



Appendix C

Corridor Recommendations Technical Memorandum

Envision My Ride: Bus Priority Study Technical Memorandum | Task 4.2 Initial Corridor Recommendations – FINAL

February 21, 2022

1 INTRODUCTION

This technical memorandum documents the evaluation method and recommendations for bus priority treatments along high-frequency routes identified as part of Charlotte Area Transit System's (CATS) *Envision My Ride* (EMR) *Bus Priority Study* (BPS). In October 2021, CATS identified the initial six (6) corridors that would benefit from bus priority treatments to improve bus operations and passenger experience. For each of these corridors, the project team, in collaboration with the Project Management Team (PMT), has developed recommendations for three types of treatments:

1. Bus lanes
2. Signal priority treatments, including transit signal priority (TSP) and queue jumps
3. Bus stop and passenger facility treatments

This memorandum is organized as follows:

- Section 2 summarizes the evaluation method for bus lanes
- Section 3 summarizes the evaluation method for signal priority treatments
- Section 4 summarizes the evaluation method for bus stop and passenger facility treatments
- Section 5 summarizes recommendations by corridor:
 - Section 5.1: Route 9 Central Avenue
 - Section 5.2: Route 7 Beatties Ford
 - Section 5.3: Route 16 South Tryon
 - Section 5.4: Route 27 Monroe Road
 - Section 5.5: Route 34 Freedom Drive
 - Section 5.6: Route 2 Ashley/Scaleybark
- Section 6 discusses next steps for the BPS

2 BUS LANE EVALUATION METHOD

Kittelsohn performed a high-level evaluation of the three highest-ranked corridors (Routes 9, 7, and 2; see technical memorandum “Assessment of Corridors: Phase I and Phase II” for details on ranking) to identify segments that would maximize the benefit of bus lanes. The evaluation used the following initial thresholds for each stop-to-stop segment:

- At least 24 or more buses travel on the segment during the peak hour in the peak direction (one bus every 2.5 minutes)
- At least 2,000 passengers in the peak hour

Both metrics were calculated to include all bus routes on the corridor in addition to Routes 9, 7, and 2 based on October 2019 data from CATS. The initial thresholds used are a policy choice based on the team’s experience implementing Bus Rapid Transit systems in other cities; CATS may consider revising these thresholds or creating acceptable ranges that are further tailored to local conditions.

Results

As shown in Table 1, most portions of the Route 9, 7, and 2 corridors along Central Avenue, Beatties Ford Road, and the crosstown network to Scaleybark Station currently do not meet initial bus lane thresholds, except segments where multiple bus routes converge in or near Uptown Charlotte. (It should be noted that there is already a bus lane in place along 4th Street in the segment with maximum bus throughput, which is consistent with the thresholds established by the team.)

Table 1. Bus Lane Metrics for Highest-Ranked Routes

Route	Buses Per Peak Hour				Passengers Per Peak Hour			
	Min	Median	Max	Note about Max Segment	Min	Median	Max	Note about Max Segment
Route 9	6	8	68	4 th Street from Caldwell Street to CTC. Includes Routes 4, 6, 9, 10, 14, 15, 17, 19, 23, 27, 40x, 41x, 46x, 48x, 52x, 53x, 61x, 62x, 63x, 64x, 65x, 74x, 77x, 82x, 85x, 88x.	285	1,168	2,369	Kings Drive from Elizabeth Avenue to 7 th Street. Includes Routes 9, 17.
Route 7	4	4	37	Trade Street from College Street to CTC. Includes 1, 7, 8, 10, 11, 16, 21, 22, 26, 34.	90	488	2,458	Trade Street from Tryon Street to College Street. Includes Routes 1, 7, 8, 10, 11, 21, 22, 26, 34
Route 2	4	6	14	Ashley Road from Alleghany Street to Freedom Drive. Includes Routes 2, 8, 24, 235.	85	183	944	Tryon Street from Herman Avenue to Scaleybark Station. Includes Routes 2, 16.

Note: Results from September 2021 analysis. Updated EMR routes were used for the subsequent signal priority evaluation.

Based on this initial evaluation, the BPS project team is not recommending additional bus lanes at this time, instead focusing on signal priority treatments and bus stop enhancements for the six initial corridors, as discussed below.

3 SIGNAL PRIORITY EVALUATION METHOD

Kittelson selected candidate locations for signal priority treatments including TSP and queue jumps by identifying segments with slow bus or vehicle speeds. The slow speed segments were analyzed using the metrics, thresholds, and data sources summarized in Table 2.

Table 2. Signal Priority Evaluation Metrics, Thresholds, and Data Sources

Indicator	Metric	Threshold	Data Source
Bus Running Speed	Average weekday AM/PM peak period running speed	12 mph	CATS Automatic Vehicle Location (AVL) system data (Sep. 1-Dec. 13, 2019)
Vehicle Probe Speed	Average weekday AM inbound/PM outbound peak period speed	15 mph	RITIS probe data (October 2019)

The bus running speed metric used for buses was based on the travel time between the bus door closing at an upstream stop and door opening at the next stop, rather than the time between departure at an upstream stop and arrival at the next stop. The reason for this modification is that the running speed based on departures and arrivals showed buses traveling at very high speeds for certain segments (e.g., 55 mph bus running speed on a 35-mph posted speed roadway), potentially due to the AVL system’s configuration for sensing when buses are within a stop vicinity. The high speeds did not appear to include acceleration from the upstream stop and deceleration to the next stop. After modifying the speed metric to be based on door open/close, the average bus running speed calculation yielded more reasonable results.

Kittelson used pre-pandemic travel times from fall 2019. While the team started by comparing October 2019 bus speeds to October 2019 vehicle speeds, the AVL trip samples small for some stop-to-stop segments due to skipped stops having null data values. Therefore, the AVL sample was expanded to include September 2019 and part of December 2019 before the 4th Street bus lane pilot was implemented. Results with at least 10 trips in the sample were used to identify slow bus speed segments.

While the bus speed metric included off-peak directions (e.g., AM outbound and PM inbound) to account for travel times potentially experienced by passengers traveling to destination outside Uptown, the vehicle speed was based on peak period directional congestion experienced by most drivers.

Appendix A includes the stop-to-stop bus running speed results for each of the six initial corridors. Appendix B includes vehicle probe speed results from RITIS. Slow segments are visualized in each route map in the Section 5: Recommendations.

Select signal priority locations were further screened for three potential treatment types using the considerations summarized in Table 3. Note that for these initial signal priority treatments listed below, additional investigation or analysis may be required. For example, TSP implementation may require ensuring there is sufficient available green time in the cycle or physical equipment (both on the bus side and intersection side) and communication are already available to dynamically detect buses and provide TSP upon bus arrivals. Similarly, queue jump candidates that have longer exclusive right turn lanes and fewer right turning vehicles that use the exclusive right turn lanes will likely lead to higher operational benefits for buses.

Table 3. Signal Priority Treatments and Screening Considerations

Treatment	Screening Considerations
TSP	All signal that met a slow speed threshold were included as candidates for TSP, unless they were located at interstate ramps or in Uptown. Though most signalized intersections in Uptown met the speed thresholds, the low speeds are likely due to general congestion that may not be addressed by TSP. Additionally, implementing TSP at these locations may degrade operations for other bus routes since there would be conflicting TSP requests from different directions. As a result, for these intersections, other bus priority treatments such as bus lanes can be more beneficial.
Signal timing adjustment	For signals where multiple bus routes intersect in opposing directions or where routes take left turns that could impact through traffic, signal timing adjustments such as reducing red time could be more beneficial than dynamically interrupting the signal cycle for TSP.
Queue jump	<p>Only locations with exclusive right turn lanes longer than 200 feet are considered. Adjacent bike lanes are noted, as a queue jump could introduce more conflicts between buses and people biking. For this evaluation, right turn volumes were not analyzed. Detailed operational analysis (e.g., Synchro) will be required during future project phases to better assess queue jump effectiveness.</p> <p>In Section 5: Recommendations, screened locations that met speed thresholds are included under the “TSP and/or queue jump” category, while locations that did not meet the speed thresholds but offer an opportunity to repurpose an existing right turn lane are included under the “queue jump” category.</p>

4 BUS STOP AND PASSENGER FACILITY EVALUATION METHOD

The project team took a two-pronged approach to evaluating passenger facilities. First, a quantitative first round assessment of each bus stop was conducted to assign a typology, followed by a more in-depth site-specific balancing review of the bus stop location and adjusting the typology of the bus stop to the surrounding context as needed.

Bus Stop and Passenger Facility Evaluation

The first assessment included assessing each bus stop against the typology scoring system (Table 4) detailed further in the previously submitted Bus Stop Guidelines Memorandum. The intent of this assessment was to gain an understanding of how the current bus stops are being used (the ridership and wait time evaluation categories) and the value they bring to the network (the rider profiles and activity generator evaluation categories).

Table 4. Typology Score System

Evaluation Category	Evaluation Criteria	Scoring
Ridership	Boardings	1 point per average weekday daily boarding
	Bus Priority Corridor	50 points if on a Bus Priority Corridor
Wait Time	Transfers	5 points if stop is a transfer location between two Bus Priority Corridors or LYNX Light Rail
	Frequencies	5 points if stop is outside the Bus Priority Corridor network (longer wait times could indicate a higher need for shelter or seating)
Rider Profile	Equity Populations	10 points if stop is in predominantly minority and/or low-income area (as defined by CATS)
	Reliant Populations	10 points if stop is in area with higher than average elderly or persons with disability
Activity Generator	Human Service Facility	15 points if one or more of the following existing or planned facilities, are within 1,320 feet of the stop: Medical facility, hospital, dialysis clinic, social security office, or County service center
	Activity Destinations	5 points if one or more of the following existing or planned facilities, are within 1,320 feet of the stop: Public library, public school, recreation center, senior center, or supermarket/pharmacy
	Major Employer	5 points if within 1,320 feet of the stop: is an existing or planned job center with more than 50 jobs
	Operator Relief	10 points if the stop is assigned as an official relief/layover point

Based on the criteria above, the different stop levels were assigned minimum scores necessary for amenity implementation (Table 5). This methodology relies on data availability concerning ridership, service levels, transfer points, operational details, rider demographics, trip generator, and human services facilities.

Table 5. Minimum Score by Bus Stop Typology

	Standard Bus Stop (Level 0)			Mobility Hubs		
	Type A	Type B	Type C	Enhanced Stop Pair (Level 1)	Mobility Plaza (Level 2)	Mobility Center (Level 3, Types A, B, C)
Minimum Score	---	10	25	50	55	65

Areas and bus stops identified as either a mobility plaza or mobility hub were re-scored based on a score developed off the bus stops or facilities within a 1/8 mile of the proposed mobility hub or mobility plaza. The data used to score stops individually was aggregated up to the facility level and scored in a similar manner, and these updated typology scores were used to prioritize implementation of these facilities.

Results

Across the six-corridors, the following number of facilities were identified:

- 9 Level 3 - Mobility Centers (including the Charlotte Transportation Center)
- 22 Level 2 - Mobility Plazas
- 323 Level 1 – Enhanced Stop Pair facilities (including seven new stops)

Bus Stop and Passenger Facility Balancing

The second step involved bus stop balancing, which involved assessing the bus stop spacing along the entire corridor and making recommendations for removal, consolidation/relocation and even addition. Bus stop balancing can improve safety for passengers and operators, increase operational efficiency, reduce travel time, improve reliability, and create consistent and predictable spacing between stops. As CATS conducts periodic reviews of bus stop spacing, it is important to follow a consistent process to designate stops as candidates for consolidation, relocation, or retention. This systematizes the balancing process, preventing ad hoc decisions that can cause average bus stop spacing to grow more unbalanced over time. It was assumed the standard spacing along the Envision My Ride – Bus Priority corridors was four bus stops per mile. Bus stops that didn’t meet this criterion were run through the flowchart in Figure 1, which describes the process for evaluating bus stop placement on CATS routes, with the goals of increasing safety, efficiency, and reliability. During the implementation phase for new and relocated bus stops, CATS should collaborate with CDOT to install new or upgrade existing crosswalks and pedestrian infrastructure.

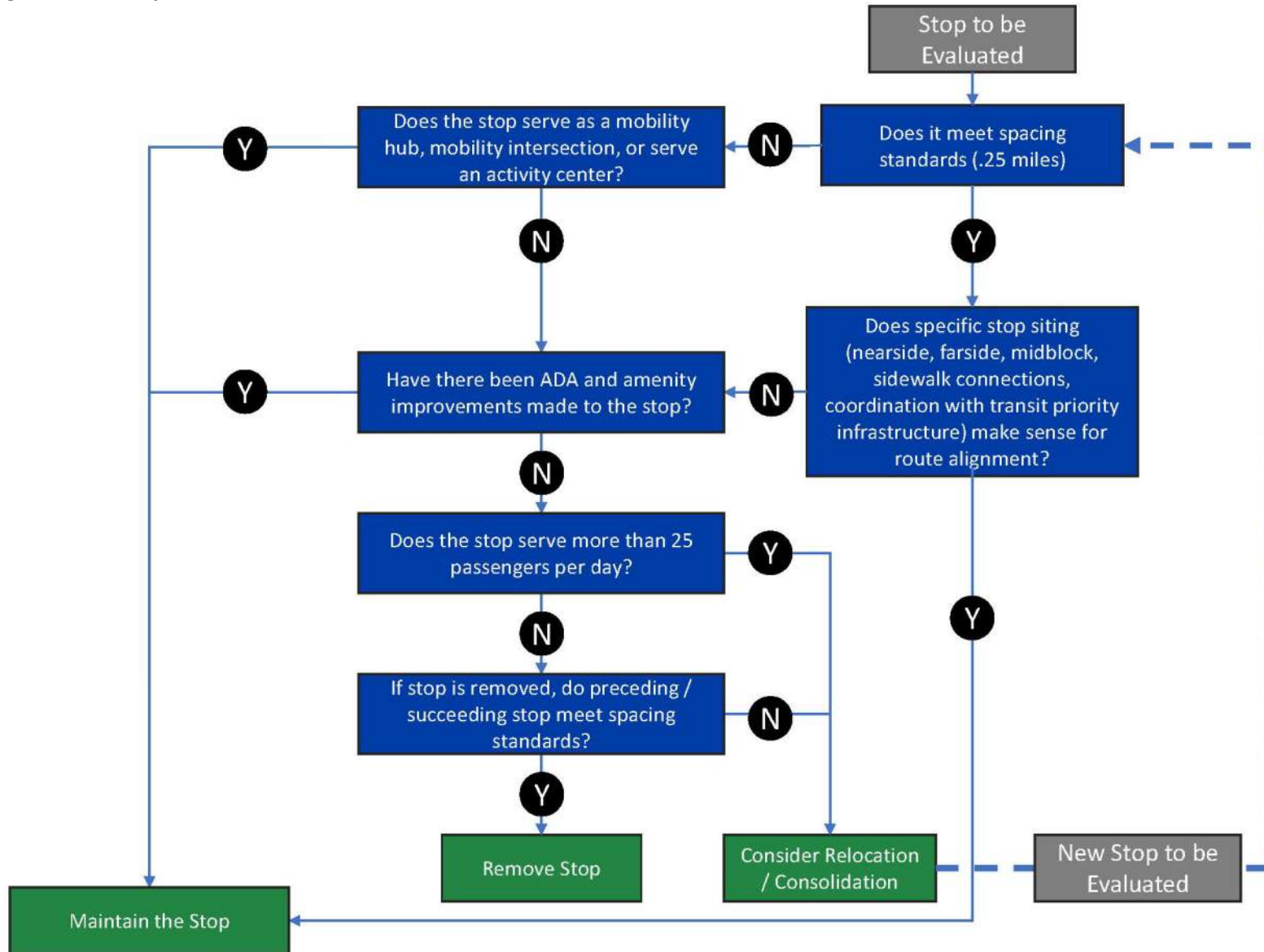
Results

As stops were proposed for removal, consolidation/relocation and addition, the new estimate of bus stops per mile ranged from 3.0 to 4.4 across the six corridors. Table 6 details the bus stop balancing results by corridor.

Table 6. Bus Stop Balancing Results by Corridor

Corridor	Average Spacing between Bus Stops	Stops per Mile
2 - Ashley Road	0.32	3.1
7 - Beatties Ford	0.24	4.2
9 - Central Avenue	0.23	4.4
16 - South Tryon	0.29	3.4
24 - Monroe Road	0.26	3.9
34 - Freedom Drive	0.31	3.2

Figure 1. Bus Stop Evaluation Decision Tree



5 FEEDBACK PROCESS

Stakeholder Agencies

In December 2021, the project team presented draft recommendations to the Project Management Team (PMT), which includes representatives from CDOT, CRTPO, and the Planning, Design, and Development Department. The project team sought to understand whether the proposed improvements may create unacceptable conflicts with general traffic or committed transportation improvements (e.g., road improvements, facility improvements, or route changes). A comment response table is included as Appendix C.

Bus Operators

The project team solicited feedback from bus operators as part of two focus group sessions held on January 12 and January 19, 2022. The focus group questions were also provided as online survey open until February 18, 2022. The project presented the initial six corridors and the areas where slow bus speeds were measured, and sought to understand:

- Whether bus operators experience delay where slow bus speeds were measured
- Where bus operators experience congestion and/or why they may have trouble adhering to their schedule
- Where bus operators have trouble making turns
- Which bus stops need improvement
- What bus operators hear from their passengers

Key themes that emerged from the focus groups included:

- Passenger boarding and fare collection is the largest source of delay
- Signal delay is a problem during for inbound routes during the AM peak period
- Passengers are difficult to see at night when lighting is inadequate

Bus operators also shared feedback about specific routes. See Appendix D for a summary of findings from the bus operator focus groups and the online survey.

Feedback from the public will be included in the forthcoming EMR BPS final report. While the project team will collect feedback on the recommendations at the upcoming public meeting on March 3, 2022, the meeting is planned to inform the public of the final recommendations.

6 RECOMMENDATIONS

The following sections are organized by route corridor and contain recommendations for signal priority treatments and bus stops. Note that in each route corridor's signal priority recommendation table, the "bus routes" column only includes the six initial corridors, though other routes may use the intersection. Intersecting

routes are included in the “notes” column at locations where multiple intersecting routes could reduce the benefit of TSP; listed routes are not comprehensive.

5.1: Route 9 Central Avenue

Figure 2 shows the signal priority and bus stop recommendations along Central Avenue and Albemarle Road.

Signal Priority Treatments

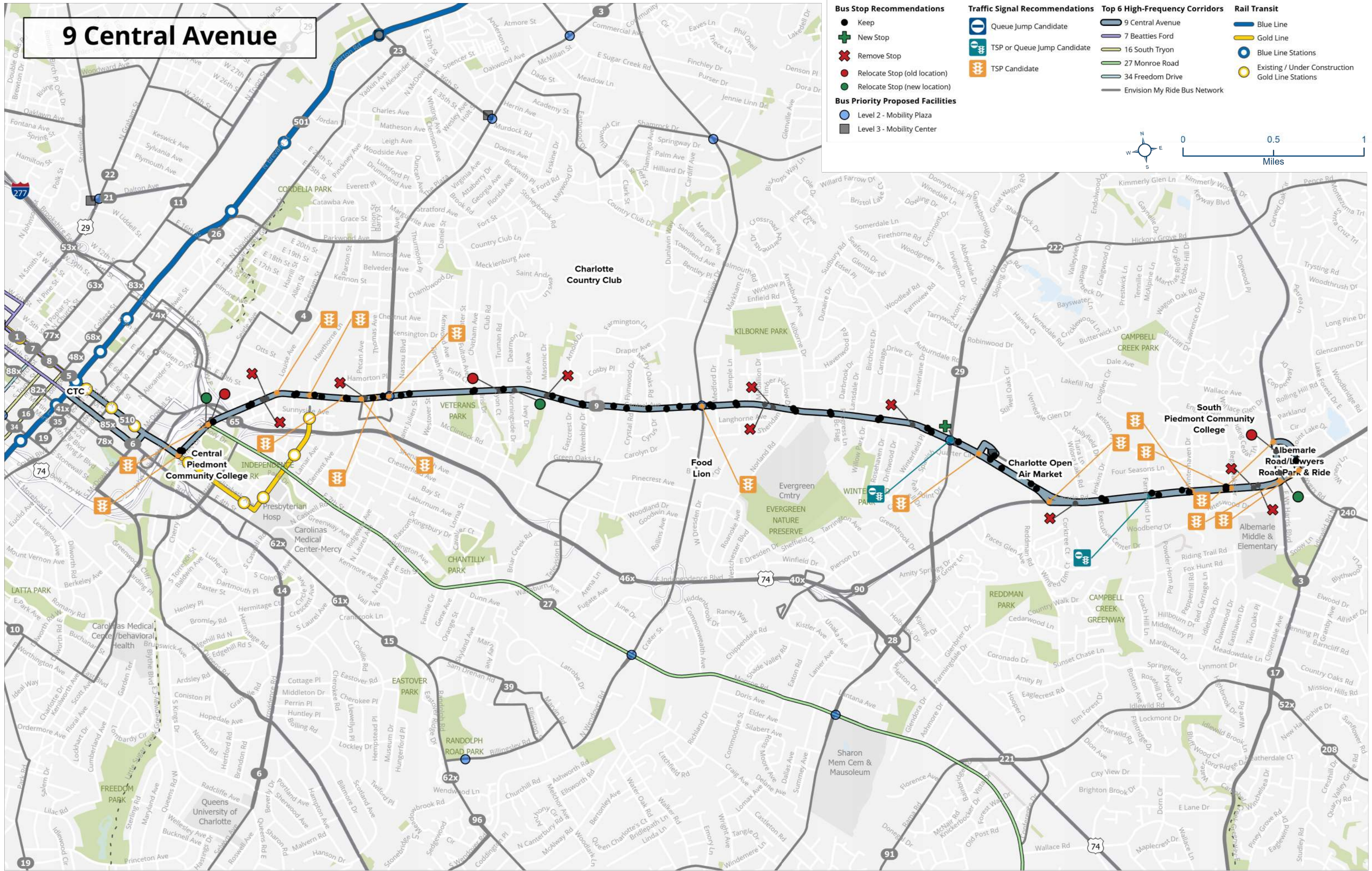
Table 7 summarizes the eighteen candidates for signal priority treatments.

Bus Stop and Passenger Facility Treatments

Table 8 provides an overview by stop of existing amenities, proposed balancing action and proposed bus stop typology with associated score.

- Outside of Uptown, 69 bus stops along the Central Avenue corridor were evaluated. Eight are proposed for removal, two are proposed for relocation, and one new stop is proposed at the intersection of Central Avenue and N Sharon Amity Road, as a pair to the bus stop on the northside of Central Avenue. Figure 3 illustrates the recommended changes by bus stop location. The bus stop changes result in an average of 4.4 bus stops per mile along the corridor.
- Along the Central Avenue corridor there are two proposed mobility hubs (Eastland CTC and Albemarle Rd) and three proposed mobility plazas (Central & The Plaza, Central & Eastway, and Central & Sharon Amity).
- The remaining 51 stops are proposed to be part of an enhanced stop pair.

