NB @ Chamblee Tucker Rd.	AM Peak	PM Peak
Mainline	4,640	3,290

I-285 NB Ramps	AM Peak	PM Peak
NB On-ramp from Northlake Pkwy.	590	670
NB Off-ramp to I-85	2,750	2,800

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Aux. lane	\$544,700	\$0	\$5,436,275	\$5,980,975





ID# 18: I-285 W/I-20 W

Location: I-285W/I-20W

Cause of Bottleneck: Tight turning radius/grade (EB to NB, SB to WB) especially for heavy trucks, combined with heavy volumes

Potential Operational Strategies for Evaluation:

- 1) SB I-285 to WB I-20: Drop a WB mainline lane at the exit to I-285 S so that a lane can be added back to the mainline when both WB ramps come on (adds 2 lanes on to the mainline instead of a single lane – one of the lanes drops at Fulton Industrial Blvd.) Reconfigure (WB I-20 to SB I-285) as a lane drop.
- 2) EB I-20 to NB I-285: Drop an EB Mainline lane at the exit to I-285. Combine both ramps into a single 2-lane exit and a new two lane C/D road. The C/D road splits to 1 lane South and 1 lane North with ramp to North on a new bridge over I-285.

Ramp Volumes	AM Peak	PM Peak
EB I-20 to SB I-285	400	1,000
I-285 NB/SB to WB I-20	1,900	1,800
WB I-20 to SB I-285	300	1,100

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Add mainline lane	\$352,300	\$0	\$3,511,755	\$3,864,055
Drop mainline lane	\$702,000	\$0	\$7,009,470	\$7,711,470





ID# 19-A: I-85 SB @ N. Druid Hills Rd.

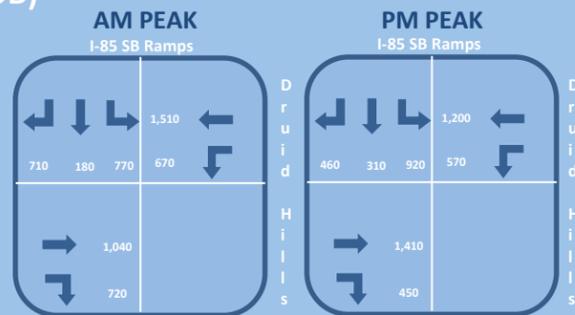
Location: I-85 SB at N. Druid Hills Rd. (Southbound Exit Ramp)

Cause of Bottleneck: Frontage road traffic may create off-ramp bottleneck

Potential Operational Strategies for Evaluation:

- 1) Close access from frontage road to I-85 SB off-ramp
- 2) Re-stripe SB off-ramp to 1 exclusive thru lane and 2 exclusive left turn lanes
- 3) Re-stripe NB on-ramp to add decision lane (see ID# 19B)
- 4) Re-stripe Druid Hills Rd. at Buford Hwy. adding dual left turn lanes (see ID# 19B)

N. Druid Hills Rd.
@ I-85 SB



Frontage Rd.	AM Peak	PM Peak
SB Right Turn	200	90
SB Left Turn	410	720

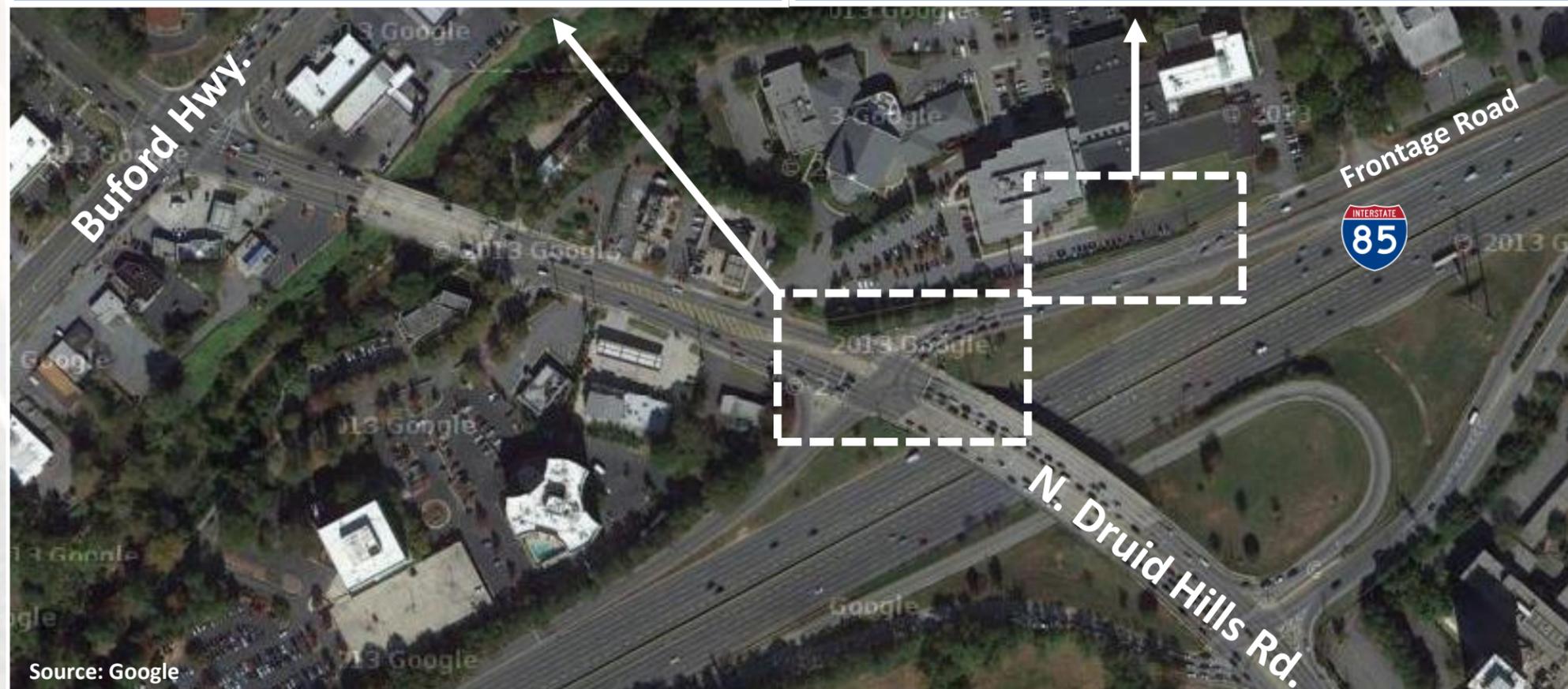
Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Close Access	\$22,100	\$0	\$220,610	\$242,710
Restriping	\$29,900	\$0	\$289,055	\$318,955



Option 2: Re-stripe SB approach to 2 exclusive left turn lanes and 1 exclusive thru lane



Option 1: Close frontage road access to ramp intersection at N. Druid Hills Rd.



Source: Google

Traffic Data Source: Traffic Counts



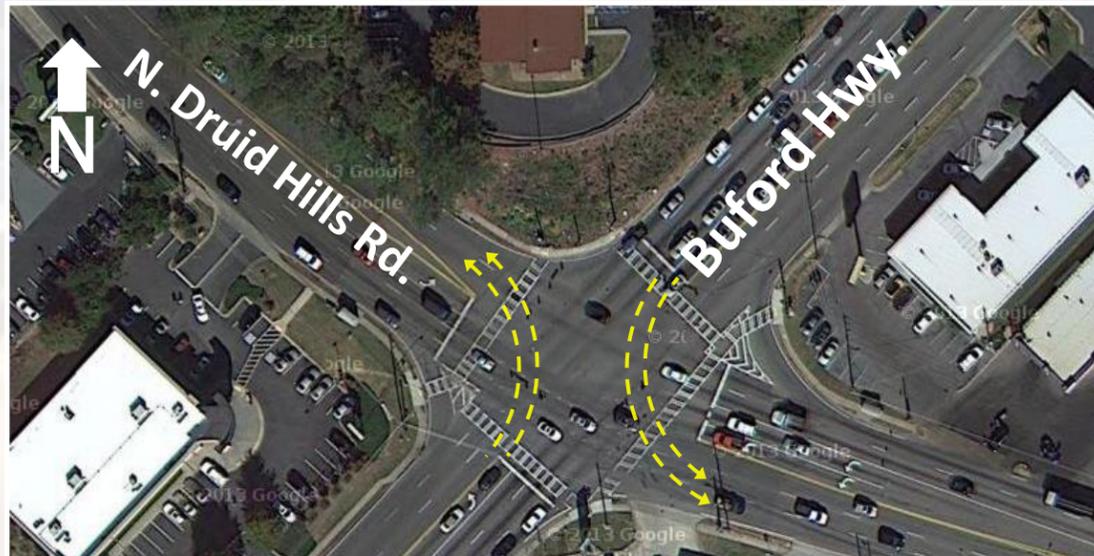
ID# 19-B: I-85 SB @ N. Druid Hills Rd.

Location: I-85 SB at N. Druid Hills Rd. (Southbound Exit Ramp)

Cause of Bottleneck: Frontage road traffic access may create off-ramp bottleneck

Potential Operational Strategies for Evaluation:

- 1) Close access from frontage road to I-85 off-ramp (see ID# 19A)
- 2) Re-stripe SB off-ramp to 1 exclusive thru lane and 2 exclusive left turn lanes (see ID# 19A)
- 3) Re-stripe NB on-ramp to add decision lane
- 4) Re-stripe Druid Hills Rd. at Buford Hwy. adding dual left turn lanes and drop 1 southbound through lane on Buford Hwy.

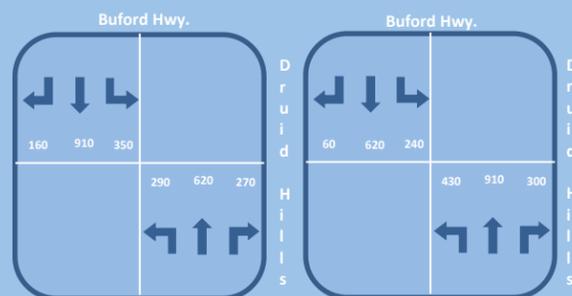


Option 4: Re-stripe Buford Hwy. adding NB and SB dual left turn lanes



Option 3: Re-stripe on-ramp to add NB decision lane

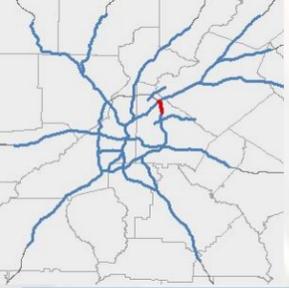
Buford Hwy. @ N. Druid Hills Rd.



Source: Google

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Add decision lane	\$91,000	\$0	\$906,425	\$997,425
Dual left turn restriping	\$53,300	\$0	\$524,290	\$577,590

Traffic Data Source: Traffic Counts



ID# 20: I-285 East SB from I-85 to Northlake Pkwy.

Location: I-285 East SB from I-85 to Northlake Pkwy.

Cause of Bottleneck: High traffic volume

Potential Operational Strategies for Evaluation:

- 1) Create auxiliary lane to eliminate lane drop from I-85 to I-285

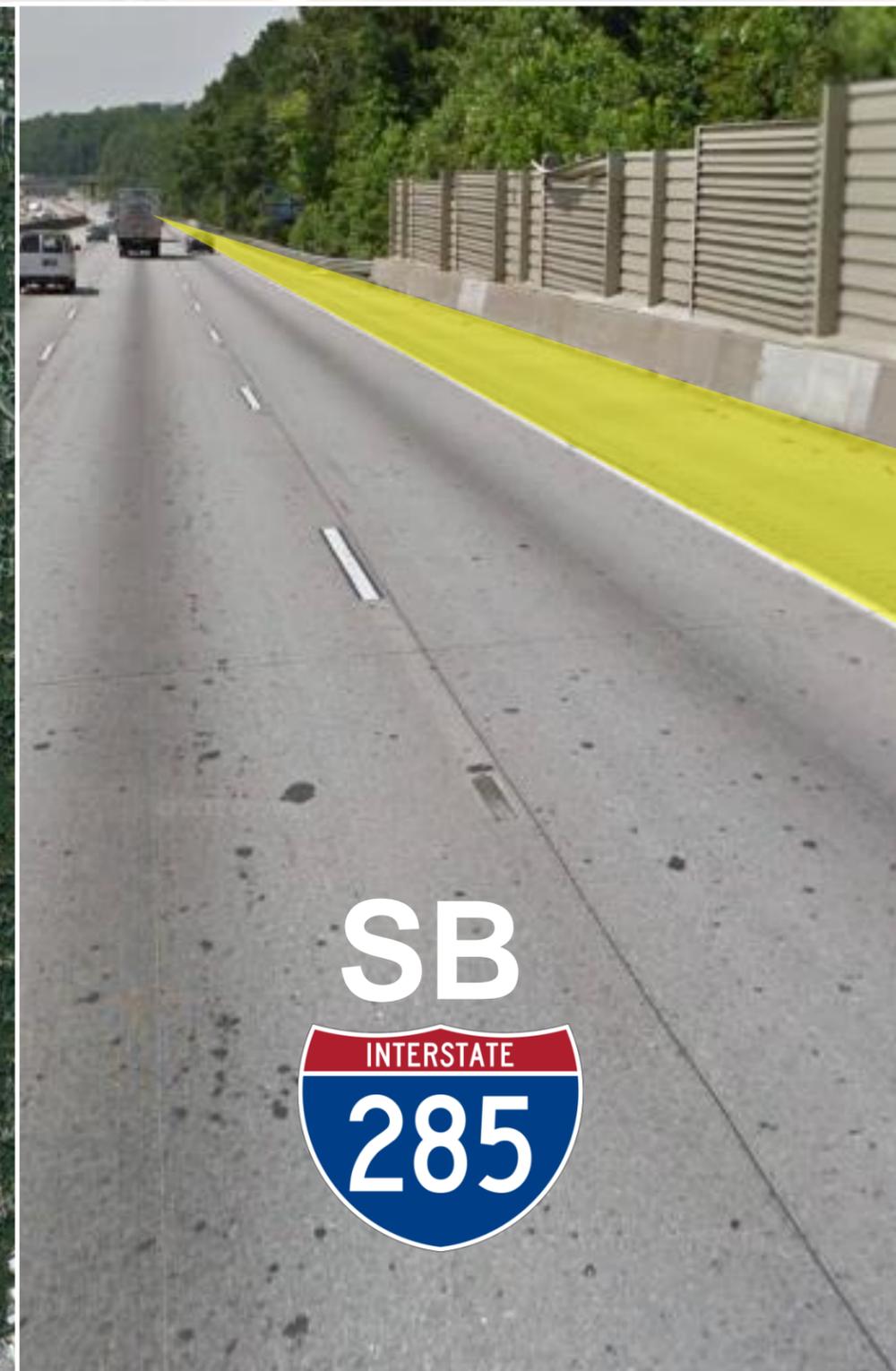
I-285 SB	AM Peak	PM Peak
Mainline	5,480	6,070

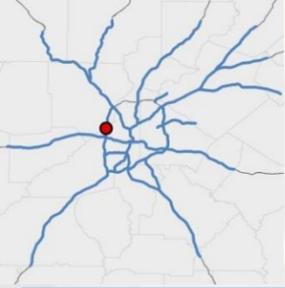
I-285 SB Ramps	AM Peak	PM Peak
SB On-ramp from I-85	500	680
SB Off-ramp to Northlake Pkwy.	650	390

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Aux. lane	\$455,000	\$0	\$4,538,430	\$4,993,430



Auxiliary Lane





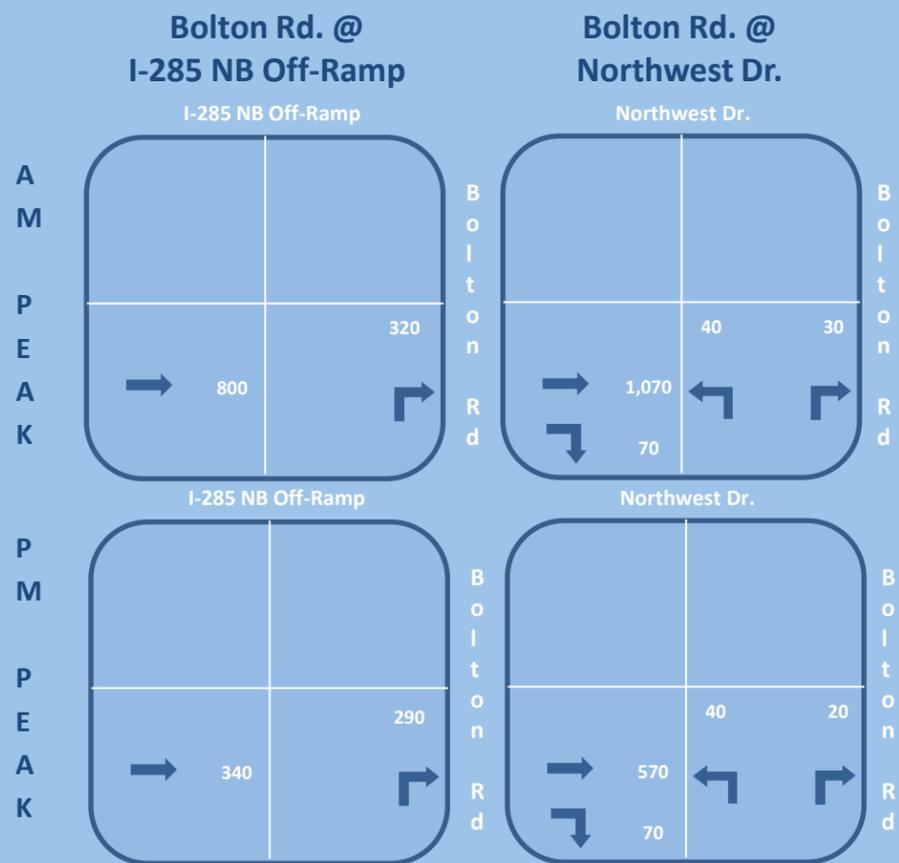
ID# 21: I-285 NW @ Bolton Rd.

Location: I-285 NW at Bolton Rd.

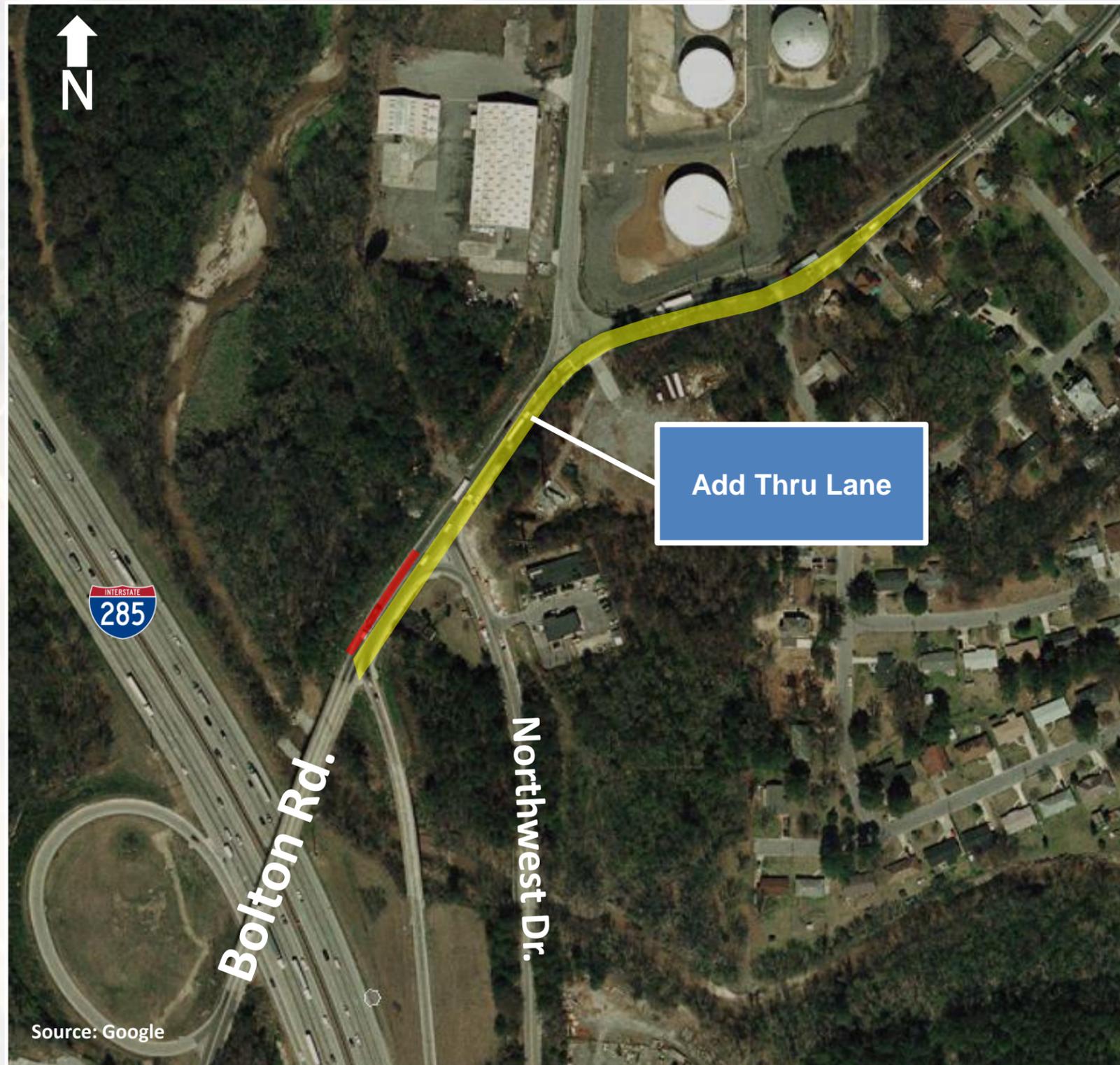
Cause of Bottleneck: Skewed intersection and limited sight distance

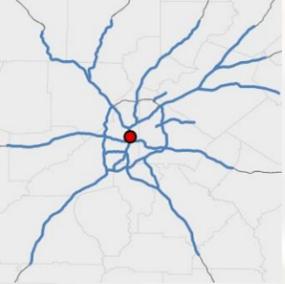
Potential Operational Strategies for Evaluation:

- 1) Channelize NB traffic and add designated lane using new pavement for ramp traffic



Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Add arterial thru lane	\$105,300	\$598,000	\$1,043,614	\$1,746,914





ID# 22: Downtown Connector NB from Freedom Pkwy. to Pine St.

Location: Downtown Connector NB from Freedom Pkwy. to Pine St.

