

FLCA / Hollymead traffic analysis was done in a detailed, professional manner - with slightly different assumption inputs to same underlying model - and yielding higher traffic outputs and hitting the tipping point for the Ashwood intersection in AM rush hour

	<u>RST Traffic Study</u>	<u>FLCA / Hollymead Study</u>	<u>Added notes</u>
<b>Model</b>	VDOT standard	same	
<b>Baseline</b>	2019 traffic counts	same	
<b>Background traffic</b>	1% annual future growth	same plus add small future Forest Lakes build out - church property (30 single family houses)	
<b>Outputs</b>	Omnidirection flows, queues, delay time, Ashwood signal performance	same	
<b>Constuction assumptions</b>	Brookhill plus RST	same	
<b>Bookhill flow detials</b>	Global methodology - simplifying assumption: apply overall regional north-south split to all Brookhill units; consider Brookhill units all as if one large geo-dot	More detailed, neighborhood by neighborhood build up: assign flows based on which direction would be fastest/least subject to delays. Focus on AM rush period	
<b>RST apartment demographics</b>	AM and other trips for "multifamily" housing are 75% of single family and townhouse trips, based on industry historical data	Apartment demographics same as single family and townhouses - immediately next door. Analytic basis for any difference is not well supported and lacks local knowledge. No public transit available to dampen vehicle trip levels, unlike many oher apartments in historical database	<b>RST and FLCA studies both underestimated with RST affordable housing proposal.</b> Will have increased traffic flows: residents will be working people, driving downtown, 'service workers' not home based 'knowledge workers' or retirees
<b>New Brookhill elementary school</b>	Unclear whether included or not	scenarios included with and without new school	

All: AM rush hour

Baseline condition, initial Ashwood traffic study (2019)

Chart #

1

Service Level

D

Lane Delay (sec)

40.7

Queue (ft)