9 Central Avenue



- ### Bus Stop Recommendations
- Keep
 - + New Stop
 - ✕ Remove Stop
 - Relocate Stop (old location)
 - Relocate Stop (new location)
- ### Bus Priority Proposed Facilities
- Level 2 - Mobility Plaza
 - Level 3 - Mobility Center

- ### Traffic Signal Recommendations
- ⬇ Queue Jump Candidate
 - ⬇ TSP or Queue Jump Candidate
 - ⬇ TSP Candidate

- ### Top 6 High-Frequency Corridors
- 9 Central Avenue
 - 7 Beatties Ford
 - 16 South Tryon
 - 27 Monroe Road
 - 34 Freedom Drive
 - Envision My Ride Bus Network

- ### Rail Transit
- Blue Line
 - Gold Line
 - Blue Line Stations
 - Existing / Under Construction Gold Line Stations



Table 7. Route 9 Signal Priority Candidate Details

#	Location	Bus Routes	Bus Speed	Vehicle Speed	Treatment Type	Notes
1	Elizabeth Ave/N Kings Dr	Routes 9, 27	<12 mph	<15 mph PM OB	TSP candidate	
2	Central Ave/E 7th St/N Kings Dr	Routes 9, 27	<12 mph	<15 mph PM OB	TSP or signal timing adjustment candidate	Intersecting routes; TSP for Route 9 would impact Route 27 NB left
3	E 10th St/Central Ave/Louise Ave	Route 9	<12 mph	<15 mph AM IB	TSP candidate	
4	Central Ave/Hawthorne Ln	Route 9		<15 mph AM IB	TSP candidate	
5	Central Ave/Clement Ave	Route 9	<12 mph	<15 mph AM IB	TSP candidate	
6	Central Ave/Pecan Ave	Route 9	<12 mph	<15 mph AM IB	TSP candidate	
7	Central Ave/Thomas Ave	Route 9	<12 mph	<15 mph AM IB	TSP candidate	
8	Central Ave/The Plaza	Route 9	<12 mph	<15 mph AM IB	TSP candidate	
9	Central Ave/Eastway Dr	Route 9	<12 mph		TSP candidate	Intersecting routes; TSP for Route 9 would affect Route 39
10	Central Ave/N Sharon Amity Rd	Route 9	<12 mph		TSP and/or queue jump candidate	Intersecting routes 28, 29, 222. WB direction QJ a potential based on presence of right turn lane. Detailed operational analysis (e.g., Synchro) needed to better assess queue jump effectiveness. Adjacent bike lane.
11	Central Ave/Eastland Mall Dy/Bell South Dy	Route 9	<12 mph		TSP candidate	
12	Albemarle Rd/Central Ave	Route 9	<12 mph		TSP candidate	NCDOT coordination needed. Intersecting routes 90, 40x, 46x.
13	Albemarle Rd/Farm Pond Ln	Route 9	<12 mph	<15 mph PM OB	TSP and/or queue jump candidate	NCDOT coordination needed. WB direction QJ a potential based on presence of right turn lane. Detailed operational analysis (e.g., Synchro) needed to better assess queue jump effectiveness
14	Albemarle Rd/Whitehaven Dr	Route 9	<12 mph	<15 mph PM OB	TSP candidate	NCDOT coordination needed.
15	Albemarle Rd/Regal Oaks Dr	Route 9	<12 mph	<15 mph PM OB	TSP candidate	NCDOT coordination needed.
16	Albemarle Rd/E W T Harris Bv	Route 9	<12 mph	<15 mph PM OB	TSP candidate	NCDOT coordination needed. Intersecting routes 3, 9, 17, 90, 240, 40x, 46x.
17	E W T Harris Bv/Lawyers Rd	Route 9	<12 mph		TSP candidate	Intersecting routes 3, 9, 17, 90, 240, 40x, 46x.
18	Albemarle Rd/Lawyers Rd	Route 9	<12 mph		TSP candidate	NCDOT coordination needed. Intersecting routes 3, 9, 17, 90, 240, 40x, 46x.

Table 8. Route 9 Bus Stop Amenity and Balancing Details

Bus Stop ID	Stop Name	Direction	Daily Ridership	Existing Amenities			Recommendation	Proposed Bus Stop Typology	Bus Stop Typology Score
				Benches	Simme Seats	Shelters			
13810	Kings Dr & Elizabeth Ave	Outbound	328	2	0	0	Keep	Level 1	284
4980	Central Ave & 7th St	Outbound	62	0	0	1	Keep	Level 1	98
4990	Central Ave & Piedmont St	Outbound	94	1	0	0	Keep	Level 1	88
5030	Central Ave & Louise Ave	Outbound	0	0	0	0	Remove	-	-
5050	Central Ave & Oakland Ave	Outbound	80	1	0	0	Keep	Level 1	100
5100	Central Ave & Lamar Ave	Outbound	30	1	0	0	Keep	Level 1	80
5120	Central Ave & Clement Ave	Outbound	57	1	0	0	Keep	Level 1	92
5170	Central Ave & Thomas Ave	Outbound	77	0	0	0	Keep	Level 1	98
5190	Central Ave & Nandina St	Outbound	101	1	0	1	Keep	Mobility Plaza	109
5250	Central Ave & Iris Dr	Outbound	20	0	1	0	Keep	Level 1	62
5270	Central Ave & Lyon Ct	Outbound	13	0	0	0	Relocate	Level 1	59
5310	Central Ave & St George St	Outbound	8	0	0	0	Remove	-	-
5330	Central Ave & Eastcrest Dr	Outbound	40	0	0	0	Keep	Level 1	77
5350	Central Ave & Wembley Dr	Outbound	83	0	0	1	Keep	Level 1	112
5340	Central Ave & Briar Creek Rd	Outbound	22	1	0	0	Keep	Level 1	60
5410	Central Ave & Carolyn Dr	Outbound	17	1	0	0	Keep	Level 1	76
45437	Central Ave & Eastway Dr	Outbound	120	1	0	0	Keep	Level 1	97
5430	Central Ave & Medford Dr	Outbound	133	0	0	1	Keep	Mobility Plaza	168
5440	Central Ave & Temple Ln	Outbound	4	1	1	0	Keep	Level 1	62
5480	Central Ave & Sheridan Dr	Outbound	18	0	0	0	Remove	-	-
5500	Central Ave & Norland Rd	Outbound	59	0	0	1	Keep	Level 1	78
5520	Central Ave & Progress Ln	Outbound	125	0	0	1	Keep	Level 1	96
5550	Central Ave & Rosehaven Dr	Outbound	103	0	0	1	Keep	Level 1	79
5560	Central Ave @ 4908	Outbound	29	0	0	0	Remove	-	-
5570	Central Ave & Winterfield Pl	Outbound	179	1	0	0	Keep	Level 1	118
NEW	New Stop	Outbound	-	-	-	-	New Stop	Mobility Plaza	-
45104	Eastland Transit Center- Bay A	Outbound	272	0	0	1	Keep	Mobility Center	225
5630	Central Ave @ Eastland Mall	Outbound	75	0	0	1	Keep	Mobility Center	114

Bus Stop ID	Stop Name	Direction	Daily Ridership	Existing Amenities			Recommendation	Proposed Bus Stop Typology	Bus Stop Typology Score
				Benches	Simme Seats	Shelters			
1370	Central Ave & Reddman Rd	Outbound	76	1	0	0	Keep	Level 1	106
15000	Albemarle Rd & Central Av	Outbound	17	0	0	0	Remove	-	-
180	Albemarle Rd & Executive Center Dr	Outbound	64	0	1	1	Keep	Level 1	95
45221	Albemarle Rd & Farm Pond Ln	Outbound	162	2	0	0	Keep	Level 1	111
230	Albemarle Rd & Winterhaven Dr	Outbound	43	0	0	0	Keep	Level 1	83
250	Albemarle Rd & Regal Oaks Dr	Outbound	79	0	0	0	Keep	Level 1	97
280	Albemarle Rd & WT Harris Blvd	Outbound	3	0	0	0	Remove	-	-
45160	WT Harris Blvd & Albemarle Rd	Outbound	44	1	0	0	Relocate	Level 1	95
285	Albemarle Rd & Lawyers Rd Park and Ride	Outbound	981	1	0	0	Keep	Mobility Center	583
270	Albemarle Rd & WT Harris Blvd	Inbound	37	0	0	1	Remove	-	-
260	Albemarle Rd & Regal Oaks Dr	Inbound	103	0	0	1	Keep	Level 1	180
240	Albemarle Rd & Winterhaven Dr	Inbound	42	0	0	0	Keep	Level 1	99
210	Albemarle Rd & Farm Pond Ln	Inbound	176	0	0	1	Keep	Level 1	227
170	Albemarle Rd & Jenkins Dr	Inbound	104	0	0	1	Keep	Level 1	168
160	Central Ave & Reddman Rd	Inbound	96	1	1	0	Keep	Level 1	160
45103	Eastland Transit Center- Bay E	Inbound	213	0	0	2	Keep	Mobility Center	227
5590	Central Ave & Sharon Amity Rd	Inbound	167	0	0	1	Keep	Mobility Plaza	229
5580	Central Ave & Winterfield Pl	Inbound	182	0	0	1	Keep	Level 1	207
5540	Central Ave & Rosehaven Dr	Inbound	124	0	0	1	Keep	Level 1	172
5510	Central Ave & Progress Ln	Inbound	145	0	0	1	Keep	Level 1	172
5470	Central Ave & Kilborne Dr	Inbound	67	0	0	1	Keep	Level 1	131
5465	Central Ave & Medallion Dr	Inbound	5	0	0	1	Remove	-	-
5450	Central Ave & Temple Ln	Inbound	10	0	0	1	Keep	Level 1	74
38620	Central Ave & Eastway Dr	Inbound	126	1	0	0	Keep	Mobility Plaza	136
5420	Central Ave & Longfellow St	Inbound	104	0	0	1	Keep	Level 1	172
5400	Central Ave & Merry Oaks Rd	Inbound	11	0	0	0	Keep	Level 1	93
5370	Central Ave & Briar Creek Rd	Inbound	20	1	0	0	Keep	Level 1	88
5360	Central Ave & Eastcrest Dr	Inbound	116	0	0	1	Keep	Level 1	158
5320	Central Ave & Masonic Dr	Inbound	10	0	0	0	Keep	Level 1	83

Bus Stop ID	Stop Name	Direction	Daily Ridership	Existing Amenities			Recommendation	Proposed Bus Stop Typology	Bus Stop Typology Score
				Benches	Simme Seats	Shelters			
5280	Central Ave & Club Rd	Inbound	14	1	0	0	Keep	Level 1	73
5240	Central Ave & Tippah Park Ct	Inbound	16	0	0	1	Keep	Level 1	66
5200	Central Ave & Nandina St	Inbound	43	0	0	1	Keep	Level 1	73
5180	Central Ave & Thomas Ave	Inbound	106	0	0	0	Keep	Mobility Plaza	128
5140	Central Ave & Pecan Ave	Inbound	0	1	0	0	Remove	-	-
5130	Central Ave & Clement Ave	Inbound	71	1	0	0	Keep	Level 1	114
5070	Central Ave & Hawthorne Ln	Inbound	6	0	0	0	Keep	Level 1	29
5060	Central Ave & Heath Ct	Inbound	111	0	0	1	Keep	Level 1	135
5010	Central Ave & Louise Ave	Inbound	0	0	0	0	Remove	Level 1	10
5000	Central Ave & Piedmont St	Inbound	72	1	0	0	Keep	Level 1	99
45498	Central Ave & 7th St	Inbound	33	0	0	0	Relocate	-	-
18040	Elizabeth Ave & Kings Dr	Inbound	162	0	0	0	Keep	Level 1	137

5.2: Route 7 Beatties Ford

Figure 3 shows the signal priority and bus stop recommendations along Beatties Ford Road.

Signal Priority Treatments

Table 9 summarizes the six candidates for signal priority treatments along West 5th Street and Beatties Ford Road.

Table 9. Route 7 Signal Priority Candidate Details

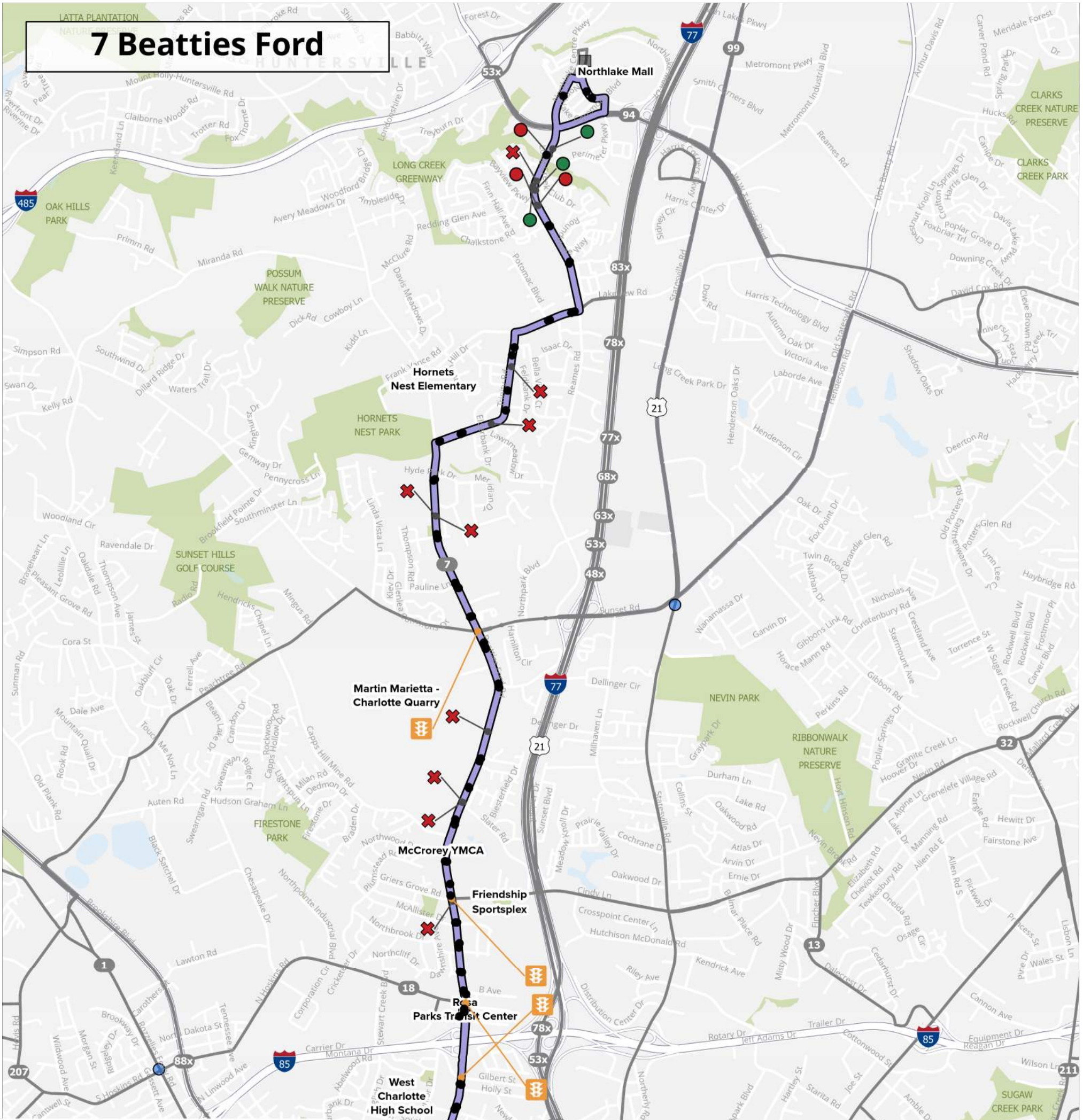
#	Location	Bus Routes	Bus Speed	Vehicle Speed	Treatment	Notes
1	W 5th St/W 6th St	Route 7	No AVL data	<15 mph AM IB	TSP candidate	
2	Beatties Ford Rd/Oaklawn Ave	Route 7	<12 mph		TSP candidate	
3	Beatties Ford Rd/Montana Dr/Gilbert St	Route 7	12.5mph AM/13 mph PM		TSP candidate	
4	Beatties Ford Rd/N Hoskins Rd	Route 7	<12 mph		TSP candidate	
5	Beatties Ford Rd/Cindy Ln/Griers Grove Rd	Route 7	<12 mph		TSP candidate	Intersecting routes; TSP for Route 2 could affect Routes 13 and 32
6	Beatties Ford Rd/Sunset Rd	Route 7	<12 mph		TSP candidate	Intersecting route; TSP for Route 7 could affect Route 207

Bus Stop and Passenger Facility Treatments

Table 10 provides an overview by stop of existing amenities, proposed balancing action and proposed bus stop typology with associated score.

- Outside of Uptown, 90 bus stops along the Beatties Ford corridor were evaluated. Thirteen are proposed for removal, and three are proposed for relocation. The bus stop changes result in an average of 4.2 bus stops per mile along the corridor.
- Along the Beatties Ford corridor there are two proposed mobility hubs (Rosa Parks CTC and Northlake Mall) and two proposed mobility plazas (Beatties Ford & Rozzelles Ferry, and Beatties Ford Rd & LaSalle).
- The remaining 69 stops are proposed to be part of an enhanced stop pair.

7 Beatties Ford



Bus Stop Recommendations

- Keep
- ✚ New Stop
- ✖ Remove Stop
- Relocate Stop (old location)
- Relocate Stop (new location)

Bus Priority Proposed Facilities

- Level 2 - Mobility Plaza
- Level 3 - Mobility Center

Traffic Signal Recommendations

- ⏸ Queue Jump Candidate
- ⏸ TSP or Queue Jump Candidate
- ⏸ TSP Candidate

Top 6 High-Frequency Corridors

- 7 Beatties Ford
- 9 Central Avenue
- 16 South Tryon
- 27 Monroe Road
- 34 Freedom Drive
- Envision My Ride Bus Network

Rail Transit

- Blue Line
- Gold Line
- Blue Line Stations
- Existing / Under Construction Gold Line Stations

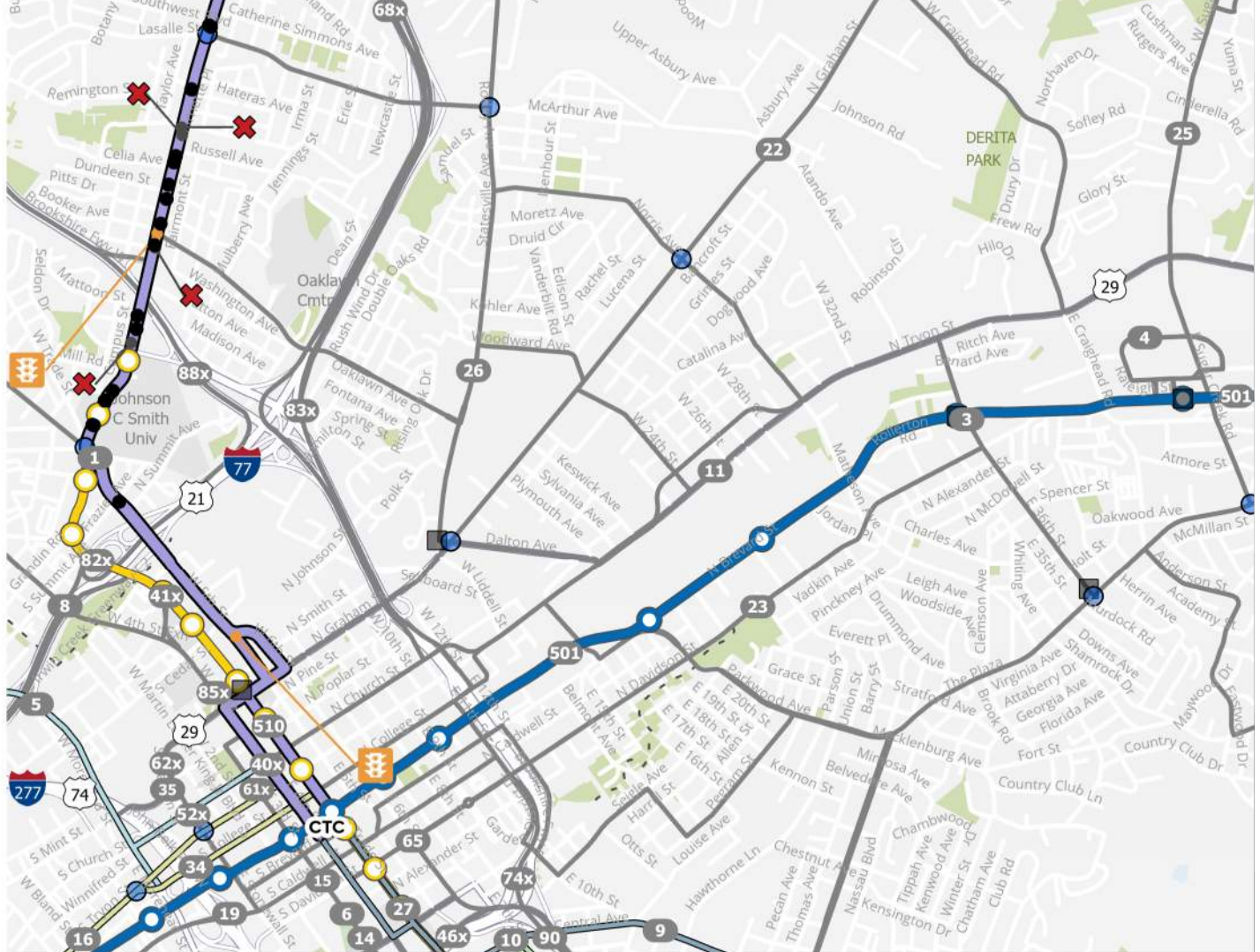


Table 10. Route 7 Bus Stop Amenity and Balancing Details

Bus Stop ID	Stop Name	Direction	Daily Ridership	Existing Amenities			Recommendation	Proposed Bus Stop Typology	Bus Stop Typology Score
				Benches	Simme Seats	Shelters			
33210	5th St & Frazier Ave	Northbound	5	0	0	0	Keep	Level 1	88
2380	Beatties Ford Rd & 5th St	Northbound	1	0	0	1	Keep	Mobility Plaza	85
2400	Beatties Ford Rd & Dixon St	Northbound	0	0	0	0	Keep	Level 1	80
2430	Beatties Ford Rd & Cemetery St	Northbound	0	0	0	0	Keep	Level 1	80
2470	Beatties Ford Rd & Sanders Ave	Northbound	0	0	0	0	Remove	-	-
2500	Beatties Ford Rd & Oaklawn Ave	Northbound	74	1	0	0	Keep	Level 1	107
2510	Beatties Ford Rd & Dundeen St	Northbound	109	1	0	0	Keep	Level 1	125
2540	Beatties Ford Rd & Russell Ave	Northbound	37	0	0	0	Keep	Level 1	92
2552	Beatties Ford Rd & St Paul St	Northbound	11	0	0	0	Remove	-	-
2570	Beatties Ford Rd & St Mark St	Northbound	44	0	0	0	Keep	Level 1	74
2610	Beatties Ford Rd & LaSalle St	Northbound	288	0	0	1	Keep	Mobility Plaza	156
2640	Beatties Ford Rd & Holly St	Northbound	1	0	0	1	Keep	Level 1	65
2660	Beatties Ford Rd & Gilbert St	Northbound	63	0	0	1	Keep	Level 1	79
24600	Rosa Parks Pl & Beatties Ford Rd	Northbound	276	0	0	2	Keep	Mobility Center	232
2720	Beatties Ford Rd & B Ave	Northbound	10	0	0	0	Keep	Level 1	83
2750	Beatties Ford Rd & Lynchester Pl	Northbound	16	0	0	0	Keep	Level 1	82
2771	Beatties Ford Rd & Friendship Village Pl	Northbound	16	0	0	0	Keep	Level 1	62
2772	Beatties Ford Rd & McAllister Dr	Northbound	11	1	1	0	Keep	Level 1	78
2780	Beatties Ford Rd & Cindy Ln	Northbound	38	0	0	0	Remove	-	-
2800	Beatties Ford Rd @ 3640	Northbound	75	1	1	0	Keep	Level 1	111
2820	Beatties Ford Rd @ 3738	Northbound	14	0	0	0	Keep	Level 1	84
2830	Beatties Ford Rd @ 3938	Northbound	3	0	0	0	Keep	Level 1	65
2860	Beatties Ford Rd & Slater Rd	Northbound	3	0	0	0	Remove	-	-
2870	Beatties Ford Rd & Slater Springs Dr	Northbound	4	0	0	0	Keep	Level 1	61
2890	Beatties Ford Rd & Olde English Dr	Northbound	13	0	0	0	Keep	Level 1	64
2910	Beatties Ford Rd @ 4530	Northbound	0	0	0	0	Remove	-	-
42190	Beatties Ford Rd & Hamilton Cir	Northbound	3	0	0	0	Keep	Level 1	60