Cause of Bottleneck: Merge of two lanes from Freedom Pkwy. onto the Downtown Connector; Diverge of Peachtree St./Pine St. traffic exiting

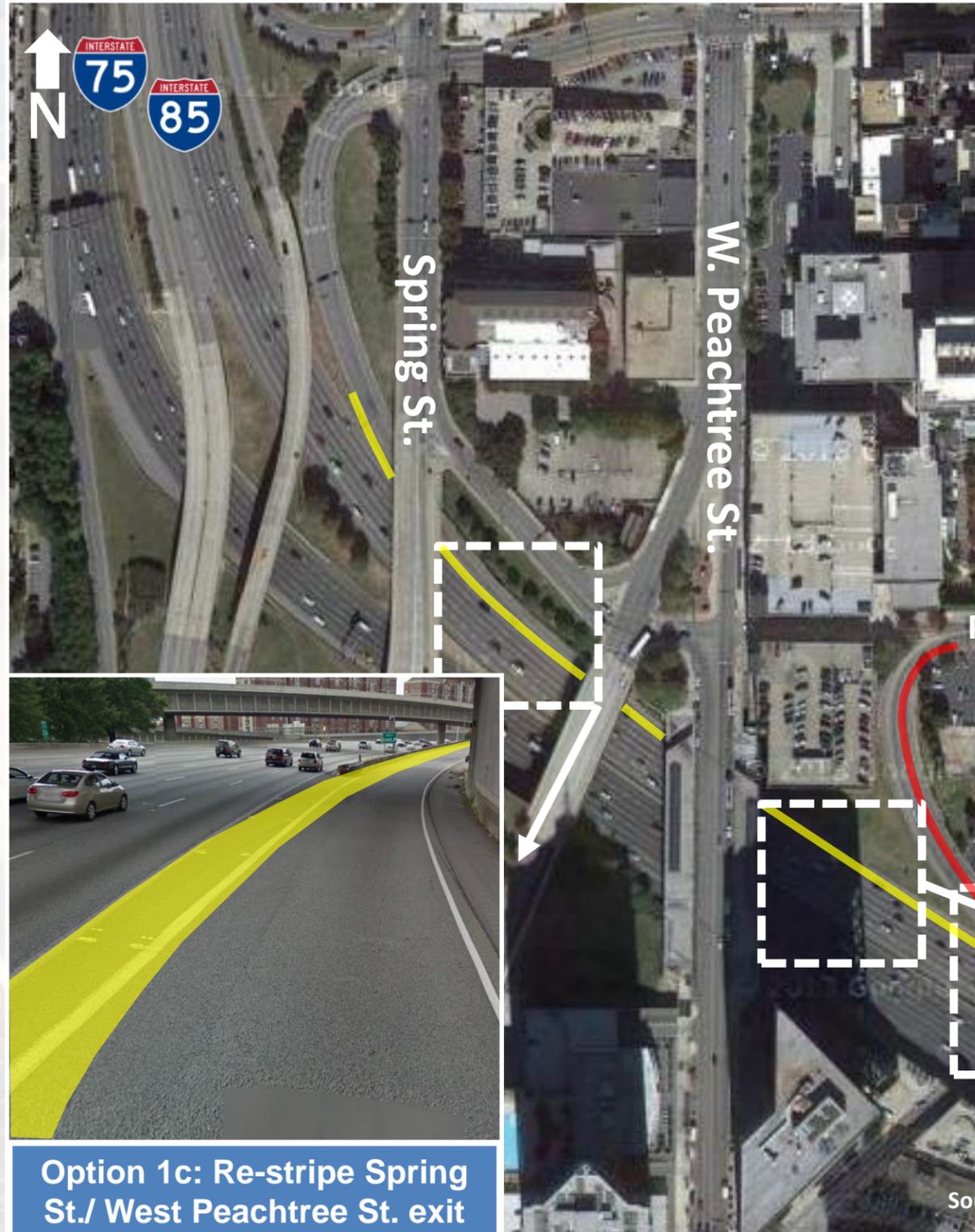
Potential Operational Strategies for Evaluation:

- 1a) Re-stripe Peachtree St./Pine St. exit from a 2-lane to a single lane exit
- 1b) Extend auxiliary lane via shoulder from Freedom Pkwy. to Spring St./ West Peachtree St. exit (.25 miles)
- 1c) Re-stripe Spring St./West Peachtree St. exit from 1 to 2 lanes (to accept shoulder lane traffic)

NB Pine/Peachtree Off-Ramp	AM Peak	PM Peak
Ramp Volume	100	400

NB DT Connector	AM Peak	PM Peak
Mainline	8,800	8,000
Congested Speed	>45	26 - 35

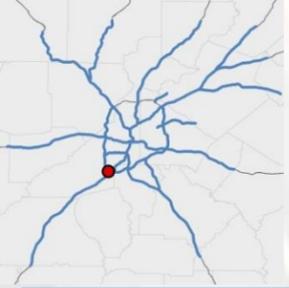
Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Extend auxiliary lane	\$105,300	\$6,728,800	\$67,278,185	\$74,006,985



Option 1c: Re-stripe Spring St./ West Peachtree St. exit

Option 1b: Auxiliary lane

Source: Google



ID# 23: I-285 S @ I-85 S Interchange

Location: I-285 S at I-85 S Interchange

Cause of Bottleneck: I-85 NB to I-285 NB volume

Potential Operational Strategies for Evaluation:

- 1a) Re-stripe and widen (minimally) I-85 NB on-ramp to create two-lane on-ramp
- 1b) Re-stripe on-ramp from WB Old National Highway C/D road to merge traffic instead of adding a lane

NB I-285	AM Peak	PM Peak
@ I-85 NB	2,530	2,440

I-285 NB Ramps	AM Peak	PM Peak
I-85 NB On-Ramp to I-285 NB	2,850	1,910
Old Natl. Hwy. NB On-Ramp to I-285 NB	690	650

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Reconfigure on-ramp	\$85,800	\$0	\$851,279	\$937,079



Source: Google



ID# 24: US 78 WB @ I-285 NB

Location: US 78 WB at I-285 NB

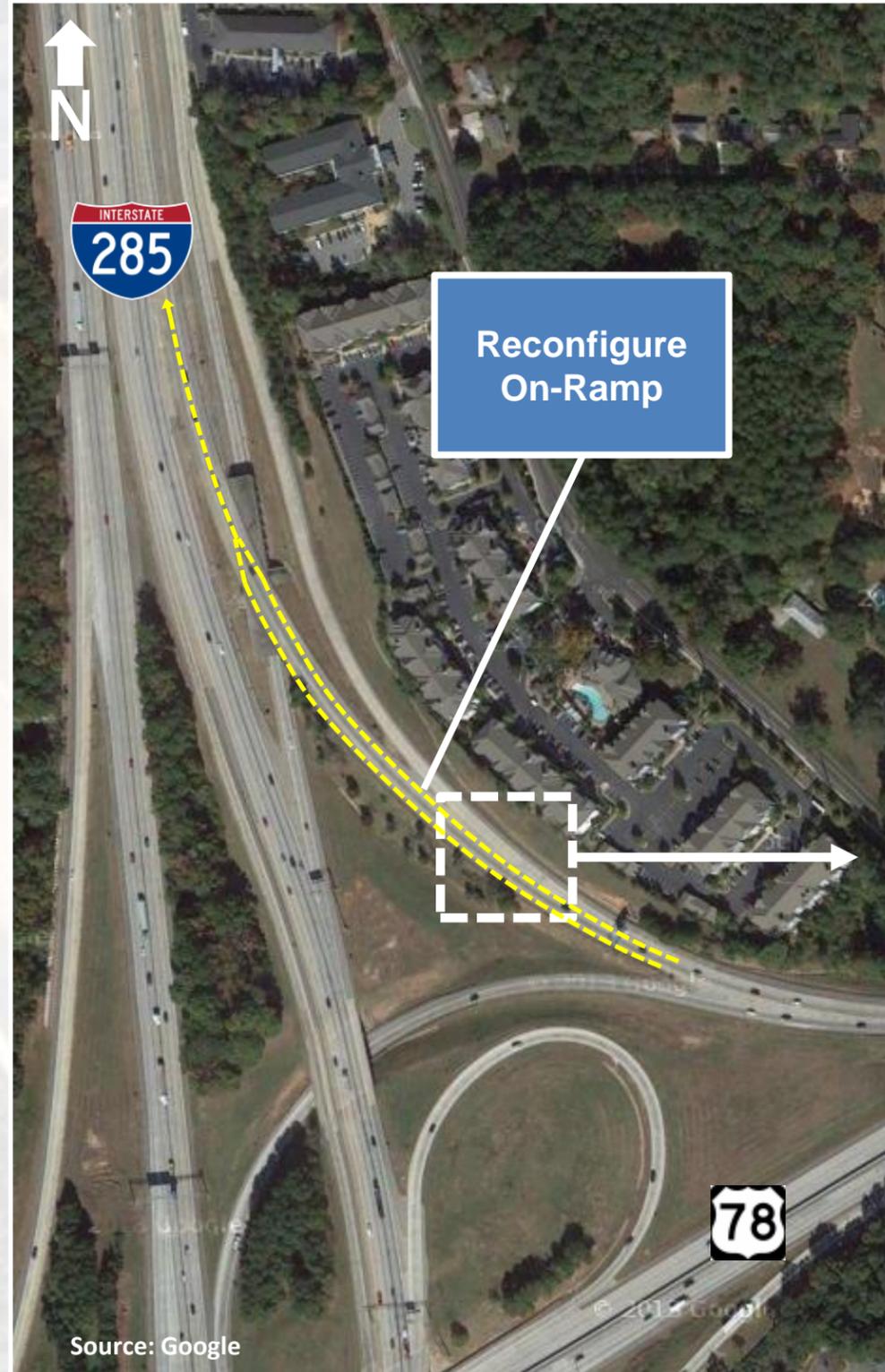
Cause of Bottleneck: Signing/ Weaving/ Last minute decision making

Potential Operational Strategies for Evaluation:

- 1a) Re-signing for Lawrenceville exit (change from an exit only off-ramp to a decision off-ramp)
- 1b) Add new pavement in the gore area to extend two-lane ramp
- 1c) Re-stripe two lanes from WB US 78 to NB I-285 so vehicles merge before I-285

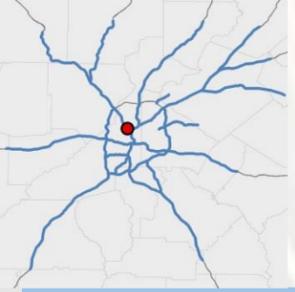
US 78 Ramps	AM Peak	PM Peak
US 78 WB to I-285 NB	2,050	860
US 78 WB to I-285 SB	1,380	1,130

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Reconfigure on-ramp	\$88,400	\$0	\$882,986	\$971,386



Source: Google





ID# 25: I-75 @ Northside Dr.

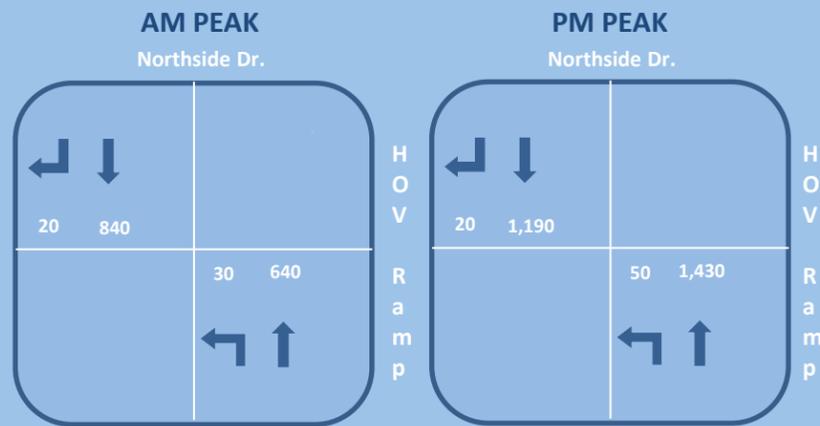
Location: I-75 at Northside Dr.

Cause of Safety Concern: HOV wrong way access

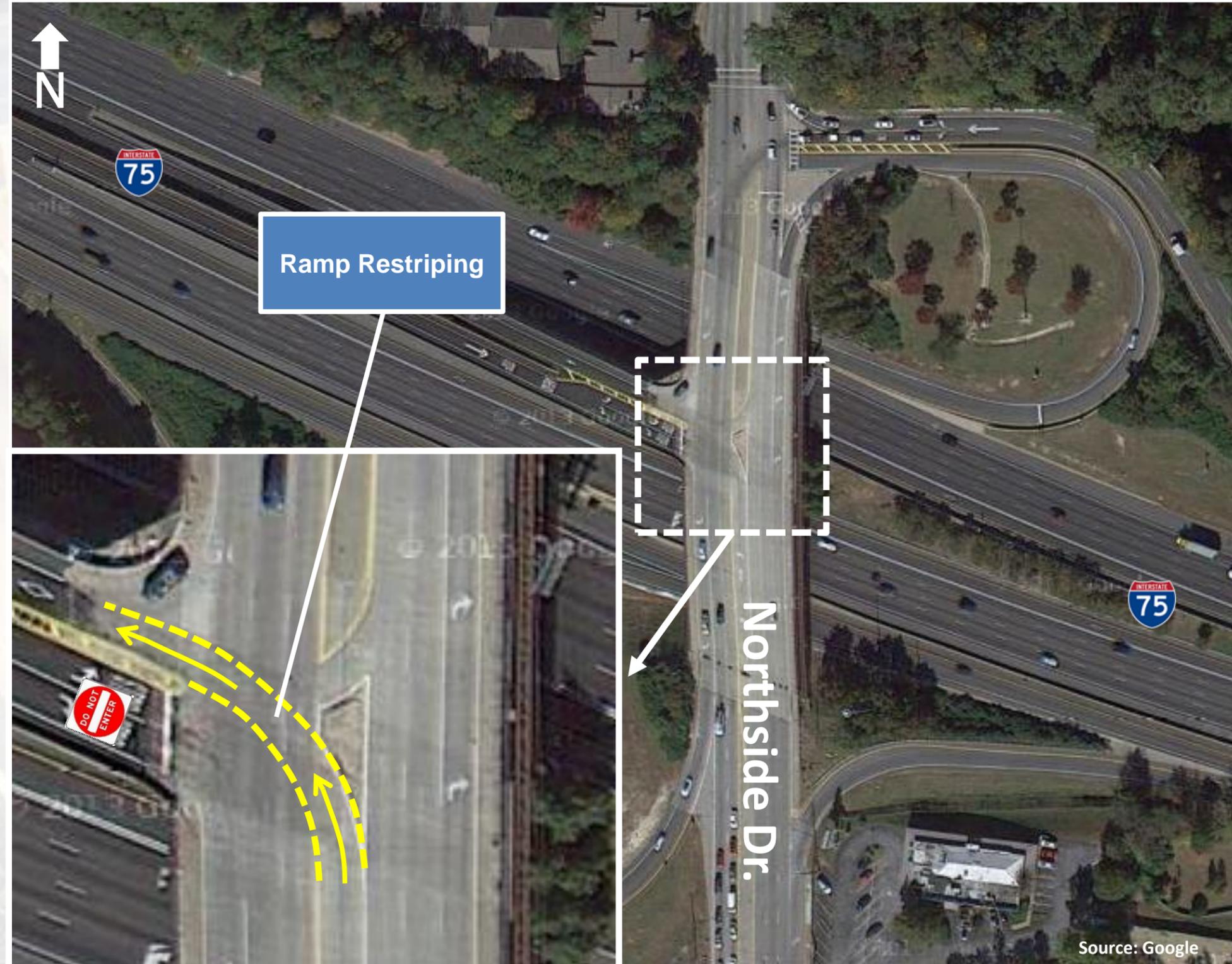
Potential Operational Strategies for Evaluation:

- 1) Re-striping; Add skip stripe on Northside Pkwy for WB to NB I-75 HOV entrance ramp so the drivers do not drive the wrong way on the HOV exit ramp.

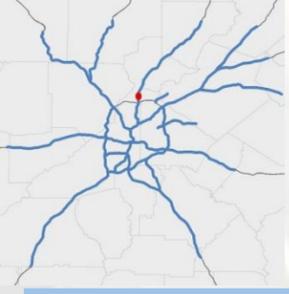
Northside Dr. @ I-75 NB HOV Ramp



Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Restriping	\$1,300	\$0	\$8,645	\$9,945



Source: Google



ID# 26: SR 400 @ Abernathy Rd.

Location: SR 400 at Abernathy Rd.

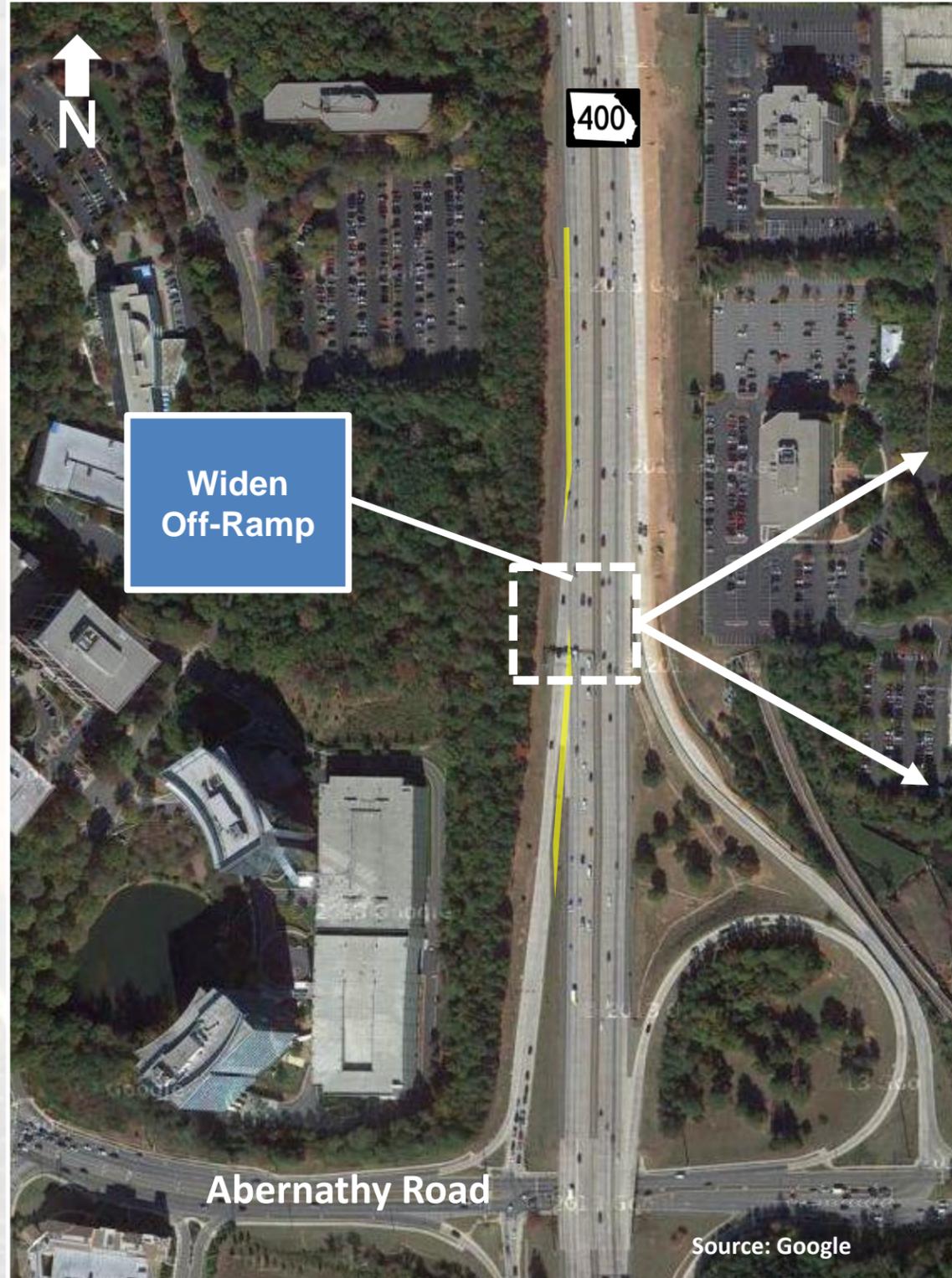
Cause of Bottleneck: High SB off-ramp volume; short deceleration length

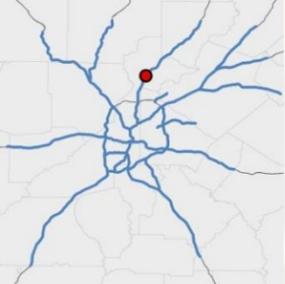
Potential Operational Strategies for Evaluation:

- 1) Widen SB Off-Ramp using the shoulder to 2 lanes and extend deceleration lane by 1000'

SR 400 Ramp	AM Peak	PM Peak
Abernathy Rd. SB Off-Ramp	1,520	870

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Widen off-ramp	\$87,100	\$0	\$863,983	\$951,083





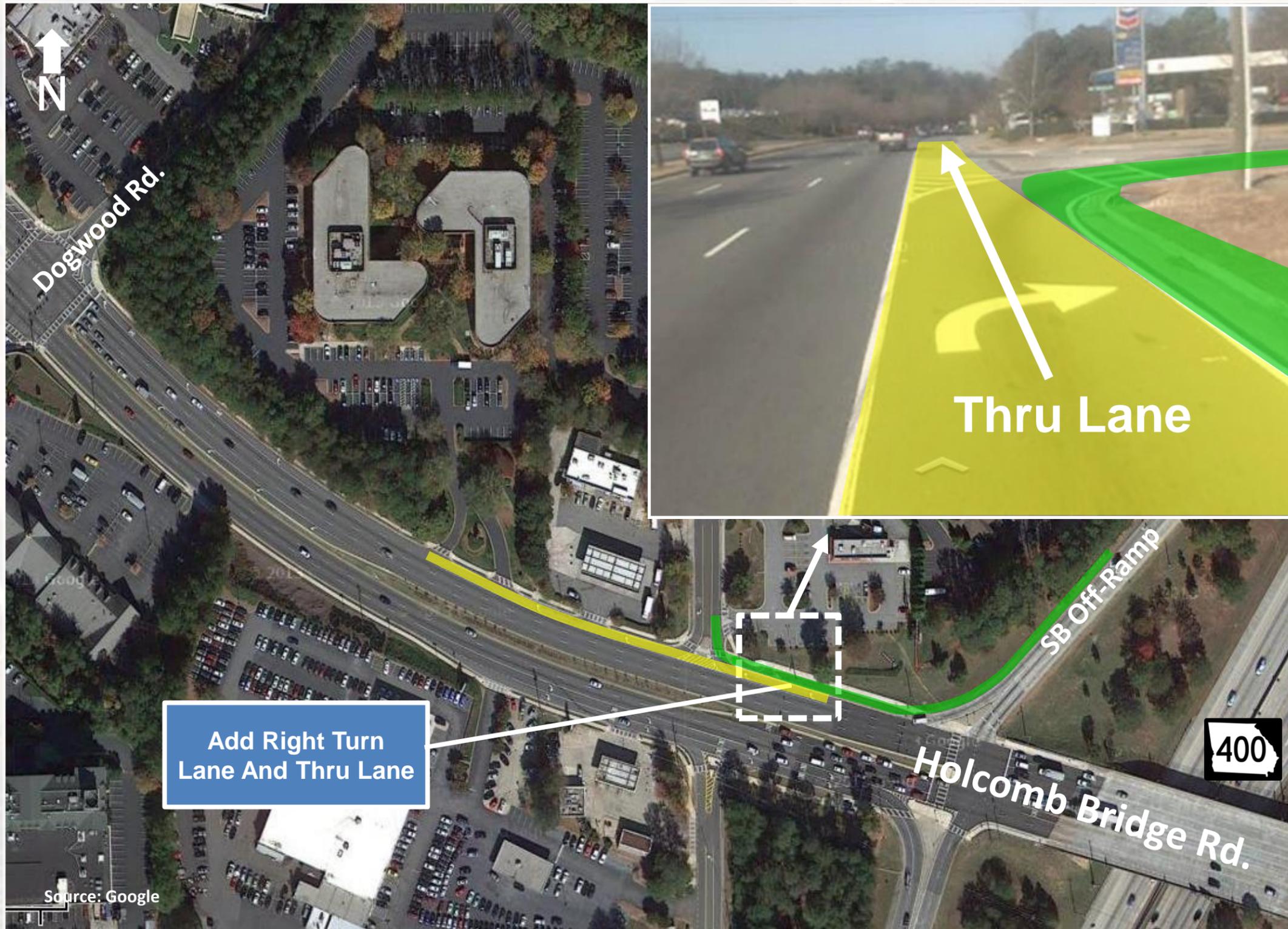
ID# 27: SR 400 @ Holcomb Bridge Rd./SR 140

Location: SR 400 at Holcomb Bridge Rd./SR 140

Cause of Bottleneck: High volume on SB off-ramp

Potential Operational Strategies for Evaluation:

- 1) Add right turn lane to SB off-ramp and modify existing striping on Holcomb Bridge Rd. to add one thru lane

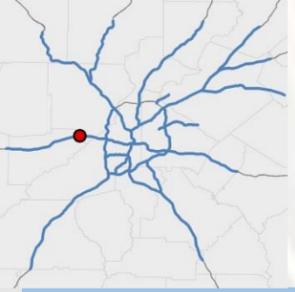


SR 400 Ramp	AM Peak	PM Peak
Holcomb Bridge SB Off-Ramp	300	1,000

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Add turn lane	\$76,700	\$0	\$760,370	\$837,070

Source: Google

Traffic Data Source: TMC Data



ID# 28A: I-20 @ Thornton Rd.

Location: I-20 at Thornton Rd.

Cause of Bottleneck: High left turn volumes/tight turning radii/steep grades

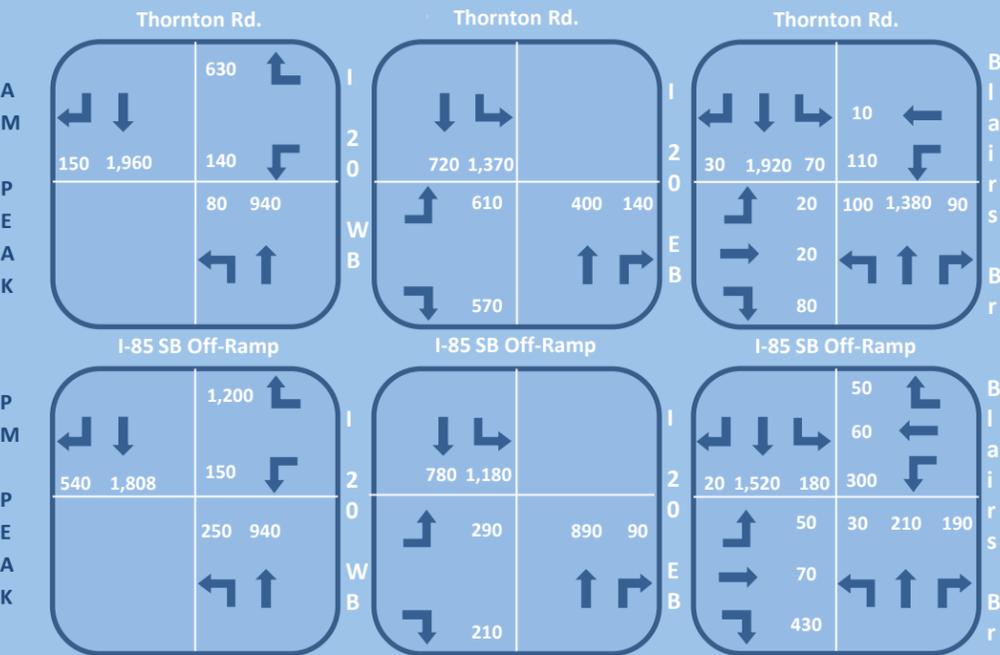
Potential Operational Strategies for Evaluation:

- 1) Diverging Diamond Interchange and WB off-ramp re-striping (reduces the number of conflict points, enhances left turn operations, and eliminates loop ramp (tight turning radii))

Thornton Rd. @
I-20 WB Ramps

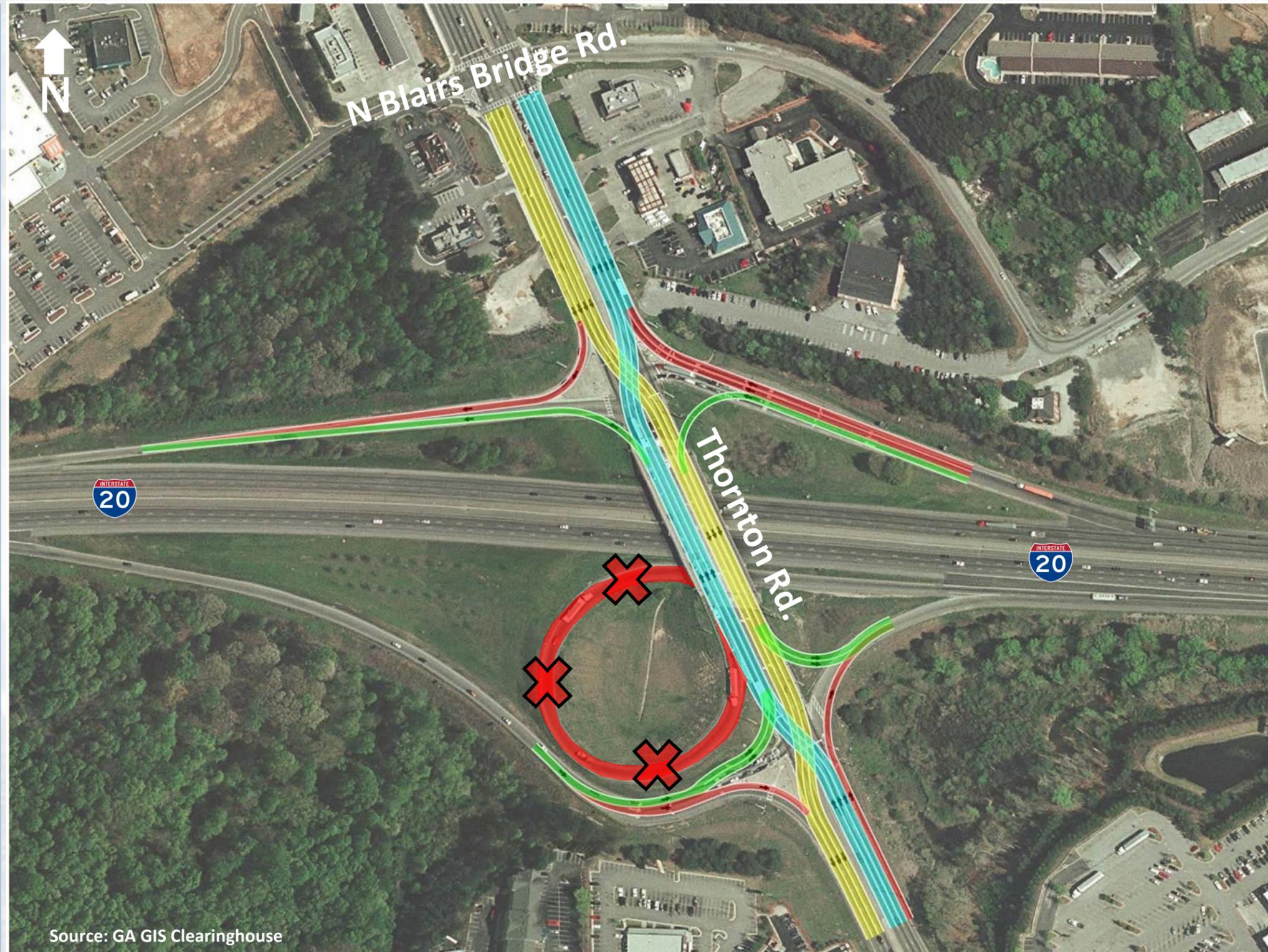
Thornton Rd. @
I-20 EB Ramps

Thornton Rd. @
N. Blairs Bridge Rd.