36

Service Level

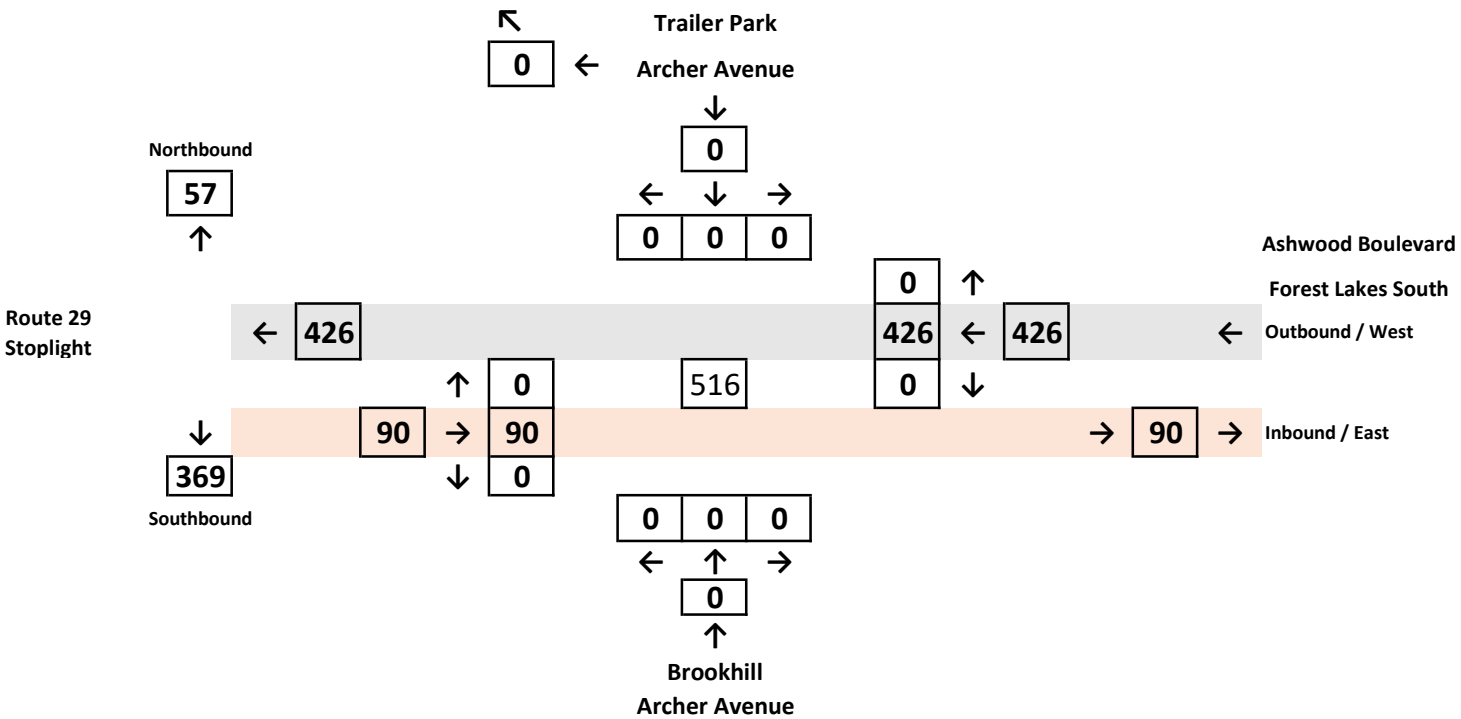
D

Lane Delay (sec)

50.1

Queue (ft)

188



Note: center square Mixing Bowl is all through and left turn crossover traffic at that point

All: AM rush hour

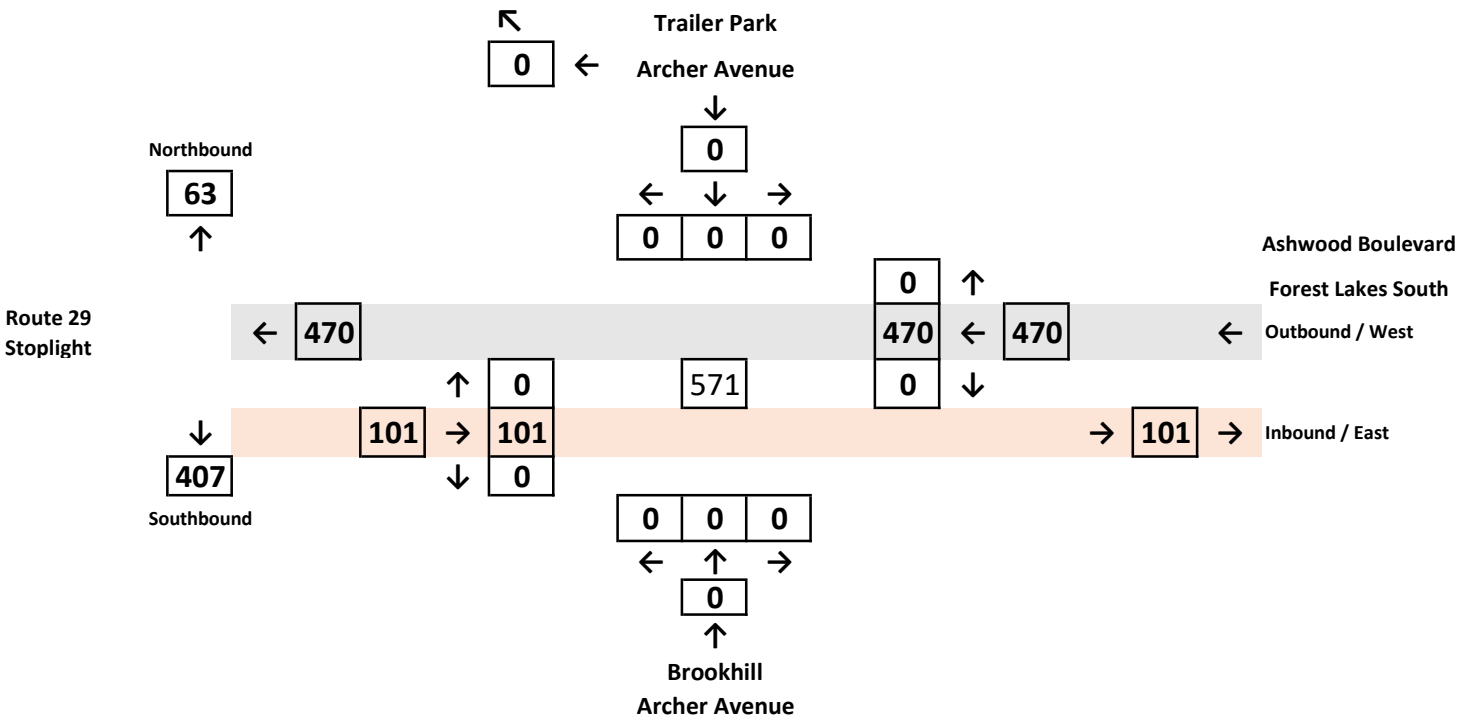
**Baseline condition updated, 2024** Updated for background growth (1.15% annual) plus FL church property eventual build out (30 single family)