Bus Stop ID	Stop Name	Direction	Daily Ridership	Existing Amenities			Recommendation	Proposed Bus Stop Typology	Bus Stop Typology Score
				Benches	Simme Seats	Shelters			
45293	Beatties Ford Rd & Sunset Rd	Northbound	56	0	0	0	Keep	Level 1	71
42660	Beatties Ford Rd & Montgomery Gardens	Northbound	26	0	0	1	Keep	Level 1	83
42650	Beatties Ford Rd & Pauline Ln	Northbound	2	0	0	0	Keep	Level 1	75
42640	Beatties Ford Rd & McIntyre Ave	Northbound	1	0	0	0	Keep	Level 1	60
42630	Beatties Ford Rd @ 5835 (Kids)	Northbound	0	0	0	0	Remove	-	-
42620	Beatties Ford Rd & Hyde Park Dr	Northbound	1	0	0	0	Keep	Level 1	70
42500	Trinity Rd & Beatties Ford Rd	Northbound	9	0	0	0	Keep	Level 1	71
42510	Trinity Rd @ Cemetery	Northbound	8	0	0	0	Keep	Level 1	71
42615	Trinity Rd & Evanshire Dr	Northbound	9	0	0	0	Remove	-	-
42606	Trinity Rd & Evanshire Dr	Northbound	7	0	0	0	Keep	Level 1	71
42608	Trinity Rd & Feldbank Dr	Northbound	10	0	0	0	Remove	-	-
45132	Trinity Rd & Larkhull Dr	Northbound	5	0	0	0	Keep	Level 1	72
45770	Lakeview Rd & Potomac Blvd	Northbound	1	0	0	0	Keep	Level 1	71
45816	Lakeview Rd & Reames Rd	Northbound	1	0	0	0	Keep	Level 1	70
46489	Reames Rd & Auston Crossing Dr	Northbound	19	0	1	0	Keep	Level 1	74
46490	Reames Rd @ Lee's Living Center	Northbound	2	0	0	0	Keep	Level 1	70
45377	Reames Rd & Bayview Pkwy	Northbound	13	0	0	0	Relocate	Level 1	70
46521	Reames Rd & Prestbury Blvd	Northbound	2	0	0	0	Remove	-	-
45378	Reames Rd & Perimeter Pkwy	Northbound	14	0	0	0	Relocate	Level 1	78
46439	Northlake Centre Pkwy & Point O'Woods	Northbound	30	0	0	0	Keep	Level 1	85
45818	Northlake Mall (1st stop)	Northbound	343	0	0	1	Keep	Mobility Center	258
45813	Northlake Mall (2nd Stop)	Northbound	14	0	0	1	Keep	Level 1	85
42605	Trinity Rd & Clairemore Pl	Southbound	2	0	0	0	Keep	Level 1	72
42515	Trinity Rd @ 9115	Southbound	11	0	0	1	Keep	Level 1	78
42505	Trinity Rd & Beatties Ford Rd	Southbound	6	0	0	0	Keep	Level 1	76
42625	Beatties Ford Rd & Hyde Park Dr	Southbound	1	0	0	0	Keep	Level 1	61
42635	Beatties Ford Rd @ 5901 (Kids)	Southbound	0	0	0	0	Remove	-	-
42645	Beatties Ford Rd & McIntyre Ave	Southbound	2	0	0	0	Keep	Level 1	61
46426	Beatties Ford Rd & Pauline Ln	Southbound	1	0	0	0	Keep	Level 1	66

Bus Stop ID	Stop Name	Direction	Daily Ridership	Existing Amenities			Recommendation	Proposed Bus Stop Typology	Bus Stop Typology Score
				Benches	Simme Seats	Shelters			
42655	Beatties Ford Rd & Sunset Rd	Southbound	31	0	0	1	Keep	Level 1	87
2940	Beatties Ford Rd & Sunset Rd	Southbound	50	1	1	0	Keep	Level 1	106
37190	Beatties Ford Rd & Hamilton Cir	Southbound	4	0	0	0	Keep	Level 1	64
2900	Beatties Ford Rd & Slater Ridge Dr	Southbound	10	0	0	0	Keep	Level 1	68
2880	Beatties Ford Rd & Slater Springs Dr	Southbound	6	0	0	0	Keep	Level 1	75
2840	Beatties Ford Rd & Slater Rd	Southbound	0	0	0	0	Remove	-	-
2850	Beatties Ford Rd & Capps Hill Mine Rd	Southbound	5	0	0	0	Keep	Level 1	78
2810	Beatties Ford Rd @ 3713	Southbound	54	1	0	0	Keep	Level 1	118
2790	Beatties Ford Rd & Griers Grove Rd	Southbound	73	0	0	1	Keep	Level 1	143
2770	Beatties Ford Rd & McAllister Dr	Southbound	15	0	0	1	Keep	Level 1	87
2760	Beatties Ford Rd & Fairdale Dr	Southbound	19	1	0	0	Keep	Level 1	77
2740	Beatties Ford Rd & Lynchester Pl	Southbound	14	0	0	1	Keep	Level 1	102
2730	Beatties Ford Rd & Hoskins Rd	Southbound	5	0	0	1	Keep	Level 1	94
45112	Beatties Ford Rd & Rosa Parks Pl (Bay C)	Southbound	177	0	0	2	Keep	Mobility Center	196
2680	Beatties Ford Rd & Rosa Parks Pl (Bay B)	Southbound	69	0	0	0	Keep	Mobility Center	75
2670	Beatties Ford Rd & Montana Dr	Southbound	75	0	0	1	Keep	Level 1	127
2630	Beatties Ford Rd & Keller Ave	Southbound	24	0	0	1	Keep	Level 1	92
2600	Beatties Ford Rd & LaSalle St	Southbound	310	0	0	1	Keep	Mobility Plaza	291
2580	Beatties Ford Rd & Hildebrand St	Southbound	41	0	0	1	Keep	Level 1	96
2550	Beatties Ford Rd & Estelle St	Southbound	7	0	0	0	Remove	-	-
2530	Beatties Ford Rd & Celia Ave	Southbound	34	0	0	1	Keep	Level 1	102
44035	Beatties Ford Rd & Dundeen St	Southbound	81	1	1	0	Keep	Level 1	131
2480	Beatties Ford Rd & Sanders Ave	Southbound	54	1	0	0	Keep	Level 1	103
2440	Beatties Ford Rd & Cemetery St	Southbound	0	0	0	1	Keep	Level 1	80
2420	Beatties Ford Rd & French St	Southbound	0	0	0	0	Remove	-	-
2390	Beatties Ford Rd & Dixon St	Southbound	0	1	0	0	Keep	Level 1	80
2370	Beatties Ford Rd & 5th St	Southbound	1	0	0	0	Keep	Mobility Plaza	86

5.3: Route 16 South Tryon

Figure 4 shows the signal priority and bus stop recommendations along South Tryon Street.

Signal Priority Treatments

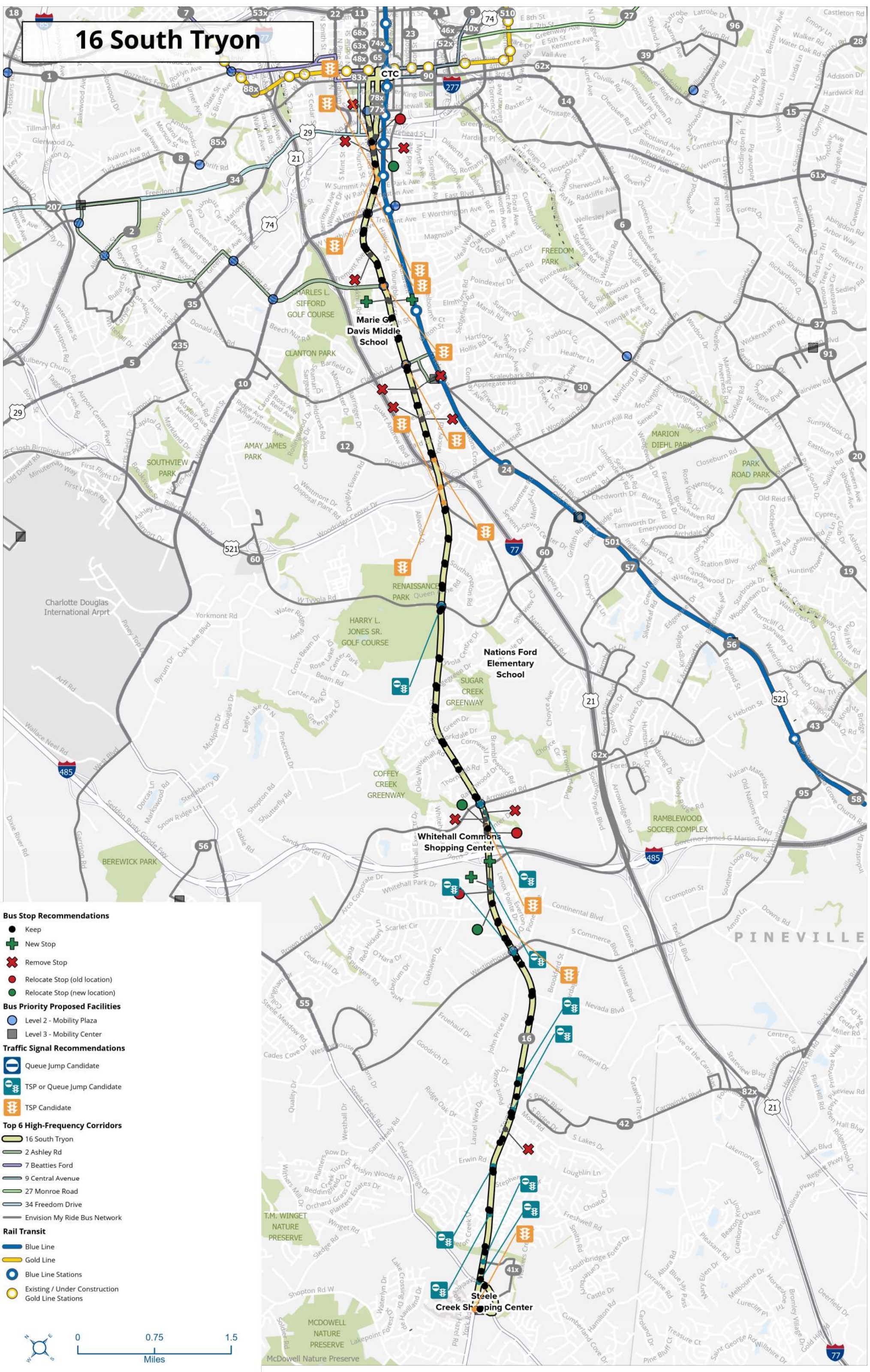
Table 11 summarizes the 25 candidates for signal priority treatments along South Tryon Street.

Bus Stop and Passenger Facility Treatments

Table 12 provides an overview by stop of existing amenities, proposed balancing action and proposed bus stop typology with associated score.

- Along the South Tryon corridor (outside of Uptown), 92 bus stops were evaluated. Eleven are proposed for removal, two are proposed for relocation, and two new locations, as an enhanced bus stop pair, are recommended on South Tryon Street at Benjamin Street. The bus stop changes result in an average of 3.4 bus stops per mile along the corridor.
- There is one proposed mobility hub (Rivergate) on the South Tryon corridor at the end of line, and eight proposed mobility plazas: Tryon & Stonewall, Tryon & College, West & Tryon, Remount & Tryon, Tryon & Clanton, Tryon & Tyvola, Tryon & Arrowood, and Tryon & Westinghouse.
- The remaining 68 stops are proposed to be part of an enhanced stop pair.

16 South Tryon



Bus Stop Recommendations

- Keep
- ⊕ New Stop
- ✗ Remove Stop
- Relocate Stop (old location)
- Relocate Stop (new location)

Bus Priority Proposed Facilities

- Level 2 - Mobility Plaza
- Level 3 - Mobility Center

Traffic Signal Recommendations

- ⏸ Queue Jump Candidate
- ⏸ TSP or Queue Jump Candidate
- ⏸ TSP Candidate

Top 6 High-Frequency Corridors

- 16 South Tryon
- 2 Ashley Rd
- 7 Beatties Ford
- 9 Central Avenue
- 27 Monroe Road
- 34 Freedom Drive
- Envision My Ride Bus Network

Rail Transit

- Blue Line
- Gold Line
- Blue Line Stations
- Existing / Under Construction Gold Line Stations



Table 11. Route 16 Signal Priority Candidate Details

#	Location	Bus Routes	Bus Speed	Vehicle Speed	Treatment	Notes
1	S Tryon St/Morehead St	Routes 16, 34		<15 mph PM OB	TSP candidate	Intersecting routes; TSP for Route 16 would affect Routes 5, 34, 35. Short turn lane; adjacent bike lane - not a good QJ candidate
2	S College St/Morehead St	Routes 16, 34	<12 mph		TSP candidate	Intersecting routes; TSP for Route 16 would affect Routes 5, 34, 35
3	S Tryon St/Carson Blvd	Route 16		<15 mph PM OB	TSP candidate	
4	S Tryon St/Bland St	Route 16	<12 mph		TSP candidate	
5	S Tryon St/Camden Rd/W Summit Ave	Route 16	<12 mph		TSP candidate	
6	S Tryon St/W Park Ave	Route 16	<12 mph		TSP candidate	
7	S Tryon St/West Blvd	Route 16	<12 mph		TSP candidate	
8	S Tryon St/Remount Rd	Routes 2, 16	<12 mph		TSP candidate	
9	S Tryon St/Clanton Rd	Routes 2, 16	<12 mph	<15 mph AM IB/PM OB	TSP candidate	Intersecting routes; TSP for Route 16 could affect Route 2, 12, 30, 41x
10	S Tryon St/Pressley Rd/Yancey Rd	Route 16	<12 mph		TSP candidate	
11	S Tryon St/Graham Py	Route 16	<12 mph		TSP candidate	
12	S Tryon St/Nations Ford Rd/Yorkmont Rd	Route 16	<12 mph		TSP candidate	
13	S Tryon St/W Tyvola Rd	Route 16	<12 mph		TSP and/or queue jump candidate	SB direction. Detailed operational analysis (e.g., Synchro) needed to better assess queue jump effectiveness.
14	S Tryon St/W Arrowood Rd	Route 16	<12 mph	<15 mph AM IB/PM OB	TSP and/or queue jump candidate	TSP for Route 16 would impact Route 56 and 41x. QJ for NB direction. SB right turn lane is short. Detailed operational analysis (e.g., Synchro) needed to better assess queue jump effectiveness.
15	St Tryon St/Whitehall Commons Shopping Center Dr	Route 16	<12 mph	<15 mph AM IB/PM OB	TSP candidate	Short turn lane - not a good QJ candidate
16	S Tryon St/Whitehall Park Dr/Ayrsley Town Blvd	Route 16	<12 mph	<15 mph AM IB/PM OB	TSP and/or queue jump candidate	NB and SB directions. Detailed operational analysis (e.g., Synchro) needed to better assess queue jump effectiveness.
17	S Tryon St/Sandy Porter Rd	Route 16	<12 mph	<15 mph AM IB/PM OB	TSP candidate	
18	S Tryon St/Westinghouse Blvd	Route 16	<12 mph	<15 mph AM IB/PM OB	TSP and/or queue jump candidate	NB and SB directions. Detailed operational analysis (e.g., Synchro) needed to better assess queue jump effectiveness.

#	Location	Bus Routes	Bus Speed	Vehicle Speed	Treatment	Notes
19	S Tryon St/Carowinds Blvd/John Price Rd	Route 16	<12 mph	<15 mph AM IB	TSP and/or queue jump candidate	NB and SB directions. Detailed operational analysis (e.g., Synchro) needed to better assess queue jump effectiveness.
20	S Tryon St/Moss Rd	Route 16	<12 mph	<15 mph AM IB	TSP and/or queue jump candidate	SB direction. NB right turn lane is short. Detailed operational analysis (e.g., Synchro) needed to better assess queue jump effectiveness.
21	S Tryon St/Erwin Rd	Route 16		<15 mph AM IB	TSP and/or queue jump candidate	SB direction. Detailed operational analysis (e.g., Synchro) needed to better assess queue jump effectiveness.
22	S Tryon St/Choate Cr	Route 16		<15 mph AM IB	TSP and/or queue jump candidate	NB direction. Detailed operational analysis (e.g., Synchro) needed to better assess queue jump effectiveness.
23	S Tryon St/Rivergate Py	Route 16		<15 mph AM IB	TSP and/or queue jump candidate	NB and SB directions. Detailed operational analysis (e.g., Synchro) needed to better assess queue jump effectiveness.
24	S Tyron St/Steele Creek Rd	Route 16	<12 mph		TSP and/or queue jump candidate	NB direction. Detailed operational analysis (e.g., Synchro) needed to better assess queue jump effectiveness.
25	S Tryon St/Steelecroft Py	Route 16	<12 mph		TSP candidate	

Table 12. Route 16 Bus Stop Amenity and Balancing Details

Bus Stop ID	Stop Name	Direction	Daily Ridership	Existing Amenities			Recommendation	Proposed Bus Stop Typology	Bus Stop Typology Score
				Benches	Simme Seats	Shelters			
45398	College St & Morehead St	Northbound	13	0	0	0	Relocate	Mobility Plaza	79
45420	Tryon St & Carson Blvd	Northbound	6	0	0	0	Remove	-	-
25840	Tryon St & Bland St	Northbound	18	0	0	0	Keep	Level 1	72
25890	Tryon St & Park Ave	Northbound	8	0	0	0	Keep	Level 1	67
25920	Tryon St & West Blvd	Northbound	48	0	0	0	Keep	Mobility Plaza	69
25930	Tryon St & Doggett St	Northbound	4	0	0	0	Keep	Level 1	57
25950	Tryon St & Tremont Ave	Northbound	3	0	0	0	Keep	Level 1	61
25980	Tryon St & Dunavant St	Northbound	15	0	0	0	Keep	Level 1	75
26030	Tryon St & Remount Rd	Northbound	67	0	0	0	Keep	Mobility Plaza	115
59571	Tryon St & Griffith St	Northbound	63	0	0	0	Keep	Level 1	123
NEW	New Stop	Northbound	-	-	-	-	New Stop	Level 1	-
26040	Tryon St & Herman Ave	Northbound	143	0	0	1	Keep	Level 1	178
26080	Tryon st & Clanton Rd	Northbound	113	0	0	1	Keep	Mobility Plaza	140
26110	Tryon St & Bowman Rd	Northbound	4	0	0	0	Remove	-	-
26130	Tryon St & Cama St	Northbound	2	0	0	0	Keep	Level 1	52
26170	Tryon St & Peterson Dr	Northbound	4	0	0	0	Remove	-	-
26180	Tryon St & Orchard Cir	Northbound	4	0	0	0	Keep	Level 1	53
26220	Tryon St & Pressley Rd	Northbound	139	0	0	1	Keep	Level 1	131
46111	Tryon St & Yorkmont Rd	Northbound	99	0	1	1	Keep	Level 1	132
46110	Tryon St & Kingman Dr	Northbound	13	0	0	0	Keep	Level 1	69
46109	Tryon St & Southampton Rd	Northbound	5	0	0	0	Keep	Level 1	74
46356	Tryon St & Queen Anne Rd	Northbound	6	0	0	0	Keep	Level 1	73
46423	Tryon St & Tyvola Rd	Northbound	18	0	0	0	Keep	Mobility Plaza	80
46173	Tryon St & Tyvola Centre Dr	Northbound	7	0	0	0	Keep	Level 1	77
52770	Tryon & Shopton	Northbound	6	0	0	0	Keep	Level 1	76
46172	Tryon St & Land Grant Rd	Northbound	26	1	0	0	Keep	Level 1	90
46171	Tryon St & Yorkdale Dr	Northbound	10	0	0	0	Keep	Level 1	77
46170	Tryon St & Thornfield Rd	Northbound	22	0	0	0	Keep	Level 1	89

Bus Stop ID	Stop Name	Direction	Daily Ridership	Existing Amenities			Recommendation	Proposed Bus Stop Typology	Bus Stop Typology Score
				Benches	Simme Seats	Shelters			
46169	Tryon St & Arrowood Rd	Northbound	84	1	0	0	Keep	Mobility Plaza	145
46100	Tryon St & Arrowcreek Dr	Northbound	30	0	0	0	Remove	-	-
26380	Tryon St @ White Hall Commons	Northbound	71	0	0	0	Keep	Level 1	115
26430	Tryon St & Sandy Porter Rd	Northbound	55	0	0	1	Keep	Level 1	117
46168	Tryon St & Westinghouse Blvd	Northbound	42	0	0	0	Keep	Mobility Plaza	110
46167	Tryon St & Westinghouse Blvd	Northbound	22	0	0	0	Keep	Level 1	66
52271	S Tryon St & Nevada Bv	Northbound	4	0	0	0	Keep	Level 1	58
46166	Tryon St & General Dr	Northbound	24	1	0	0	Keep	Level 1	76
46165	Tryon St & Carowinds Blvd	Northbound	36	0	0	0	Keep	Level 1	99
52421	Tryon St & South Point Bv	Northbound	14	0	0	0	Keep	Level 1	82
46328	Tryon St & Moss Rd	Northbound	13	0	0	0	Keep	Level 1	80
46164	Tryon St & Savannah Club Dr	Northbound	13	0	0	0	Keep	Level 1	80
46163	Tryon St & Erwin Rd	Northbound	9	0	0	0	Keep	Level 1	78
46162	Tryon St & Choate Rd	Northbound	24	2	0	0	Keep	Level 1	93
46324	Tryon St & Rivergate Pkwy	Northbound	37	0	0	1	Keep	Level 1	108
52450	S Tryon St & Rivergate Py	Northbound	5	0	0	0	Keep	Level 1	93
52462	Tryon St & Steele Creek Rd	Northbound	43	0	0	0	Keep	Level 1	121
52460	Steele Creek Rd & S Tryon St	Northbound	5	0	0	0	Keep	Level 1	90
46695	CMC Steeecroft	Northbound	263	0	0	1	Keep	Mobility Center	220
44885	Tryon St @ 8951	Northbound	66	1	1	0	Keep	Level 1	134
NEW	New Stop	Northbound	-	-	-	-	New Stop	Level 1	-
46536	Tryon St & Rivergate Pkwy	Southbound	62	0	0	0	Keep	Level 1	79
46160	Tryon St & Choate Rd	Southbound	23	0	0	0	Keep	Level 1	73
46159	Tryon St & Erwin Rd	Southbound	9	0	0	0	Keep	Level 1	72
46158	Tryon St & Garden Oaks Ln	Southbound	6	0	0	0	Keep	Level 1	52
52420	Tryon St & Mother Theresa Villas	Southbound	12	0	0	0	Remove	-	-
46327	Tryon St & Moss Rd	Southbound	22	0	0	0	Keep	Level 1	54
46326	Tryon St & Crescent Springs	Southbound	50	0	0	0	Keep	Level 1	79
46156	Tryon St & General Dr	Southbound	35	0	0	0	Keep	Level 1	76

Bus Stop ID	Stop Name	Direction	Daily Ridership	Existing Amenities			Recommendation	Proposed Bus Stop Typology	Bus Stop Typology Score
				Benches	Simme Seats	Shelters			
52270	Tryon St & Nevada Bv	Southbound	6	0	0	0	Keep	Level 1	71
46155	Tryon St & Westinghouse Blvd	Southbound	38	0	0	0	Keep	Mobility Plaza	84
45480	Tryon St & Township Rd	Southbound	37	0	0	0	Keep	Level 1	82
44895	Tryon St & Sandy Porter Rd	Southbound	58	0	0	0	Keep	Level 1	89
NEW	New Stop	Southbound	-	-	-	-	New Stop	Level 1	-
44905	Tryon St & Bethany Brook Ln	Southbound	89	0	0	0	Relocate	Level 1	77
26370	Tryon St & I-485	Southbound	106	0	0	0	Relocate	Level 1	112
26360	Tryon St @ Whitehall Commons entrance	Southbound	3	0	0	0	Remove	-	-
46154	Tryon St & Arrowood Rd	Southbound	96	0	0	0	Keep	Mobility Plaza	114
46153	Tryon St & Thornfield Rd	Southbound	21	0	0	0	Keep	Level 1	72
46152	Tryon St & Yorkdale Dr	Southbound	15	0	0	0	Keep	Level 1	72
46151	Tryon St & Courtney Oaks Rd	Southbound	29	0	0	0	Keep	Level 1	78
52760	Tryon St & Shopton Rd	Southbound	6	0	0	0	Keep	Level 1	71
46150	Tryon St & Tyvola Centre Dr	Southbound	9	0	0	0	Keep	Level 1	71
52740	S Tryon St & Tyvola Rd	Southbound	14	0	0	0	Keep	Mobility Plaza	83
45120	Tryon St & Queen Anne Rd	Southbound	8	0	0	0	Keep	Level 1	73
45110	Tryon St & Southampton Rd	Southbound	6	0	0	0	Keep	Level 1	71
45100	Tryon St & Kingman Dr	Southbound	8	0	0	0	Keep	Level 1	61
45090	Tryon St & Yorkmont Rd	Southbound	92	0	0	0	Keep	Level 1	97
26210	Tryon St & Pressley Rd	Southbound	102	0	0	0	Keep	Level 1	83
26190	Tryon St & Orchard Cir	Southbound	2	0	0	0	Keep	Level 1	51
26160	Tryon St & Peterson Dr	Southbound	4	0	0	0	Remove	-	-
26140	Tryon St & Cama St	Southbound	9	1	1	0	Keep	Level 1	52
26100	Tryon St & Bowman Rd	Southbound	4	0	0	0	Remove	-	-
26090	Tryon St & Blairhill Rd	Southbound	172	1	1	0	Keep	Mobility Plaza	128
26050	Tryon St & Herman Ave	Southbound	126	1	0	0	Keep	Level 1	116
59570	Tryon St & Griffith St	Southbound	60	0	0	0	Keep	Level 1	99
NEW	New Stop	Southbound	-	-	-	-	New Stop	Level 1	-
26020	Tryon St & Remount Rd	Southbound	58	0	0	0	Keep	Mobility Plaza	87

Bus Stop ID	Stop Name	Direction	Daily Ridership	Existing Amenities			Recommendation	Proposed Bus Stop Typology	Bus Stop Typology Score
				Benches	Simme Seats	Shelters			
25990	Tryon St & Brookhill Rd	Southbound	9	0	0	0	Keep	Level 1	67
25970	Tryon St & Rampart St	Southbound	5	0	0	0	Remove	-	-
25960	Tryon St & Tremont Ave	Southbound	6	0	0	0	Keep	Level 1	53
25940	Tryon St & Woodcrest Ave	Southbound	6	0	0	0	Keep	Level 1	57
25910	Tryon St & West Blvd	Southbound	39	1	1	0	Keep	Mobility Plaza	83
25880	Tryon St & Park Ave	Southbound	6	0	0	0	Keep	Level 1	67
25850	Tryon St & Bland St	Southbound	12	0	0	0	Keep	Level 1	71
25830	Tryon St & Catherine St	Southbound	3	0	0	0	Remove	-	-
25815	Tryon St & Carson Blvd	Southbound	8	0	0	0	Keep	Mobility Plaza	87
25800	Tryon St & Morehead St	Southbound	7	0	0	0	Remove	-	-

5.4: Route 27 Monroe Road

Figure 5 shows the signal priority and bus stop recommendations along Monroe Road.