I-20 @ Thornton Rd.	AM Peak	PM Peak
WB Mainline	2,970	6,103
EB Mainline	4,150	2,870

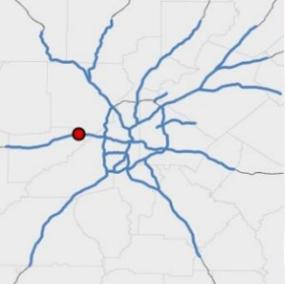
Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Diverging Diamond	\$327,600	\$832,000	\$3,268,590	\$4,428,190



Source: GA GIS Clearinghouse

Traffic Data Source: GDOT Atlanta Radial Freeway Strategic Plan





ID# 28B: I-20 @ Thornton Rd.

Location: I-20 at Thornton Rd.

Cause of Bottleneck: High volumes

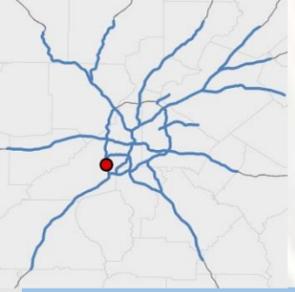
Potential Operational Strategies for Evaluation:

- 1) Diverging Diamond Interchange and WB off-ramp re-striping (reduces the number of conflict points, enhances left turn operations, and eliminates loop ramp (tight turning radii)) (See ID # 28A)
- 2) Re-stripe SB Thornton to WB Skyview Rd. right turn lane to accommodate additional SB through lane on Thornton Rd. Add two lane loop ramp on Thornton Rd. to I-20. Re-stripe WB off-ramp.

I-20 @ Thornton Rd.		AM Peak	PM Peak
WB Mainline		2,970	6,103
EB Mainline		4,150	2,870

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Ramp upgrade and re-stripe, add thru lane	\$273,000	\$26,000	\$2,723,500	\$3,022,500





ID# 29A: I-285 @ Camp Creek Pkwy.

Location: I-285 @ Camp Creek Pkwy.

Cause of Bottleneck: Both off-ramps back up onto I-285

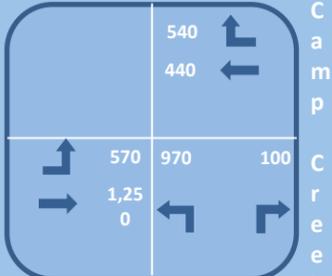
Potential Operational Strategies for Evaluation:

- 1) Diverging Diamond Interchange (DDI) - (reduces the number of conflict points, enhances the operations of left turns from the arterial)
- 2) New configuration representing a hybrid of a DDI and a Displaced Left Turn Intersection (See ID# 29B)
- 3) New configuration hybrid of a DDI (See ID# 29C)

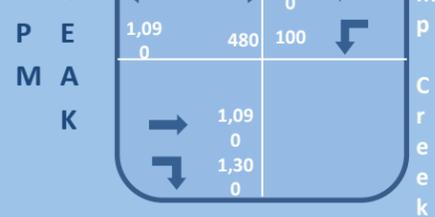
**Camp Creek Pkwy.
@ I-285 SB**
I-285 SB Off-Ramp



**Camp Creek Pkwy.
@ I-285 NB**
I-285 NB Off-Ramp



**Camp Creek Pkwy.
@ I-285 SB**
I-285 SB Off-Ramp



**Camp Creek Pkwy.
@ I-285 NB**
I-285 NB Off-Ramp



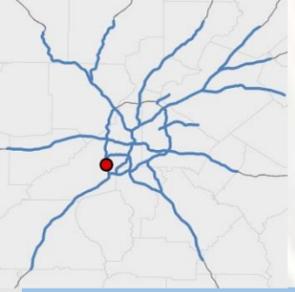
Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Ramp upgrade and re-stripe, add thru lane	\$769,600	\$312,000	\$7,692,750	\$8,774,350



Source: GA GIS Clearinghouse

Traffic Data Source: Traffic Counts





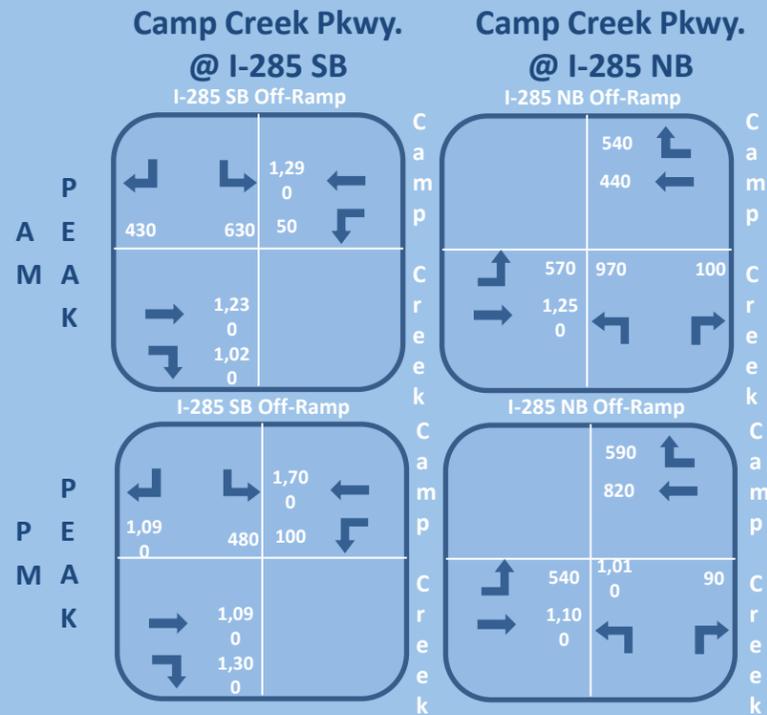
ID# 29B: I-285 @ Camp Creek Pkwy.

Location: I-285 @ Camp Creek Pkwy.

Cause of Bottleneck: Both off-ramps back up onto I-285

Potential Operational Strategies for Evaluation:

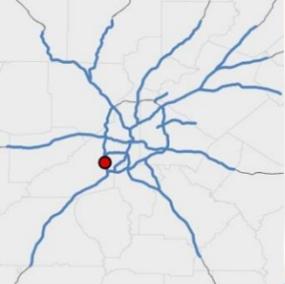
- 1) Diverging Diamond Interchange (DDI) (See ID# 29A)
- 2) New configuration representing a hybrid of a DDI and a Displaced Left Turn Intersection
- 3) New configuration hybrid of a DDI (See ID# 29C)



Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Ramp upgrade and re-stripe, add thru lane	\$1,173,900	\$988,000	\$11,734,320	\$13,896,220

Source: GA GIS Clearinghouse

Traffic Data Source: Traffic Counts



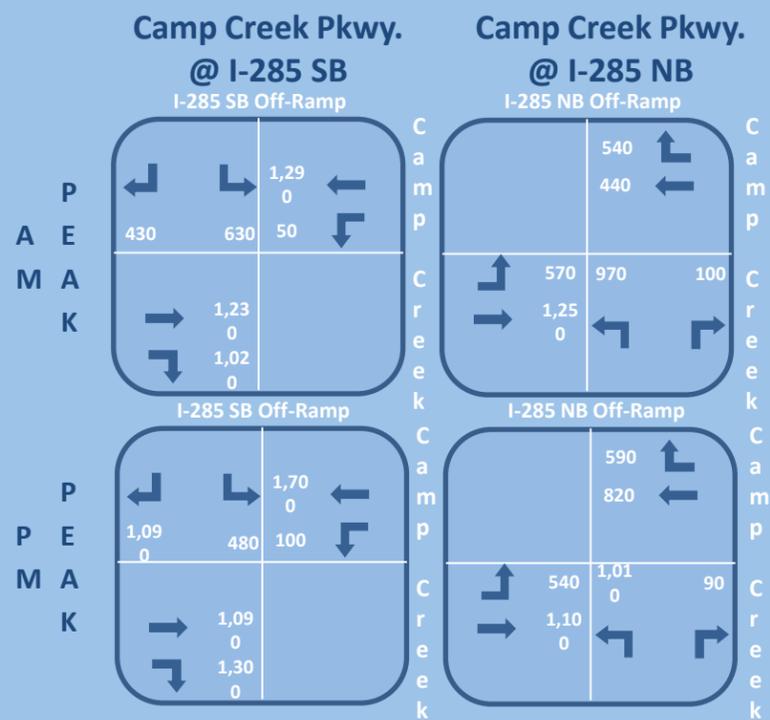
ID# 29C: I-285 @ Camp Creek Pkwy.

Location: I-285 @ Camp Creek Pkwy.

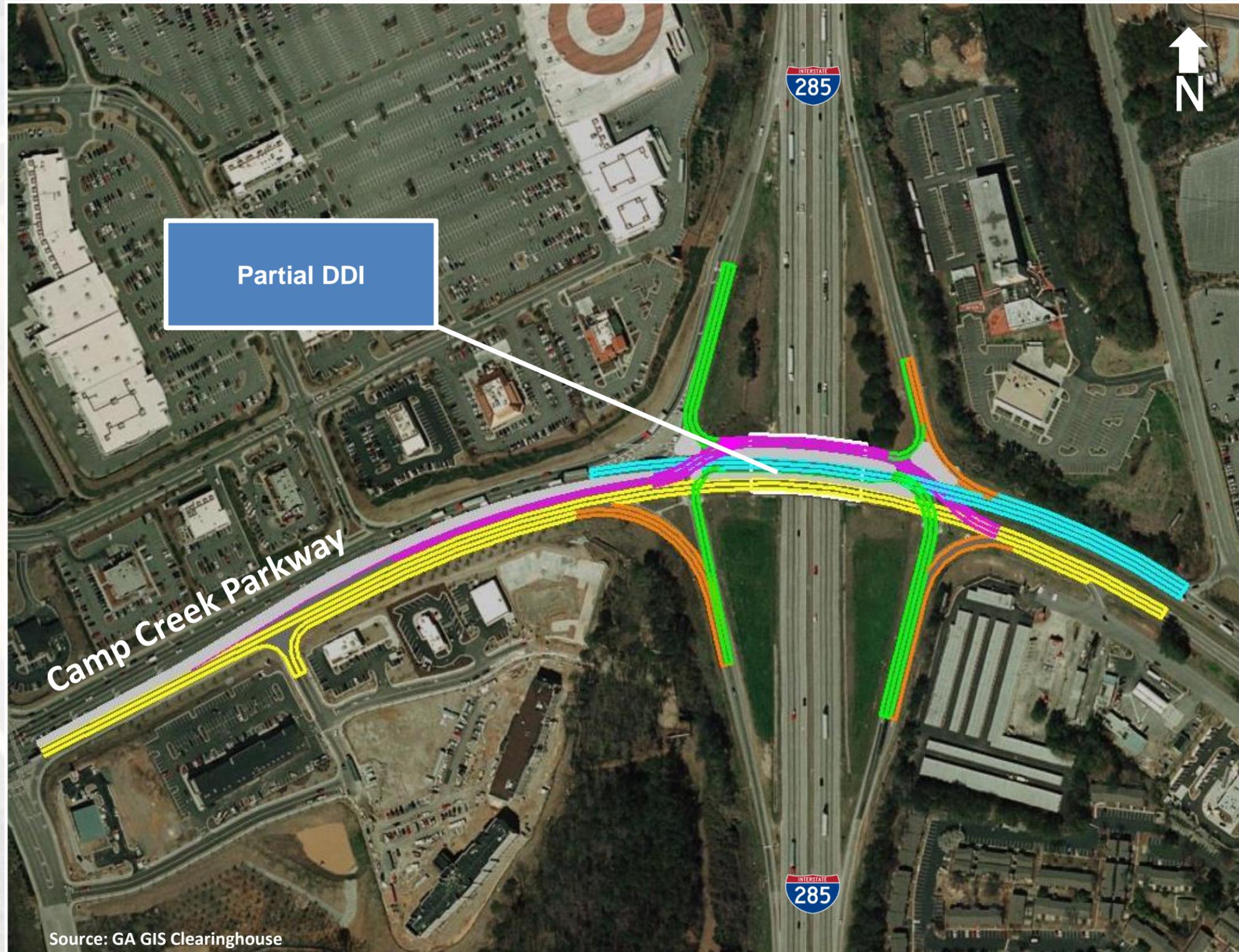
Cause of Bottleneck: Both off-ramps back up onto I-285

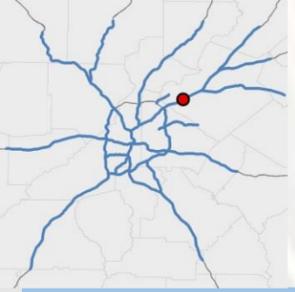
Potential Operational Strategies for Evaluation:

- 1) Diverging Diamond Interchange (DDI) (See ID# 29A)
- 2) New configuration representing a hybrid of a DDI and a Displaced Left Turn Intersection (See ID# 29B)
- 3) New configuration hybrid of a DDI



Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Partial DDI	\$685,100	\$468,000	\$6,846,645	\$7,999,745





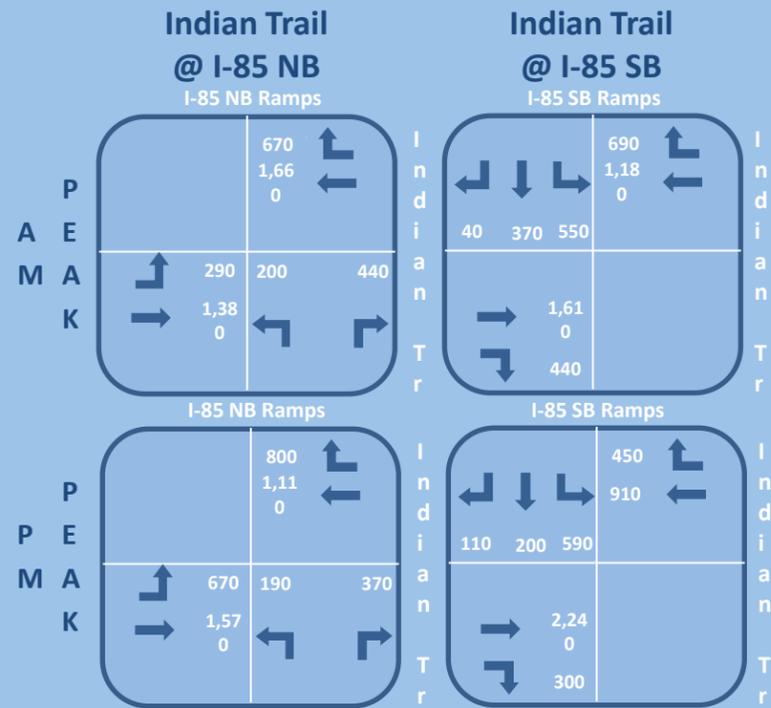
ID# 30: I-85 N @ Indian Trail/Lilburn Rd.

Location: I-85 N at Indian Trail/Lilburn Rd.

Cause of Bottleneck: Not enough left/right turn lanes at ramp terminal

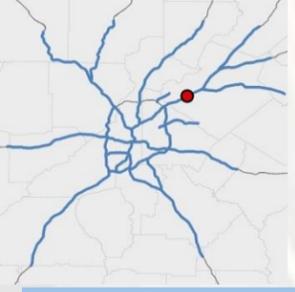
Potential Operational Strategies for Evaluation:

- 1) Diverging Diamond Interchange to reduce the number of conflicts
- 2) I-85 NB on-ramp widening from 2 to 3 lanes



Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
DDI	\$373,100	\$832,000	\$3,724,305	\$4,929,405
Ramp widening	\$15,600	\$0	\$154,570	\$170,170





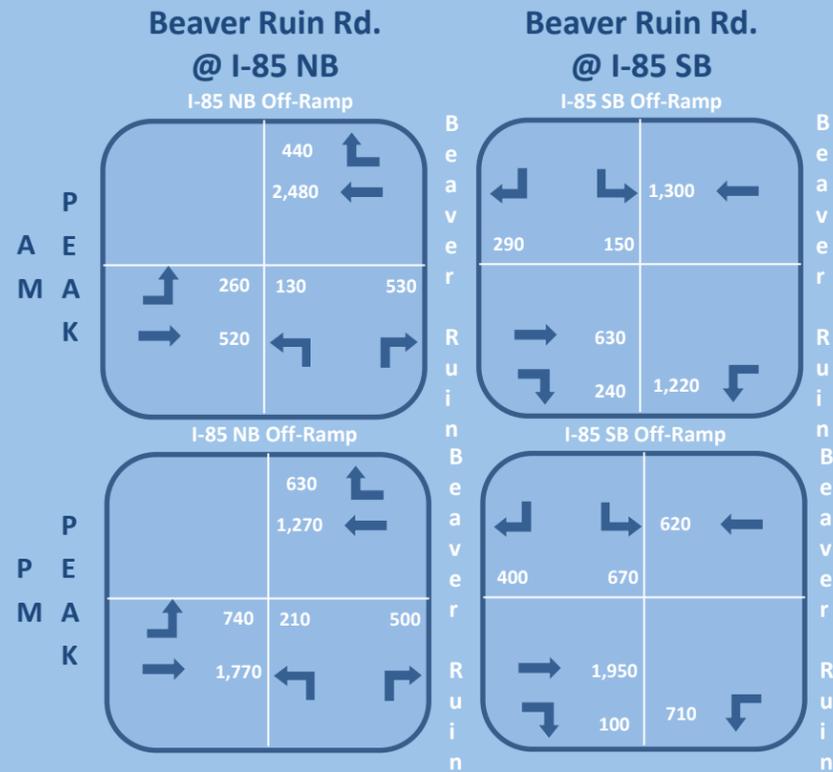
ID# 31A: I-85 N @ Beaver Ruin Rd.

Location: I-85 N at Beaver Ruin Rd.

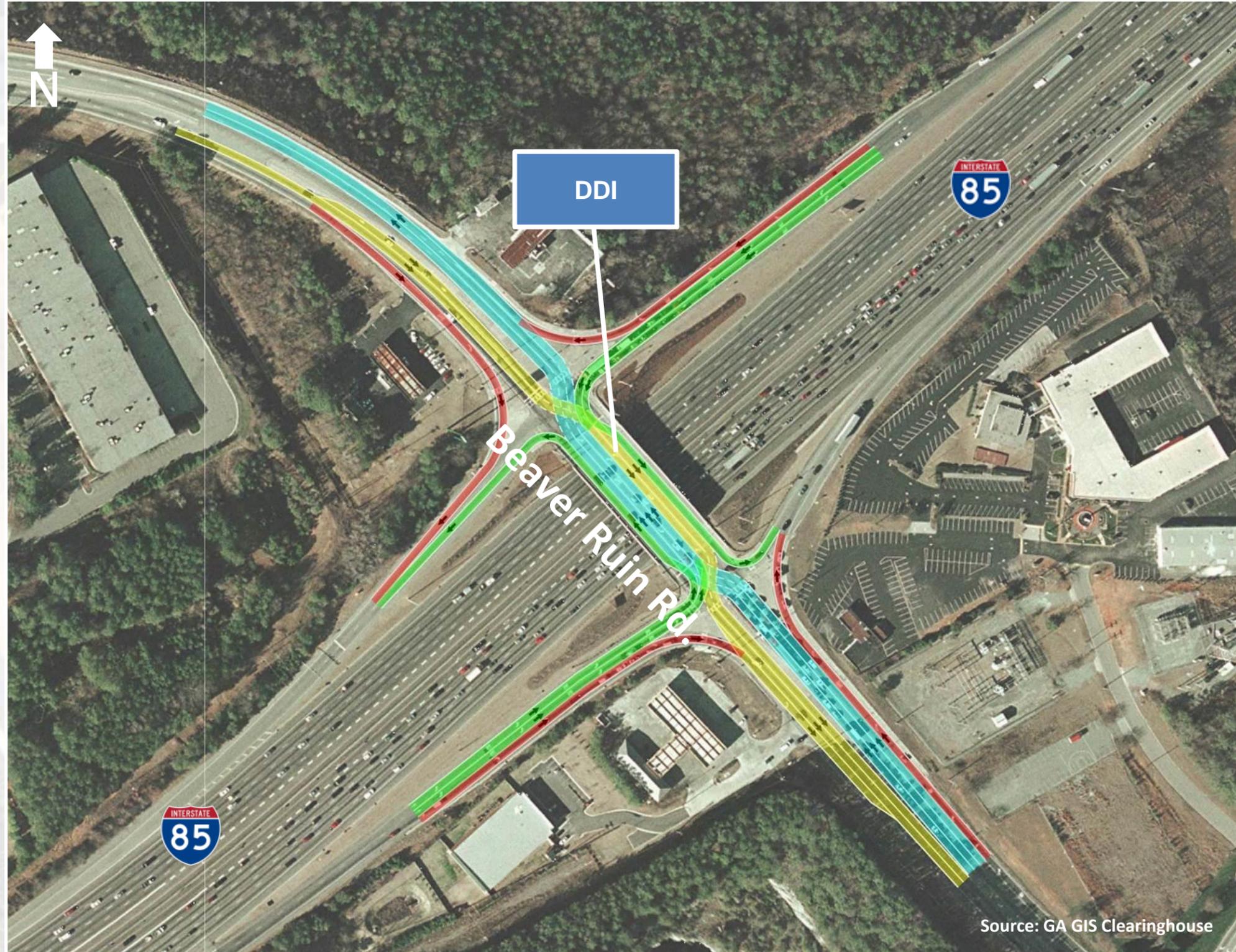
Cause of Bottleneck: High left turn volumes

Potential Operational Strategies for Evaluation:

- 1) Diverging Diamond Interchange to reduce the number of conflicts
- 2) Diverging Diamond Interchange to reduce the number of conflicts (See ID# 31B)

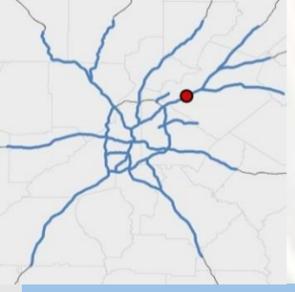


Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
DDI	\$328,900	\$832,000	\$3,285,750	\$4,446,650



Source: GA GIS Clearinghouse

Traffic Data Source: TMC Data/Traffic Counts



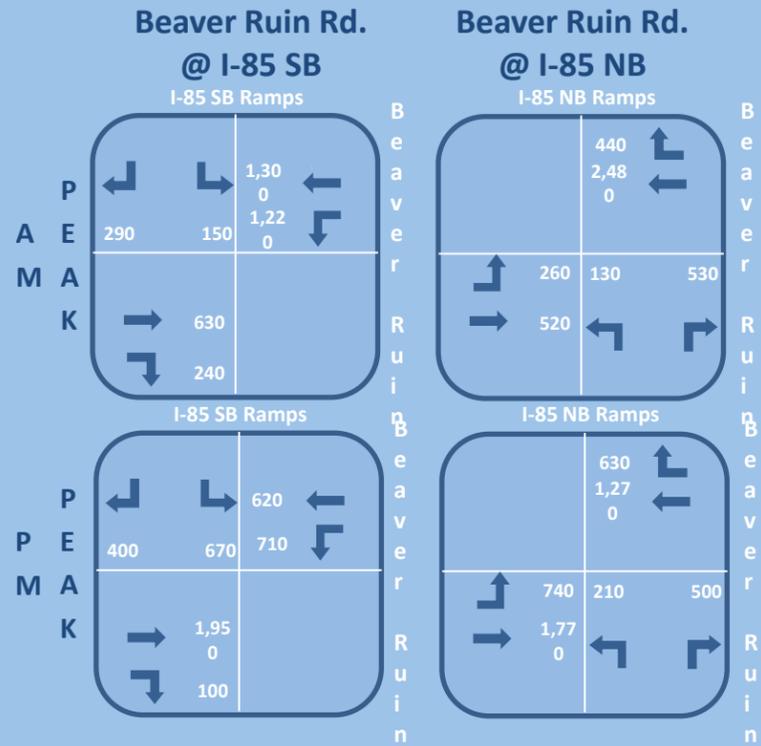
ID# 31B: I-85 N @ Beaver Ruin Rd.

Location: I-85 N at Beaver Ruin Rd.