Chart # 

2
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Service Level	D
Lane Delay (sec)	39.3
Queue (ft)	37

Service Level	D
Lane Delay (sec)	48.8
Queue (ft)	203



Note: center square Mixing Bowl is all through and left turn crossover traffic at that point

All: AM rush hour

## Add Brookhill northbound Archer flows - base assumptions (2024)

RST TIA updated 8/2020

Chart #

3

Service Level

D

Lane Delay (sec)

39.4

Queue (ft)

46

Service Level

D

Lane Delay (sec)

52.8

Queue (ft)

235

Increase in Ashwood/29 Left vs. base

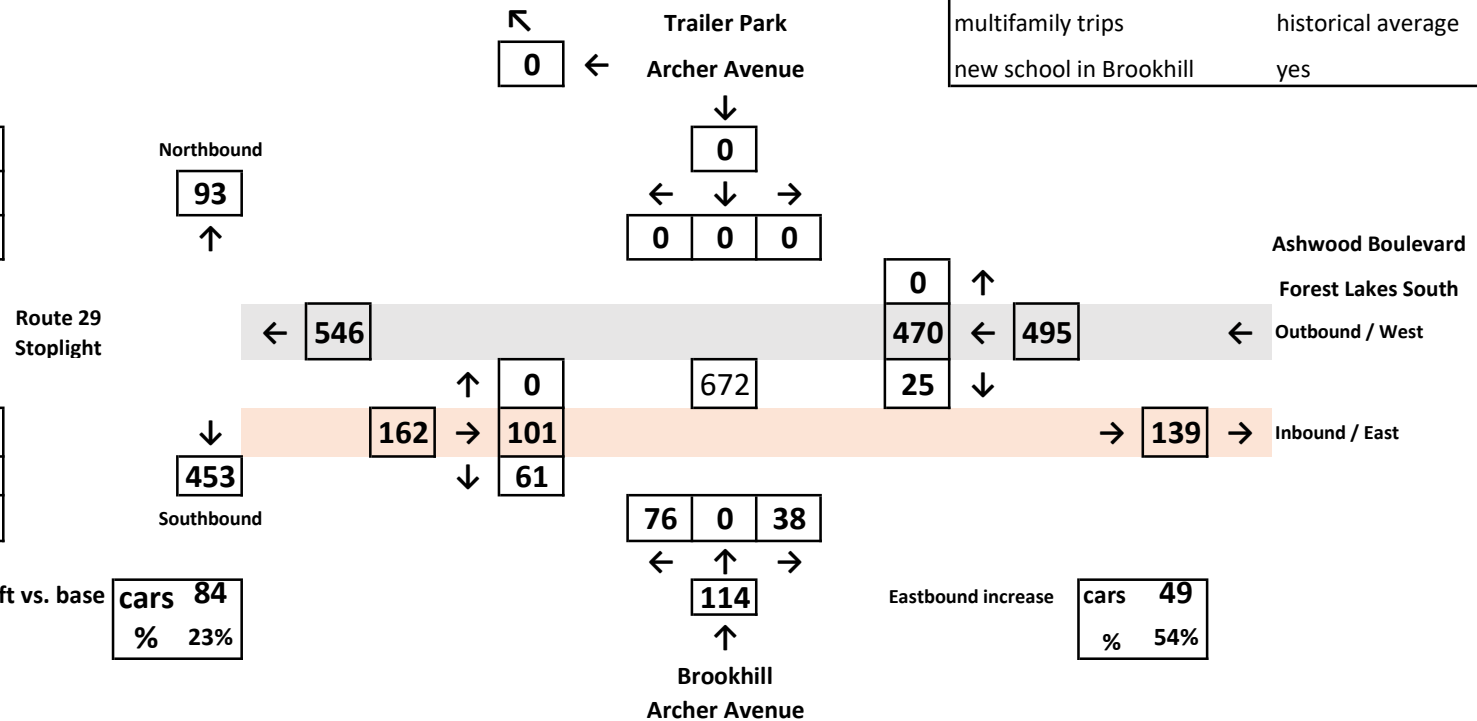
**cars 84**  
**% 23%**

Note: center square Mixing Bowl is all through and left turn crossover traffic at that point

Increase in Mixing Bowl vs. base

**cars 156**  
**% 30%**

direction/choice:	computer modeled
multifamily trips	historical average
new school in Brookhill	yes