Signal Priority Treatments

Table 13 summarizes the 14 candidates for signal priority treatments along East 7th Street and Monroe Road.

Bus Stop and Passenger Facility Treatments

Table 14 provides an overview by stop of existing amenities, proposed balancing action and proposed bus stop typology with associated score.

- Along the Monroe Road corridor (outside of Uptown), 108 bus stops were evaluated. Twenty-one are proposed for removal, five are proposed for relocation, and one new bus stop is recommended, as a pair to the bus stop at Monroe Road & Orchard Lake Drive. The bus stop changes result in an average of 3.9 bus stops per mile along the corridor.
- There is one proposed mobility hub (Matthews) on the Monroe Road corridor at the end of line, and two proposed mobility plazas (Wendover & Monroe and Monroe & Sharon Amity).
- The remaining 82 stops are proposed to be part of an enhanced stop pair.

27 Monroe Road

Bus Stop Recommendations

- Keep
- + New Stop
- ✗ Remove Stop
- Relocate Stop (old location)
- Relocate Stop (new location)

Bus Priority Proposed Facilities

- Level 2 - Mobility Plaza
- Level 3 - Mobility Center

Traffic Signal Recommendations

- ⬇ Queue Jump Candidate
- ⚡ TSP or Queue Jump Candidate
- ⚡ TSP Candidate

Top 6 High-Frequency Corridors

- 27 Monroe Road
- 2 Ashley Rd
- 7 Beatties Ford
- 9 Central Avenue
- 16 South Tryon
- 34 Freedom Drive
- Envision My Ride Bus Network

Rail Transit

- Blue Line
- Gold Line
- Blue Line Stations
- Existing / Under Construction Gold Line Stations

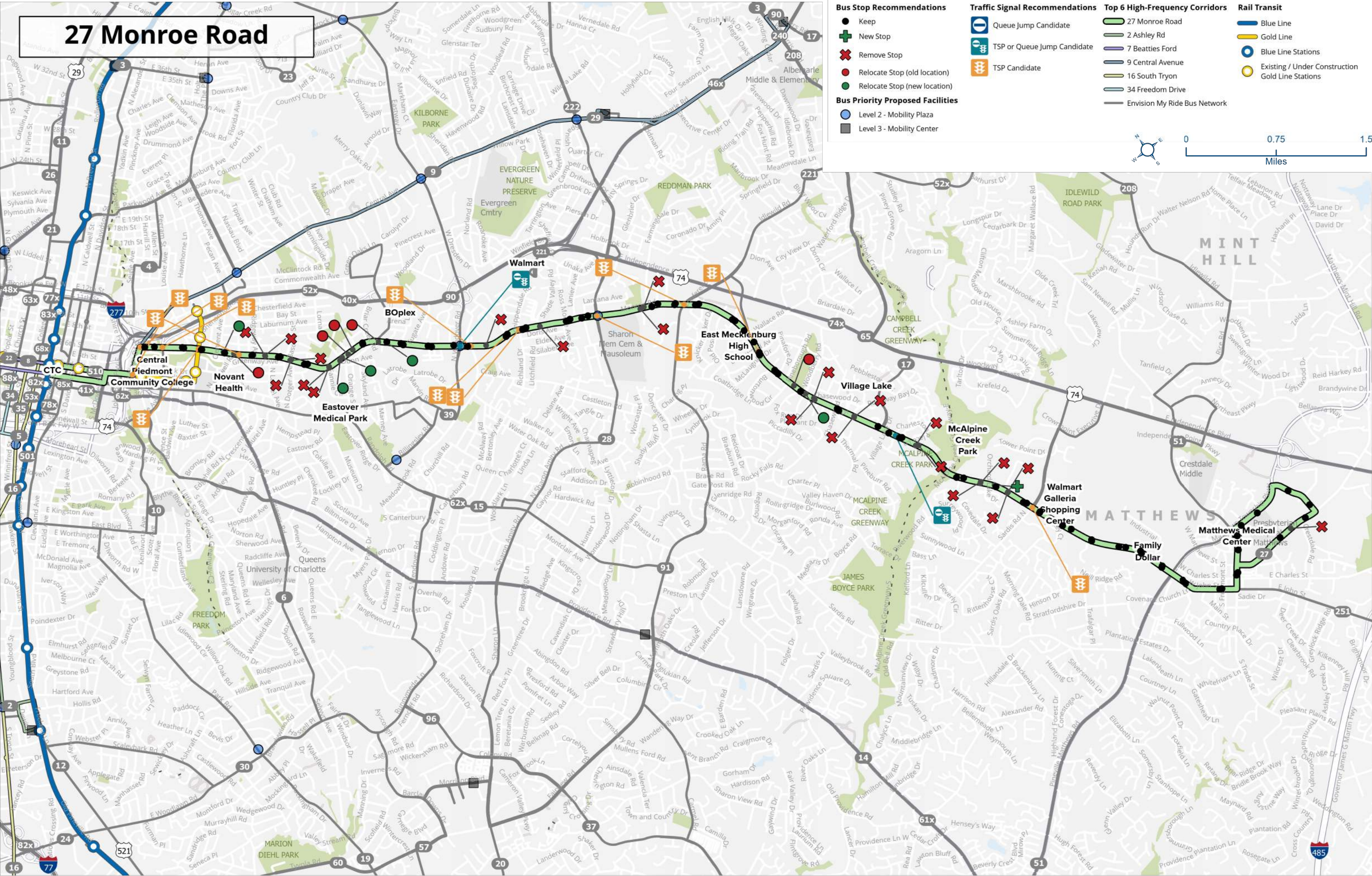


Table 13. Route 27 Signal Priority Candidate Details

#	Location	Bus Routes	Bus Speed	Vehicle Speed	Treatment	Notes
1	E 7th St/E Independence Blvd/ Charlottetowne Ave/	Route 27	<12 mph		TSP candidate	Detailed analysis needed to determine whether TSP would cause queue on ramp. Stakeholder coordination needed.
2	E 7th St/Hawthorne Ln/Hawthorne Ln	Route 27	<12 mph		TSP candidate	
3	E 7th St/N Caswell Rd/Pecan Ave	Route 27	<12 mph		TSP candidate	
4	Monroe Rd/N Wendover Rd	Route 27	<12 mph		TSP and/or queue jump candidate	WB and EB directions. Detailed operational analysis (e.g., Synchro) needed to better assess queue jump effectiveness.
5	Monroe Rd/McAlway Rd/Char Meck Ln	Route 27	<12 mph		TSP candidate	More detailed analysis should confirm source of congestion - could be N. Wendover Rd intersection
6	Monroe Rd/Commonwealth Rd	Route 27	<12 mph		TSP candidate	More detailed analysis should confirm source of congestion - could be N. Wendover Rd intersection
7	Monroe Rd/Richland Rd	Route 27	<12 mph		TSP candidate	More detailed analysis should confirm source of congestion - could be N. Wendover Rd intersection
8	Monroe Rd/N Sharon Amity Rd	Route 27	<12 mph		TSP and/or queue jump candidate	Short turn lane - not a good QJ candidate
9	Monroe Rd/Idlewild Rd/Rama Rd	Route 27	<12 mph		TSP candidate	Adjacent to off-ramp; potential impact on WB queue. Consider directional TSP to reduce number of TSP calls.
10	Monroe Rd/Eaglewood Ave	Route 27	<12 mph		TSP candidate	
11	Monroe Rd/McAlpine Station Dr/Timber Springs Dr	Route 27	<12 mph		TSP and/or queue jump candidate	SB direction. Detailed operational analysis (e.g., Synchro) needed to better assess queue jump effectiveness.
12	Monroe Rd/Sardis Rd	Route 27	<12 mph		TSP candidate	
13	NC 51 @ SR 1009 (Old Monroe Rd/ West John St)	Route 27	<12 mph	<15 mph AM IB/PM OB	TSP candidate	Short turn lane - not a good QJ candidate
14	SR 1010 (John St) @ SR 3448 (Trade St)	Route 27	<12 mph	<15 mph AM IB/PM OB	TSP or signal timing adjustment candidate	

Table 14. Route 27 Bus Stop Amenity and Balancing Details

Bus Stop ID	Stop Name	Direction	Daily Ridership	Existing Amenities			Recommendation	Proposed Bus Stop Typology	Bus Stop Typology Score
				Benches	Simme Seats	Shelters			
7930	7th St & Hawthorne Ln	Northbound	20	0	0	0	Keep	Level 1	78
8020	7th St & Caswell Rd	Northbound	32	0	0	0	Relocate	Level 1	83
8040	7th St & Clarice Ave	Northbound	15	0	0	0	Keep	Level 1	88
8070	7th St & Laurel Ave	Northbound	3	0	0	0	Remove	-	82
8080	7th St & Bascom St	Northbound	3	0	0	0	Keep	Level 1	83
8110	7th St & Dotger Ave	Northbound	9	0	0	0	Remove	-	87
8130	7th St & Firefighter Pl	Northbound	19	1	1	0	Keep	Level 1	93
15770	Monroe Rd & Dunn Ave	Northbound	12	1	0	0	Remove	-	89
15790	Monroe Rd & Colonnade Dr	Northbound	5	0	0	0	Relocate	Level 1	75
15810	Monroe Rd & Briar Creek Rd	Northbound	43	0	0	0	Keep	Level 1	97
15830	Monroe Rd & Fortune St	Northbound	31	1	0	0	Keep	Level 1	83
15855	Monroe Rd & Chipley Ave	Northbound	16	0	0	0	Keep	Level 1	88
15880	Monroe Rd & Buford Ave	Northbound	10	0	0	0	Keep	Level 1	72
15900	Monroe Rd & Wendover Rd	Northbound	57	1	1	0	Keep	Mobility Plaza	105
15930	Monroe Rd & McAlway Rd	Northbound	28	0	0	0	Remove	-	68
15950	Monroe Rd & Commonwealth Ave	Northbound	19	1	1	0	Keep	Level 1	70
16000	Monroe Rd & Chippendale Rd	Northbound	38	0	0	1	Keep	Level 1	88
16040	Monroe Rd & Eaton Rd	Northbound	20	0	0	0	Keep	Level 1	72
42325	Monroe Rd & Mandarin Blvd	Northbound	77	0	0	0	Keep	Mobility Plaza	103
16091	Monroe Rd & McMullen Way	Northbound	2	0	0	0	Remove	-	62
16120	Monroe Rd & Ashmore Dr	Northbound	51	0	0	1	Keep	Level 1	101
16140	Monroe Rd & Long Ave	Northbound	29	0	0	1	Keep	Level 1	84
16150	Monroe Rd & Bainbridge Rd	Northbound	35	0	0	0	Keep	Level 1	88
16200	Monroe Rd & Old Post Rd	Northbound	28	0	0	0	Keep	Level 1	88
16260	Monroe Rd & Wallace Ln	Northbound	63	0	0	1	Keep	Level 1	114
16240	Monroe Rd & Eaglewood Ave	Northbound	12	0	0	0	Keep	Level 1	73
16300	Monroe Rd & Burtonwood Cir	Northbound	4	0	0	0	Keep	Level 1	63
16310	Monroe Rd @ Mason Wallace Park	Northbound	6	0	0	0	Relocate	Level 1	65

Bus Stop ID	Stop Name	Direction	Daily Ridership	Existing Amenities			Recommendation	Proposed Bus Stop Typology	Bus Stop Typology Score
				Benches	Simme Seats	Shelters			
16351	Monroe Rd & Fox Run Dr	Northbound	5	0	0	0	Remove	-	74
16360	Monroe Rd & Lumarka Dr	Northbound	33	1	0	0	Keep	Level 1	96
16390	Monroe Rd & Renard Ridge Rd	Northbound	4	0	0	0	Remove	-	73
16410	Monroe Rd & Village Lake Dr	Northbound	49	0	0	1	Keep	Level 1	108
16430	Monroe Rd & Timber Springs Dr	Northbound	93	0	0	1	Keep	Level 1	142
16480	Monroe Rd @ 8539	Northbound	6	0	0	0	Remove	-	69
16510	Monroe Rd & Covedale Dr	Northbound	17	1	0	0	Keep	Level 1	91
16520	Monroe Rd @ Greylyn Park	Northbound	10	0	0	0	Remove	-	84
NEW	New Stop	Northbound	-	-	-	-	New Stop	Level 1	0
16550	Monroe Rd & Delmar Office Dr	Northbound	5	0	0	0	Remove	-	79
16600	Monroe Rd & Sardis Rd North	Northbound	87	0	0	1	Keep	Level 1	157
37465	Monroe Rd & Sardis Rd North (Eckerd	Northbound	65	1	0	0	Keep	Level 1	121
16610	Monroe Rd & Galleria Blvd	Northbound	14	1	1	0	Keep	Level 1	75
16620	Monroe Rd @ Family Dollar	Northbound	11	1	0	0	Keep	Level 1	70
16630	Monroe Rd @ 10701	Northbound	6	0	0	0	Keep	Level 1	66
45957	Monroe Rd @ 10801	Northbound	2	0	0	0	Keep	Level 1	61
45119	Monroe Rd & Hwy 51	Northbound	6	0	0	0	Keep	Level 1	66
16640	Monroe Rd & Lois St	Northbound	25	0	0	0	Keep	Level 1	83
7650	John St & Ames Rd	Northbound	78	0	0	1	Keep	Level 1	148
37240	Trade St & Charles St	Northbound	32	0	0	1	Keep	Mobility Center	106
37200	Independence Pointe Pkwy @ 10630	Northbound	42	1	1	0	Keep	Level 1	82
34210	West Blvd @ 1520	Northbound	77	1	1	0	Keep	Level 1	76
34220	West Blvd & Remount Rd	Northbound	45	0	0	0	Keep	Level 1	102
37250	Matthews-Mint Hill Rd @ 701 (Conbraco)	Northbound	2	0	0	0	Remove	-	76
37230	Matthews-Mint Hill Rd @ Presbyterian	Northbound	3	0	0	0	Keep	Level 1	77
41130	Matthews Township Pkwy & Paces Ave	Southbound	19	1	1	0	Keep	Level 1	90
40159	Matthews Township Pkwy & Sam Newell	Southbound	7	0	0	0	Keep	Level 1	82
37180	Trade St & Matthews Township Pkwy	Southbound	9	0	0	0	Keep	Level 1	82
37176	Trade St & Park Center Dr	Southbound	5	0	0	0	Keep	Level 1	81

Bus Stop ID	Stop Name	Direction	Daily Ridership	Existing Amenities			Recommendation	Proposed Bus Stop Typology	Bus Stop Typology Score
				Benches	Simme Seats	Shelters			
37170	Trade St & Matthews Station St	Southbound	25	0	0	0	Keep	Mobility Center	84
37480	John St & Ames Rd	Southbound	70	0	0	0	Keep	Level 1	79
36480	Monroe Rd & Hwy 51	Southbound	29	0	0	0	Keep	Level 1	62
45948	Monroe Rd & Matthews Township Pkwy	Southbound	12	0	0	0	Keep	Level 1	61
46477	Monroe Rd @ 10804	Southbound	5	0	0	0	Keep	Level 1	61
37490	Monroe Rd @ 10600 (Animal Clinic)	Southbound	5	0	0	0	Keep	Level 1	60
37510	Monroe Rd @ Drake Apts	Southbound	15	0	0	0	Keep	Level 1	62
37520	Monroe Rd & Galleria Blvd	Southbound	19	0	0	0	Keep	Level 1	68
37460	Monroe Rd & Sardis Rd North	Southbound	77	0	0	0	Keep	Level 1	73
16580	Monroe Rd & Sardis Rd North	Southbound	76	0	0	0	Keep	Level 1	69
16560	Monroe Rd & Orchard Lake Dr	Southbound	10	0	0	0	Remove	-	76
16540	Monroe Rd & Orchard Lake Dr	Southbound	0	1	0	0	Keep	Level 1	65
16521	Monroe Rd & Orchard Lake Dr	Southbound	14	0	0	0	Remove	-	66
16490	Monroe Rd & Covedale Dr	Southbound	13	0	0	0	Keep	Level 1	67
16450	Monroe Rd @ 8516	Southbound	8	0	0	0	Remove	-	67
16420	Monroe Rd & McAlpine Station Dr	Southbound	67	1	0	0	Keep	Level 1	83
16400	Monroe Rd & Village Lake Dr	Southbound	59	1	0	0	Keep	Level 1	70
16380	Monroe Rd & Renard Ridge Rd	Southbound	4	0	0	0	Remove	-	70
16370	Monroe Rd & Chasewood Dr	Southbound	27	0	0	0	Keep	Level 1	77
16350	Monroe Rd & Painter Pl	Southbound	2	0	0	0	Remove	-	60
16320	Monroe Rd & Woodberry Rd	Southbound	7	0	0	0	Keep	Level 1	62
16290	Monroe Rd & Pinafore Dr	Southbound	3	0	0	0	Keep	Level 1	61
16250	Monroe Rd & McLaughlin Dr	Southbound	19	0	0	0	Keep	Level 1	72
16230	Monroe Rd & Conference Dr	Southbound	55	0	0	1	Keep	Level 1	82
16190	Monroe Rd & Old Post Rd	Southbound	22	0	0	0	Keep	Level 1	67
16160	Monroe Rd & Bainbridge Rd	Southbound	32	0	0	0	Keep	Level 1	68
16130	Monroe Rd & Idlewild Rd	Southbound	34	0	0	0	Keep	Level 1	65
16100	Monroe Rd & Ashmore Dr	Southbound	45	0	0	0	Keep	Level 1	71
16090	Monroe Rd & McMullen Way	Southbound	7	0	0	0	Remove	-	61

Bus Stop ID	Stop Name	Direction	Daily Ridership	Existing Amenities			Recommendation	Proposed Bus Stop Typology	Bus Stop Typology Score
				Benches	Simme Seats	Shelters			
42340	Monroe Rd & Summey Ave	Southbound	62	1	1	0	Keep	Mobility Plaza	75
16030	Monroe Rd & Ross Moore Ave	Southbound	21	0	0	0	Keep	Level 1	52
16010	Monroe Rd & Commodore St	Southbound	10	0	0	0	Remove	-	58
15980	Monroe Rd & Chippendale Rd	Southbound	24	0	0	0	Keep	Level 1	57
15960	Monroe Rd & Commonwealth Ave	Southbound	20	0	0	0	Keep	Level 1	60
15910	Monroe Rd & Wendover Rd	Southbound	90	0	1	0	Keep	Mobility Plaza	88
15890	Monroe Rd & Oak Grove Rd	Southbound	15	0	0	0	Keep	Level 1	68
15850	Monroe Rd & Chipley Ave	Southbound	21	0	0	0	Keep	Level 1	69
15820	Monroe Rd & Washburn Ave	Southbound	34	0	0	0	Relocate	Level 1	57
15800	Monroe Rd & Alcott St	Southbound	32	0	0	0	Keep	Level 1	71
15780	Monroe Rd & Puhlman St	Southbound	8	0	0	0	Relocate	Level 1	71
15760	Monroe Rd & Montrose St	Southbound	19	0	0	0	Remove	-	86
8120	7th St & 5th St	Southbound	19	0	0	0	Keep	Level 1	84
8100	7th St & Dotger Ave	Southbound	9	0	0	0	Remove	-	83
8090	7th St & Cameron Ave	Southbound	5	0	0	0	Keep	Level 1	81
8060	7th St & Laurel Ave	Southbound	5	0	0	0	Remove	-	80
8030	7th St & Clarice Ave	Southbound	31	0	0	0	Keep	Level 1	93
8010	7th St & Clement Ave	Southbound	25	0	0	0	Keep	Level 1	80
7980	7th St & Hawthorne Ln	Southbound	25	1	0	0	Keep	Level 1	83
7970	7th St & Armory Dr	Southbound	9	0	0	0	Keep	Level 1	73
45660	7th St & Charlottetowne Ave	Southbound	24	1	0	0	Keep	Level 1	76

5.5: Route 34 Freedom Drive

Figure 6 shows the signal priority and bus stop recommendations along Freedom Drive.

Signal Priority Treatments

Table 15 summarizes the six candidates for signal priority treatments along Morehead Street and Freedom Drive. An adjustment to the future Route 34 to travel along Freedom Drive instead of Ashley Road and Tuckaseegee Road means that AVL data for fall 2019 was not available for the rerouted portions. Though the intersection of Freedom Drive/Ashley Road/Tuckaseegee Road did not meet the slow vehicle speed threshold; it is included as an opportunistic candidate for a queue jump based on the presence of an exclusive southbound right turn lane.

Bus Stop and Passenger Facility Treatments

Table 16 provides an overview by stop of existing amenities, proposed balancing action and proposed bus stop typology with associated score.

- Outside of Uptown, 44 bus stops along the Freedom Drive corridor were evaluated. Four bus stops are proposed for removal, one for relocation, and four new bus stops are proposed along Freedom Drive: an enhanced stop pair at Ashley Drive and another enhanced bus stop pair between Alleghany Street and Ashley Drive. The bus stop changes result in an average of 3.6 bus stops per mile along the corridor. For this corridor, it should be noted that it is assumed the route will continue straight on Freedom Drive between Alleghany Street and Ashley Drive.
- There is one Mobility Center: Freedom Drive & Toddville Road.
- There is one Mobility Center: Freedom Drive & Ashley Road
- The remaining 35 stops are proposed to be part of an enhanced stop pair.