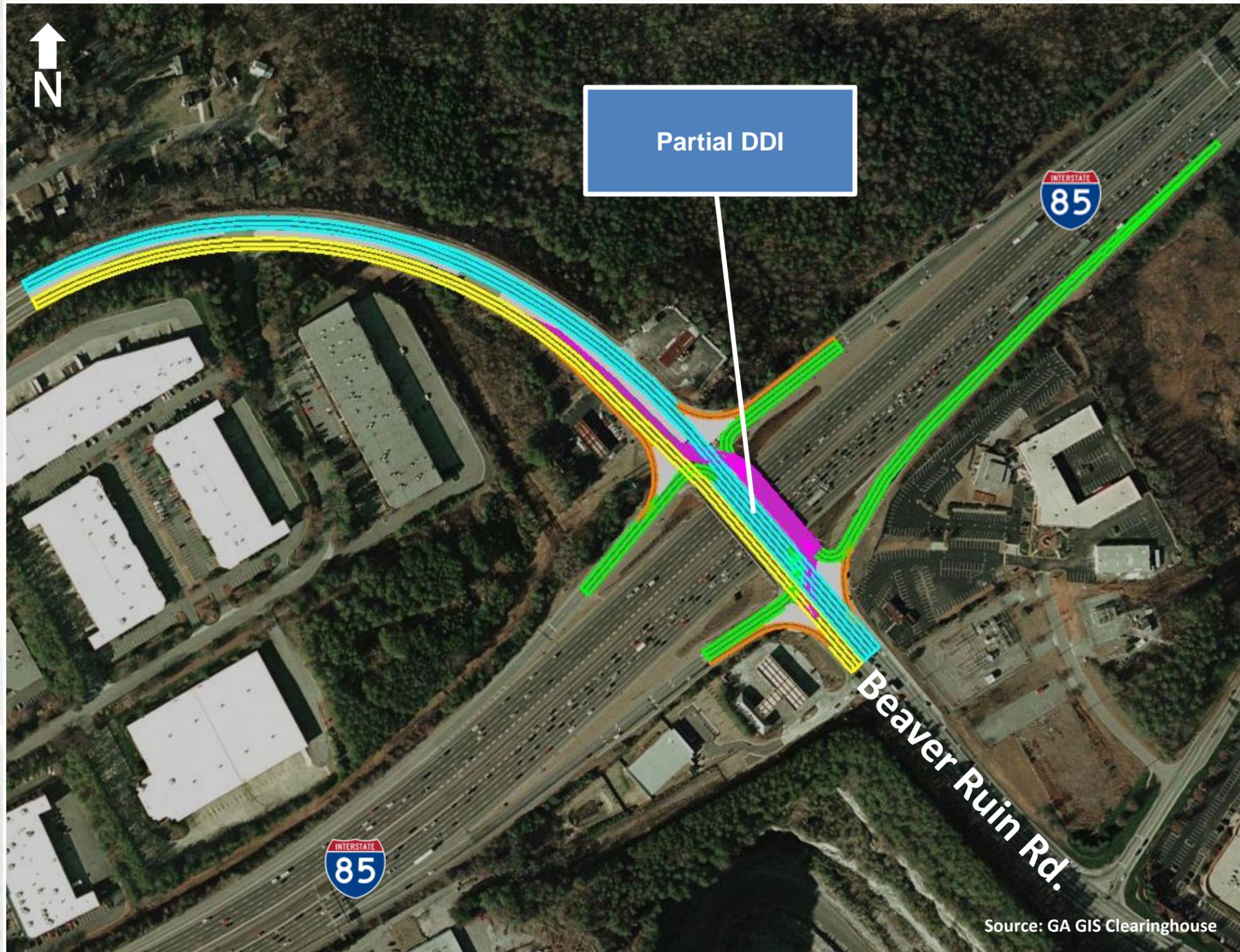
Cause of Bottleneck: High left turn volumes

Potential Operational Strategies for Evaluation:

- 1) Diverging Diamond Interchange to reduce the number of conflicts (See ID# 31A)
- 2) Diverging Diamond Interchange to reduce the number of conflicts

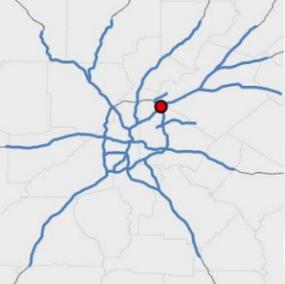


Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Partial DDI	\$663,000	\$754,000	\$6,619,470	\$8,036,470



Source: GA GIS Clearinghouse

Traffic Data Source: TMC Data/OPS Traffic Counts



ID# 32A: I-85 N @ I-285 Interchange

Location: I-85 N at I-285 Interchange

Cause of Bottleneck: High volumes - SB AM/NB PM

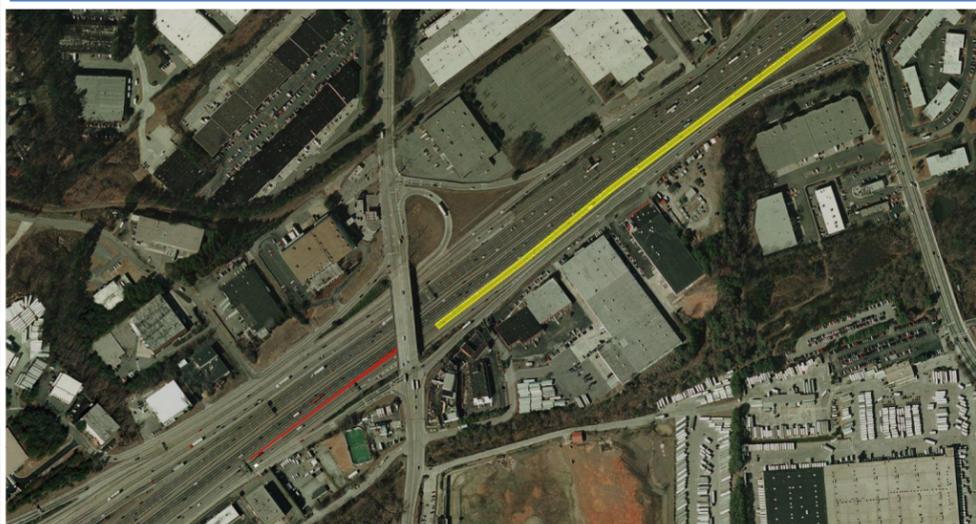
Potential Operational Strategies for Evaluation:

- 1a) Construct flyover for I-285 EB to I-85 NB that would provide access to Northcrest Rd. (eliminates the ability to exit on C/D and then get back on I-85 at Northcrest)
- 1b) Add barrier separating exit ramps from I-85 on-ramp
- 1c) Re-stripe lane add to merge at I-285 WB to I-85 NB on-ramp
- 2a) Re-stripe I-285 EB to I-85 NB on-ramp to add 2 lanes
- 2b) Re-stripe lane add to merge at I-285 WB to I-85 NB on-ramp

Northcrest Rd. Off-Ramp	AM Peak	PM Peak
Ramp Volume	790	480
I-285 to I-85 NB On-Ramp	AM Peak	PM Peak
Ramp Volume	Not Available	1,200
I-85 NB @ 285	AM Peak	PM Peak
Mainline	3,400	8,600
Congested Speed	> 45	< 25

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Restriping	\$703,300	\$4,303,000	\$7,029,165	\$12,035,465

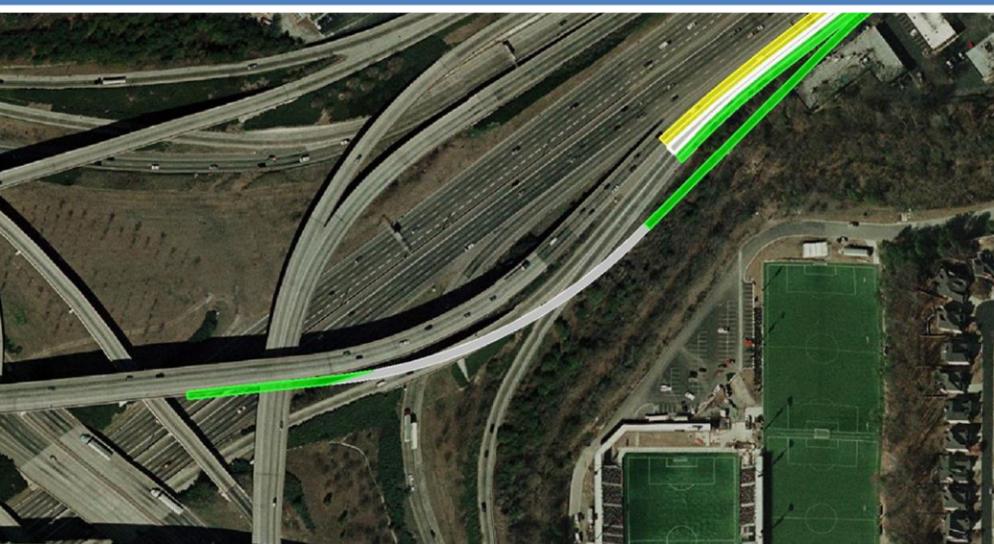
1c: Re-stripe exit ramps (RED)



1b: Construct Barrier



1a: Construct flyover (WHITE)



Source: GA GIS Clearinghouse



ID# 32B: I-85 N @ I-285 Interchange

Location: I-85 N at I-285 Interchange

Cause of Bottleneck: High volumes - SB AM/NB PM

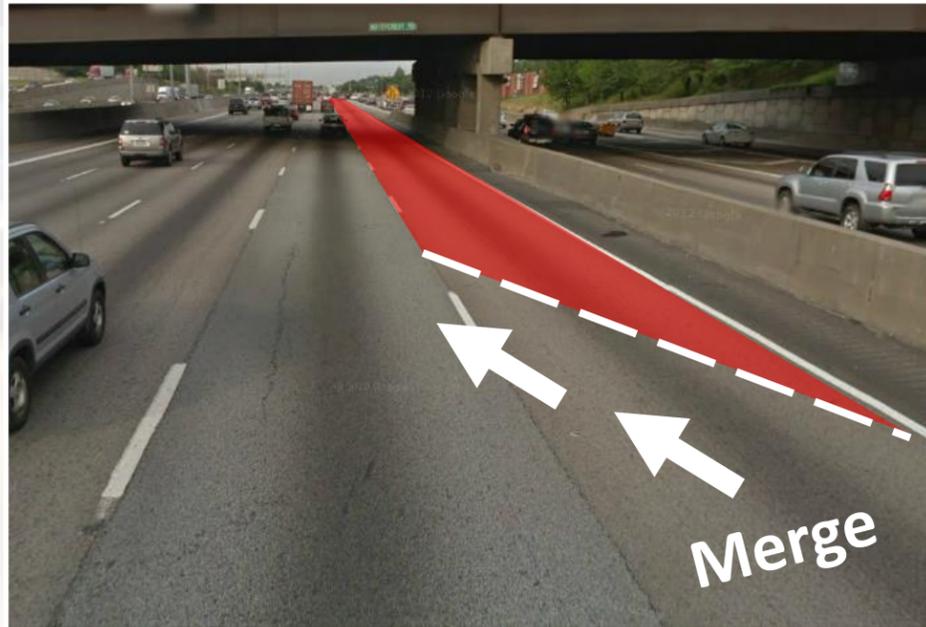
Potential Operational Strategies for Evaluation:

- 1a) Construct flyover for I-285 EB to I-85 NB that would provide access to Northcrest Rd. (eliminates the ability to exit on C/D and then get back on I-85 at Northcrest)
- 1b) Add barrier separating exit ramps from I-85 on-ramp
- 1c) Re-stripe lane add to merge at I-285 WB to I-85 NB on-ramp
- 2a) Re-stripe I-285 EB to I-85 NB on-ramp (currently 1 lane) to add 1 lane; and
- 2b) Re-stripe I-285 WB to I-85 NB on-ramp (currently 2 lanes) to remove one lane

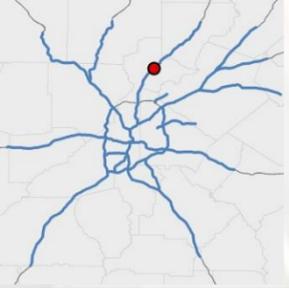
I-85 NB @ 285	AM Peak	PM Peak
Mainline	3,400	8,600
Congested Speed	> 45	< 25

I-85 NB Ramps	AM Peak	PM Peak
I-285 to I-85 NB On-Ramp	Not Available	1,200
Northcrest Rd. Off-Ramp	790	480

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Restriping	\$42,900	\$0	\$416,260	\$459,160



Traffic Data Source: TMC Data/OPS Traffic Counts



ID# 33: SR 400 @ Haynes Bridge Rd.

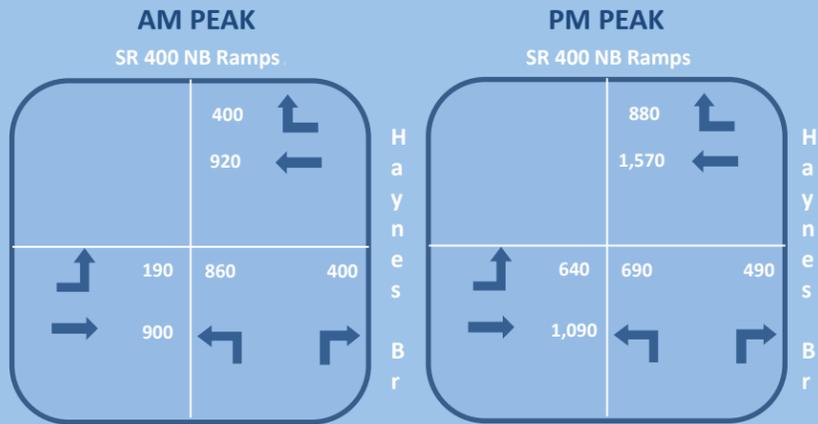
Location: SR 400 at Haynes Bridge Rd.

Cause of Bottleneck: Heavy NB to WB movement

Potential Operational Strategies for Evaluation:

- 1) Construct new NB to WB loop ramp and re-construct NB SR 400 on-ramp

Haynes Bridge Rd.
@ SR 400 NB



Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Reconfigure Ramp	\$205,400	\$3,250,000	\$2,047,262	\$5,502,662



Source: Google

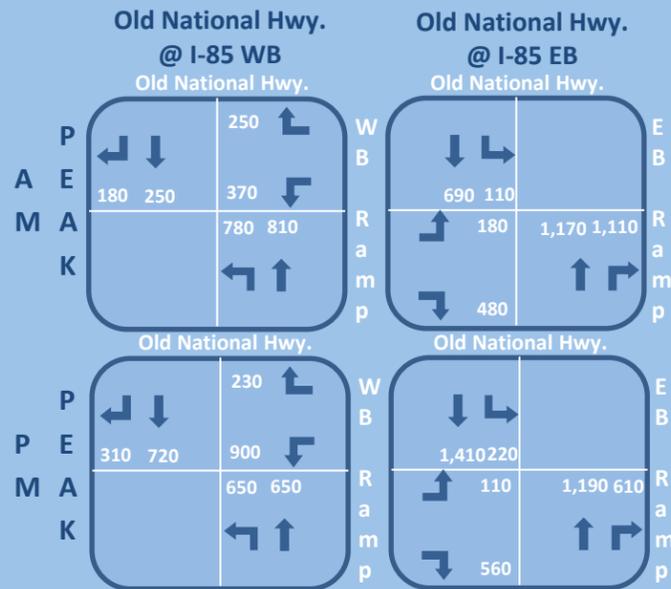
ID# 34: I-285/85 @ Old National Highway

Location: I-285/85 @ Old National Highway

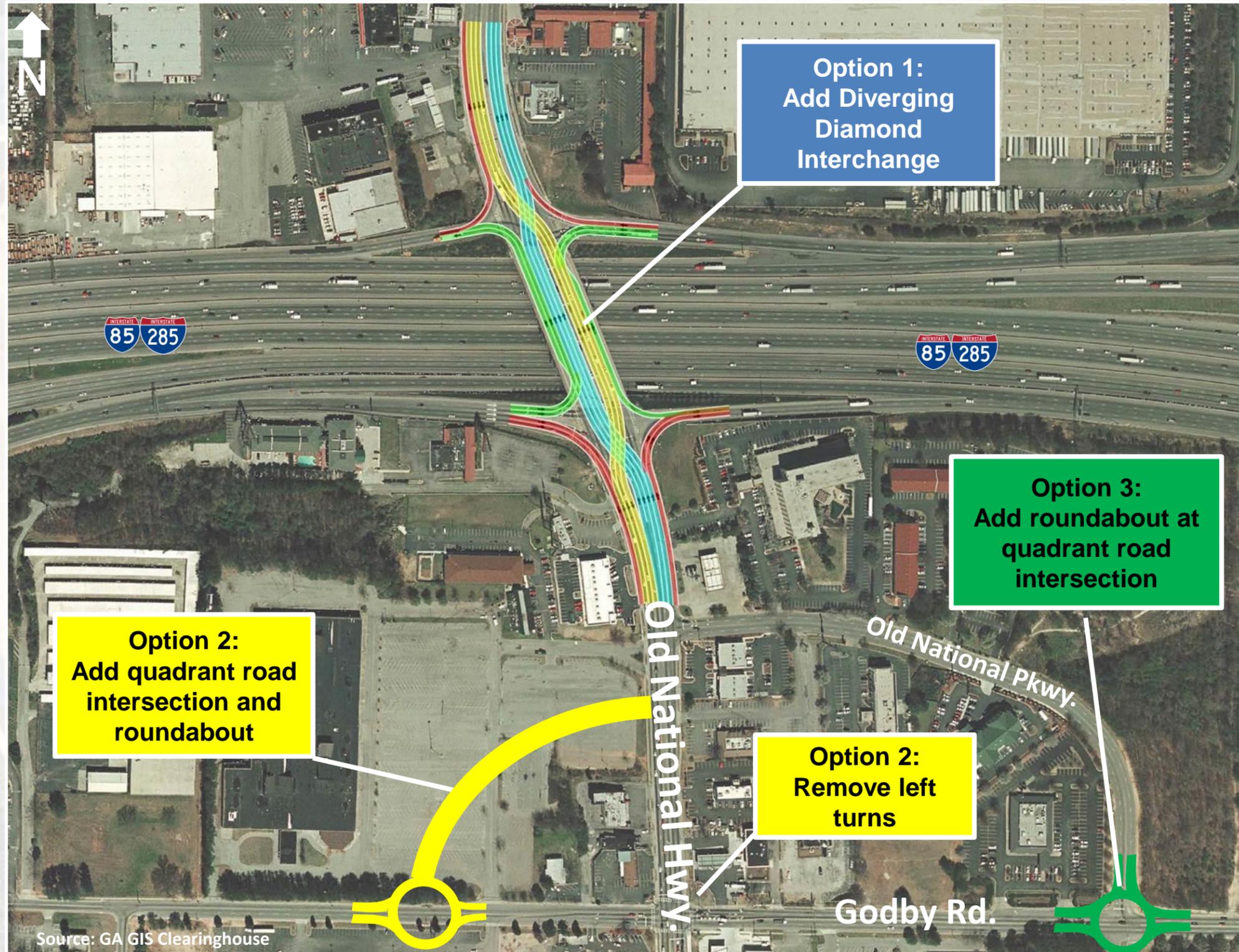
Cause of Bottleneck: Peak period volumes on Old National and Godby Rd.

Potential Operational Strategies for Evaluation:

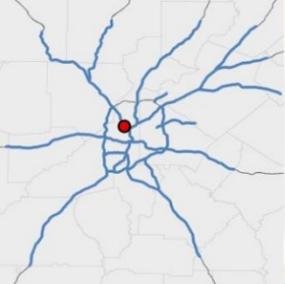
- 1) Add Diverging Diamond (reduces the number of conflicts) (\$4,501,900)
- 2) Add quadrant road intersection and roundabout. Shift left turns from Old Nat. Hwy./Godby intersection to new quadrant intersection (\$16,819,725)
- 3) Add roundabout at Godby Rd. and Old National Pkwy. intersection. Extend SB to EB left turn lane on Old National Hwy. (\$2,489,890)



Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
DDI	\$334,100	\$832,000	\$3,335,800	\$4,501,900
Quadrant road and roundabout	\$373,100	\$12,727,000	\$3,719,625	\$16,819,725
Roundabout	\$221,000	\$65,000	\$2,203,890	\$2,489,890



Traffic Data Source: OPS Traffic Counts



ID# 35: I-75 @ Howell Mill Rd.

Location: I-75 at Howell Mill Rd.

Cause of Bottleneck: Weaving/turn volumes at NB Off-Ramp

Potential Operational Strategies for Evaluation:

- 1) Diverging Diamond Interchange (reduces the number of conflicts)



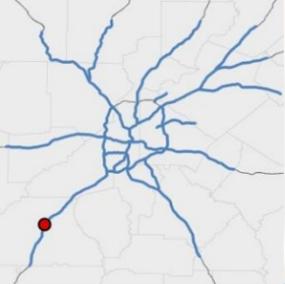
Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
DDI	\$334,100	\$3,640,000	\$3,336,450	\$7,310,550



Source: GA GIS Clearinghouse

Traffic Data Source: OPS Traffic Counts





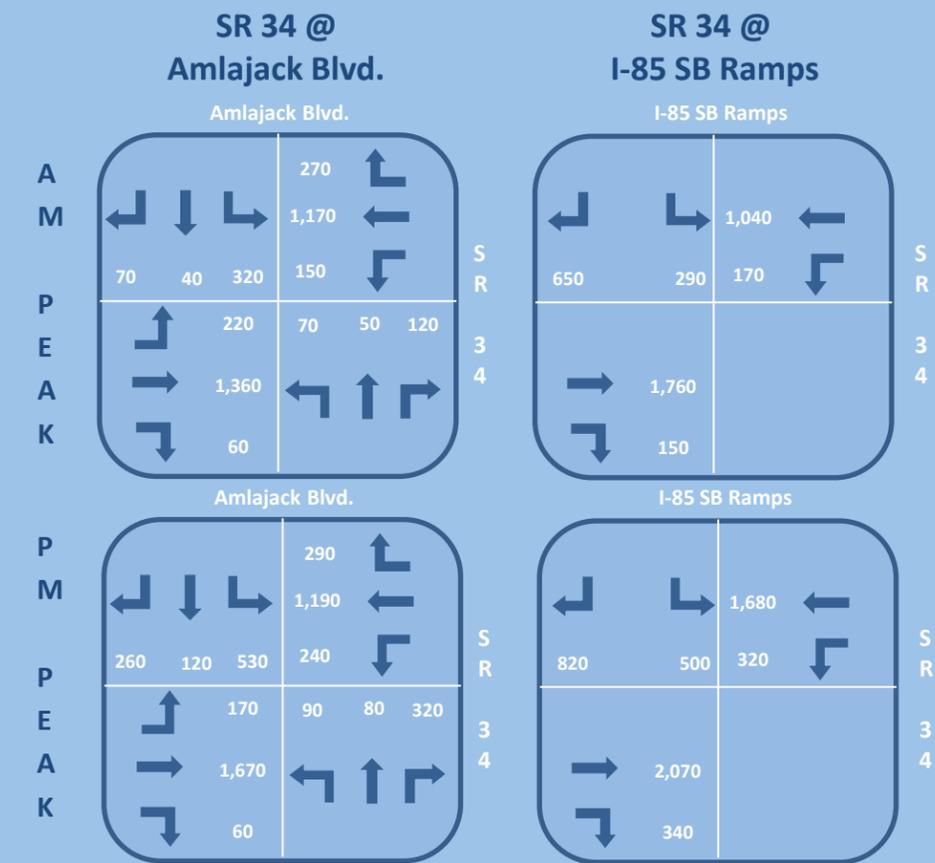
ID# 36: I-85 S @ SR 34

Location: I-85 S at SR 34 (Bullsboro Dr.)