All: AM rush hour

Add Brookhill northbound Archer flows - realistic potential levels (2024)

Chart #

4

direction/choice: block level behavioral  
multifamily trips higher end of range  
new school in Brookhill yes

Service Level

D

Lane Delay (sec)

39.4

Queue (ft)

43

Service Level

E

Lane Delay (sec)

58.1

Queue (ft)

275

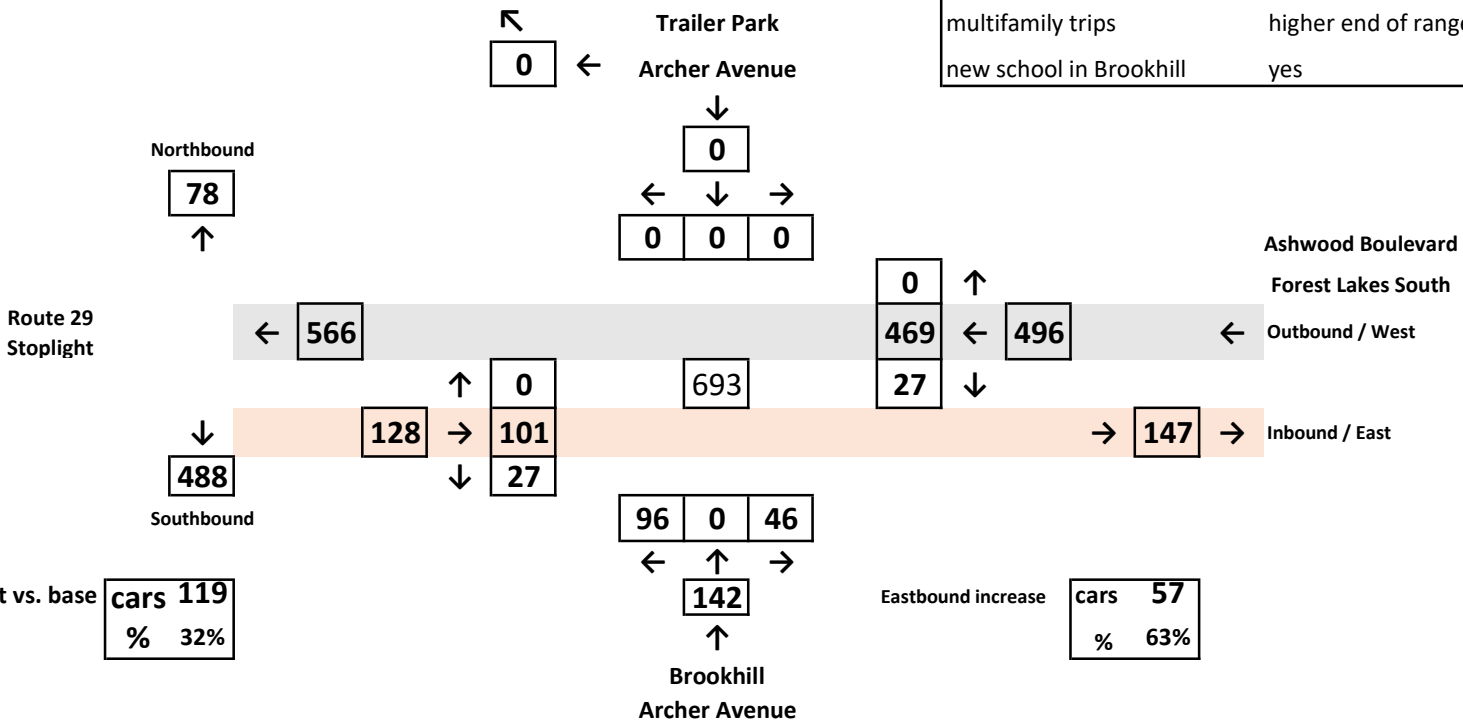
Increase in Ashwood/29 Left vs. base

**cars 119**  
**% 32%**

Note: center square Mixing Bowl is all through and left turn crossover traffic at that point

Increase in Mixing Bowl vs. base

**cars 177**  
**% 34%**



**Add Brookhill northbound Archer flows - with realistic potential levels and no new Brookhill elementary school (2024)**

5

direction/choice:	block level behavioral
multifamily trips	higher end of range
new school in Brookhill	no