In late January 2022, CATS also adjusted Route 34 to serve Moores Chapel Road instead of the original loop on Old Mount Holly Road and Toddville Road. In response, stop recommendations were modified to include this new alignment and stops that CATS had identified to serve it. With these modifications:

- One stop is proposed for relocation, two stops are proposed for removal, and there are 22 proposed new bus stops (primarily along the Moores Chapel Road alignment)

34 Freedom Drive

Bus Stop Recommendations

- Keep
- ✚ New Stop
- ✖ Remove Stop
- Relocate Stop (old location)
- Relocate Stop (new location)

Bus Priority Proposed Facilities

- Level 2 - Mobility Plaza
- Level 3 - Mobility Center

Traffic Signal Recommendations

- ⬇ Queue Jump Candidate
- ⚡ TSP or Queue Jump Candidate
- ⚡ TSP Candidate

Top 6 High-Frequency Corridors

- 34 Freedom Drive
- 2 Ashley Rd
- 7 Beatties Ford
- 9 Central Avenue
- 16 South Tryon
- 27 Monroe Road
- Envision My Ride Bus Network

Rail Transit

- Blue Line
- Gold Line
- Blue Line Stations
- Existing / Under Construction Gold Line Stations

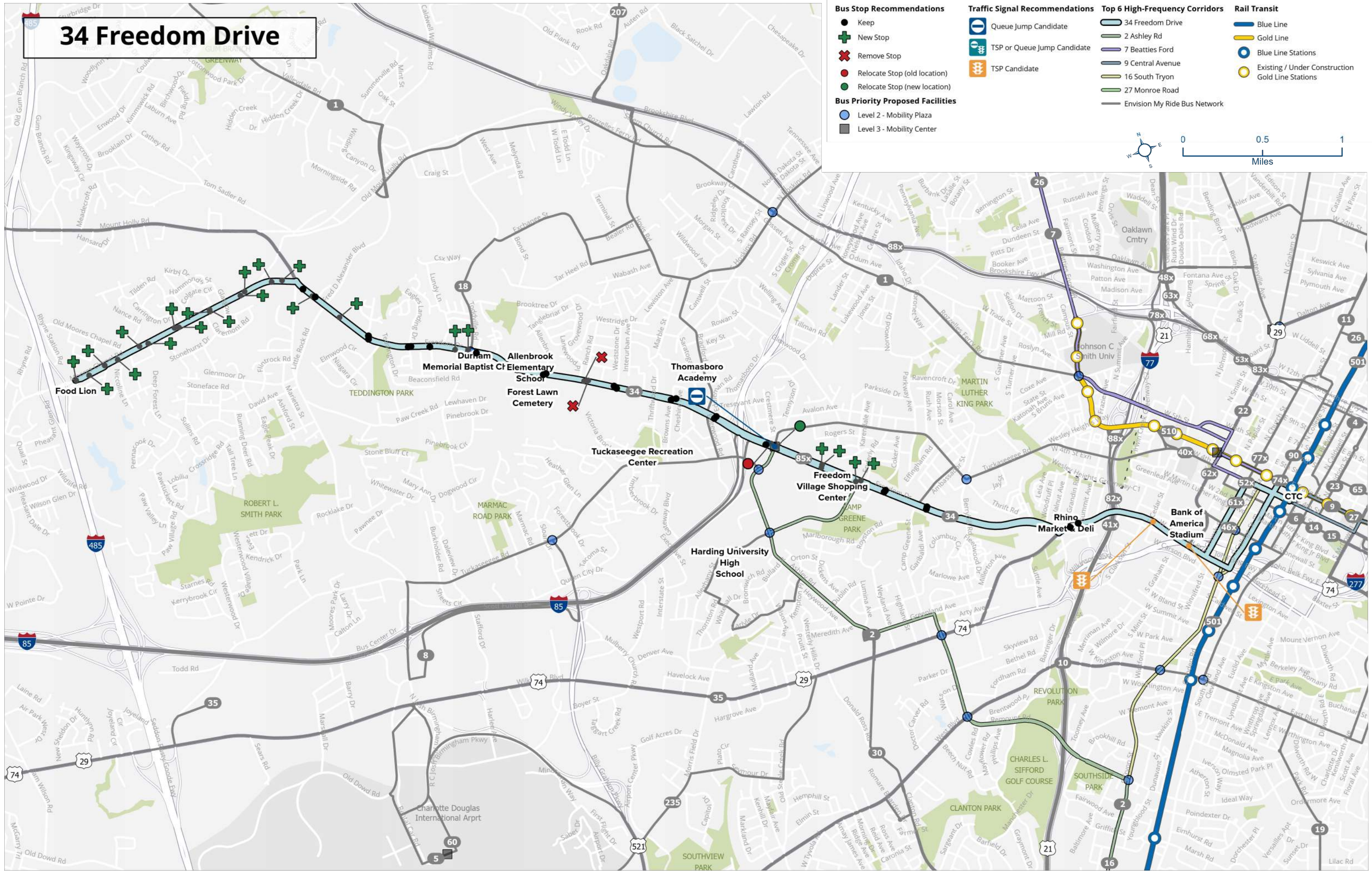


Table 15. Route 34 Signal Priority Candidate Details

#	Location	Bus Routes	Bus Speed	Vehicle Speed	Treatment	Notes
1	E Morehead St/S College St/S Tryon St	Routes 16, 34	<12 mph		TSP candidate	Intersecting routes; TSP for Route 16 would affect Routes 5, 34, 35.
2	E Morehead St/S Tryon St/W Morehead St St	Routes 16, 34		<15 mph PM OB	TSP candidate	Intersecting routes; TSP for Route 16 would affect Routes 5, 34, 35. Short turn lane; adjacent bike lane - not a good QJ candidate
3	W Morehead St/S Church St	Route 34	No AVL data	<15 mph AM IB`	TSP candidate	TSP for Route 34 IB would benefit Routes 5 and 35 IB but could affect Route 34 OB (SB) right turns
4	W Morehead St/S Mint St	Route 34	No AVL data	<15 mph AM IB	TSP candidate	TSP for Route 34 would benefit Routes 5 and 35 IB but could affect Route 5 and 35 OB (SB) right turns
5	W Morehead St/S Cedar St	Route 34	No AVL data	<15 mph AM IB	TSP candidate	
6	Freedom Dr/Ashley Rd/Tuckaseegee Rd	Route 34	No AVL data		Queue jump candidate	EB right turn lane provides QJ opportunity. Intersecting routes 2, 8, 208, 85x. Detailed operational analysis (e.g., Synchro) needed to assess effectiveness.

Table 16. Route 34 Bus Stop Amenity and Balancing Details

Bus Stop ID	Stop Name	Direction	Daily Ridership	Existing Amenities			Recommendation	Proposed Bus Stop Typology	Bus Stop Typology Score
				Benches	Simme Seats	Shelters			
33440	Morehead St & Grandin Rd	Northbound	59	0	0	1	Keep	Level 1	93
11030	Freedom Dr & Camp Greene St	Northbound	22	0	0	0	Keep	Level 1	70
11050	Freedom Dr @ 2640	Northbound	73	0	0	0	Keep	Level 1	94
NEW	New Stop	Northbound	-	-	-	-	New Stop	Level 1	-
NEW	New Stop	Northbound	-	-	-	-	New Stop	Level 1	-
11080	Freedom Dr & Ashley Rd	Northbound	22	0	0	0	Relocate	Mobility Center	100
11095	Freedom Dr & Bradford Dr	Northbound	18	0	0	0	Keep	Level 1	66
52750	Freedom Dr & Browns Ave	Northbound	25	0	0	0	Keep	Level 1	85
45605	Freedom Dr & Weststone Dr	Northbound	9	0	0	0	Keep	Level 1	71
11120	Freedom Dr & Ranch Rd	Northbound	4	0	0	0	Remove	Level 1	71
11130	Freedom Dr & Allenbrook Dr	Northbound	2	0	0	0	Keep	Level 1	70
NEW	New Stop	Northbound	-	-	-	-	New Stop	Mobility Plaza	-
45830	Freedom Dr & Eagles Landing	Northbound	1	0	0	0	Keep	Level 1	26
46420	Freedom Dr & McDonald Rd	Northbound	1	0	0	0	Keep	Level 1	26
45832	Freedom Dr & Wingate Dr	Northbound	9	0	0	0	Keep	Level 1	30
NEW	New Stop	Northbound	-	-	-	-	New Stop	Level 1	-
NEW	New Stop	Northbound	-	-	-	-	New Stop	Level 1	-
NEW	New Stop	Northbound	-	-	-	-	New Stop	Level 1	-
NEW	New Stop	Northbound	-	-	-	-	New Stop	Level 1	-
NEW	New Stop	Northbound	-	-	-	-	New Stop	Level 1	-
NEW	New Stop	Northbound	-	-	-	-	New Stop	Level 1	-
NEW	New Stop	Southbound	-	-	-	-	New Stop	Level 1	-
NEW	New Stop	Southbound	-	-	-	-	New Stop	Level 1	-
NEW	New Stop	Southbound	-	-	-	-	New Stop	Level 1	-
NEW	New Stop	Southbound	-	-	-	-	New Stop	Level 1	-
NEW	New Stop	Southbound	-	-	-	-	New Stop	Level 1	-
NEW	New Stop	Southbound	-	-	-	-	New Stop	Level 1	-

Bus Stop ID	Stop Name	Direction	Daily Ridership	Existing Amenities			Recommendation	Proposed Bus Stop Typology	Bus Stop Typology Score
				Benches	Simme Seats	Shelters			
NEW	New Stop	Southbound	-	-	-	-	New Stop	Level 1	-
45831	Freedom Dr & Wingate Dr	Southbound	81	1	0	0	Keep	Level 1	116
NEW	New Stop	Southbound	-	-	-	-	New Stop	Level 1	-
NEW	New Stop	Southbound	-	-	-	-	New Stop	Level 1	-
46419	Freedom Dr & Elmwood Cir	Southbound	8	0	0	0	Keep	Level 1	75
52400	Freedom Dr & Eagles Landing	Southbound	5	0	0	0	Keep	Level 1	73
45833	Freedom Dr & Teddington Dr	Southbound	7	0	0	0	Keep	Level 1	76
NEW	New Stop	Southbound	-	-	-	-	New Stop	Level 1	-
11151	Freedom Dr & Toddville Rd	Southbound	36	0	0	0	Keep	Mobility Plaza	103
11131	Freedom Dr & Allenbrook Dr	Southbound	2	0	0	0	Keep	Level 1	72
11121	Freedom Dr & Ranch Rd	Southbound	3	0	0	0	Remove	Level 1	73
45599	Freedom Dr & Weststone Dr	Southbound	4	0	0	0	Keep	Level 1	74
52751	Freedom & Browns Ave	Southbound	16	0	0	0	Keep	Level 1	101
11096	Freedom Dr & Edgewood Rd	Southbound	20	0	0	0	Keep	Level 1	93
11070	Freedom Dr & Ashley Rd	Southbound	11	0	0	0	Keep	Mobility Center	89
NEW	New Stop	Southbound	-	-	-	-	New Stop	Level 1	-
NEW	New Stop	Southbound	-	-	-	-	New Stop	Level 1	-
11060	Freedom Dr & Pacific St	Southbound	81	1	1	0	Keep	Level 1	148
11040	Freedom Dr & Camp Greene St	Southbound	22	1	0	0	Keep	Level 1	80
33430	Morehead St & Grandin Rd	Southbound	24	0	0	1	Keep	Level 1	83

5.6: Route 2 Ashley/Scaleybark

Figure 7 shows the signal priority and bus stop recommendations along Ashley Road, Remount Road, and South Tryon Street.

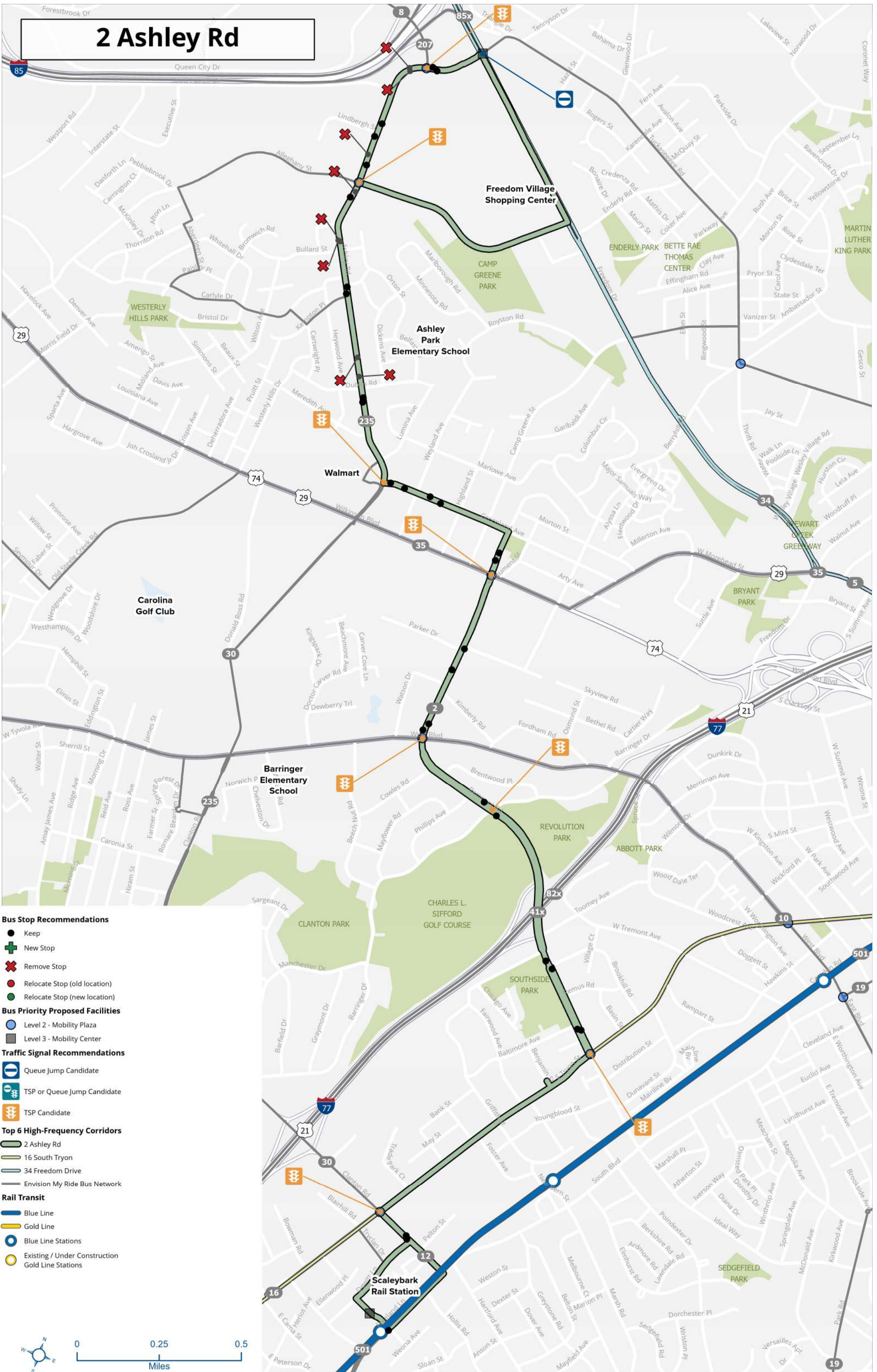
Signal Priority Treatments

Table 17 summarizes the eight candidates for signal priority treatments along Route 2. It should be noted that Route 2 was selected as a crosstown route to explore how recommendations for improving cross-town connectivity may vary from those for radial routes serving Uptown. As the Route 2 crosses multiple EMR routes (including the 34 and the 16, any recommendations for improvements should be coordinated with these two routes to maximize reliability and minimize transfer times along all EMR routes.

Table 17. Route 2 Signal Priority Candidate Details

#	Location	Bus Routes	Bus Speed	Vehicle Speed	Treatment	Notes
1	Ashley Rd/Tuckaseegee Rd	Route 2	<12 mph	<15 mph AM IB	TSP candidate	Detailed analysis needed to determine whether TSP would cause queue on ramp. Stakeholder coordination needed.
2	Ashley Rd/Alleghany St	Route 2	<12 mph	Not met	TSP candidate	
3	Ashley Rd/Greenland Av	Route 2	<12 mph	Not met	TSP candidate	
4	Remount Rd/Wilkinson Blvd	Route 2	<12 mph	Not met	TSP or signal timing adjustment candidate	Intersecting routes; TSP for Route 2 could affect Routes 5 and 35
5	Remount Rd/West Blvd	Route 2	<12 mph	<15 mph AM IB	TSP or signal timing adjustment candidate	Intersecting routes; TSP for Route 2 could affect Route 10 and 30
6	Remount Rd/Barringer Dr	Route 2	<12 mph	Not met	TSP candidate	
7	S Tryon St/Remount Rd	Routes 2, 16	<12 mph	Not met	TSP candidate	
8	Clanton Rd/S Tryon St	Routes 2, 16	<12 mph	<15 mph AM IB/PM OB	TSP candidate	Intersecting routes; TSP for Route 2 could affect Route 12, 16, 30, 41x

2 Ashley Rd



Bus Stop Recommendations

- Keep
- ✚ New Stop
- ✖ Remove Stop
- Relocate Stop (old location)
- Relocate Stop (new location)

Bus Priority Proposed Facilities

- Level 2 - Mobility Plaza
- Level 3 - Mobility Center

Traffic Signal Recommendations

- 🚦 Queue Jump Candidate
- 🚦 TSP or Queue Jump Candidate
- 🚦 TSP Candidate

Top 6 High-Frequency Corridors

- 2 Ashley Rd
- 16 South Tryon
- 34 Freedom Drive
- Envision My Ride Bus Network

Rail Transit

- 🚇 Blue Line
- 🚇 Gold Line
- Blue Line Stations
- Existing / Under Construction Gold Line Stations



Bus Stop and Passenger Facility Treatments

Table 18 provides an overview by stop of existing amenities, proposed balancing action and proposed bus stop typology with associated score.

- Along the Ashley/Scaleybark corridor, 37 bus stops were evaluated. Nine bus stops are proposed for removal, and the rest will remain as-is. The bus stop changes result in an average of 3.1 bus stops per mile along the corridor.
- There is one proposed mobility hub (Scaleybark Station) on the Ashley/Scaleybark corridor connecting to the Light Rail, and seven proposed mobility plazas: Tryon & Clanton, Remount & Tryon, West & Remount, Wilkinson & Remount, Ashley & Alleghany, Valerie Woodard, and Freedom & Ashley.
- The remaining 15 stops are proposed to be part of an enhanced stop pair.

Table 18. Route 2 Bus Stop Amenity and Balancing Details

Bus Stop ID	Stop Name	Direction	Daily Ridership	Existing Amenities			Recommendation	Proposed Bus Stop Typology	Bus Stop Typology Score
				Benches	Simme Seats	Shelters			
33320	4th St Ext & Grandin Rd	Northbound	37	0	0	0	Keep	Level 1	80
29620	South Blvd & Whitton St	Northbound	233	1	0	0	Keep	Mobility Center	103
6005	Clanton Rd & Pelton St	Northbound	24	0	0	0	Keep	Mobility Plaza	15
24490	Remount Rd & Tryon St	Northbound	21	0	0	0	Keep	Mobility Plaza	86
24510	Remount Rd & Brookhill Rd	Northbound	18	1	1	0	Keep	Level 1	70
24530	Remount & Barringer	Northbound	3	1	1	0	Keep	Level 1	61
11465	Remount Rd & West Blvd	Northbound	46	0	0	0	Keep	Mobility Plaza	91
24561	Remount Rd & Parker Dr	Northbound	6	0	0	0	Keep	Level 1	63
11461	Remount Rd & Wilkinson Blvd	Northbound	17	0	0	0	Keep	Mobility Plaza	69
44605	Greenland Ave & Weyland Ave	Northbound	25	0	0	0	Keep	Level 1	68
11490	Greenland Ave & Ashley Rd	Northbound	80	1	1	0	Keep	Level 1	108
46350	Ashley Rd & Dublin Rd	Northbound	8	0	0	0	Keep	Level 1	68
44545	Ashley Rd @ 2401	Northbound	4	0	0	0	Remove	-	61
1330	Ashley Rd & Kempton Pl	Northbound	8	0	0	0	Keep	Level 1	63
1290	Ashley Rd & Bullard St	Northbound	6	0	0	0	Remove	-	61
1310	Ashley Rd & Alleghany St	Northbound	23	0	0	0	Remove	-	25

Bus Stop ID	Stop Name	Direction	Daily Ridership	Existing Amenities			Recommendation	Proposed Bus Stop Typology	Bus Stop Typology Score
				Benches	Simme Seats	Shelters			
1240	Ashley Rd & Alleghany St	Northbound	106	1	0	0	Keep	Mobility Plaza	105
1220	Ashley Rd & Scott Futrell Dr	Northbound	9	1	0	0	Keep	Level 1	73
1210	Ashley Rd & Tuckaseegee Rd	Northbound	5	0	0	0	Remove	-	85
1200	Ashley Rd & Freedom Dr	Northbound	162	0	0	1	Keep	Mobility Center	189
1190	Ashley Rd & Tuckaseegee Rd	Southbound	162	0	0	1	Keep	Mobility Center	155
37280	Ashley Rd & Scott Futrell Dr	Southbound	15	0	0	0	Remove	-	93
410	Ashley Rd & Alleghany St	Southbound	128	0	0	1	Keep	Level 1	154
1230	Ashley & Allegany	Southbound	19	0	0	0	Remove	-	79
1270	Ashley Rd & Alleghany St	Southbound	7	0	0	0	Keep	Mobility Plaza	75
1300	Ashley Rd & Bullard St	Southbound	5	0	0	0	Remove	-	63
1340	Ashley Rd & Kempton Pl	Southbound	16	1	1	0	Keep	Level 1	70
46351	Ashley Rd & Dublin Rd	Southbound	7	0	0	0	Remove	-	65
1350	Ashley Rd & Meredith Ave	Southbound	5	0	0	0	Keep	Level 1	68
44570	Greenland Ave & Weyland Ave	Southbound	26	0	0	0	Keep	Level 1	78
44610	Greenland Ave & Weyland Ave	Southbound	10	0	0	0	Keep	Level 1	68
11460	Remount Rd & Wilkinson Blvd	Southbound	14	0	0	0	Keep	Mobility Plaza	74
24560	Remount Rd & Parker Dr	Southbound	5	0	0	0	Keep	Level 1	62
11466	Remount Rd & West Blvd	Southbound	34	0	0	0	Keep	Mobility Plaza	72
59510	Remount & Barringer	Southbound	3	1	1	0	Keep	Level 1	62
24520	Remount Rd & Toomey Ave	Southbound	19	0	0	1	Keep	Level 1	80
24470	Remount Rd & Baltimore Ave	Southbound	23	0	0	1	Keep	Mobility Plaza	90
5780	Clanton Rd & Dewitt Ln	Southbound	34	0	0	0	Keep	Mobility Plaza	64

7 NEXT STEPS

These recommendations will be shared more broadly at the upcoming public meeting on March 3, 2022.

The project team is using the agreed upon recommendations for Route 9 (Central Avenue) to code a VISSIM microsimulation of the corridor to quantify the potential travel time savings of the improvements versus 2019 operating conditions. These savings will then be used to estimate the potential travel time savings of signal improvements and bus stop consolidations on other corridors in the Envision My Ride network. The costs and benefits of the proposed improvements will be detailed in the Final Report.

Envision My Ride: Bus Priority Study Technical Memorandum | Task 4.2 Initial Corridor Recommendations – Appendices

February 21, 2022

Appendix A: Bus Running Speed Results

Appendix B: Vehicle Probe Speed Results

Appendix C: Agency Comment Responses

**Appendix D: Feedback from Bus Operators (Focus Group Discussion
and Online Survey)**

APPENDIX A: BUS RUNNING SPEED RESULTS

Appendix A contains bus running speed results from CATS AVL data for the initial six corridors:

- Route 9
- Route 7
- Route 16
- Route 27
- Route 34
- Route 2

For each route, the following tables are included:

- AM inbound
- PM inbound
- AM outbound
- PM outbound

Bolded rows meet the speed threshold (12 mph), trips sample size threshold (10 trips), and contain a signal.