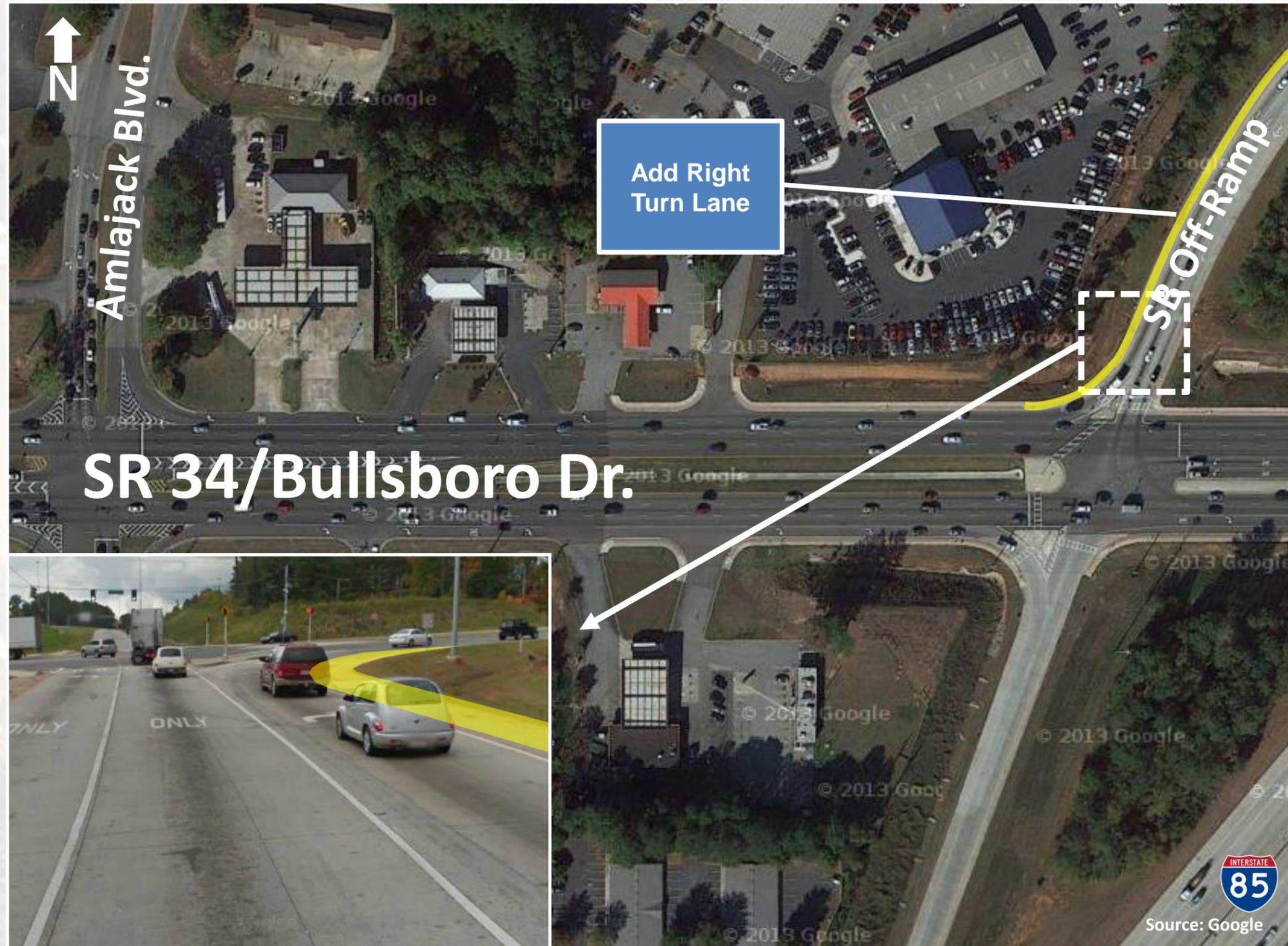
Cause of Bottleneck: Right turn lane at SB Off-Ramp

Potential Operational Strategies for Evaluation:

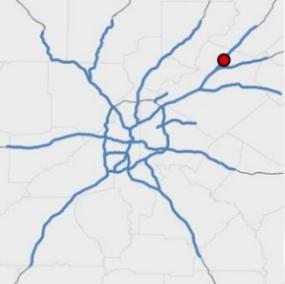
- 1) Construct 2nd right turn lane (additional pavement) and add right turn signal



Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Add right turn lane	\$92,300	\$312,000	\$913,250	\$1,317,550



Traffic Data Source: OPS Traffic Counts



ID# 37: I-985 @ SR 20

Location: I-985 at SR 20

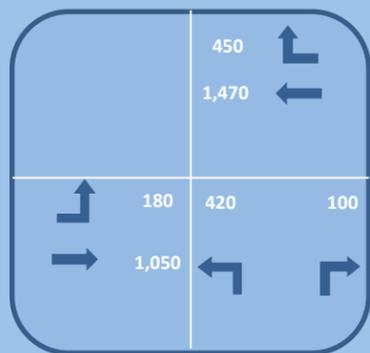
Cause of Bottleneck: High volumes

Potential Operational Strategies for Evaluation:

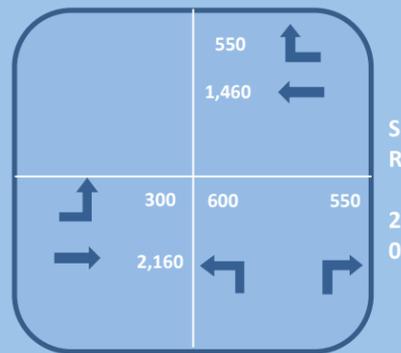
- 1) Increase NB exit ramp storage by widening ramp using shoulders (approx. 0.2 miles)

**SR 20
@ I-985 NB**

AM PEAK
I-985 NB Ramps



PM PEAK
I-985 NB Ramps

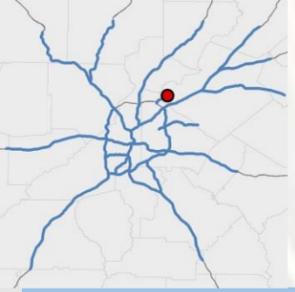


Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Widen off-ramp	\$54,600	\$0	\$540,280	\$594,880



Source: Google





ID# 38: Peachtree Industrial Blvd. @ SR 140

Location: Peachtree Industrial Blvd. at SR 140

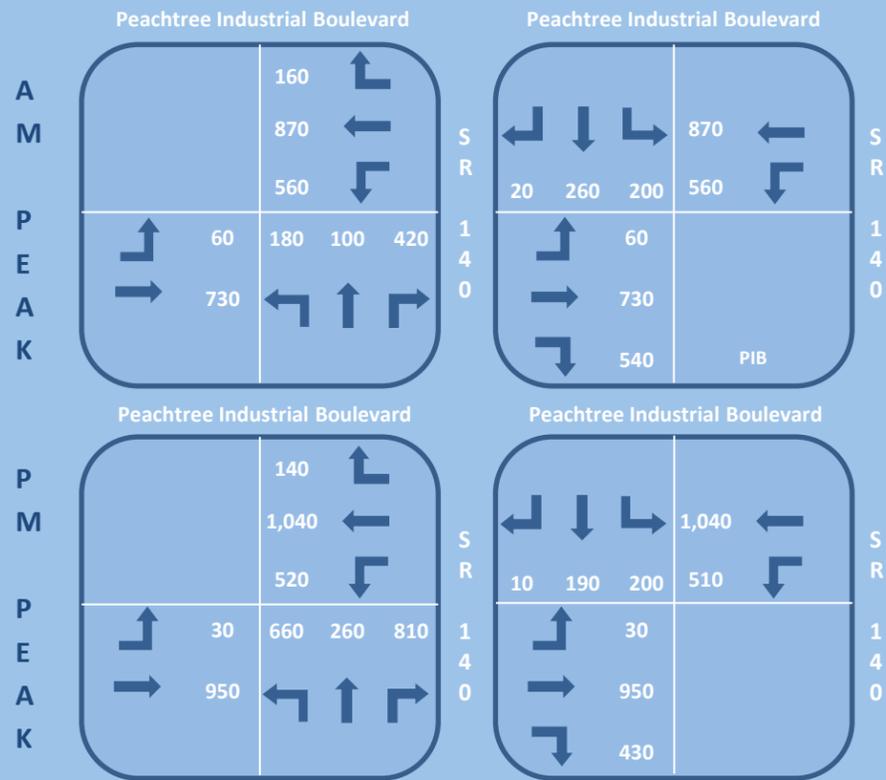
Cause of Bottleneck: Left turn volumes

Potential Operational Strategies for Evaluation:

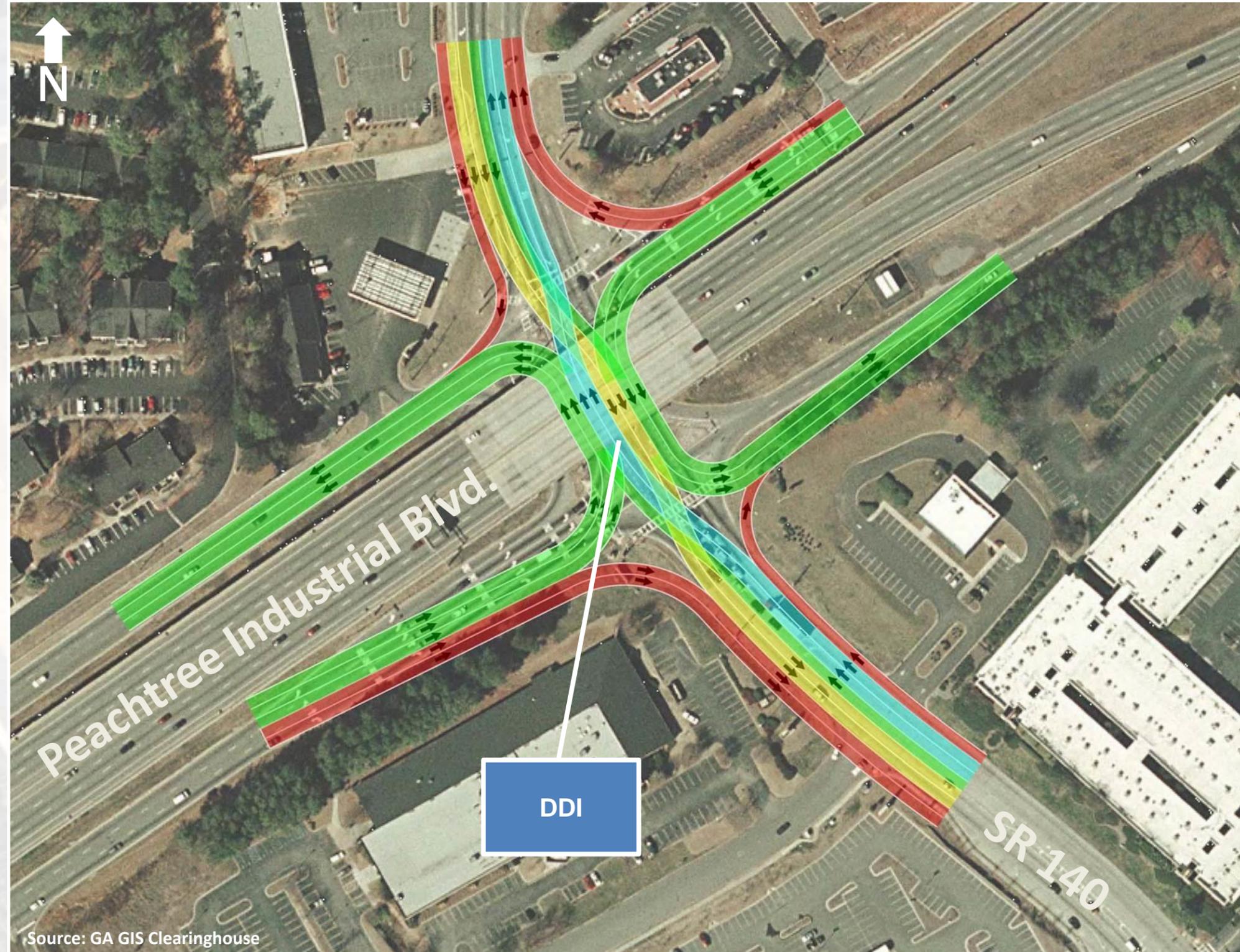
- 1) Diverging Diamond Interchange (reduces the number of conflicts)

**SR 140 @ PIB
NB Off-Ramp**

**SR 140 @ PIB
SB Off-Ramp**

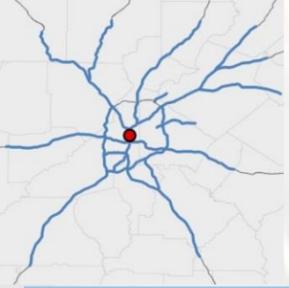


Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
DDI	\$276,900	\$650,000	\$2,761,720	\$3,688,620



Source: GA GIS Clearinghouse

Traffic Data Source: Traffic Counts



ID# 39: Downtown Connector @ North Ave.

Location: Downtown Connector @ North Ave.

Cause of Bottleneck: High right turn volume

Potential Operational Strategies for Evaluation:

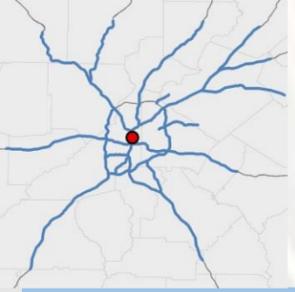
- 1) Add right turn lane at North Ave. off-ramp

Downtown Connector Ramp	AM Peak	PM Peak
North Ave. SB Off-Ramp	1,300	400

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Add right turn lane	\$72,800	\$78,000	\$723,060	\$873,860



Source: Google



ID# 40: Downtown Connector SB @ Williams St.

Location: Downtown Connector at Williams St. (Southbound Off-Ramp, Northbound/ Southbound On-Ramp)

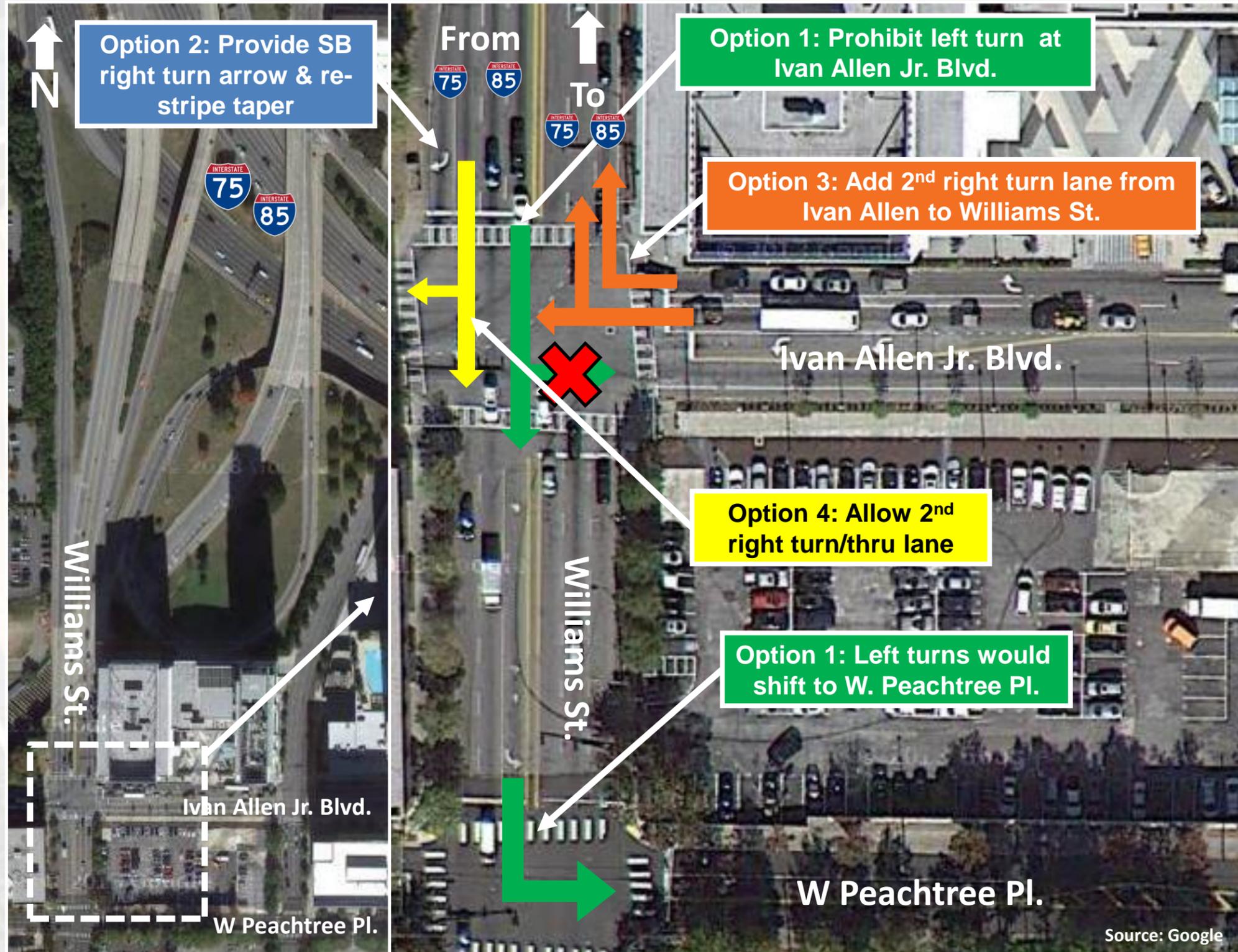
Cause of Bottleneck: Weave of SB exiting traffic approaching the intersection of Ivan Allen Jr. Blvd.

Potential Operational Strategies for Evaluation:

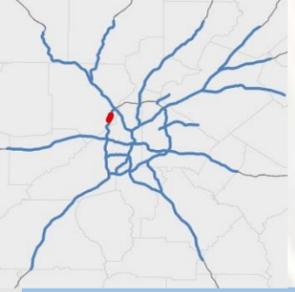
- 1) Prohibit left turn at Ivan Allen Jr. Blvd. SB approach (left turns would shift to W Peachtree Pl.
- 2) Provide SB right turn arrow at Ivan Allen Jr. Blvd. and re-stripe SB right turn taper
- 3) Add second right turn lane from Ivan Allen Jr. Blvd. to Williams St.
- 4) Re-stripe Williams St. (allow 2nd right turn/thru lane)

I-75 / I-85 Ramp	AM Peak	PM Peak
Williams St. SB Off-Ramp	700	200

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Prohibit left turn	\$11,700	\$0	\$109,687	\$121,388
Re-stripe right turn	\$41,600	\$0	\$390,943	\$125,320
Add right turn lane	\$9,100	\$0	\$83,817	\$92,918
Re-stripe ramp	\$9,100	\$0	\$83,817	\$92,918



Source: Google



ID# 41: I-285 @ Paces Ferry Rd.

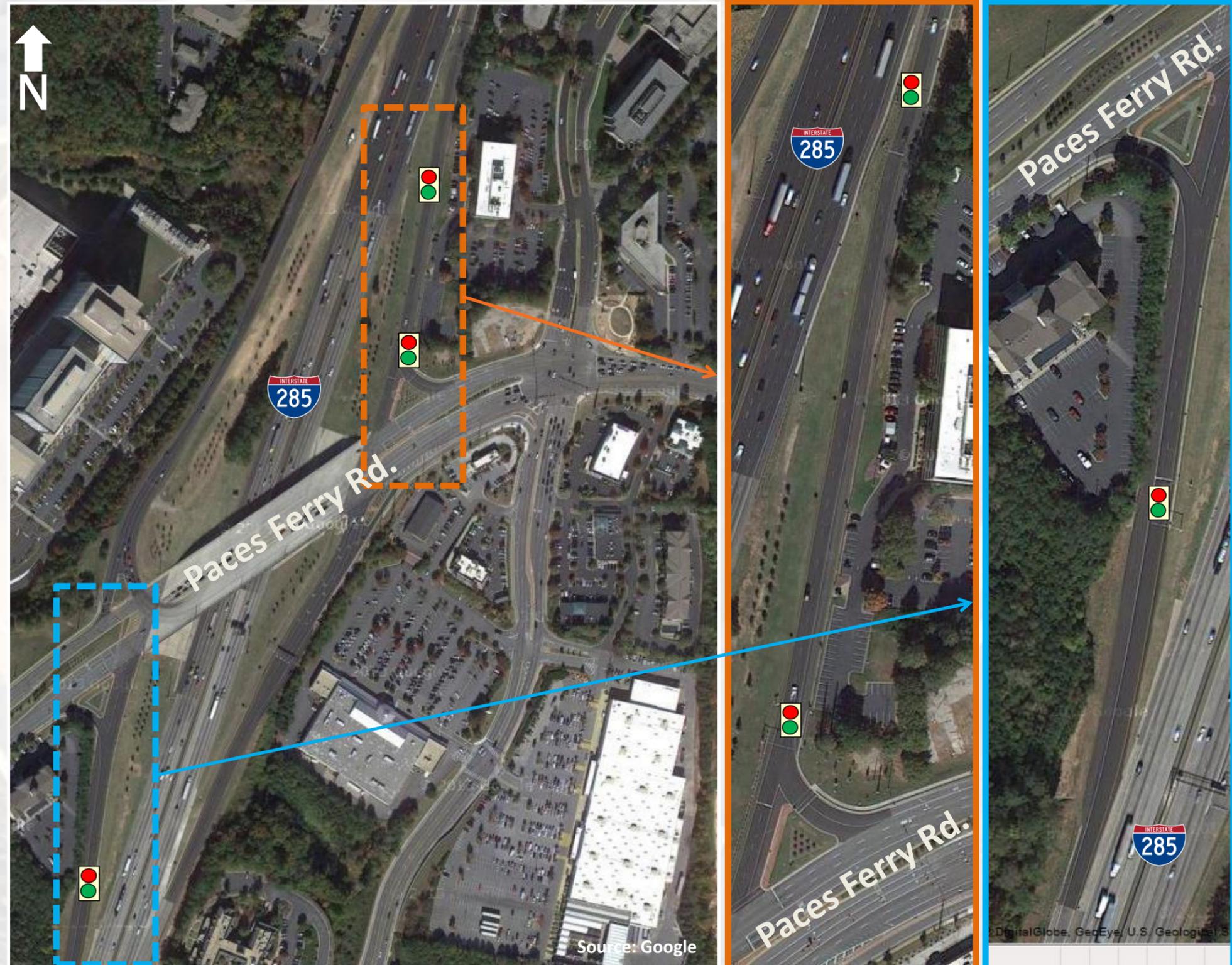
Location: I-285 at Paces Ferry Rd.

Cause of Bottleneck: High Ramp Volume

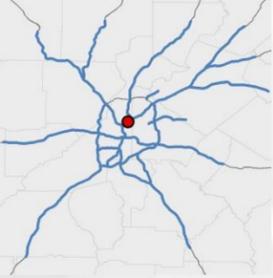
Potential Operational Strategies for Evaluation:

- 1) Ramp meter signal timing improvements

Paces Ferry NB On-Ramp		AM Peak	PM Peak	
Ramp Volume		1,440	1,160	
Paces Ferry SB On-Ramp		AM Peak	PM Peak	
Ramp Volume		460	810	
Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Ramp Signal Timing	\$6,500	\$0	\$52,390	\$58,890



Traffic Data Source: Traffic Counts



ID# 42: Piedmont Rd. @ Buford Connector SB

Location: Piedmont Rd. at SB Buford Connector

Cause of Bottleneck: High Volume and Weaving

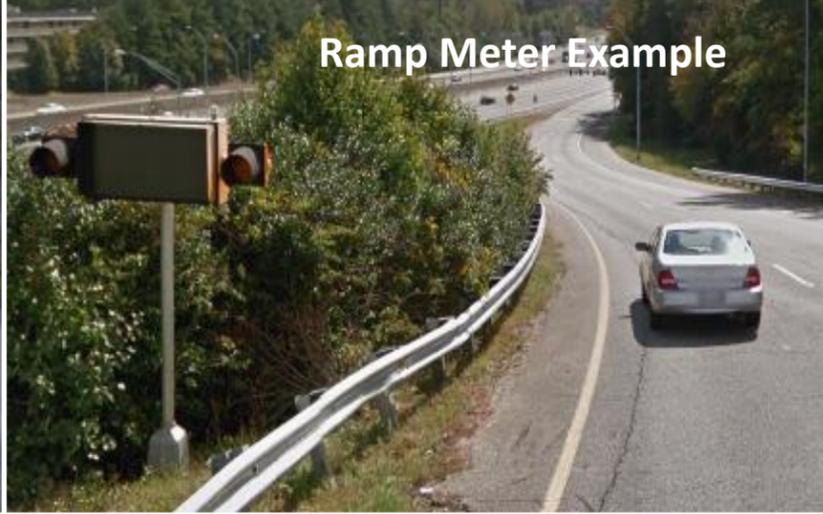
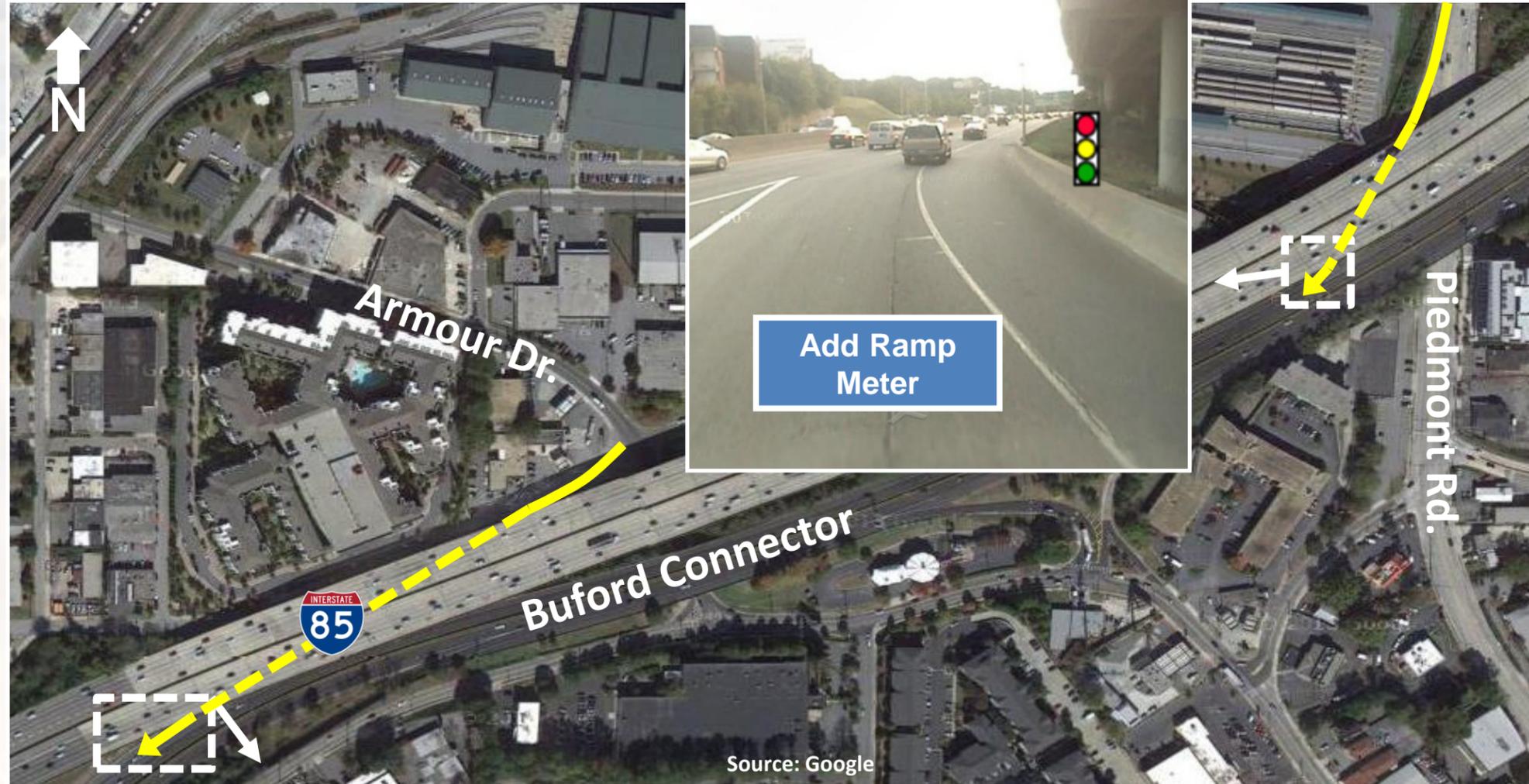
Potential Operational Strategies for Evaluation:

- 1) Add ramp meter for southbound on-ramp from Piedmont Rd. to Buford Connector
- 2) Add ramp meter for southbound on-ramp from Armour Dr. to Buford Connector

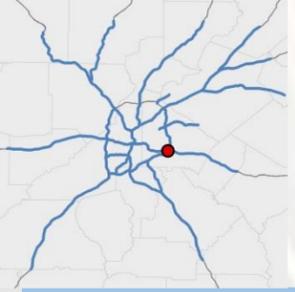
SB Buford Connector	AM Peak	PM Peak
Mainline	3,480	2,530

Buford Connector Ramps	AM Peak	PM Peak
Armour Dr. SB On-Ramp	Not available	Not available
Piedmont Rd. SB On-Ramp	920	920

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Ramp metering	\$5,200	\$0	\$51,245	\$55,445
Ramp metering	\$5,200	\$0	\$51,245	\$55,445