**D**

## 39.4

43

78

↑

0

**Trailer Park**  
**Archer Avenue**

↓  
0

←	↓	→
0	0	0

### Forest Lakes South

- Outbound / West

← 566

↑	0
→	101
↓	27

718

0
469
52

	↑
	←
	↓

← 521

→ 237

**E**

## 58.1

275

↓

488

128	→	101
	↓	27

96	0	136
←	↑	→

←   ↑   →  
232

**Brookhill  
Archer Avenue**

<b>cars</b>	<b>147</b>
<b>%</b>	<b>163%</b>

<b>cars</b>	<b>119</b>
<b>%</b>	<b>32%</b>

<b>cars</b>	<b>202</b>
<b>%</b>	<b>39%</b>

Note: center square Mixing Bowl is all through and left turn crossover traffic at that point

All: AM rush hour

Add RST proposed development -with historcial standard multi family trip rates (2024)

Chart #

6

direction/choice: block level behavioral  
multifamily trips std. historical for RST  
new school in Brookhill yes

Service Level

D

Lane Delay (sec)

38.2

Queue (ft)

45

Service Level

E

Lane Delay (sec)

63.7

Queue (ft)

366

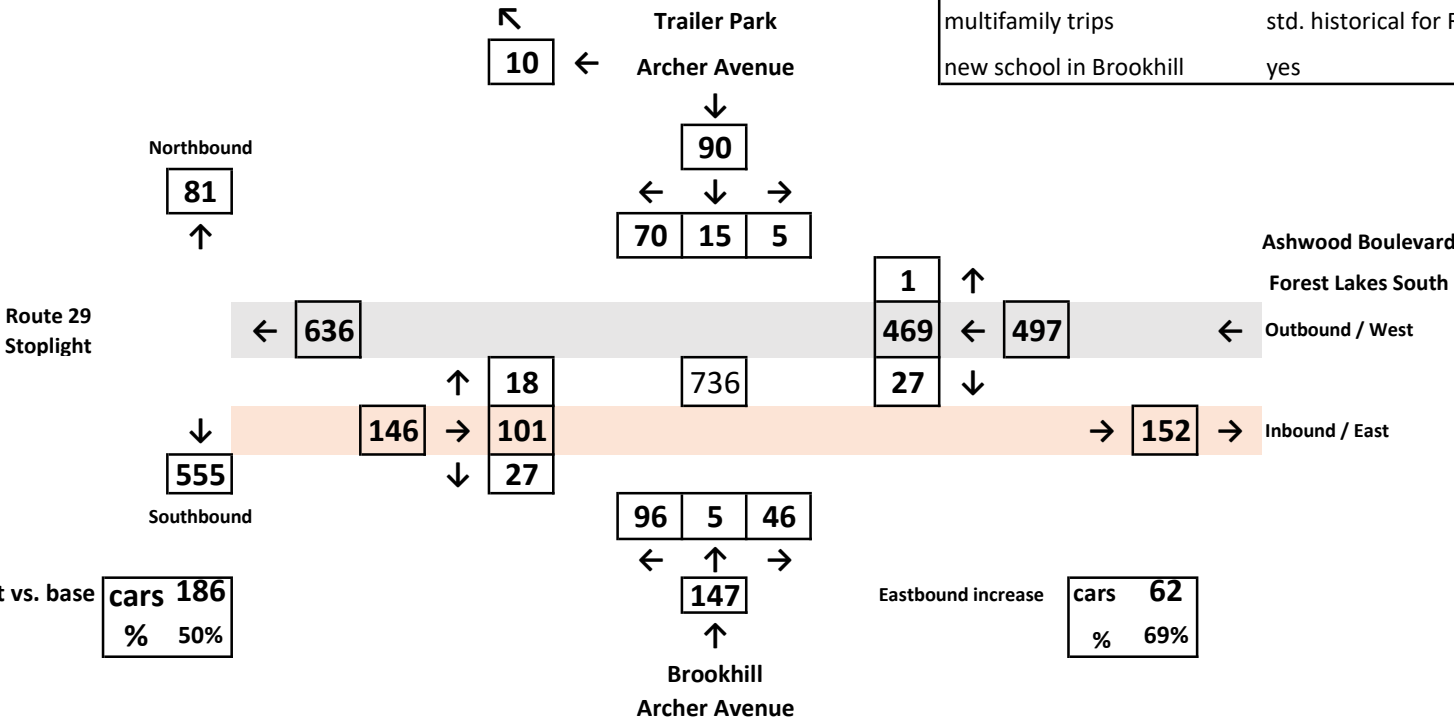
Increase in Ashwood/29 Left vs. base

**cars 186**  
**% 50%**

Note: center square Mixing Bowl is all through and left turn crossover traffic at that point