Route 9 AM Inbound

From Stop	To Stop	Trips in Sample	Average Running Speed
Albemarle Rd & Lawyers Rd Park and Ride	Albemarle Rd & WT Harris Blvd	145	6.21
Albemarle Rd & WT Harris Blvd	Albemarle Rd & Regal Oaks Dr	129	15.83
Albemarle Rd & Regal Oaks Dr	Albemarle Rd & Winterhaven Dr	53	15.91
Albemarle Rd & Winterhaven Dr	Albemarle Rd & Farm Pond Ln	66	11.99
Albemarle Rd & Farm Pond Ln	Albemarle Rd & Jenkins Dr	215	22.05
Albemarle Rd & Jenkins Dr	Central Ave & Reddman Rd	183	21.54
Central Ave & Reddman Rd	Eastland Transit Center- Bay E	268	29.01
Eastland Transit Center- Bay E	Central Ave & Sharon Amity Rd	321	11.15
Central Ave & Sharon Amity Rd	Central Ave & Winterfield Pl	345	9.44
Central Ave & Winterfield Pl	Central Ave & Rosehaven Dr	358	16.45
Central Ave & Rosehaven Dr	Central Ave & Progress Ln	275	22.01
Central Ave & Progress Ln	Central Ave & Kilborne Dr	198	14.29
Central Ave & Kilborne Dr	Central Ave & Medallion Dr	38	17.15
Central Ave & Medallion Dr	Central Ave & Temple Ln	7	14.99
Central Ave & Temple Ln	Central Ave & Eastway Dr	30	10.66
Central Ave & Eastway Dr	Central Ave & Longfellow St	244	9.04
Central Ave & Longfellow St	Central Ave & Merry Oaks Rd	52	18.77
Central Ave & Merry Oaks Rd	Central Ave & Briar Creek Rd	27	14.98
Central Ave & Briar Creek Rd	Central Ave & Eastcrest Dr	128	17.04
Central Ave & Eastcrest Dr	Central Ave & Masonic Dr	38	22.12
Central Ave & Masonic Dr	Central Ave & Club Rd	9	16.07
Central Ave & Club Rd	Central Ave & Tippah Park Ct	16	13.75
Central Ave & Tippah Park Ct	Central Ave & Nandina St	33	24.41
Central Ave & Nandina St	Central Ave & Thomas Ave	120	10.97
Central Ave & Thomas Ave	Central Ave & Clement Ave	165	15.51
Central Ave & Clement Ave	Central Ave & Heath Ct	186	14.97
Central Ave & Heath Ct	Central Ave & Piedmont St	130	11.07
Central Ave & Piedmont St	Central Ave & 7th St	34	10.11
Central Ave & 7th St	Elizabeth Ave & Kings Dr	57	11.02
Elizabeth Ave & Kings Dr	Trade St & McDowell St	8	10.8
Trade St & McDowell St	Trade St & Alexander St	3	13.53
Trade St & Alexander St	Transit Center- Bay V	112	9.2

Route 9 PM Inbound

From Stop	To Stop	Trips in Sample	Average Running Speed
Albemarle Rd & Lawyers Rd Park and Ride	Albemarle Rd & WT Harris Blvd	96	7.13
Albemarle Rd & WT Harris Blvd	Albemarle Rd & Regal Oaks Dr	63	9.12
Albemarle Rd & Regal Oaks Dr	Albemarle Rd & Winterhaven Dr	56	15.28
Albemarle Rd & Winterhaven Dr	Albemarle Rd & Farm Pond Ln	92	10.1
Albemarle Rd & Farm Pond Ln	Albemarle Rd & Jenkins Dr	206	17.72
Albemarle Rd & Jenkins Dr	Central Ave & Reddman Rd	116	20.15
Central Ave & Reddman Rd	Eastland Transit Center- Bay E	117	29.39
Eastland Transit Center- Bay E	Central Ave & Sharon Amity Rd	225	11.14
Central Ave & Sharon Amity Rd	Central Ave & Winterfield Pl	182	8.6
Central Ave & Winterfield Pl	Central Ave & Rosehaven Dr	160	17.21
Central Ave & Rosehaven Dr	Central Ave & Progress Ln	197	21.22
Central Ave & Progress Ln	Central Ave & Kilborne Dr	127	13.6
Central Ave & Kilborne Dr	Central Ave & Medallion Dr	3	18.3
Central Ave & Medallion Dr	Central Ave & Temple Ln	0	-
Central Ave & Temple Ln	Central Ave & Eastway Dr	18	15.52
Central Ave & Eastway Dr	Central Ave & Longfellow St	193	10.8
Central Ave & Longfellow St	Central Ave & Merry Oaks Rd	20	18.24
Central Ave & Merry Oaks Rd	Central Ave & Briar Creek Rd	8	18.78
Central Ave & Briar Creek Rd	Central Ave & Eastcrest Dr	48	18.12
Central Ave & Eastcrest Dr	Central Ave & Masonic Dr	22	23.33
Central Ave & Masonic Dr	Central Ave & Club Rd	7	13.28
Central Ave & Club Rd	Central Ave & Tippah Park Ct	13	14.92
Central Ave & Tippah Park Ct	Central Ave & Nandina St	38	22.74
Central Ave & Nandina St	Central Ave & Thomas Ave	109	8.42
Central Ave & Thomas Ave	Central Ave & Clement Ave	135	11.96
Central Ave & Clement Ave	Central Ave & Heath Ct	134	15.01
Central Ave & Heath Ct	Central Ave & Piedmont St	140	11.58
Central Ave & Piedmont St	Central Ave & 7th St	30	18.27
Central Ave & 7th St	Elizabeth Ave & Kings Dr	35	11.22
Elizabeth Ave & Kings Dr	Trade St & McDowell St	1	7.61
Trade St & McDowell St	Trade St & Alexander St	0	-
Trade St & Alexander St	Transit Center- Bay V	30	6.93

Route 9 AM Outbound

From Stop	To Stop	Trips in Sample	Average Running Speed
Transit Center- Bay H	Trade St & Alexander St	98	7.44
Trade St & Alexander St	Kings Dr & Elizabeth Ave	78	9.11
Kings Dr & Elizabeth Ave	Central Ave & 7th St	63	15.96
Central Ave & 7th St	Central Ave & Piedmont St	45	17.84
Central Ave & Piedmont St	Central Ave & Oakland Ave	123	15.66
Central Ave & Oakland Ave	Central Ave & Lamar Ave	17	14.88
Central Ave & Lamar Ave	Central Ave & Clement Ave	10	12.31
Central Ave & Clement Ave	Central Ave & Thomas Ave	23	14.74
Central Ave & Thomas Ave	Central Ave & Nandina St	45	13.57
Central Ave & Nandina St	Central Ave & Iris Dr	32	22.56
Central Ave & Iris Dr	Central Ave & Lyon Ct	7	13.52
Central Ave & Lyon Ct	Central Ave & St George St	1	23.52
Central Ave & St George St	Central Ave & Eastcrest Dr	0	-
Central Ave & Eastcrest Dr	Central Ave & Wembley Dr	32	14.64
Central Ave & Wembley Dr	Central Ave & Briar Creek Rd	34	16.55
Central Ave & Briar Creek Rd	Central Ave & Carolyn Dr	2	20.08
Central Ave & Carolyn Dr	Central Ave & Eastway Dr	25	16.8
Central Ave & Eastway Dr	Central Ave & Medford Dr	176	8.23
Central Ave & Medford Dr	Central Ave & Temple Ln	4	16.51
Central Ave & Temple Ln	Central Ave & Sheridan Dr	1	21.48
Central Ave & Sheridan Dr	Central Ave & Norland Rd	8	16.92
Central Ave & Norland Rd	Central Ave & Progress Ln	50	16.23
Central Ave & Progress Ln	Central Ave & Rosehaven Dr	113	22.03
Central Ave & Rosehaven Dr	Central Ave @ 4908	24	18.08
Central Ave @ 4908	Central Ave & Winterfield Pl	41	15.25
Central Ave & Winterfield Pl	Eastland Transit Center- Bay A	302	11.14
Eastland Transit Center- Bay A	Central Ave @ Eastland Mall	220	10.04
Central Ave @ Eastland Mall	Central Ave & Reddman Rd	95	19.71
Central Ave & Reddman Rd	Albemarle Rd & Central Av	19	8.09
Albemarle Rd & Central Av	Albemarle Rd & Executive Center Dr	51	17.37
Albemarle Rd & Executive Center Dr	Albemarle Rd & Farm Pond Ln	198	13.32
Albemarle Rd & Farm Pond Ln	Albemarle Rd & Winterhaven Dr	83	18
Albemarle Rd & Winterhaven Dr	Albemarle Rd & Regal Oaks Dr	63	18.11
Albemarle Rd & Regal Oaks Dr	WT Harris Blvd & Albemarle Rd	36	11.78
WT Harris Blvd & Albemarle Rd	Albemarle Rd & Lawyers Rd Park and Ride	7	18.48

Route 9 PM Outbound

From Stop	To Stop	Trips in Sample	Average Running Speed
Transit Center- Bay H	Trade St & Alexander St	180	8.31
Trade St & Alexander St	Kings Dr & Elizabeth Ave	137	11.07
Kings Dr & Elizabeth Ave	Central Ave & 7th St	95	10.29
Central Ave & 7th St	Central Ave & Piedmont St	80	15.05
Central Ave & Piedmont St	Central Ave & Oakland Ave	183	10.5
Central Ave & Oakland Ave	Central Ave & Lamar Ave	126	13.01
Central Ave & Lamar Ave	Central Ave & Clement Ave	141	11.28
Central Ave & Clement Ave	Central Ave & Thomas Ave	178	11.5
Central Ave & Thomas Ave	Central Ave & Nandina St	252	12.9
Central Ave & Nandina St	Central Ave & Iris Dr	68	23.8
Central Ave & Iris Dr	Central Ave & Lyon Ct	27	11.96
Central Ave & Lyon Ct	Central Ave & St George St	13	22.86
Central Ave & St George St	Central Ave & Eastcrest Dr	33	13.03
Central Ave & Eastcrest Dr	Central Ave & Wembley Dr	197	14.49
Central Ave & Wembley Dr	Central Ave & Briar Creek Rd	130	16.45
Central Ave & Briar Creek Rd	Central Ave & Carolyn Dr	28	18.82
Central Ave & Carolyn Dr	Central Ave & Eastway Dr	72	13.83
Central Ave & Eastway Dr	Central Ave & Medford Dr	298	6.62
Central Ave & Medford Dr	Central Ave & Temple Ln	38	15.06
Central Ave & Temple Ln	Central Ave & Sheridan Dr	17	21.18
Central Ave & Sheridan Dr	Central Ave & Norland Rd	80	15.04
Central Ave & Norland Rd	Central Ave & Progress Ln	284	12.62
Central Ave & Progress Ln	Central Ave & Rosehaven Dr	358	21.71
Central Ave & Rosehaven Dr	Central Ave @ 4908	158	17.87
Central Ave @ 4908	Central Ave & Winterfield Pl	163	14.88
Central Ave & Winterfield Pl	Eastland Transit Center- Bay A	371	11.79
Eastland Transit Center- Bay A	Central Ave @ Eastland Mall	269	9.79
Central Ave @ Eastland Mall	Central Ave & Reddman Rd	209	20.13
Central Ave & Reddman Rd	Albemarle Rd & Central Av	58	8.98
Albemarle Rd & Central Av	Albemarle Rd & Executive Center Dr	29	16.15
Albemarle Rd & Executive Center Dr	Albemarle Rd & Farm Pond Ln	181	9.85
Albemarle Rd & Farm Pond Ln	Albemarle Rd & Winterhaven Dr	199	11.23
Albemarle Rd & Winterhaven Dr	Albemarle Rd & Regal Oaks Dr	141	9.57
Albemarle Rd & Regal Oaks Dr	WT Harris Blvd & Albemarle Rd	103	8.4
WT Harris Blvd & Albemarle Rd	Albemarle Rd & Lawyers Rd Park and Ride	24	10.81

Route 7 AM Inbound

From Stop	To Stop	Trips in Sample	Average Running Speed
Northlake Mall (1st stop)	Northlake Mall (2nd Stop)	0	-
Northlake Mall (2nd Stop)	Reames Rd & Perimeter Pkwy	0	-
Reames Rd & Perimeter Pkwy	Reames Rd & Bayview Pkwy	44	21.34
Reames Rd & Bayview Pkwy	Reames Rd @ Lee's Living Center	0	-
Reames Rd @ Lee's Living Center	Reames Rd & Auston Crossing Dr	0	-
Reames Rd & Auston Crossing Dr	Lakeview Rd & Reames Rd	0	-
Lakeview Rd & Reames Rd	Lakeview Rd & Potomac Blvd	0	-
Lakeview Rd & Potomac Blvd	Trinity Rd & Feldbank Dr	11	17.91
Trinity Rd & Feldbank Dr	Trinity Rd & Clairemore Pl	0	-
Trinity Rd & Clairemore Pl	Trinity Rd & Evanshire Dr	0	-
Trinity Rd & Evanshire Dr	Trinity Rd @ 9115	0	-
Trinity Rd @ 9115	Trinity Rd & Beatties Ford Rd	0	-
Trinity Rd & Beatties Ford Rd	Beatties Ford Rd & Hyde Park Dr	0	-
Beatties Ford Rd & Hyde Park Dr	Beatties Ford Rd @ 5901 (Kids Workshop)	0	-
Beatties Ford Rd @ 5901 (Kids Workshop)	Beatties Ford Rd & McIntyre Ave	0	-
Beatties Ford Rd & McIntyre Ave	Beatties Ford Rd & Pauline Ln	0	-
Beatties Ford Rd & Pauline Ln	Beatties Ford Rd & Sunset Rd	0	-
Beatties Ford Rd & Sunset Rd	Beatties Ford Rd & Sunset Rd	0	-
Beatties Ford Rd & Sunset Rd	Beatties Ford Rd & Hamilton Cir	14	19.88
Beatties Ford Rd & Hamilton Cir	Beatties Ford Rd & Slater Ridge Dr	13	26.06
Beatties Ford Rd & Slater Ridge Dr	Beatties Ford Rd & Slater Springs Dr	11	20.41
Beatties Ford Rd & Slater Springs Dr	Beatties Ford Rd & Slater Rd	0	-
Beatties Ford Rd & Slater Rd	Beatties Ford Rd & Capps Hill Mine Rd	0	-
Beatties Ford Rd & Capps Hill Mine Rd	Beatties Ford Rd @ 3713	12	24.4
Beatties Ford Rd @ 3713	Beatties Ford Rd & Griers Grove Rd	68	17.25
Beatties Ford Rd & Griers Grove Rd	Beatties Ford Rd & McAllister Dr	30	14.21
Beatties Ford Rd & McAllister Dr	Beatties Ford Rd & Fairdale Dr	35	14.45
Beatties Ford Rd & Fairdale Dr	Beatties Ford Rd & Lynchester Pl	25	14.67
Beatties Ford Rd & Lynchester Pl	Beatties Ford Rd & Hoskins Rd	10	8.96
Beatties Ford Rd & Hoskins Rd	Beatties Ford Rd & Rosa Parks Pl (Bay C)	17	8.07
Beatties Ford Rd & Rosa Parks Pl (Bay C)	Beatties Ford Rd & Montana Dr	148	12.5
Beatties Ford Rd & Montana Dr	Beatties Ford Rd & Keller Ave	24	16.95
Beatties Ford Rd & Keller Ave	Beatties Ford Rd & LaSalle St	43	16.14
Beatties Ford Rd & LaSalle St	Beatties Ford Rd & Hildebrand St	118	15.88
Beatties Ford Rd & Hildebrand St	Beatties Ford Rd & Estelle St	24	14.86
Beatties Ford Rd & Estelle St	Beatties Ford Rd & Celia Ave	9	15.02
Beatties Ford Rd & Celia Ave	Beatties Ford Rd & Dundeen St	27	12.13

From Stop	To Stop	Trips in Sample	Average Running Speed
Beatties Ford Rd & Dundeen St	Beatties Ford Rd & Sanders Ave	49	12.75
Beatties Ford Rd & Sanders Ave	Beatties Ford Rd & Cemetery St	0	-
Beatties Ford Rd & Cemetery St	Beatties Ford Rd & French St	0	-
Beatties Ford Rd & French St	Beatties Ford Rd & Dixon St	0	-
Beatties Ford Rd & Dixon St	Beatties Ford Rd & 5th St	0	-
Beatties Ford Rd & 5th St	5th St & Trade St	0	-
5th St & Trade St	5th St & Frazier Ave	0	-
5th St & Frazier Ave	5th St & Irwin Ave	0	-
5th St & Irwin Ave	5th & Graham	0	-
5th & Graham	Trade St & Tryon St	2	19.42
Trade St & Tryon St	Trade St & College St	0	-
Trade St & College St	Transit Center- Bay A	0	-
Northlake Mall (1st stop)	Northlake Mall (2nd Stop)	0	-
Northlake Mall (2nd Stop)	Reames Rd & Perimeter Pkwy	0	-

Route 7 PM Inbound

From Stop	To Stop	Trips in Sample	Average Running Speed
Northlake Mall (1st stop)	Northlake Mall (2nd Stop)	8	3.75
Northlake Mall (2nd Stop)	Reames Rd & Perimeter Pkwy	3	10.24
Reames Rd & Perimeter Pkwy	Reames Rd & Bayview Pkwy	23	20.71
Reames Rd & Bayview Pkwy	Reames Rd @ Lee's Living Center	0	-
Reames Rd @ Lee's Living Center	Reames Rd & Auston Crossing Dr	1	22.89
Reames Rd & Auston Crossing Dr	Lakeview Rd & Reames Rd	0	-
Lakeview Rd & Reames Rd	Lakeview Rd & Potomac Blvd	0	-
Lakeview Rd & Potomac Blvd	Trinity Rd & Feldbank Dr	2	15.51
Trinity Rd & Feldbank Dr	Trinity Rd & Clairemore Pl	0	-
Trinity Rd & Clairemore Pl	Trinity Rd & Evanshire Dr	0	-
Trinity Rd & Evanshire Dr	Trinity Rd @ 9115	3	15.08
Trinity Rd @ 9115	Trinity Rd & Beatties Ford Rd	0	-
Trinity Rd & Beatties Ford Rd	Beatties Ford Rd & Hyde Park Dr	0	-
Beatties Ford Rd & Hyde Park Dr	Beatties Ford Rd @ 5901 (Kids Workshop)	0	-
Beatties Ford Rd @ 5901 (Kids Workshop)	Beatties Ford Rd & McIntyre Ave	0	-
Beatties Ford Rd & McIntyre Ave	Beatties Ford Rd & Pauline Ln	0	-
Beatties Ford Rd & Pauline Ln	Beatties Ford Rd & Sunset Rd	3	20.59
Beatties Ford Rd & Sunset Rd	Beatties Ford Rd & Sunset Rd	9	7.74
Beatties Ford Rd & Sunset Rd	Beatties Ford Rd & Hamilton Cir	3	19.83
Beatties Ford Rd & Hamilton Cir	Beatties Ford Rd & Slater Ridge Dr	2	24.33
Beatties Ford Rd & Slater Ridge Dr	Beatties Ford Rd & Slater Springs Dr	6	21.43
Beatties Ford Rd & Slater Springs Dr	Beatties Ford Rd & Slater Rd	0	0
Beatties Ford Rd & Slater Rd	Beatties Ford Rd & Capps Hill Mine Rd	0	0
Beatties Ford Rd & Capps Hill Mine Rd	Beatties Ford Rd @ 3713	11	25.53
Beatties Ford Rd @ 3713	Beatties Ford Rd & Griers Grove Rd	25	17.21
Beatties Ford Rd & Griers Grove Rd	Beatties Ford Rd & McAllister Dr	9	13.12
Beatties Ford Rd & McAllister Dr	Beatties Ford Rd & Fairdale Dr	12	16.5
Beatties Ford Rd & Fairdale Dr	Beatties Ford Rd & Lynchester Pl	17	14.3
Beatties Ford Rd & Lynchester Pl	Beatties Ford Rd & Hoskins Rd	3	12.81
Beatties Ford Rd & Hoskins Rd	Beatties Ford Rd & Rosa Parks Pl (Bay C)	11	10.36
Beatties Ford Rd & Rosa Parks Pl (Bay C)	Beatties Ford Rd & Montana Dr	152	12.98
Beatties Ford Rd & Montana Dr	Beatties Ford Rd & Keller Ave	22	15.65
Beatties Ford Rd & Keller Ave	Beatties Ford Rd & LaSalle St	45	14.23
Beatties Ford Rd & LaSalle St	Beatties Ford Rd & Hildebrand St	77	14.01
Beatties Ford Rd & Hildebrand St	Beatties Ford Rd & Estelle St	10	16.22
Beatties Ford Rd & Estelle St	Beatties Ford Rd & Celia Ave	7	15.38
Beatties Ford Rd & Celia Ave	Beatties Ford Rd & Dundeen St	44	11.12
Beatties Ford Rd & Dundeen St	Beatties Ford Rd & Sanders Ave	52	11.12

From Stop	To Stop	Trips in Sample	Average Running Speed
Beatties Ford Rd & Sanders Ave	Beatties Ford Rd & Cemetery St	2	9.94
Beatties Ford Rd & Cemetery St	Beatties Ford Rd & French St	0	-
Beatties Ford Rd & French St	Beatties Ford Rd & Dixon St	0	-
Beatties Ford Rd & Dixon St	Beatties Ford Rd & 5th St	0	-
Beatties Ford Rd & 5th St	5th St & Trade St	0	-
5th St & Trade St	5th St & Frazier Ave	0	-
5th St & Frazier Ave	5th St & Irwin Ave	0	-
5th St & Irwin Ave	5th & Graham	0	-
5th & Graham	Trade St & Tryon St	0	-
Trade St & Tryon St	Trade St & College St	0	-
Trade St & College St	Transit Center- Bay A	0	-
Northlake Mall (1st stop)	Northlake Mall (2nd Stop)	8	3.75
Northlake Mall (2nd Stop)	Reames Rd & Perimeter Pkwy	3	10.24

Route 7 AM Outbound

From Stop	To Stop	Trips in Sample	Average Running Speed
Transit Center- Bay M	4th St & Tryon St	0	-
4th St & Tryon St	4th St & Church St	0	-
4th St & Church St	4th St & Poplar St	0	-
4th St & Poplar St	4th St & Graham St	0	-
4th St & Graham St	Graham St & 5th St	0	-
Graham St & 5th St	Graham St & 6th St	1	6.89
Graham St & 6th St	5th St & Cedar St	0	-
5th St & Cedar St	5th St & Irwin Ave	0	-
5th St & Irwin Ave	5th St & Frazier Ave	0	-
5th St & Frazier Ave	Beatties Ford Rd & 5th St	0	-
Beatties Ford Rd & 5th St	Beatties Ford Rd & Dixon St	0	-
Beatties Ford Rd & Dixon St	Beatties Ford Rd & Cemetery St	0	-
Beatties Ford Rd & Cemetery St	Beatties Ford Rd & Sanders Ave	0	-
Beatties Ford Rd & Sanders Ave	Beatties Ford Rd & Oaklawn Ave	0	-
Beatties Ford Rd & Oaklawn Ave	Beatties Ford Rd & Dundeen St	19	12.41
Beatties Ford Rd & Dundeen St	Beatties Ford Rd & Russell Ave	33	17.92
Beatties Ford Rd & Russell Ave	Beatties Ford Rd & St Paul St	15	11.96
Beatties Ford Rd & St Paul St	Beatties Ford Rd & St Mark St	8	17.78
Beatties Ford Rd & St Mark St	Beatties Ford Rd & LaSalle St	62	18.01
Beatties Ford Rd & LaSalle St	Beatties Ford Rd & Holly St	2	20.08
Beatties Ford Rd & Holly St	Beatties Ford Rd & Gilbert St	1	15.92
Beatties Ford Rd & Gilbert St	Rosa Parks Pl & Beatties Ford Rd	141	15.18
Rosa Parks Pl & Beatties Ford Rd	Rosa Parks Pl & Carrier Dr	3	12.59
Rosa Parks Pl & Carrier Dr	Beatties Ford Rd & B Ave	0	-
Beatties Ford Rd & B Ave	Beatties Ford Rd & Lynchester Pl	1	19.2
Beatties Ford Rd & Lynchester Pl	Beatties Ford Rd & Friendship Village Pl	4	20.4
Beatties Ford Rd & Friendship Village Pl	Beatties Ford Rd & McAllister Dr	6	15.19
Beatties Ford Rd & McAllister Dr	Beatties Ford Rd & Cindy Ln	10	18.51
Beatties Ford Rd & Cindy Ln	Beatties Ford Rd @ 3640	35	11.54
Beatties Ford Rd @ 3640	Beatties Ford Rd @ 3738	19	17.3
Beatties Ford Rd @ 3738	Beatties Ford Rd @ 3938	1	26.05
Beatties Ford Rd @ 3938	Beatties Ford Rd & Slater Rd	0	-
Beatties Ford Rd & Slater Rd	Beatties Ford Rd & Slater Springs Dr	0	-
Beatties Ford Rd & Slater Springs Dr	Beatties Ford Rd & Olde English Dr	0	-
Beatties Ford Rd & Olde English Dr	Beatties Ford Rd @ 4530	0	-
Beatties Ford Rd @ 4530	Beatties Ford Rd & Hamilton Cir	0	-
Beatties Ford Rd & Hamilton Cir	Beatties Ford Rd & Sunset Rd	4	29.13

From Stop	To Stop	Trips in Sample	Average Running Speed
Beatties Ford Rd & Sunset Rd	Beatties Ford Rd & Montgomery Gardens Dr	15	8.15
Beatties Ford Rd & Montgomery Gardens Dr	Beatties Ford Rd & Pauline Ln	2	20.48
Beatties Ford Rd & Pauline Ln	Beatties Ford Rd & McIntyre Ave	0	-
Beatties Ford Rd & McIntyre Ave	Beatties Ford Rd @ 5835 (Kids Workshop)	0	-
Beatties Ford Rd @ 5835 (Kids Workshop)	Beatties Ford Rd & Hyde Park Dr	0	-
Beatties Ford Rd & Hyde Park Dr	Trinity Rd & Beatties Ford Rd	0	-
Trinity Rd & Beatties Ford Rd	Trinity Rd @ Cemetery	1	19.23
Trinity Rd @ Cemetery	Trinity Rd & Evanshire Dr	2	18.34
Trinity Rd & Evanshire Dr	Trinity Rd & Feldbank Dr	3	16.83
Trinity Rd & Feldbank Dr	Trinity Rd & Larkhull Dr	1	14.87
Trinity Rd & Larkhull Dr	Lakeview Rd & Potomac Blvd	1	18.53
Lakeview Rd & Potomac Blvd	Lakeview Rd & Reames Rd	1	14.38
Lakeview Rd & Reames Rd	Reames Rd & Auston Crossing Dr	0	-
Reames Rd & Auston Crossing Dr	Reames Rd @ Lee's Living Center	0	-
Reames Rd @ Lee's Living Center	Reames Rd & Bayview Pkwy	0	-
Reames Rd & Bayview Pkwy	Reames Rd & Prestbury Blvd	0	-
Reames Rd & Prestbury Blvd	Reames Rd & Perimeter Pkwy	0	-
Reames Rd & Perimeter Pkwy	Northlake Centre Pkwy & Point O'Woods Dr	7	13.86
Northlake Centre Pkwy & Point O'Woods Dr	Northlake Mall (1st stop)	0	-