Traffic Data Source: OPS Traffic Counts



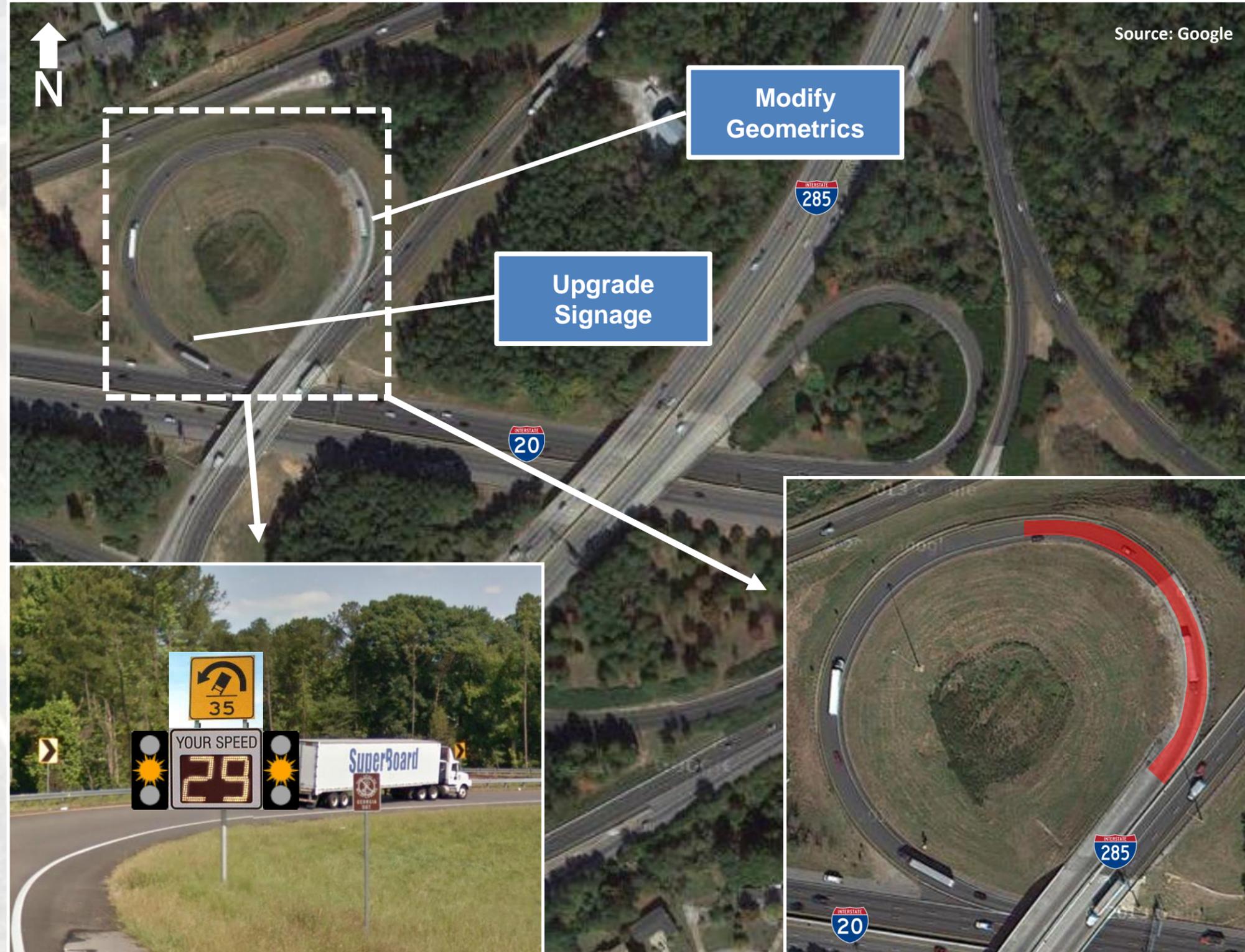
ID# 43: I-285E/I-20E

Location: I-285E/I-20 E

Cause of Safety Concern : Varying turning radii leading to difficulty for trucks navigating ramps

Potential Operational Strategies for Evaluation:

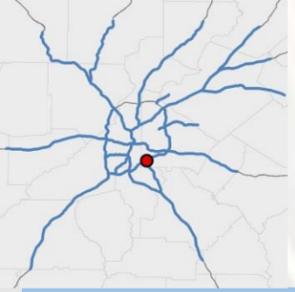
- 1a) Improve ramp geometrics to better accommodate trucks
- 1b) Consider upgrade to existing automated truck rollover warning sign



Source: Google

I-20 WB Ramps	AM Peak	PM Peak
I-20 WB to I-285 SB	Not Available	Not Available

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Ramp geometrics / signage	\$35,100	\$0	\$332,514	\$367,614



ID# 44: I-285 South @ I-675

Location: I-285 S at I-675

Cause of Safety Concern : Tight curves on ramps

Potential Operational Strategies for Evaluation:

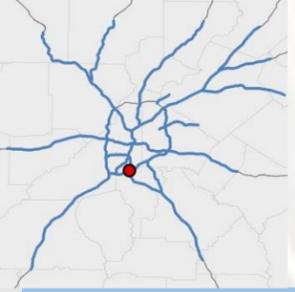
- 1) New automated truck rollover warning system for ramps

I-285 Ramps	AM Peak	PM Peak
I-675 NB to I-285 WB	1,000	400
I-285 WB to I-675 SB	200	1,500

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Signage	\$2,600	\$0	\$14,950	\$17,550



Source: Google



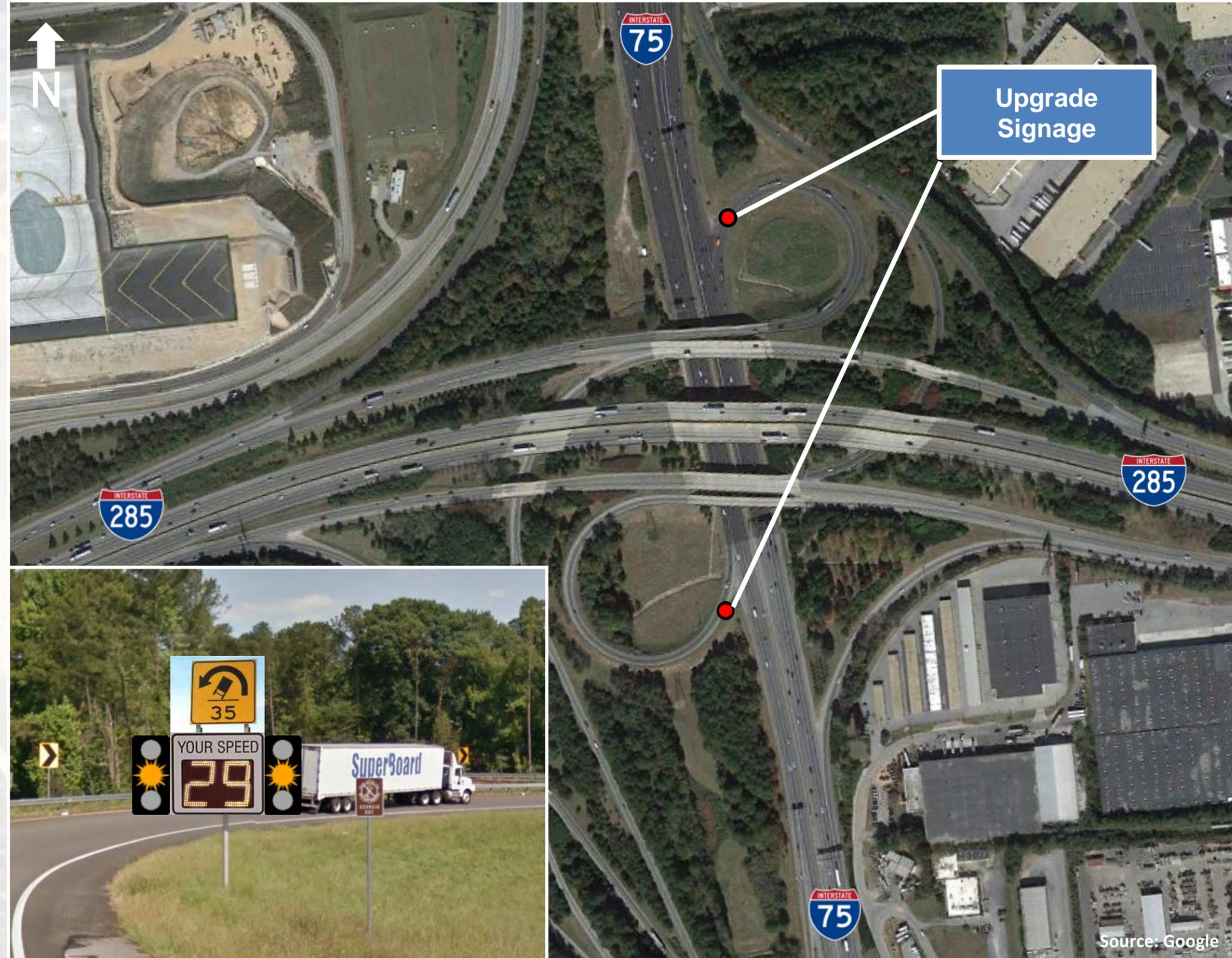
ID# 45: I-285 South @ I-75 S Interchange

Location: I-285 S at I-75 S Interchange

Cause of Safety Concern : Truck overturns (NB to WB)

Potential Operational Strategies for Evaluation:

- 1) New automated truck rollover warning system for ramps



Source: Google

I-75 NB Off-Ramp	AM Peak	PM Peak
I-75 NB to I-285 WB	500	800
I-75 SB to I-285 EB	1,000	1,700

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Signage	\$2,600	\$0	\$14,950	\$17,550

ID# 46: I-75 NB Between Northside Dr. and Howell Mill Rd.

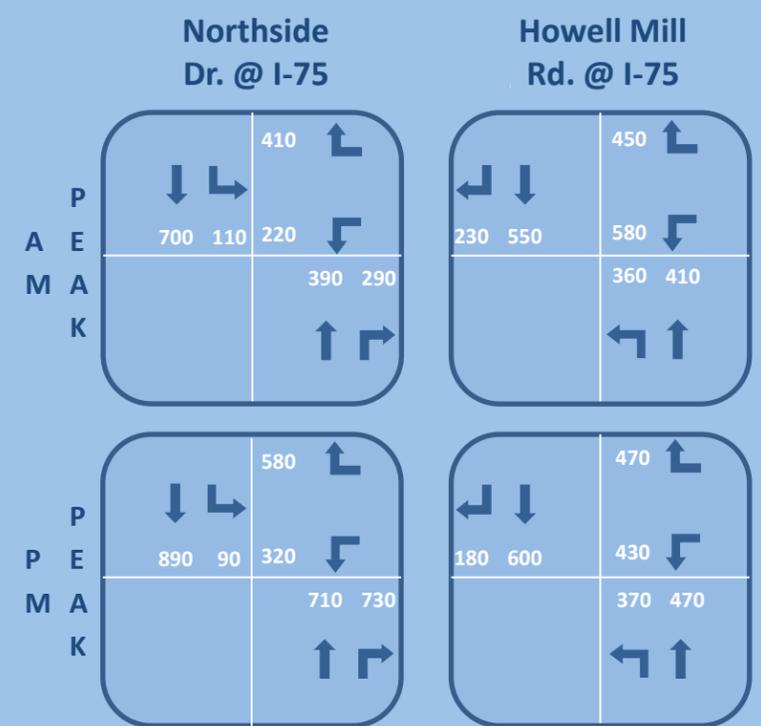


Location: I-75 between Northside Dr. and Howell Mill Rd.

Cause of Bottleneck: Tight weaving distance for merging traffic

Potential Operational Strategies for Evaluation:

- 1) C/D road between Northside Dr. and Howell Mill Rd.



I-75 NB @ Howell Mill		AM Peak	PM Peak	
Mainline		5,270	7,150	
Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
C/D Road	\$908,700	\$3,900,000	\$9,076,990	\$13,885,690



Traffic Data Source: Traffic Counts

ID# 47A: I-85 North @ Hamilton Mill Rd.

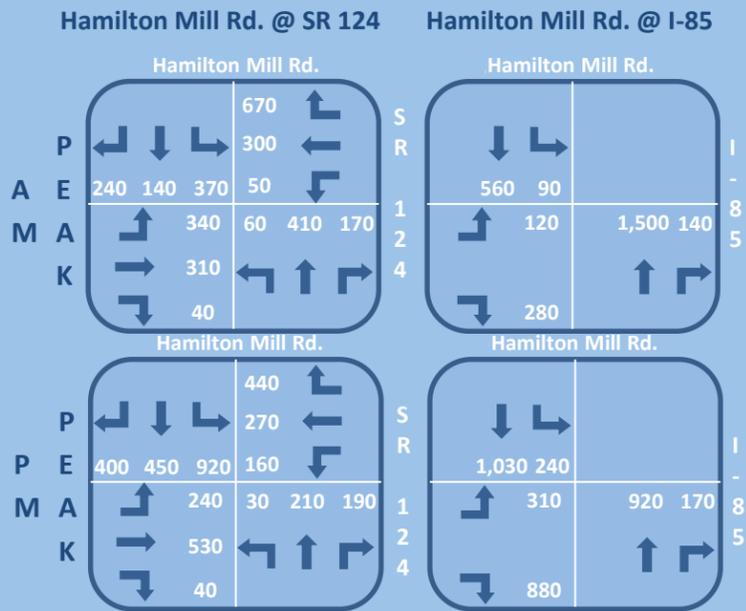


Location: I-85 North @ Hamilton Mill

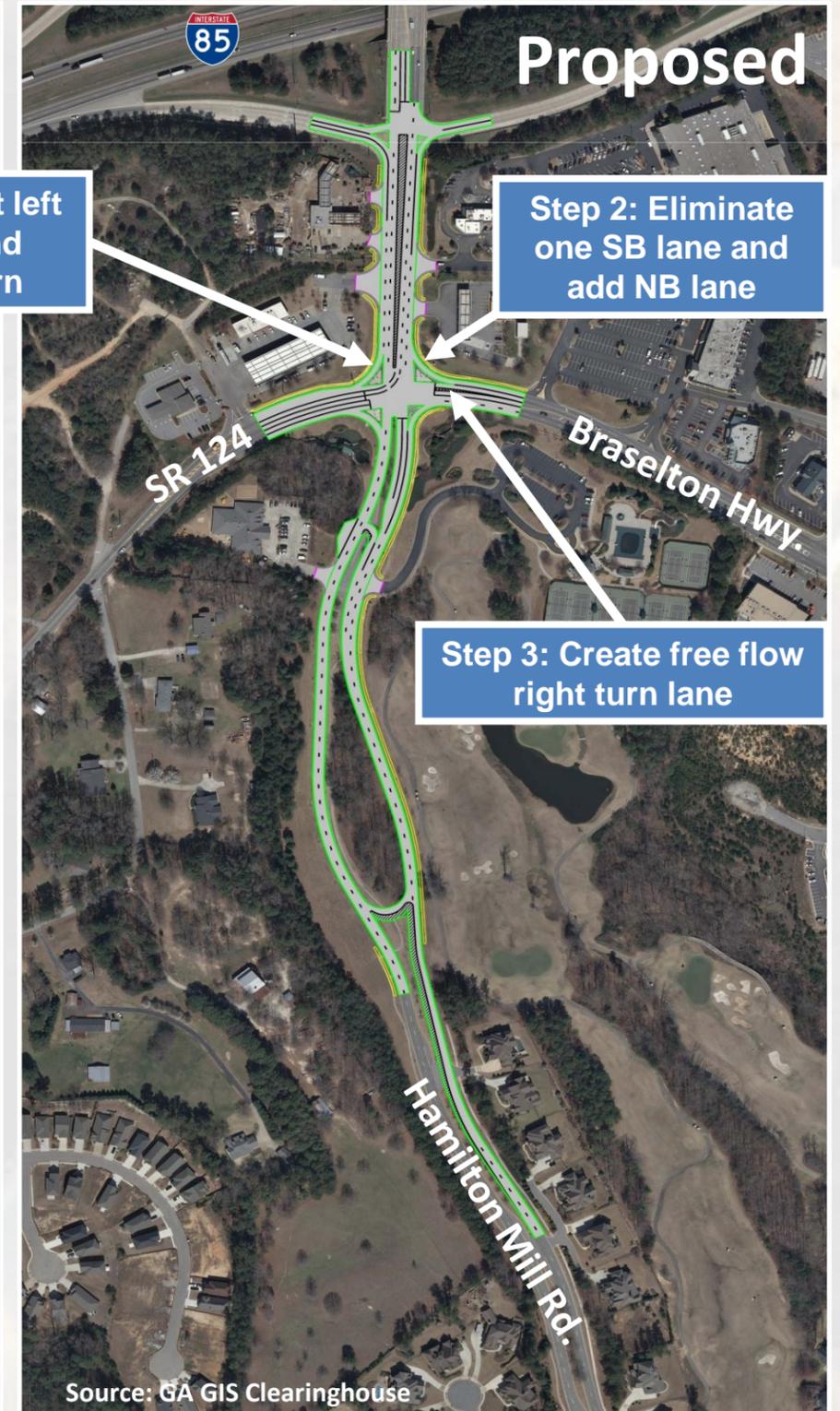
Cause of Bottleneck: Hamilton Mill Road and Braselton Highway Volume

Potential Operational Strategies for Evaluation:

- 1a) Create indirect left turn intersection at Hamilton Mill Road and Braselton Highway/SR 124 and eliminate Hamilton Mill Road southbound left turn at SR 124
- 1b) Shift Hamilton Mill Rd. median between I-85 Northbound ramps and SR 124 to eliminate one southbound lane and add one northbound lane
- 1c) Create free flow right turn lane for SR 124 westbound to Hamilton Mill Road northbound movement



Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Indirect left turn	\$200,200	\$0	\$1,991,470	\$2,191,670



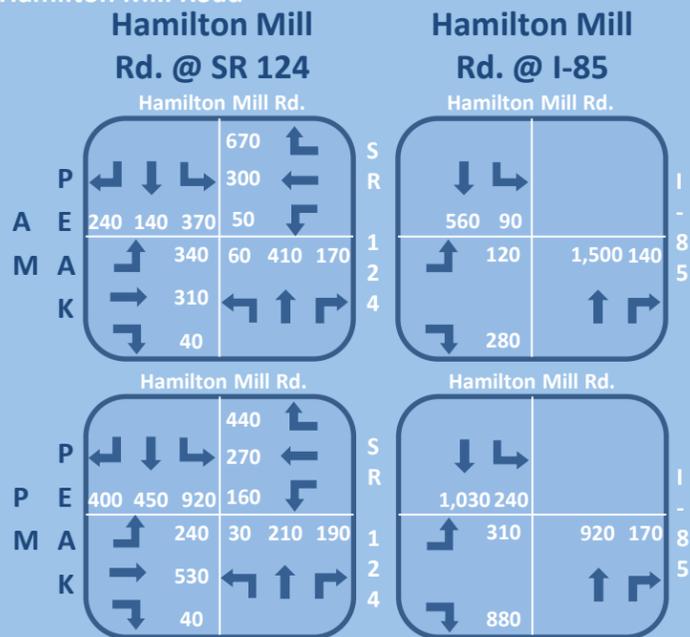
ID# 47B: I-85 North @ Hamilton Mill Rd.

Location: I-85 North @ Hamilton Mill Rd.

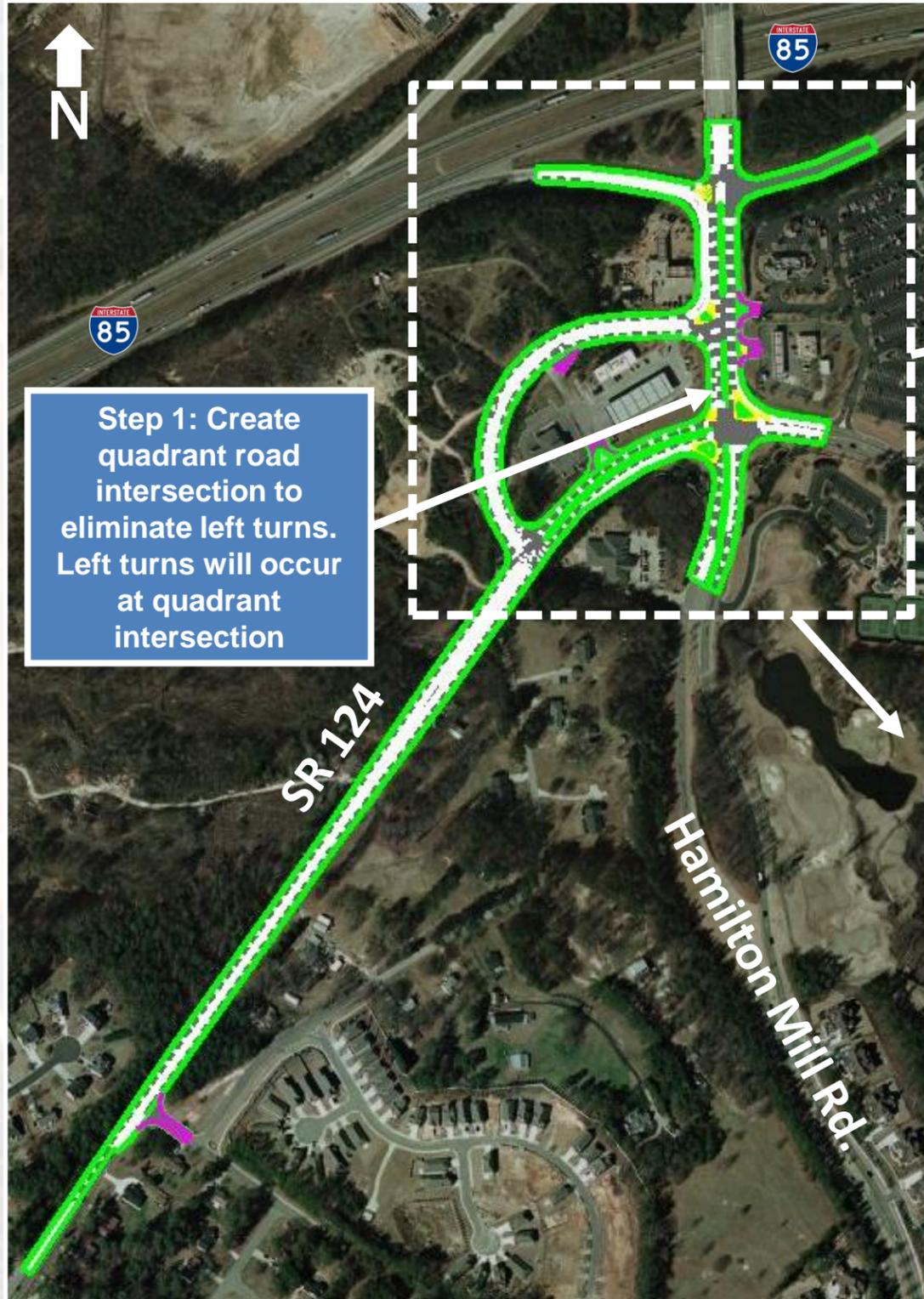
Cause of Bottleneck: Arterial peak period volumes at Hamilton Mill Road and Braselton Highway (SR 124)

Potential Operational Strategies for Evaluation:

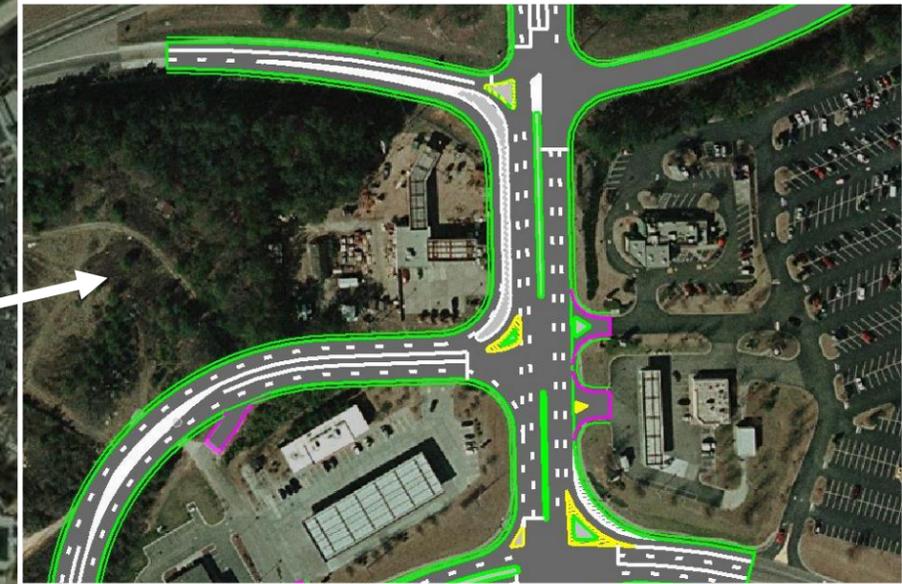
- 1) Create quadrant road intersection to eliminate SB left turn onto SR 124 and all east/west left turns from SR 124 onto Hamilton Mill Road. These left turn movements will occur at quadrant road intersection. Channelize I-85 NB traffic at Hamilton Mill Road using pavement island
- 2) Create quadrant road intersection to eliminate SB left turn onto SR 124 and all east/west left turns from SR 124 onto Hamilton Mill Road. These left turn movements will occur at quadrant road intersection. Re-stripe SB Hamilton Mill Road



Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Quadrant road (barrier)	\$483,600	\$5,434,000	\$4,827,680	\$10,745,280
Quadrant road (no barrier)	\$475,800	\$5,434,000	\$4,755,660	\$10,665,460



Option 1: Channelize I-85 ramp traffic onto quadrant road intersection (pavement island)



Option 2: Re-stripe SB Hamilton Mill Rd. traffic onto quadrant road intersection



Source: Google

Traffic Data Source: Traffic Counts

ID# 47C: I-85 North @ Hamilton Mill Rd.