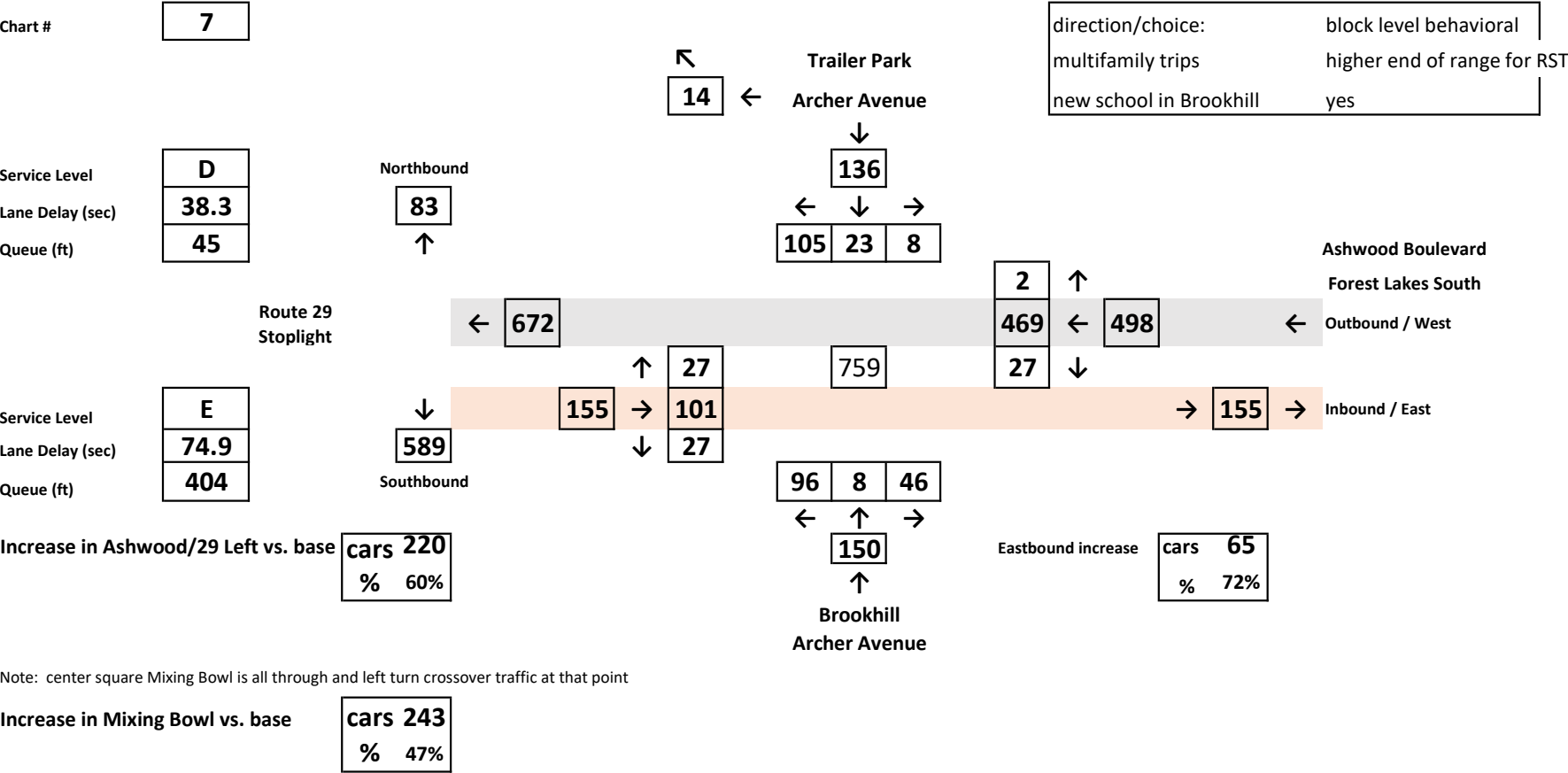
Increase in Mixing Bowl vs. base

**cars 220**  
**% 43%**



All: AM rush hour

Add RST proposed development - with realistic potential multi family trip rates (+ Brookhill school) (2024)





All: AM rush hour

Add RST proposed development - with realistic potential multi family trip rates and no new Brookhill school - 2024