Route 7 PM Outbound

From Stop	To Stop	Trips in Sample	Average Running Speed
Transit Center- Bay M	4th St & Tryon St	1	6.63
4th St & Tryon St	4th St & Church St	0	-
4th St & Church St	4th St & Poplar St	0	-
4th St & Poplar St	4th St & Graham St	0	-
4th St & Graham St	Graham St & 5th St	0	-
Graham St & 5th St	Graham St & 6th St	0	-
Graham St & 6th St	5th St & Cedar St	0	-
5th St & Cedar St	5th St & Irwin Ave	0	-
5th St & Irwin Ave	5th St & Frazier Ave	0	-
5th St & Frazier Ave	Beatties Ford Rd & 5th St	0	-
Beatties Ford Rd & 5th St	Beatties Ford Rd & Dixon St	0	-
Beatties Ford Rd & Dixon St	Beatties Ford Rd & Cemetery St	0	-
Beatties Ford Rd & Cemetery St	Beatties Ford Rd & Sanders Ave	0	-
Beatties Ford Rd & Sanders Ave	Beatties Ford Rd & Oaklawn Ave	1	10.07
Beatties Ford Rd & Oaklawn Ave	Beatties Ford Rd & Dundeen St	40	11.33
Beatties Ford Rd & Dundeen St	Beatties Ford Rd & Russell Ave	44	15.87
Beatties Ford Rd & Russell Ave	Beatties Ford Rd & St Paul St	17	10.29
Beatties Ford Rd & St Paul St	Beatties Ford Rd & St Mark St	25	17.29
Beatties Ford Rd & St Mark St	Beatties Ford Rd & LaSalle St	102	13.67
Beatties Ford Rd & LaSalle St	Beatties Ford Rd & Holly St	2	19.21
Beatties Ford Rd & Holly St	Beatties Ford Rd & Gilbert St	2	9.74
Beatties Ford Rd & Gilbert St	Rosa Parks Pl & Beatties Ford Rd	214	13.81
Rosa Parks Pl & Beatties Ford Rd	Rosa Parks Pl & Carrier Dr	1	5.83
Rosa Parks Pl & Carrier Dr	Beatties Ford Rd & B Ave	1	17.87
Beatties Ford Rd & B Ave	Beatties Ford Rd & Lynchester Pl	13	15.49
Beatties Ford Rd & Lynchester Pl	Beatties Ford Rd & Friendship Village Pl	36	18.65
Beatties Ford Rd & Friendship Village Pl	Beatties Ford Rd & McAllister Dr	26	14.73
Beatties Ford Rd & McAllister Dr	Beatties Ford Rd & Cindy Ln	20	15.19
Beatties Ford Rd & Cindy Ln	Beatties Ford Rd @ 3640	49	12.83
Beatties Ford Rd @ 3640	Beatties Ford Rd @ 3738	33	15.02
Beatties Ford Rd @ 3738	Beatties Ford Rd @ 3938	5	24.31
Beatties Ford Rd @ 3938	Beatties Ford Rd & Slater Rd	2	15.48
Beatties Ford Rd & Slater Rd	Beatties Ford Rd & Slater Springs Dr	3	12.14
Beatties Ford Rd & Slater Springs Dr	Beatties Ford Rd & Olde English Dr	11	24.38
Beatties Ford Rd & Olde English Dr	Beatties Ford Rd @ 4530	0	-
Beatties Ford Rd @ 4530	Beatties Ford Rd & Hamilton Cir	0	-
Beatties Ford Rd & Hamilton Cir	Beatties Ford Rd & Sunset Rd	8	18.82

From Stop	To Stop	Trips in Sample	Average Running Speed
Beatties Ford Rd & Sunset Rd	Beatties Ford Rd & Montgomery Gardens Dr	0	-
Beatties Ford Rd & Montgomery Gardens Dr	Beatties Ford Rd & Pauline Ln	0	-
Beatties Ford Rd & Pauline Ln	Beatties Ford Rd & McIntyre Ave	0	-
Beatties Ford Rd & McIntyre Ave	Beatties Ford Rd @ 5835 (Kids Workshop)	0	-
Beatties Ford Rd @ 5835 (Kids Workshop)	Beatties Ford Rd & Hyde Park Dr	0	-
Beatties Ford Rd & Hyde Park Dr	Trinity Rd & Beatties Ford Rd	0	-
Trinity Rd & Beatties Ford Rd	Trinity Rd @ Cemetery	0	-
Trinity Rd @ Cemetery	Trinity Rd & Evanshire Dr	0	-
Trinity Rd & Evanshire Dr	Trinity Rd & Feldbank Dr	37	17.23
Trinity Rd & Feldbank Dr	Trinity Rd & Larkhull Dr	0	-
Trinity Rd & Larkhull Dr	Lakeview Rd & Potomac Blvd	0	-
Lakeview Rd & Potomac Blvd	Lakeview Rd & Reames Rd	0	-
Lakeview Rd & Reames Rd	Reames Rd & Auston Crossing Dr	0	-
Reames Rd & Auston Crossing Dr	Reames Rd @ Lee's Living Center	0	-
Reames Rd @ Lee's Living Center	Reames Rd & Bayview Pkwy	0	-
Reames Rd & Bayview Pkwy	Reames Rd & Prestbury Blvd	0	-
Reames Rd & Prestbury Blvd	Reames Rd & Perimeter Pkwy	0	-
Reames Rd & Perimeter Pkwy	Northlake Centre Pkwy & Point O'Woods Dr	0	-
Northlake Centre Pkwy & Point O'Woods Dr	Northlake Mall (1st stop)	0	-

Route 16 AM Inbound

From Stop	To Stop	Trips in Sample	Average Running Speed
CMC Steelecroft	Tryon St & Steele Creek Rd	53	8.12
Tryon St & Steele Creek Rd	Tryon St & Rivergate Pkwy	14	18.75
Tryon St & Rivergate Pkwy	Tryon St & Choate Rd	44	17.45
Tryon St & Choate Rd	Tryon St & Erwin Rd	40	14.16
Tryon St & Erwin Rd	Tryon St & Savannah Club Dr	26	8.81
Tryon St & Savannah Club Dr	Tryon St & Moss Rd	26	10.77
Tryon St & Moss Rd	Tryon St & South Point Bv	14	11.32
Tryon St & South Point Bv	Tryon St & Carowinds Blvd	22	11.48
Tryon St & Carowinds Blvd	Tryon St & General Dr	17	19
Tryon St & General Dr	S Tryon St & Nevada Bv	2	15.85
S Tryon St & Nevada Bv	Tryon St & Westinghouse Blvd	0	-
Tryon St & Westinghouse Blvd	Tryon St & Westinghouse Blvd	26	8.95
Tryon St & Westinghouse Blvd	Tryon St & Sandy Porter Rd	93	14.25
Tryon St & Sandy Porter Rd	Tryon St @ 8951	91	12.32
Tryon St @ 8951	Tryon St @ White Hall Commons	60	15.4
Tryon St @ White Hall Commons	Tryon St & Arrowcreek Dr	75	11.75
Tryon St & Arrowcreek Dr	Tryon St & Arrowood Rd	144	11.6
Tryon St & Arrowood Rd	Tryon St & Thornfield Rd	123	23.32
Tryon St & Thornfield Rd	Tryon St & Yorkdale Dr	53	19.71
Tryon St & Yorkdale Dr	Tryon St & Land Grant Rd	77	23.03
Tryon St & Land Grant Rd	Tryon & Shopton	67	18.48
Tryon & Shopton	Tryon St & Tyvola Centre Dr	42	22.87
Tryon St & Tyvola Centre Dr	Tryon St & Tyvola Rd	44	22.94
Tryon St & Tyvola Rd	Tryon St & Queen Anne Rd	0	-
Tryon St & Queen Anne Rd	Tryon St & Southampton Rd	0	-
Tryon St & Southampton Rd	Tryon St & Kingman Dr	22	16.95
Tryon St & Kingman Dr	Tryon St & Yorkmont Rd	142	12.93
Tryon St & Yorkmont Rd	Tryon St & Pressley Rd	174	13.13
Tryon St & Pressley Rd	Tryon St & Orchard Cir	11	20.84
Tryon St & Orchard Cir	Tryon St & Peterson Dr	0	-
Tryon St & Peterson Dr	Tryon St & Cama St	0	-
Tryon St & Cama St	Tryon St & Bowman Rd	1	15
Tryon St & Bowman Rd	Tryon St & Clanton Rd	20	18.71
Tryon St & Clanton Rd	Tryon St & Herman Ave	114	14.01
Tryon St & Herman Ave	Tryon St & Griffith St	103	12.84
Tryon St & Griffith St	Tryon St & Remount Rd	103	17.47
Tryon St & Remount Rd	Tryon St & Dunavant St	34	16.86
Tryon St & Dunavant St	Tryon St & Tremont Ave	3	18.18

From Stop	To Stop	Trips in Sample	Average Running Speed
Tryon St & Tremont Ave	Tryon St & Doggett St	1	22.95
Tryon St & Doggett St	Tryon St & West Blvd	1	13.96
Tryon St & West Blvd	Tryon St & Park Ave	4	16.3
Tryon St & Park Ave	Tryon St & Bland St	5	13.24
Tryon St & Bland St	Tryon St & Carson Blvd	8	13.84
Tryon St & Carson Blvd	College St & Morehead St	2	14.32
College St & Morehead St	College St & Stonewall St	13	4.9
College St & Stonewall St	College St & 2nd St	123	8.88
College St & 2nd St	College St & 3rd St	223	7.98
College St & 3rd St	College St & 4th St	8	7.45
College St & 4th St	Transit Center- Bay A	0	-

Route 16 PM Inbound

From Stop	To Stop	Trips in Sample	Average Running Speed
CMC Steelescroft	Tryon St & Steele Creek Rd	121	8.92
Tryon St & Steele Creek Rd	Tryon St & Rivergate Pkwy	94	17.28
Tryon St & Rivergate Pkwy	Tryon St & Choate Rd	59	21.29
Tryon St & Choate Rd	Tryon St & Erwin Rd	22	24.16
Tryon St & Erwin Rd	Tryon St & Savannah Club Dr	10	21.45
Tryon St & Savannah Club Dr	Tryon St & Moss Rd	7	17.73
Tryon St & Moss Rd	Tryon St & South Point Bv	16	13.96
Tryon St & South Point Bv	Tryon St & Carowinds Blvd	68	12.04
Tryon St & Carowinds Blvd	Tryon St & General Dr	97	21.42
Tryon St & General Dr	S Tryon St & Nevada Bv	32	16.15
S Tryon St & Nevada Bv	Tryon St & Westinghouse Blvd	17	12.4
Tryon St & Westinghouse Blvd	Tryon St & Westinghouse Blvd	64	10.47
Tryon St & Westinghouse Blvd	Tryon St & Sandy Porter Rd	101	13.03
Tryon St & Sandy Porter Rd	Tryon St @ 8951	136	14.66
Tryon St @ 8951	Tryon St @ White Hall Commons	175	14.82
Tryon St @ White Hall Commons	Tryon St & Arrowcreek Dr	88	10
Tryon St & Arrowcreek Dr	Tryon St & Arrowood Rd	74	7.97
Tryon St & Arrowood Rd	Tryon St & Thornfield Rd	22	23.89
Tryon St & Thornfield Rd	Tryon St & Yorkdale Dr	2	15.31
Tryon St & Yorkdale Dr	Tryon St & Land Grant Rd	12	23.55
Tryon St & Land Grant Rd	Tryon & Shopton	9	18.65
Tryon & Shopton	Tryon St & Tyvola Centre Dr	0	-
Tryon St & Tyvola Centre Dr	Tryon St & Tyvola Rd	4	24.17
Tryon St & Tyvola Rd	Tryon St & Queen Anne Rd	2	6.6
Tryon St & Queen Anne Rd	Tryon St & Southampton Rd	0	-
Tryon St & Southampton Rd	Tryon St & Kingman Dr	0	-
Tryon St & Kingman Dr	Tryon St & Yorkmont Rd	41	7.74
Tryon St & Yorkmont Rd	Tryon St & Pressley Rd	180	7.09
Tryon St & Pressley Rd	Tryon St & Orchard Cir	18	18.46
Tryon St & Orchard Cir	Tryon St & Peterson Dr	1	18.01
Tryon St & Peterson Dr	Tryon St & Cama St	0	-
Tryon St & Cama St	Tryon St & Bowman Rd	1	15.94
Tryon St & Bowman Rd	Tryon St & Clanton Rd	4	19.7
Tryon St & Clanton Rd	Tryon St & Herman Ave	147	14.68
Tryon St & Herman Ave	Tryon St & Griffith St	71	15.05
Tryon St & Griffith St	Tryon St & Remount Rd	94	16.31
Tryon St & Remount Rd	Tryon St & Dunavant St	26	16.47
Tryon St & Dunavant St	Tryon St & Tremont Ave	2	18.25

From Stop	To Stop	Trips in Sample	Average Running Speed
Tryon St & Tremont Ave	Tryon St & Doggett St	0	-
Tryon St & Doggett St	Tryon St & West Blvd	7	13.15
Tryon St & West Blvd	Tryon St & Park Ave	30	11.48
Tryon St & Park Ave	Tryon St & Bland St	9	8.33
Tryon St & Bland St	Tryon St & Carson Blvd	16	14.29
Tryon St & Carson Blvd	College St & Morehead St	1	6.65
College St & Morehead St	College St & Stonewall St	0	-
College St & Stonewall St	College St & 2nd St	5	7.73
College St & 2nd St	College St & 3rd St	18	8.19
College St & 3rd St	College St & 4th St	0	-
College St & 4th St	Transit Center- Bay A	1	4.62

Route 16 AM Outbound

From Stop	To Stop	Trips in Sample	Average Running Speed
Transit Center- Bay N	Tryon St & 3rd St	74	6.11
Tryon St & 3rd St	Tryon St & 2nd St	40	6.55
Tryon St & 2nd St	Tryon St & Stonewall St	32	7.5
Tryon St & Stonewall St	Tryon St & Morehead St	12	8.82
Tryon St & Morehead St	Tryon St & Carson Blvd	2	8.54
Tryon St & Carson Blvd	Tryon St & Catherine St	0	-
Tryon St & Catherine St	Tryon St & Bland St	0	-
Tryon St & Bland St	Tryon St & Park Ave	16	7.47
Tryon St & Park Ave	Tryon St & West Blvd	19	19.47
Tryon St & West Blvd	Tryon St & Woodcrest Ave	1	11.07
Tryon St & Woodcrest Ave	Tryon St & Tremont Ave	0	-
Tryon St & Tremont Ave	Tryon St & Rampart St	1	15.26
Tryon St & Rampart St	Tryon St & Brookhill Rd	1	17.24
Tryon St & Brookhill Rd	Tryon St & Remount Rd	21	15.56
Tryon St & Remount Rd	Tryon St & Griffith St	37	17.55
Tryon St & Griffith St	Tryon St & Herman Ave	26	20.4
Tryon St & Herman Ave	Tryon St & Blairhill Rd	84	12.55
Tryon St & Blairhill Rd	Tryon St & Bowman Rd	9	19.64
Tryon St & Bowman Rd	Tryon St & Cama St	2	21.53
Tryon St & Cama St	Tryon St & Peterson Dr	1	15.66
Tryon St & Peterson Dr	Tryon St & Orchard Cir	0	-
Tryon St & Orchard Cir	Tryon St & Pressley Rd	4	20.31
Tryon St & Pressley Rd	Tryon St & Yorkmont Rd	212	14.59
Tryon St & Yorkmont Rd	Tryon St & Kingman Dr	31	24.26
Tryon St & Kingman Dr	Tryon St & Southampton Rd	4	21.01
Tryon St & Southampton Rd	Tryon St & Queen Anne Rd	5	17.25
Tryon St & Queen Anne Rd	S Tryon St & Tyvola Rd	14	15.88
S Tryon St & Tyvola Rd	Tryon St & Tyvola Centre Dr	4	23.68
Tryon St & Tyvola Centre Dr	Tryon St & Shopton Rd	2	24.53
Tryon St & Shopton Rd	Tryon St & Courtney Oaks Rd	1	18.2
Tryon St & Courtney Oaks Rd	Tryon St & Yorkdale Dr	8	16.74
Tryon St & Yorkdale Dr	Tryon St & Thornfield Rd	6	23.78
Tryon St & Thornfield Rd	Tryon St & Arrowood Rd	35	23.99
Tryon St & Arrowood Rd	Tryon St @ Whitehall Commons entrance	0	-
Tryon St @ Whitehall Commons entrance	Tryon St & I-485	0	-
Tryon St & I-485	Tryon St & Bethany Brook Ln	199	13.82
Tryon St & Bethany Brook Ln	Tryon St & Sandy Porter Rd	125	15.74
Tryon St & Sandy Porter Rd	Tryon St & Township Rd	64	17.5

From Stop	To Stop	Trips in Sample	Average Running Speed
Tryon St & Township Rd	Tryon St & Westinghouse Blvd	77	12.61
Tryon St & Westinghouse Blvd	Tryon St & Nevada Bv	5	31.07
Tryon St & Nevada Bv	Tryon St & General Dr	4	21.72
Tryon St & General Dr	Tryon St & Crescent Springs	92	17.67
Tryon St & Crescent Springs	Tryon St & John Price Rd	0	-
Tryon St & John Price Rd	Tryon St & Moss Rd	0	-
Tryon St & Moss Rd	Tryon St & Mother Theresa Villas	7	16.61
Tryon St & Mother Theresa Villas	Tryon St & Garden Oaks Ln	4	24.73
Tryon St & Garden Oaks Ln	Tryon St & Erwin Rd	1	22.86
Tryon St & Erwin Rd	Tryon St & Choate Rd	0	-
Tryon St & Choate Rd	Tryon St & Rivergate Pkwy	15	20
Tryon St & Rivergate Pkwy	S Tryon St & Rivergate Py	2	26.24
S Tryon St & Rivergate Py	Steele Creek Rd & S Tryon St	0	-
Steele Creek Rd & S Tryon St	CMC Steelecroft	7	19.33

Route 16 PM Outbound

From Stop	To Stop	Trips in Sample	Average Running Speed
Transit Center- Bay N	Tryon St & 3rd St	180	6.17
Tryon St & 3rd St	Tryon St & 2nd St	175	5.58
Tryon St & 2nd St	Tryon St & Stonewall St	97	7.4
Tryon St & Stonewall St	Tryon St & Morehead St	10	9.45
Tryon St & Morehead St	Tryon St & Carson Blvd	5	7.32
Tryon St & Carson Blvd	Tryon St & Catherine St	4	8.22
Tryon St & Catherine St	Tryon St & Bland St	9	9.49
Tryon St & Bland St	Tryon St & Park Ave	24	8.7
Tryon St & Park Ave	Tryon St & West Blvd	28	16.31
Tryon St & West Blvd	Tryon St & Woodcrest Ave	7	14.78
Tryon St & Woodcrest Ave	Tryon St & Tremont Ave	1	11.86
Tryon St & Tremont Ave	Tryon St & Rampart St	5	11.45
Tryon St & Rampart St	Tryon St & Brookhill Rd	4	17
Tryon St & Brookhill Rd	Tryon St & Remount Rd	22	16.9
Tryon St & Remount Rd	Tryon St & Griffith St	104	16.8
Tryon St & Griffith St	Tryon St & Herman Ave	63	19.91
Tryon St & Herman Ave	Tryon St & Blairhill Rd	104	9.8
Tryon St & Blairhill Rd	Tryon St & Bowman Rd	36	17.92
Tryon St & Bowman Rd	Tryon St & Cama St	8	21.98
Tryon St & Cama St	Tryon St & Peterson Dr	6	17.6
Tryon St & Peterson Dr	Tryon St & Orchard Cir	0	-
Tryon St & Orchard Cir	Tryon St & Pressley Rd	5	16.57
Tryon St & Pressley Rd	Tryon St & Yorkmont Rd	191	12.55
Tryon St & Yorkmont Rd	Tryon St & Kingman Dr	134	23.96
Tryon St & Kingman Dr	Tryon St & Southampton Rd	33	20.72
Tryon St & Southampton Rd	Tryon St & Queen Anne Rd	11	18.22
Tryon St & Queen Anne Rd	S Tryon St & Tyvola Rd	22	9.6
S Tryon St & Tyvola Rd	Tryon St & Tyvola Centre Dr	65	23.99
Tryon St & Tyvola Centre Dr	Tryon St & Shopton Rd	40	22.3
Tryon St & Shopton Rd	Tryon St & Courtney Oaks Rd	49	18.89
Tryon St & Courtney Oaks Rd	Tryon St & Yorkdale Dr	122	20.03
Tryon St & Yorkdale Dr	Tryon St & Thornfield Rd	94	20.58
Tryon St & Thornfield Rd	Tryon St & Arrowood Rd	122	18.97
Tryon St & Arrowood Rd	Tryon St @ Whitehall Commons entrance	1	4.83
Tryon St @ Whitehall Commons entrance	Tryon St & I-485	0	-
Tryon St & I-485	Tryon St & Bethany Brook Ln	133	10.24
Tryon St & Bethany Brook Ln	Tryon St & Sandy Porter Rd	114	10.89
Tryon St & Sandy Porter Rd	Tryon St & Township Rd	28	12.43

From Stop	To Stop	Trips in Sample	Average Running Speed
Tryon St & Township Rd	Tryon St & Westinghouse Blvd	18	9.51
Tryon St & Westinghouse Blvd	Tryon St & Nevada Bv	10	27.43
Tryon St & Nevada Bv	Tryon St & General Dr	12	16.84
Tryon St & General Dr	Tryon St & Crescent Springs	43	12.18
Tryon St & Crescent Springs	Tryon St & John Price Rd	0	-
Tryon St & John Price Rd	Tryon St & Moss Rd	0	-
Tryon St & Moss Rd	Tryon St & Mother Theresa Villas	34	15.75
Tryon St & Mother Theresa Villas	Tryon St & Garden Oaks Ln	9	21.16
Tryon St & Garden Oaks Ln	Tryon St & Erwin Rd	11	18.64
Tryon St & Erwin Rd	Tryon St & Choate Rd	28	26
Tryon St & Choate Rd	Tryon St & Rivergate Pkwy	53	18.4
Tryon St & Rivergate Pkwy	S Tryon St & Rivergate Py	0	-
S Tryon St & Rivergate Py	Steele Creek Rd & S Tryon St	0	-
Steele Creek Rd & S Tryon St	CMC Steelescrot	15	23.11