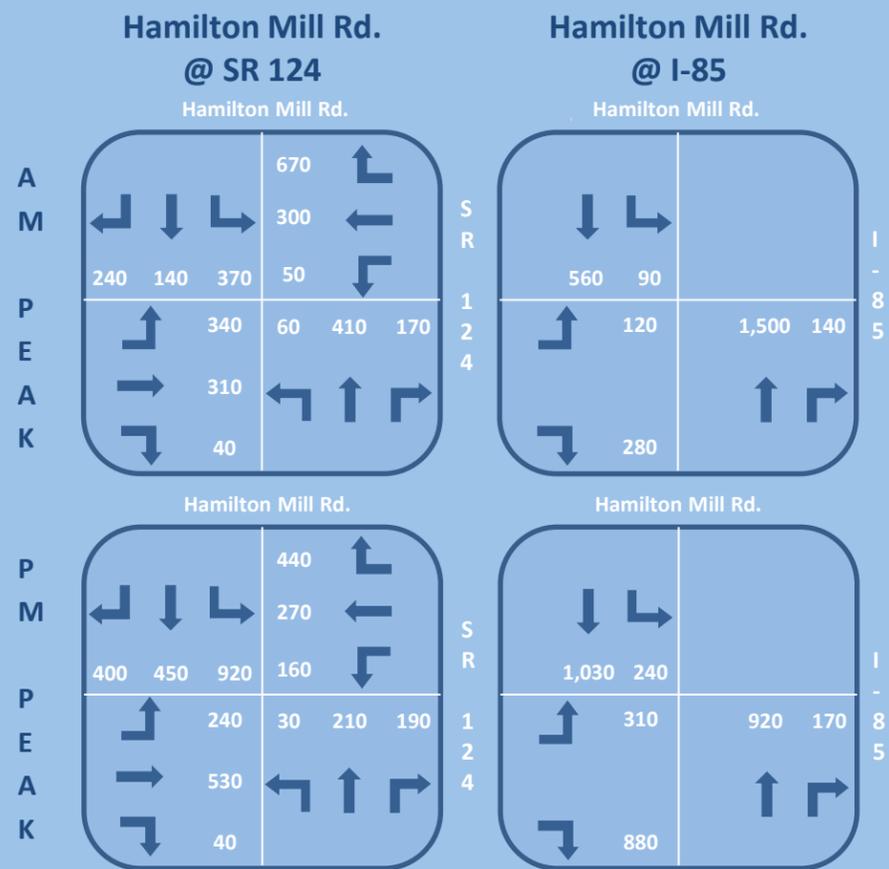


Location: I-85 North @ Hamilton Mill Rd.

Cause of Bottleneck: Arterial peak period volumes at Hamilton Mill Road and SR 124 (Braselton Hwy)

Potential Operational Strategies for Evaluation:

4) Relocate Hamilton Mill Rd. off-ramp



Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Relocate off-ramp	\$660,400	\$3,003,000	\$6,595,680	\$10,259,080



Traffic Data Source: OPS Traffic Counts



ID# 48: I-285 East @ US 78

Location: I-285 East @ US 78

Cause of Bottleneck: Congestion

Potential Operational Strategies for Evaluation:

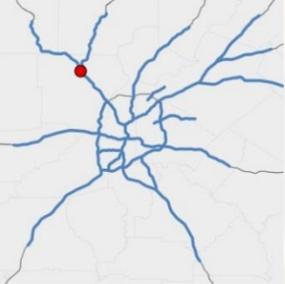
- 1a) Re-stripe I-285 SB off-ramp to US 78 EB to convert from one lane drop to two lanes drop to reduce I-285 SB from four lanes to three lanes
- 1b) Re-stripe US 78 EB on-ramp to I-285 SB to convert from merge to lane add
- 1c) Use SB shoulders on I-285 SB to accommodate auxiliary lane from US 78 to Ponce de Leon Ave (PM only)

I-285 SB	AM Peak	PM Peak
Mainline	4,220	7,700
US 78 WB/EB On-Ramp	340	790
US 78 EB Off-Ramp	600	1,740

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Aux. lane	\$188,500	\$0	\$1,874,860	\$2,063,360



Traffic Data Source: TMC Data



ID# 49: I-75 North @ Barrett Pkwy.

Location: I-75 North @ Barrett Pkwy.

Cause of Safety Concern : Ramp Queue

Potential Operational Strategies for Evaluation:

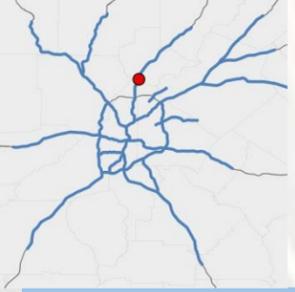
- 1) Widen Barrett Parkway SB on-ramp to 3 lanes and extend merging distance

I-75 SB @ Barrett Pkwy.	AM Peak	PM Peak
Mainline	4,320	3,480

I-75 SB Ramp	AM Peak	PM Peak
Barrett Pkwy. SB On-Ramp	1,330	1,110

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Widen on-ramp and extend merge distance	\$81,900	\$0	\$814,320	\$896,220





ID# 50: SR 400 @ Northridge Dr.

Location: SR 400 @ Northridge Dr.

Cause of Safety Concern : Ramp Queue

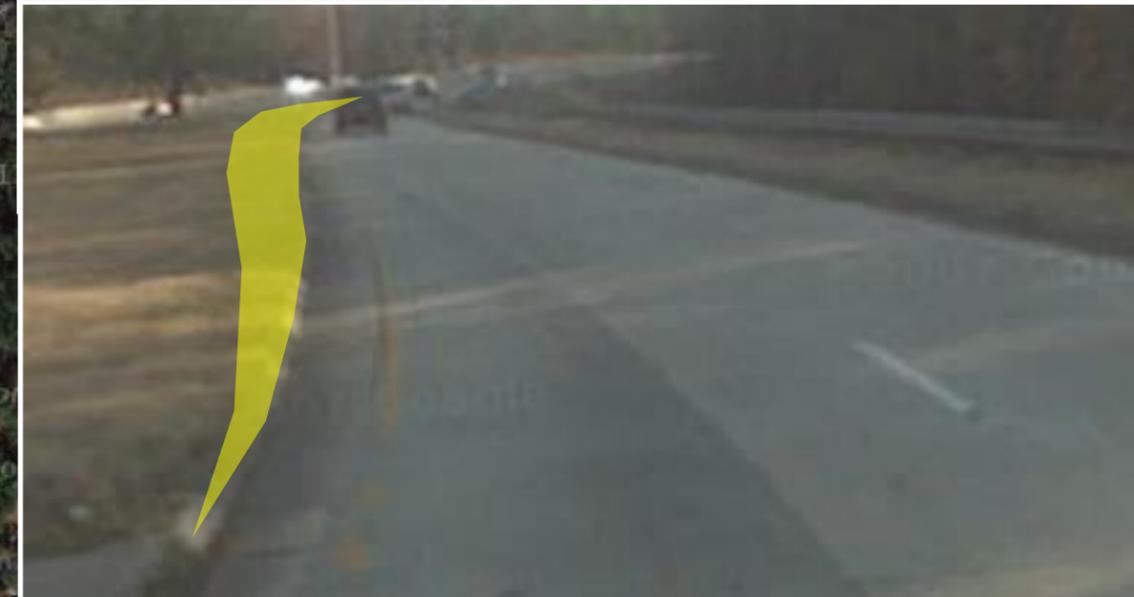
Potential Operational Strategies for Evaluation:

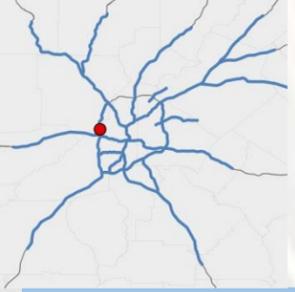
- 1) Widen Northridge Dr. SB on-ramp to 2 lanes
- 2) Widen Northridge Dr. NB on-ramp to 2 lanes

SR 400 @ Northridge	AM Peak	PM Peak
NB Mainline	5,130	7,240
SB Mainline	4,080	5,220

SR 400 Ramps	AM Peak	PM Peak
Northridge Dr. NB On-Ramp	1,040	1,070
Northridge Dr. SB On-Ramp	1,430	830

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Widen on-ramp	\$37,700	\$0	\$364,910	\$402,610
Widen on-ramp	\$37,700	\$0	\$374,270	\$411,970





ID# 51: I-285 @ D.L. Hollowell Pkwy.

Location: I-285 @ D.L. Hollowell Pkwy.

Cause of Safety Concern : Ramp Queue

Potential Operational Strategies for Evaluation:

- 1) Widen Hollowell Pkwy. SB on-ramp to 2 lanes

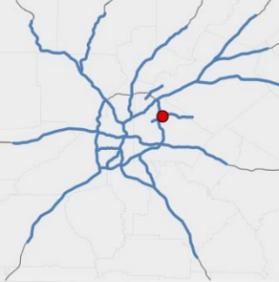


I-285 SB @ Hollowell Pkwy.	AM Peak	PM Peak
Mainline	Not Available	Not Available

I-285 SB Ramp	AM Peak	PM Peak
Hollowell Pkwy. SB On-Ramp	Not Available	Not Available

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Widen on-ramp	\$29,900	\$0	\$297,671	\$327,571

Source: Google



ID# 52: US 78 @ Brockett Rd.

Location: US 78 @ Brockett Rd.

Cause of Safety Concern : Ramp Queue

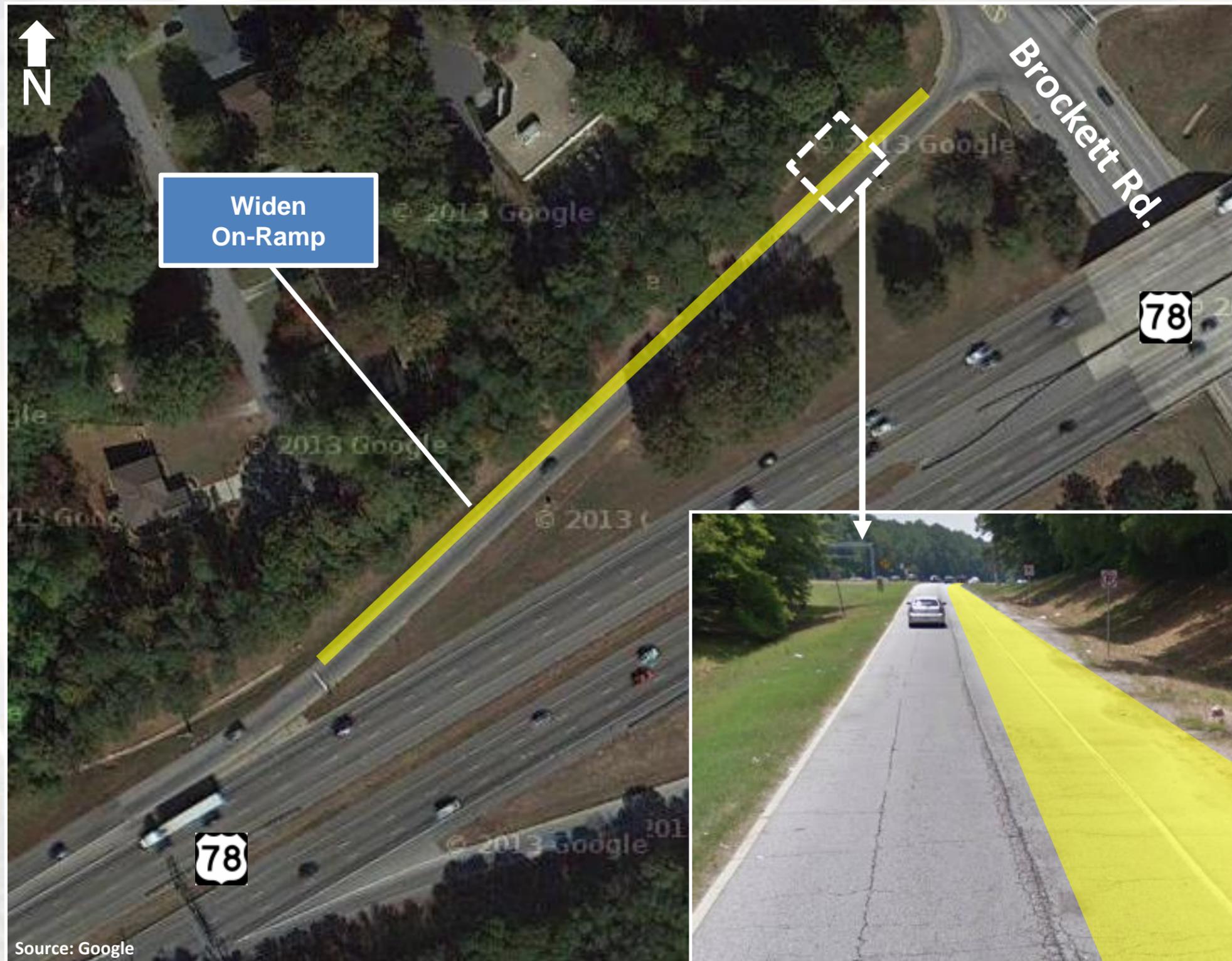
Potential Operational Strategies for Evaluation:

- 1) Widen Brockett Rd. WB on-ramp to 2 lanes

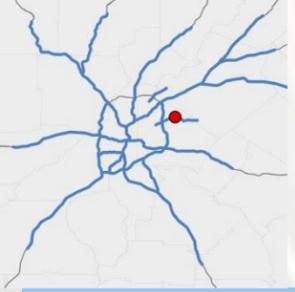
US 78 WB @ Brockett Rd.	AM Peak	PM Peak
Mainline	5,200	2,430

US 78 WB Ramp	AM Peak	PM Peak
Brockett Rd. WB On-Ramp	Not Available	Not Available

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Widen on-ramp	\$35,100	\$0	\$350,545	\$385,645



Source: Google



ID# 53: US 78 @ Mtn. Industrial Blvd.

Location: US 78 @ Mtn. Industrial Blvd.

Cause of Safety Concern : Ramp Queue

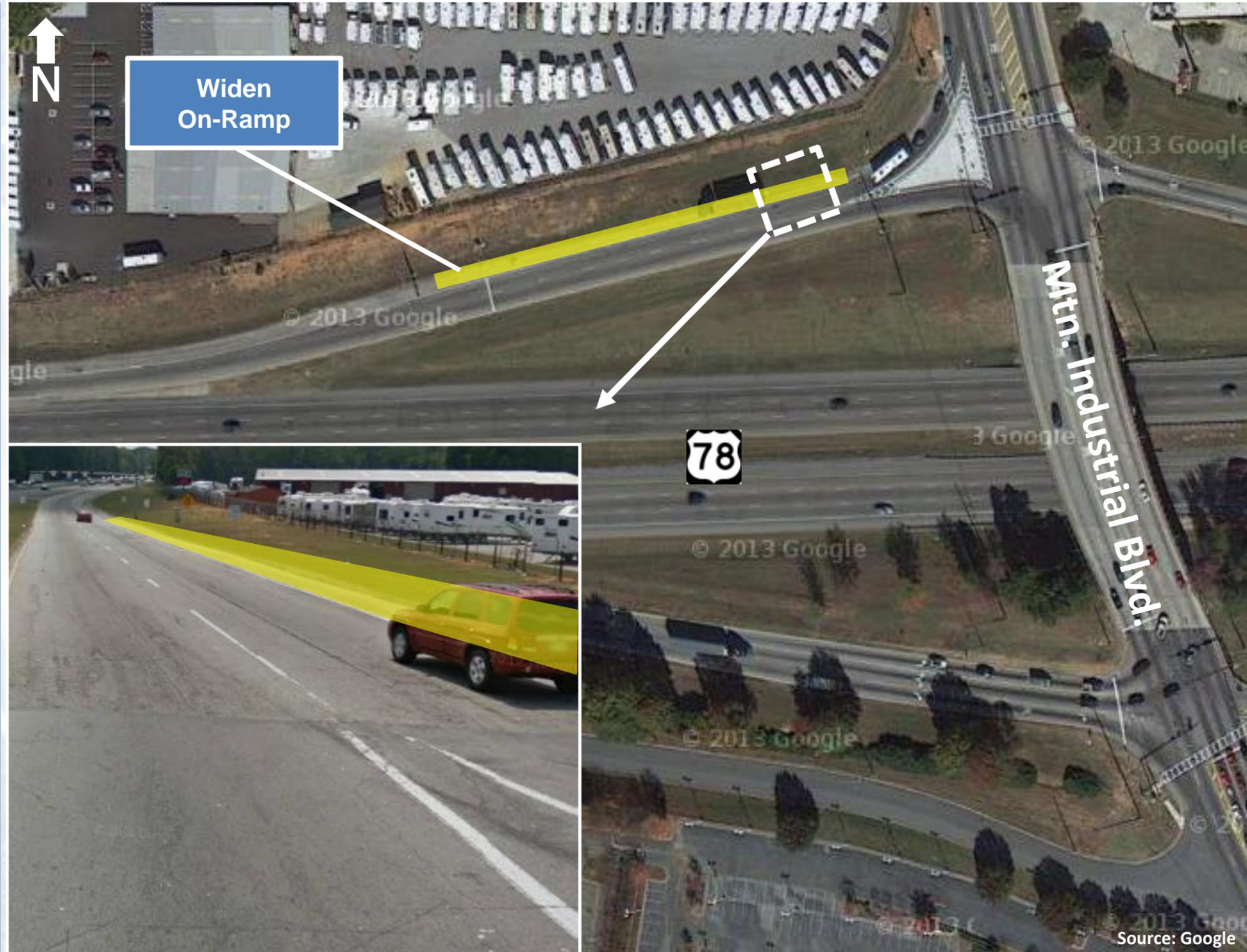
Potential Operational Strategies for Evaluation:

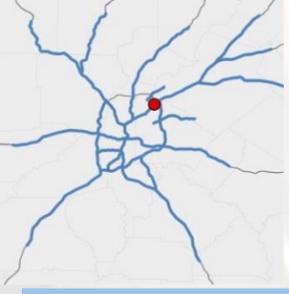
- 1) Widen Mtn. Industrial Blvd. WB on-ramp to 3 lanes

US 78 WB @ Mtn. Industrial Blvd.	AM Peak	PM Peak
Mainline	4,050	1,870

US 78 WB Ramp	AM Peak	PM Peak
Mtn. Industrial Blvd. WB On-Ramp	Not Available	Not Available

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Widen on-ramp	\$35,100	\$0	\$348,530	\$383,630





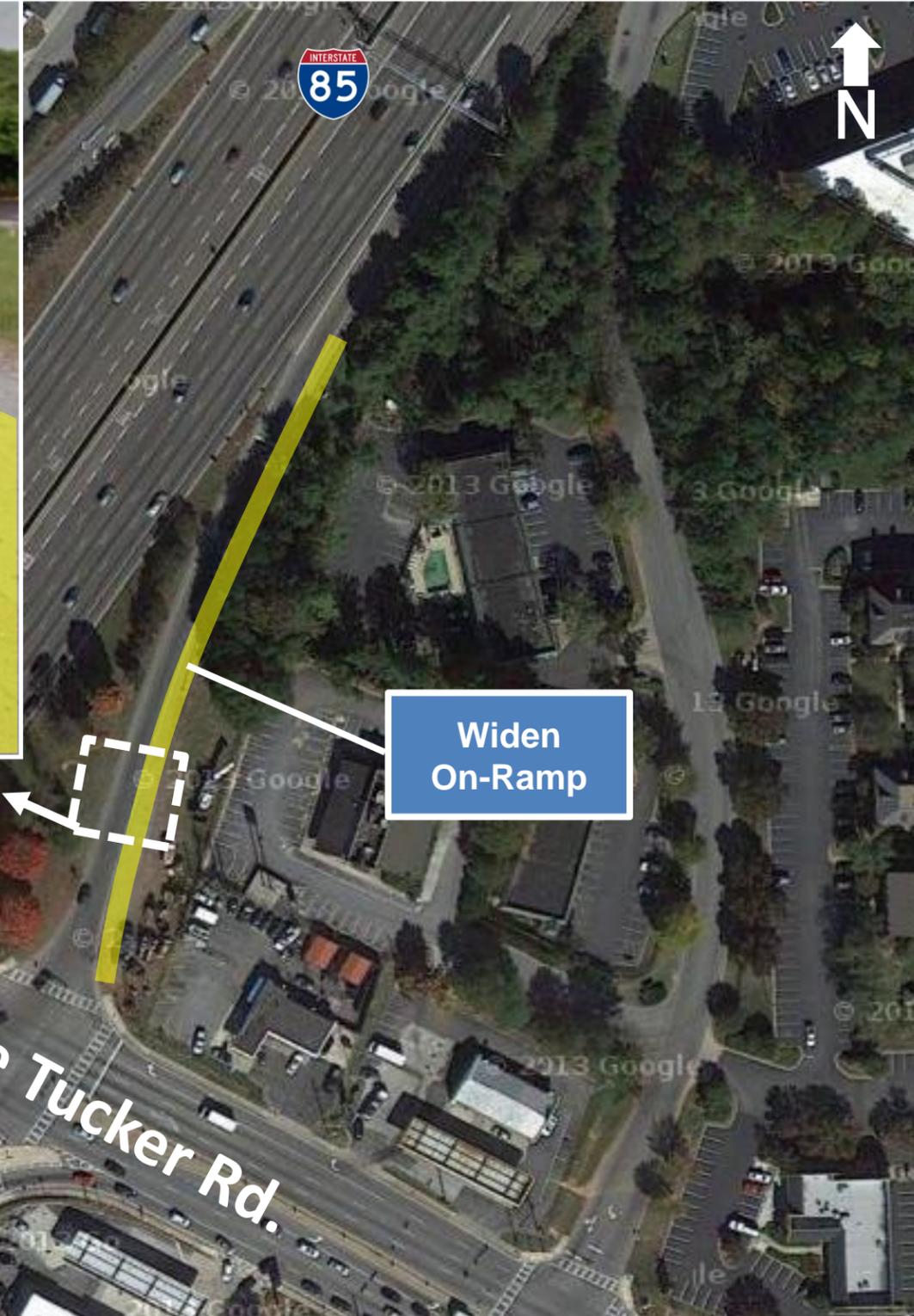
ID# 54: I-85 North @ Chamblee Tucker Rd.

Location: I-85 North @ Chamblee Tucker Rd.

Cause of Safety Concern : Ramp Queue

Potential Operational Strategies for Evaluation:

- 1) Widen Chamblee Tucker NB on-ramp to 2 lanes

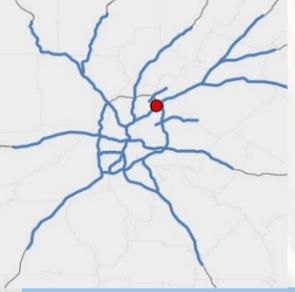


I-85 NB Ramp	AM Peak	PM Peak
Chamblee Tucker NB On-Ramp	2,600	2,800

Chamblee Tucker		AM Peak	PM Peak
WB Right Turn	↗	660	260
WB Through	←	990	490
EB Left Turn	↖	90	160
EB Through	→	300	1,560

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Widen on-ramp	\$102,700	\$0	\$1,022,840	\$1,125,540

Source: Google



ID# 55: I-285 East @ Chamblee Tucker Rd.

Location: I-285 East SB from I-85 to Chamblee Tucker Rd.

Cause of Safety Concern : Ramp congestion

Potential Operational Strategies for Evaluation:

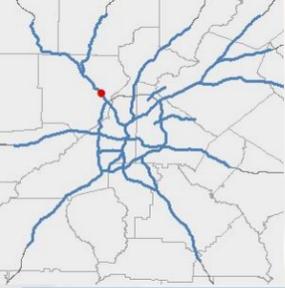
- 1) Widen Chamblee Tucker Rd. SB on-ramp

Chamblee Tucker @ 285 SB		AM Peak	PM Peak
WB Left Turn	↙	310	130
WB Through	←	970	540
EB Right Turn	↘	190	550
EB Through	→	250	960

SB I-285	AM Peak	PM Peak
Mainline	2,810	3,470
Chamblee Tucker On-Ramp	300	1,000

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Widen on-ramp	\$260,000	\$0	\$2,591,160	\$2,581,160





ID# 56: I-75 North @ Delk Rd.

Location: I-75 North @ Delk Rd.

Cause of Safety Concern : Ramp Queue

Potential Operational Strategies for Evaluation:

- 1) Widen Delk Rd. NB on-ramp to 2 lanes

I-75 NB @ Delk Rd.	AM Peak	PM Peak
Mainline	5,310	7,030

I-75 NB Ramp	AM Peak	PM Peak
Delk Rd. NB On-Ramp	560	730

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Widen on-ramp	\$54,600	\$0	\$535,145	\$589,745



Delk Rd.

Source: Google



ID# 57: I-75 South @ SR 54/Jonesboro Rd.

Location: I-75 South @ SR 54/Jonesboro Rd.

Cause of Bottleneck: Ramp queue

Potential Operational Strategies for Evaluation:

- 1) Add ramp meter bypass lane to on-ramp for buses/vanpools/HOVs to bypass ramp meter queues during peak period

Jonesboro Rd. On-Ramp	AM Departures
GRTA Route 440 Serving Hampton (Boothe's Crossing Shopping Plaza)	7
GRTA Route 440 Serving Jonesboro Station	8

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Ramp meter bypass lane	\$119,600	\$0	\$1,189,630	\$1,309,230



Source: Google



ID# 58: I-75 North @ North Marietta Pkwy. (SR 120)

Location: I-75 North @ North Marietta Pkwy. (SR 20)

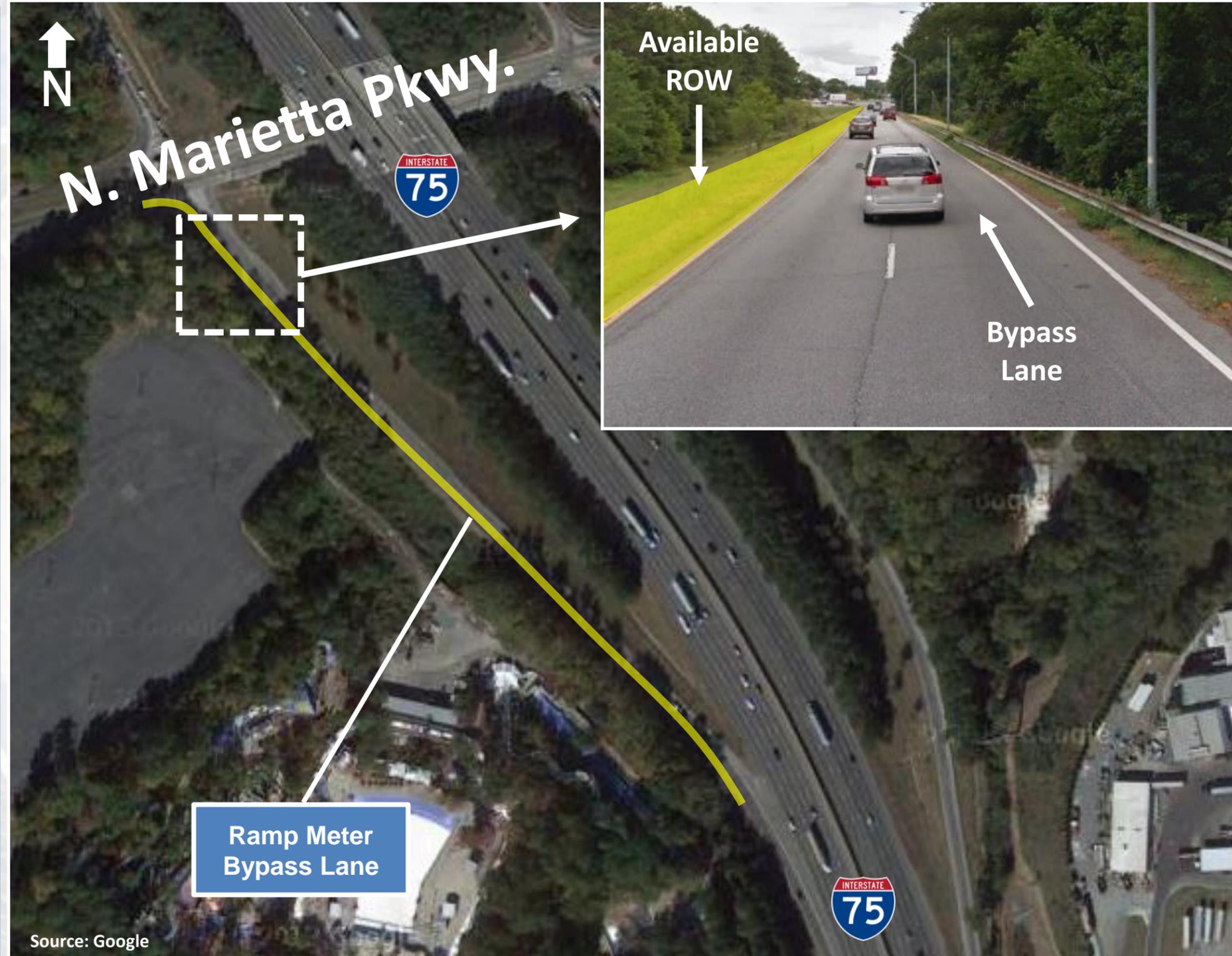
Cause of Bottleneck: Ramp queue

Potential Operational Strategies for Evaluation:

- 1) Add ramp meter bypass lane to on-ramp for buses/vanpools/HOVs to bypass ramp meter queues during peak period

Marietta Pkwy. On-Ramp	AM Departures
CCT Route 10-C Serving MTC Park & Ride	6

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Ramp meter bypass lane	\$58,500	\$0	\$581,360	\$639,860



Source: Google



ID# 59: US 41/Cobb Parkway @ I-285

Location: Cobb Pkwy. @ I-285

Cause of Bottleneck: Congested intersection with upstream weaving issues.

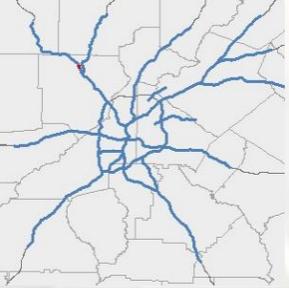
Potential Operational Strategies for Evaluation:

- 1) Channelize Cobb Pkwy. SB traffic through signage



Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Channelization	\$22,100	\$0	\$220,220	\$242,320

Source: Google



ID# 60: I-75 North @ Barrett Pkwy.

Location: I-75 North @ Barrett Pkwy.

Cause of Bottleneck: Ramp queue affecting transit bottleneck

Potential Operational Strategies for Evaluation:

- 1) Add ramp meter bypass lane to on-ramp for buses/vanpools/HOVs to bypass ramp meter queues during peak period



Barrett Pkwy. SB On-Ramp	AM Departures
CCT Route 10-C Serving Town Center	6
GRTA Route 480 Serving Acworth Park & Ride	6

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Ramp meter bypass lane	\$79,300	\$0	\$780,585	\$859,885

Source: Google



ID# 61: I-575 @ SR 92

Location: I-575 @ SR 92

Cause of Bottleneck: Ramp queue affecting transit bottleneck

Potential Operational Strategies for Evaluation:

- 1) Add ramp meter bypass lane to on-ramp for buses/vanpools/HOVs to bypass ramp meter queues during peak period

SR 92 SB On-Ramp	AM Departures
GRTA Route 490 Serving Canton Park & Ride	4
GRTA Route 490 Serving Woodstock Park & Ride	4

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Ramp meter bypass lane	\$19,500	\$0	\$189,540	\$209,040



Source: Google



ID# 62: SR 400 @ Holcomb Bridge Rd.

Location: SR 400 @ Holcomb Bridge Rd.

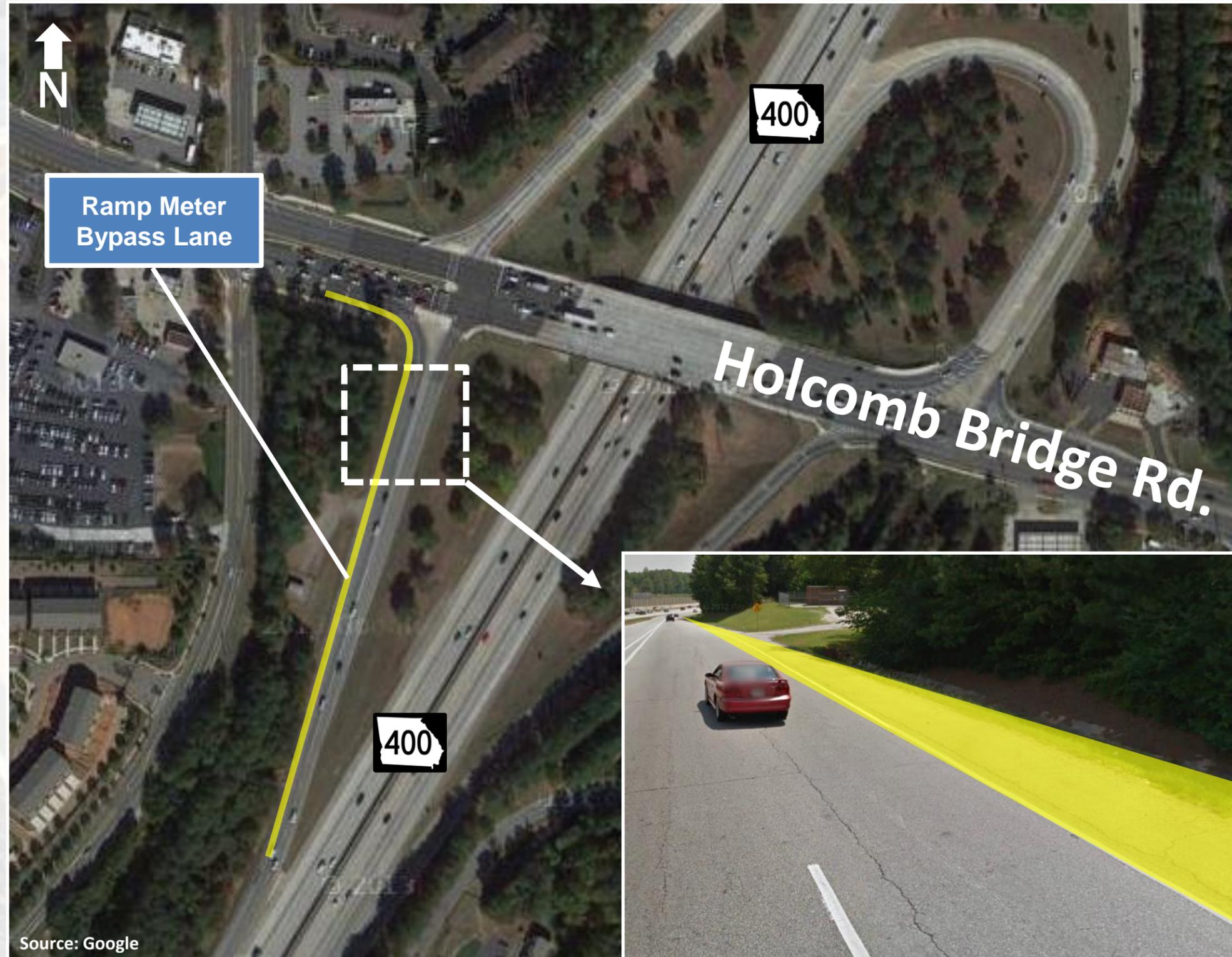
Cause of Bottleneck: Ramp queue affecting transit bottleneck

Potential Operational Strategies for Evaluation:

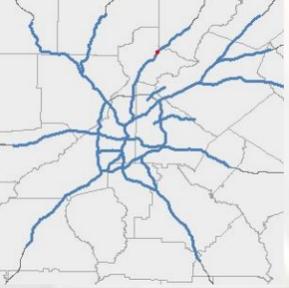
- 1) Add ramp meter bypass lane to on-ramp for buses/vanpools/HOVs to bypass ramp meter queues during peak period

Holcomb Bridge Rd. SB On-Ramp	AM Departures	PM Departures
MARTA Route 185 Serving Windward Pkwy. & Ride	13	25

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Ramp meter bypass lane	\$53,300	\$0	\$524,485	\$577,785



Source: Google



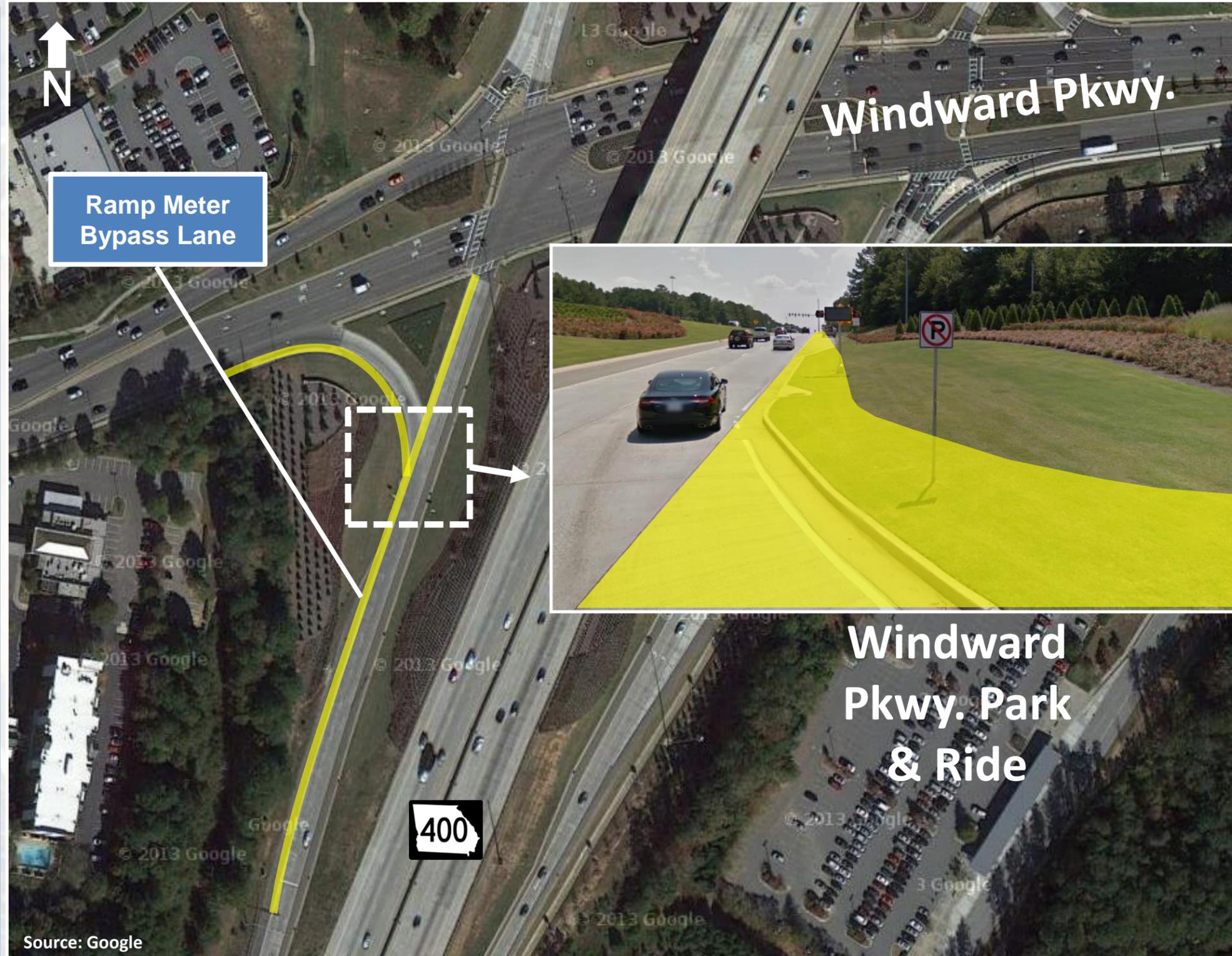
ID# 63: SR 400 @ Windward Pkwy.

Location: SR 400 @ Windward Pkwy.

Cause of Bottleneck: Ramp queue affecting transit bottleneck

Potential Operational Strategies for Evaluation:

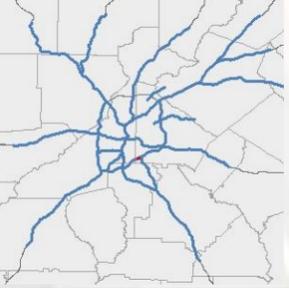
- 1) Add ramp meter bypass lane to on-ramp for buses/vanpools/HOVs to bypass ramp meter queues during peak period



Windward Pkwy. SB On-Ramp	AM Departures	PM Departures
MARTA Route 143 Serving Windward Pkwy. & Ride	13	15

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Ramp meter bypass lane	\$57,200	\$0	\$570,895	\$628,095

Traffic Data Source: TMC Data



ID# 64: I-285 S @ Moreland Ave.

Location: I-285 S @ Moreland Ave.

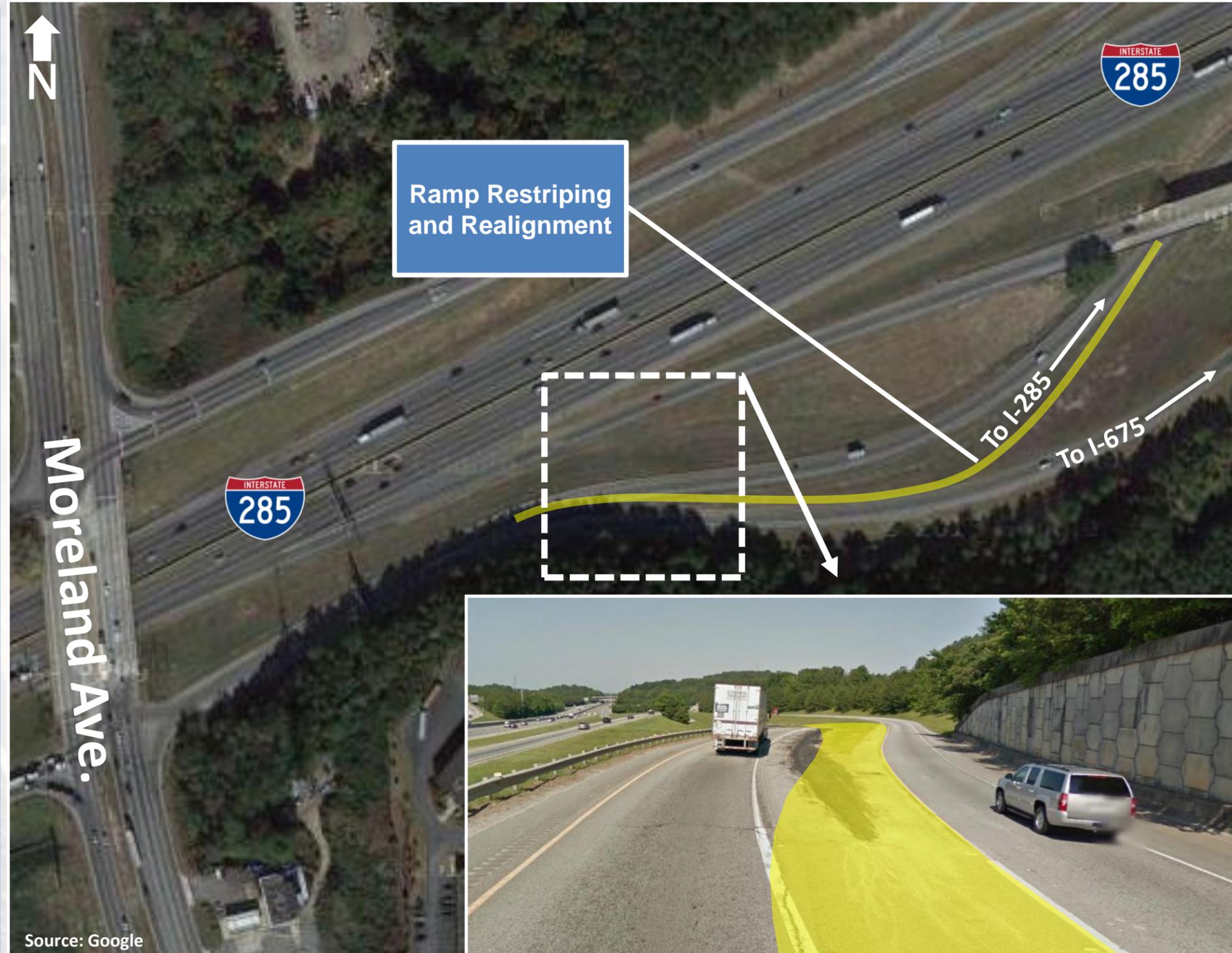
Cause of Bottleneck: Weaving distance on on-ramp

Potential Operational Strategies for Evaluation:

- 1) Re-stripe and re-align I-285 EB and I-675 SB on-ramps to increase weaving distance

I-285 @ Moreland Ave.	AM Peak	PM Peak
Mainline	2,120	3,900
Moreland Ave. On-Ramp	420	1,090

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Ramp realignment	\$202,800	\$0	\$2,021,240	\$2,224,040



Source: Google



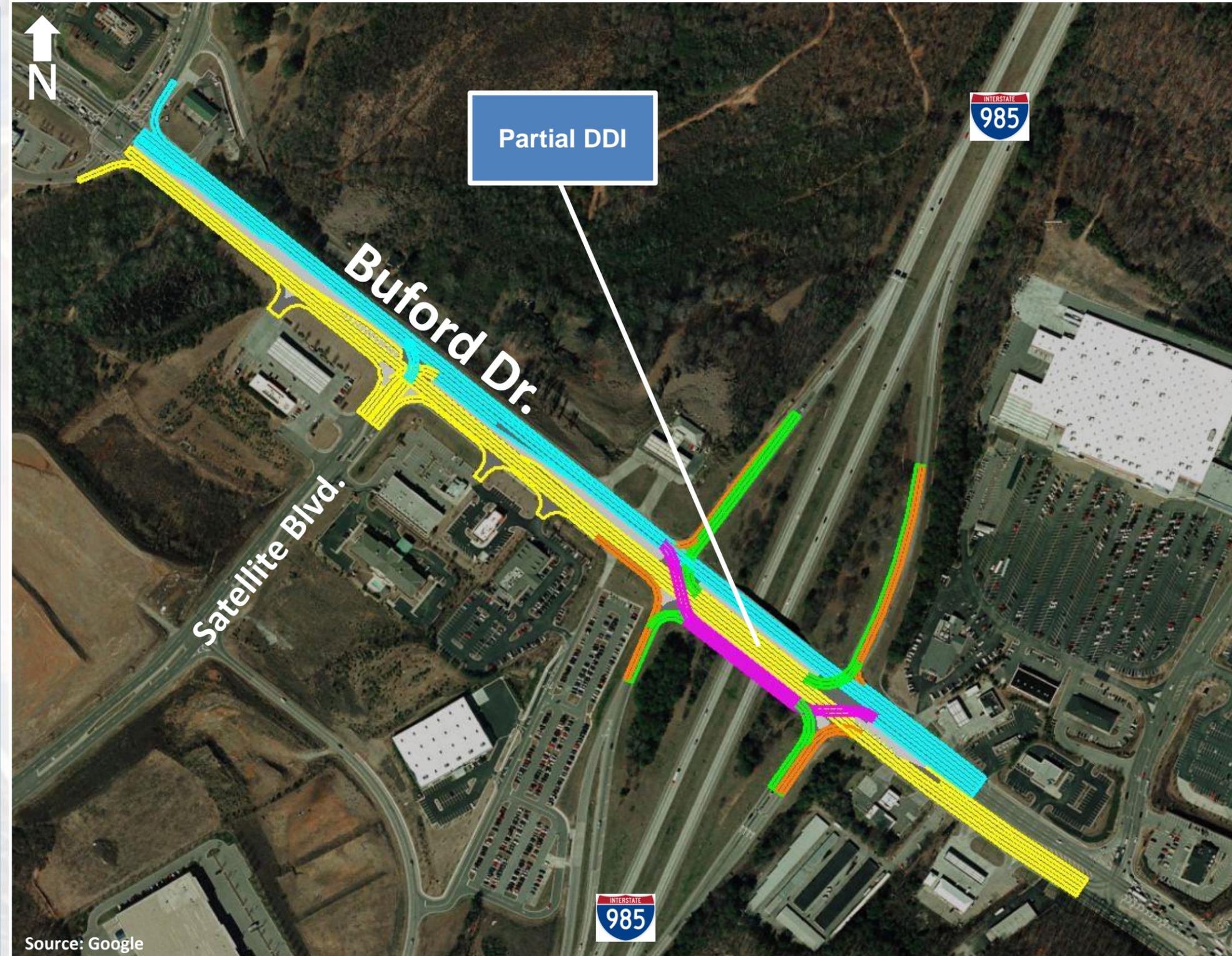
ID# 65A: SR 20/Buford Dr. @ I-985

Location: Buford Dr. @ I-985

Cause of Bottleneck: Weaving

Potential Operational Strategies for Evaluation:

- 1) New configuration representing a partial DDI and a displaced left turn intersection
- 2) Re-stripe Buford Dr. between I-985 SB off-ramp and S. Lee St. (See ID# 66B) (\$893,555)



Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Partial DDI	\$1,102,400	\$1,820,000	\$11,016,850	\$13,939,250

Source: Google



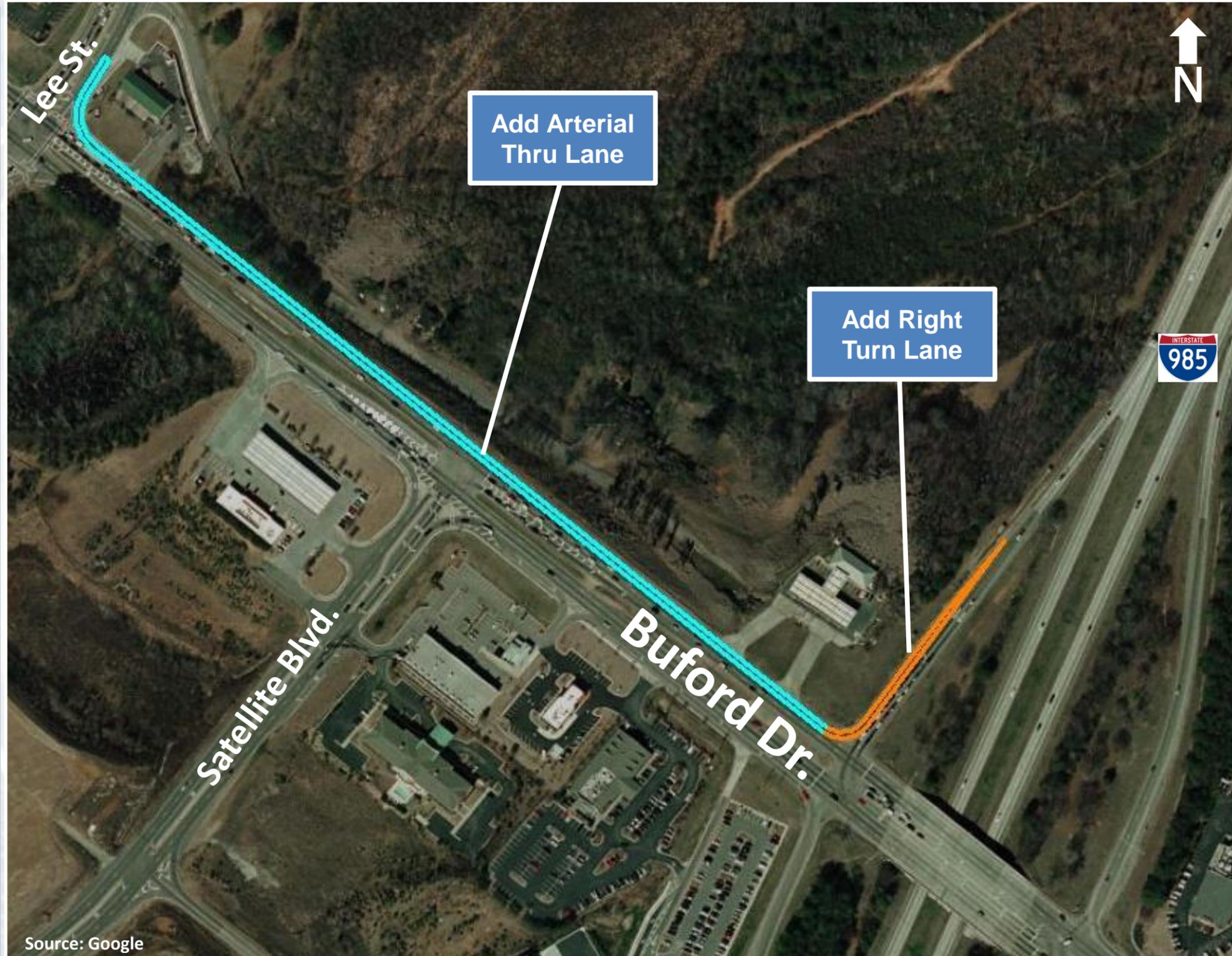
ID# 65B: SR 20/Buford Dr. @ I-985

Location: Buford Dr. @ I-985

Cause of Bottleneck: Weaving

Potential Operational Strategies for Evaluation:

- 1) New configuration representing a partial DDI and a displaced left turn intersection (See ID# 66A) (\$13,939,250)
- 2) Add right turn lane to I-985 SB Off-ramp and an arterial thru lane to Buford Dr.



Source: Google

Improvement Strategy	Cost (Includes 30% Contingency)			
	PE	ROW	CST	TOTAL
Add thru lane and right turn lane	\$81,900	\$0	\$811,655	\$893,555