Route 27 AM Inbound

From Stop	To Stop	Trips in Sample	Average Running Speed
Matthews-Mint Hill Rd & Crestdale Rd	Matthews-Mint Hill Rd @ 701 (Conbraco)	0	-
Matthews-Mint Hill Rd @ 701 (Conbraco)	Matthews-Mint Hill Rd @ Presbyterian Hospital	0	-
Matthews-Mint Hill Rd @ Presbyterian Hospital	Trade St & Charles St	0	-
Trade St & Charles St	John St & Ames Rd	34	7.87
John St & Ames Rd	Monroe Rd & Lois St	29	17.74
Monroe Rd & Lois St	Monroe Rd & Hwy 51	8	8.55
Monroe Rd & Hwy 51	Monroe Rd @ 10801	0	-
Monroe Rd @ 10801	Monroe Rd @ 10701	0	-
Monroe Rd @ 10701	Monroe Rd @ Family Dollar	0	-
Monroe Rd @ Family Dollar	Monroe Rd & Galleria Blvd	8	21.1
Monroe Rd & Galleria Blvd	Monroe Rd & Sardis Rd North (Eckerd Drugs)	26	19.59
Monroe Rd & Sardis Rd North (Eckerd Drugs)	Monroe Rd & Sardis Rd North	59	9.55
Monroe Rd & Sardis Rd North	Monroe Rd & Delmar Office Dr	12	16.82
Monroe Rd & Delmar Office Dr	Monroe Rd @ Greylyn Park	10	23.94
Monroe Rd @ Greylyn Park	Monroe Rd & Covedale Dr	19	18.91
Monroe Rd & Covedale Dr	Monroe Rd @ 8539	5	28.25
Monroe Rd @ 8539	Monroe Rd & Timber Springs Dr	27	14.52
Monroe Rd & Timber Springs Dr	Monroe Rd & Village Lake Dr	173	13.65
Monroe Rd & Village Lake Dr	Monroe Rd & Renard Ridge Rd	18	19
Monroe Rd & Renard Ridge Rd	Monroe Rd & Lumarka Dr	11	15.16
Monroe Rd & Lumarka Dr	Monroe Rd & Fox Run Dr	5	13.7
Monroe Rd & Fox Run Dr	Monroe Rd @ Mason Wallace Park	3	14.91
Monroe Rd @ Mason Wallace Park	Monroe Rd & Burtonwood Cir	11	18.3
Monroe Rd & Burtonwood Cir	Monroe Rd & Eaglewood Ave	14	17.22
Monroe Rd & Eaglewood Ave	Monroe Rd & Wallace Ln	42	12.92
Monroe Rd & Wallace Ln	Monroe Rd & Old Post Rd	99	16.51
Monroe Rd & Old Post Rd	Monroe Rd & Bainbridge Rd	81	21.59
Monroe Rd & Bainbridge Rd	Monroe Rd & Long Ave	71	11.05
Monroe Rd & Long Ave	Monroe Rd & Ashmore Dr	101	14.83
Monroe Rd & Ashmore Dr	Monroe Rd & McMullen Way	25	10.96
Monroe Rd & McMullen Way	Monroe Rd & Mandarin Blvd	21	14.94
Monroe Rd & Mandarin Blvd	Monroe Rd & Eaton Rd	59	14.47
Monroe Rd & Eaton Rd	Monroe Rd & Chippendale Rd	47	17.57
Monroe Rd & Chippendale Rd	Monroe Rd & Commonwealth Ave	57	11.44
Monroe Rd & Commonwealth Ave	Monroe Rd & McAlway Rd	35	9.27

From Stop	To Stop	Trips in Sample	Average Running Speed
Monroe Rd & McAlway Rd	Monroe Rd & Wendover Rd	77	9.97
Monroe Rd & Wendover Rd	Monroe Rd & Buford Ave	24	18.65
Monroe Rd & Buford Ave	Monroe Rd & Chipley Ave	8	17.66
Monroe Rd & Chipley Ave	Monroe Rd & Fortune St	23	12.14
Monroe Rd & Fortune St	Monroe Rd & Briar Creek Rd	43	15.09
Monroe Rd & Briar Creek Rd	Monroe Rd & Colonnade Dr	12	10.65
Monroe Rd & Colonnade Dr	Monroe Rd & Dunn Ave	12	14.85
Monroe Rd & Dunn Ave	7th St & Firefighter Pl	17	14.51
7th St & Firefighter Pl	7th St & Dotger Ave	46	14.25
7th St & Dotger Ave	7th St & Bascom St	14	12.45
7th St & Bascom St	7th St & Laurel Ave	9	12.02
7th St & Laurel Ave	7th St & Clarice Ave	7	10.31
7th St & Clarice Ave	7th St & Caswell Rd	19	7.08
7th St & Caswell Rd	7th St & Hawthorne Ln	43	20.21
7th St & Hawthorne Ln	7th St & Beaumont Ave	10	11.51
7th St & Beaumont Ave	7th St & Charlottetowne Ave	22	11.14
7th St & Charlottetowne Ave	Elizabeth Ave & Kings Dr	111	8.81
Elizabeth Ave & Kings Dr	Trade St & McDowell St	13	15.34
Trade St & McDowell St	Trade St & Alexander St	4	13.23
Trade St & Alexander St	Transit Center- Bay V	42	9.02

Route 27 PM Inbound

From Stop	To Stop	Trips in Sample	Average Running Speed
Matthews-Mint Hill Rd & Crestdale Rd	Matthews-Mint Hill Rd @ 701 (Conbraco)	0	-
Matthews-Mint Hill Rd @ 701 (Conbraco)	Matthews-Mint Hill Rd @ Presbyterian Hospital	0	-
Matthews-Mint Hill Rd @ Presbyterian Hospital	Trade St & Charles St	4	18.61
Trade St & Charles St	John St & Ames Rd	36	5.38
John St & Ames Rd	Monroe Rd & Lois St	41	20.91
Monroe Rd & Lois St	Monroe Rd & Hwy 51	13	7.52
Monroe Rd & Hwy 51	Monroe Rd @ 10801	7	18.15
Monroe Rd @ 10801	Monroe Rd @ 10701	5	15.62
Monroe Rd @ 10701	Monroe Rd @ Family Dollar	0	-
Monroe Rd @ Family Dollar	Monroe Rd & Galleria Blvd	6	21.48
Monroe Rd & Galleria Blvd	Monroe Rd & Sardis Rd North (Eckerd Drugs)	56	16.83
Monroe Rd & Sardis Rd North (Eckerd Drugs)	Monroe Rd & Sardis Rd North	207	7.92
Monroe Rd & Sardis Rd North	Monroe Rd & Delmar Office Dr	33	16.83
Monroe Rd & Delmar Office Dr	Monroe Rd @ Greylyn Park	4	15.96
Monroe Rd @ Greylyn Park	Monroe Rd & Covedale Dr	9	16.9
Monroe Rd & Covedale Dr	Monroe Rd @ 8539	10	29.46
Monroe Rd @ 8539	Monroe Rd & Timber Springs Dr	34	16.1
Monroe Rd & Timber Springs Dr	Monroe Rd & Village Lake Dr	88	13.8
Monroe Rd & Village Lake Dr	Monroe Rd & Renard Ridge Rd	11	18.07
Monroe Rd & Renard Ridge Rd	Monroe Rd & Lumarka Dr	12	14.85
Monroe Rd & Lumarka Dr	Monroe Rd & Fox Run Dr	13	17.52
Monroe Rd & Fox Run Dr	Monroe Rd @ Mason Wallace Park	3	20.85
Monroe Rd @ Mason Wallace Park	Monroe Rd & Burtonwood Cir	3	19.96
Monroe Rd & Burtonwood Cir	Monroe Rd & Eaglewood Ave	1	18.97
Monroe Rd & Eaglewood Ave	Monroe Rd & Wallace Ln	10	11.7
Monroe Rd & Wallace Ln	Monroe Rd & Old Post Rd	67	15.74
Monroe Rd & Old Post Rd	Monroe Rd & Bainbridge Rd	39	20.42
Monroe Rd & Bainbridge Rd	Monroe Rd & Long Ave	36	10.25
Monroe Rd & Long Ave	Monroe Rd & Ashmore Dr	28	14.84
Monroe Rd & Ashmore Dr	Monroe Rd & McMullen Way	0	-
Monroe Rd & McMullen Way	Monroe Rd & Mandarin Blvd	2	11.85
Monroe Rd & Mandarin Blvd	Monroe Rd & Eaton Rd	66	15.37
Monroe Rd & Eaton Rd	Monroe Rd & Chippendale Rd	45	23.75
Monroe Rd & Chippendale Rd	Monroe Rd & Commonwealth Ave	38	14.73
Monroe Rd & Commonwealth Ave	Monroe Rd & McAlway Rd	28	15.3

From Stop	To Stop	Trips in Sample	Average Running Speed
Monroe Rd & McAlway Rd	Monroe Rd & Wendover Rd	44	13.45
Monroe Rd & Wendover Rd	Monroe Rd & Buford Ave	43	19.94
Monroe Rd & Buford Ave	Monroe Rd & Chipley Ave	15	18.75
Monroe Rd & Chipley Ave	Monroe Rd & Fortune St	31	12.4
Monroe Rd & Fortune St	Monroe Rd & Briar Creek Rd	57	13.61
Monroe Rd & Briar Creek Rd	Monroe Rd & Colonnade Dr	4	11.17
Monroe Rd & Colonnade Dr	Monroe Rd & Dunn Ave	1	10.52
Monroe Rd & Dunn Ave	7th St & Firefighter Pl	4	12.83
7th St & Firefighter Pl	7th St & Dotger Ave	2	14.13
7th St & Dotger Ave	7th St & Bascom St	0	-
7th St & Bascom St	7th St & Laurel Ave	0	-
7th St & Laurel Ave	7th St & Clarice Ave	1	5.82
7th St & Clarice Ave	7th St & Caswell Rd	15	8.42
7th St & Caswell Rd	7th St & Hawthorne Ln	13	19.69
7th St & Hawthorne Ln	7th St & Beaumont Ave	10	14.12
7th St & Beaumont Ave	7th St & Charlottetowne Ave	9	11.04
7th St & Charlottetowne Ave	Elizabeth Ave & Kings Dr	22	9.81
Elizabeth Ave & Kings Dr	Trade St & McDowell St	0	-
Trade St & McDowell St	Trade St & Alexander St	0	-
Trade St & Alexander St	Transit Center- Bay V	5	5.94

Route 27 AM Outbound

From Stop	To Stop	Trips in Sample	Average Running Speed
Transit Center- Bay I	Trade St & Alexander St	16	6.8
Trade St & Alexander St	Kings Dr & Elizabeth Ave	13	9.44
Kings Dr & Elizabeth Ave	7th St & Charlottetowne Ave	46	17.14
7th St & Charlottetowne Ave	7th St & Armory Dr	8	14.57
7th St & Armory Dr	7th St & Hawthorne Ln	8	14.72
7th St & Hawthorne Ln	7th St & Clement Ave	30	18.49
7th St & Clement Ave	7th St & Clarice Ave	16	9.7
7th St & Clarice Ave	7th St & Laurel Ave	1	10.28
7th St & Laurel Ave	7th St & Cameron Ave	0	-
7th St & Cameron Ave	7th St & Dotger Ave	2	14.49
7th St & Dotger Ave	7th St & 5th St	1	17.56
7th St & 5th St	Monroe Rd & Montrose St	26	20.82
Monroe Rd & Montrose St	Monroe Rd & Puhlman St	18	16.65
Monroe Rd & Puhlman St	Monroe Rd & Alcott St	23	17.09
Monroe Rd & Alcott St	Monroe Rd & Washburn Ave	91	14
Monroe Rd & Washburn Ave	Monroe Rd & Chipley Ave	87	19.47
Monroe Rd & Chipley Ave	Monroe Rd & Oak Grove Rd	30	20.75
Monroe Rd & Oak Grove Rd	Monroe Rd & Wendover Rd	55	10.33
Monroe Rd & Wendover Rd	Monroe Rd & Commonwealth Ave	103	21.78
Monroe Rd & Commonwealth Ave	Monroe Rd & Chippendale Rd	75	13.59
Monroe Rd & Chippendale Rd	Monroe Rd & Commodore St	9	18.41
Monroe Rd & Commodore St	Monroe Rd & Ross Moore Ave	13	18.2
Monroe Rd & Ross Moore Ave	Monroe Rd & Summey Ave	82	17.14
Monroe Rd & Summey Ave	Monroe Rd & Sharon Amity Rd	31	11.34
Monroe Rd & Sharon Amity Rd	Monroe Rd & McMullen Way	3	17.6
Monroe Rd & McMullen Way	Monroe Rd & Ashmore Dr	3	14.6
Monroe Rd & Ashmore Dr	Monroe Rd & Idlewild Rd	25	18.33
Monroe Rd & Idlewild Rd	Monroe Rd & Bainbridge Rd	16	8.26
Monroe Rd & Bainbridge Rd	Monroe Rd & Old Post Rd	31	22.89
Monroe Rd & Old Post Rd	Monroe Rd & Conference Dr	52	15.88
Monroe Rd & Conference Dr	Monroe Rd & McLaughlin Dr	18	18.23
Monroe Rd & McLaughlin Dr	Monroe Rd & Pinafore Dr	2	26.48
Monroe Rd & Pinafore Dr	Monroe Rd & Woodberry Rd	0	-
Monroe Rd & Woodberry Rd	Monroe Rd & Painter Pl	1	13.54
Monroe Rd & Painter Pl	Monroe Rd & Chasewood Dr	3	17.2
Monroe Rd & Chasewood Dr	Monroe Rd & Renard Ridge Rd	1	19.06
Monroe Rd & Renard Ridge Rd	Monroe Rd & Village Lake Dr	5	16.8
Monroe Rd & Village Lake Dr	Monroe Rd & McAlpine Station Dr	142	11.05

From Stop	To Stop	Trips in Sample	Average Running Speed
Monroe Rd & McAlpine Station Dr	Monroe Rd @ 8516	74	16.64
Monroe Rd @ 8516	Monroe Rd & Covedale Dr	26	27.91
Monroe Rd & Covedale Dr	Monroe Rd & Orchard Lake Dr (16521)	23	18.26
Monroe Rd & Orchard Lake Dr (16521)	Monroe Rd & Orchard Lake Dr (16540)	3	15.63
Monroe Rd & Orchard Lake Dr (16540)	Monroe Rd & Orchard Lake Dr (16560)	2	16.75
Monroe Rd & Orchard Lake Dr (16560)	Monroe Rd & Sardis Rd North	46	17.27
Monroe Rd & Sardis Rd North	Monroe Rd & Sardis Rd North	125	11.01
Monroe Rd & Sardis Rd North	Monroe Rd & Galleria Blvd	86	18.27
Monroe Rd & Galleria Blvd	Monroe Rd @ Drake Apts	12	22.36
Monroe Rd @ Drake Apts	Monroe Rd @ 10600 (Animal Clinic)	6	20.24
Monroe Rd @ 10600 (Animal Clinic)	Monroe Rd @ 10804	2	21.05
Monroe Rd @ 10804	Monroe Rd & Matthews Township Pkwy	4	20.03
Monroe Rd & Matthews Township Pkwy	Monroe Rd & Hwy 51	25	7.24
Monroe Rd & Hwy 51	John St & Ames Rd	40	22.39
John St & Ames Rd	Trade St & Matthews Station St	31	9.51
Trade St & Matthews Station St	Trade St & Park Center Dr	5	14.93
Trade St & Park Center Dr	Trade St & Matthews Township Pkwy	3	11.72
Trade St & Matthews Township Pkwy	Matthews Township Pkwy & Sam Newell Rd	6	7.54
Matthews Township Pkwy & Sam Newell Rd	Matthews Township Pkwy & Paces Ave	1	19.98
Matthews Township Pkwy & Paces Ave	Independence Pointe Pkwy @ 10630	30	18.69
Independence Pointe Pkwy @ 10630	Independence Pointe Pkwy & Matthews-Mint Hill Rd	42	19.9
Independence Pointe Pkwy & Matthews-Mint Hill Rd	Matthews-Mint Hill Rd & Crestdale Rd	0	-

Route 27 PM Outbound

From Stop	To Stop	Trips in Sample	Average Running Speed
Transit Center- Bay I	Trade St & Alexander St	100	8.71
Trade St & Alexander St	Kings Dr & Elizabeth Ave	78	11.12
Kings Dr & Elizabeth Ave	7th St & Charlottetowne Ave	55	8.95
7th St & Charlottetowne Ave	7th St & Armory Dr	13	17.08
7th St & Armory Dr	7th St & Hawthorne Ln	20	15.01
7th St & Hawthorne Ln	7th St & Clement Ave	32	14.35
7th St & Clement Ave	7th St & Clarice Ave	36	11.36
7th St & Clarice Ave	7th St & Laurel Ave	15	14.22
7th St & Laurel Ave	7th St & Cameron Ave	15	15.59
7th St & Cameron Ave	7th St & Dotger Ave	17	12.89
7th St & Dotger Ave	7th St & 5th St	16	16.39
7th St & 5th St	Monroe Rd & Montrose St	35	19.65
Monroe Rd & Montrose St	Monroe Rd & Puhlman St	26	17.86
Monroe Rd & Puhlman St	Monroe Rd & Alcott St	27	17.01
Monroe Rd & Alcott St	Monroe Rd & Washburn Ave	46	15.62
Monroe Rd & Washburn Ave	Monroe Rd & Chipley Ave	33	18.21
Monroe Rd & Chipley Ave	Monroe Rd & Oak Grove Rd	17	19.62
Monroe Rd & Oak Grove Rd	Monroe Rd & Wendover Rd	47	12.46
Monroe Rd & Wendover Rd	Monroe Rd & Commonwealth Ave	96	22.65
Monroe Rd & Commonwealth Ave	Monroe Rd & Chippendale Rd	65	14.35
Monroe Rd & Chippendale Rd	Monroe Rd & Commodore St	42	16.97
Monroe Rd & Commodore St	Monroe Rd & Ross Moore Ave	32	19.69
Monroe Rd & Ross Moore Ave	Monroe Rd & Summey Ave	94	14.69
Monroe Rd & Summey Ave	Monroe Rd & Sharon Amity Rd	53	11.49
Monroe Rd & Sharon Amity Rd	Monroe Rd & McMullen Way	8	18.37
Monroe Rd & McMullen Way	Monroe Rd & Ashmore Dr	28	13.24
Monroe Rd & Ashmore Dr	Monroe Rd & Idlewild Rd	138	18.23
Monroe Rd & Idlewild Rd	Monroe Rd & Bainbridge Rd	111	10.5
Monroe Rd & Bainbridge Rd	Monroe Rd & Old Post Rd	74	22.31
Monroe Rd & Old Post Rd	Monroe Rd & Conference Dr	108	16.5
Monroe Rd & Conference Dr	Monroe Rd & McLaughlin Dr	71	15.66
Monroe Rd & McLaughlin Dr	Monroe Rd & Pinafore Dr	10	26.14
Monroe Rd & Pinafore Dr	Monroe Rd & Woodberry Rd	8	19.69
Monroe Rd & Woodberry Rd	Monroe Rd & Painter Pl	1	16.25
Monroe Rd & Painter Pl	Monroe Rd & Chasewood Dr	5	23.35
Monroe Rd & Chasewood Dr	Monroe Rd & Renard Ridge Rd	11	16.63
Monroe Rd & Renard Ridge Rd	Monroe Rd & Village Lake Dr	32	15.87
Monroe Rd & Village Lake Dr	Monroe Rd & McAlpine Station Dr	168	9.5

From Stop	To Stop	Trips in Sample	Average Running Speed
Monroe Rd & McAlpine Station Dr	Monroe Rd @ 8516	28	17.19
Monroe Rd @ 8516	Monroe Rd & Covedale Dr	5	27.35
Monroe Rd & Covedale Dr	Monroe Rd & Orchard Lake Dr (16521)	5	17.23
Monroe Rd & Orchard Lake Dr (16521)	Monroe Rd & Orchard Lake Dr (16540)	3	12.64
Monroe Rd & Orchard Lake Dr (16540)	Monroe Rd & Orchard Lake Dr (16560)	0	-
Monroe Rd & Orchard Lake Dr (16560)	Monroe Rd & Sardis Rd North	28	11.59
Monroe Rd & Sardis Rd North	Monroe Rd & Sardis Rd North	174	7.74
Monroe Rd & Sardis Rd North	Monroe Rd & Galleria Blvd	70	18.09
Monroe Rd & Galleria Blvd	Monroe Rd @ Drake Apts	14	16.58
Monroe Rd @ Drake Apts	Monroe Rd @ 10600 (Animal Clinic)	3	15.67
Monroe Rd @ 10600 (Animal Clinic)	Monroe Rd @ 10804	0	-
Monroe Rd @ 10804	Monroe Rd & Matthews Township Pkwy	2	11.77
Monroe Rd & Matthews Township Pkwy	Monroe Rd & Hwy 51	6	10.75
Monroe Rd & Hwy 51	John St & Ames Rd	23	14.4
John St & Ames Rd	Trade St & Matthews Station St	47	8.09
Trade St & Matthews Station St	Trade St & Park Center Dr	4	9.63
Trade St & Park Center Dr	Trade St & Matthews Township Pkwy	1	16.39
Trade St & Matthews Township Pkwy	Matthews Township Pkwy & Sam Newell Rd	5	6.83
Matthews Township Pkwy & Sam Newell Rd	Matthews Township Pkwy & Paces Ave	10	16.41
Matthews Township Pkwy & Paces Ave	Independence Pointe Pkwy @ 10630	21	17.65
Independence Pointe Pkwy @ 10630	Independence Pointe Pkwy & Matthews-Mint Hill Rd	34	17.03
Independence Pointe Pkwy & Matthews-Mint Hill Rd	Matthews-Mint Hill Rd & Crestdale Rd	1	11.21

Route 34 AM Inbound

From Stop	To Stop	Trips in Sample	Average Running Speed
Freedom Dr & Old Little Rock Rd	Freedom Dr & Wingate Dr	0	-
Freedom Dr & Wingate Dr	Freedom Dr & Elmwood Cir	27	19.09
Freedom Dr & Elmwood Cir	Freedom Dr & Eagles Landing Dr	3	20.13
Freedom Dr & Eagles Landing Dr	Freedom Dr & Teddington Dr	4	11.56
Freedom Dr & Teddington Dr	Freedom Dr & Toddville Rd	40	16.17
Freedom Dr & Toddville Rd	Freedom Dr & Allenbrook Dr	13	21.82
Freedom Dr & Allenbrook Dr	Freedom Dr & Ranch Rd	5	23.87
Freedom Dr & Ranch Rd	Freedom Dr & Weststone Dr	9	17.02
Freedom Dr & Weststone Dr	Freedom & Browns Ave	10	23.5
Freedom & Browns Ave	Edgewood Rd & Susan St	73	16.53
Edgewood Rd & Susan St	Tuckaseegee Rd & I-85	105	10.08
Tuckaseegee Rd & I-85	Ashley Rd & Scott Futrell Dr	41	11.05
Ashley Rd & Scott Futrell Dr	Ashley Rd & Alleghany St	54	15.64
Ashley Rd & Alleghany St	Alleghany St & Ashley Rd	83	9.52
Alleghany St & Ashley Rd	Alleghany St @ 1335	11	20.27
Alleghany St @ 1335	Alleghany St @ 1203	6	18.52
Alleghany St @ 1203	Alleghany St & Freedom Dr	19	13.06
Alleghany St & Freedom Dr	Freedom Dr & Pacific St	73	9.91
Freedom Dr & Pacific St	Freedom Dr & Camp Greene St	41	18.38
Freedom Dr & Camp Greene St	Berryhill Rd & Freedom Dr	24	9.09
Berryhill Rd & Freedom Dr	Berryhill Rd & Tuckaseegee Rd	29	13.28
Berryhill Rd & Tuckaseegee Rd	Tuckaseegee Rd & Jay St	2	10.28
Tuckaseegee Rd & Jay St	Tuckaseegee Rd & Wesley Heights Way	3	17
Tuckaseegee Rd & Wesley Heights Way	4th St Ext & Grandin Rd	14	15.1
4th St Ext & Grandin Rd	4th St Ext & Sycamore St	19	21.62
4th St Ext & Sycamore St	4th St Ext & Victoria Ave	3	6.63
4th St Ext & Victoria Ave	4th St & Cedar St	13	8.08
4th St & Cedar St	Trade St & Graham St	12	13.07
Trade St & Graham St	Trade St & Church St	0	-
Trade St & Church St	Trade St & Tryon St	0	-
Trade St & Tryon St	Trade St & College St	2	7.16
Trade St & College St	Transit Center- Bay A	0	-

Note: Grey-highlighted cells will not be part of the future Route 34. Route 2 will serve Ashley Rd and Alleghany St, and Route 34 will travel into Uptown via Morehead St.

Route 34 PM Inbound

From Stop	To Stop	Trips in Sample	Average Running Speed
Freedom Dr & Old Little Rock Rd	Freedom Dr & Wingate Dr	0	-
Freedom Dr & Wingate Dr	Freedom Dr & Elmwood Cir	16	24.93
Freedom Dr & Elmwood Cir	Freedom Dr & Eagles Landing Dr	2	19.75
Freedom Dr & Eagles Landing Dr	Freedom Dr & Teddington Dr	0	-
Freedom Dr & Teddington Dr	Freedom Dr & Toddville Rd	2	17.42
Freedom Dr & Toddville Rd	Freedom Dr & Allenbrook Dr	7	23.94
Freedom Dr & Allenbrook Dr	Freedom Dr & Ranch Rd	0	-
Freedom Dr & Ranch Rd	Freedom Dr & Weststone Dr	0	-
Freedom Dr & Weststone Dr	Freedom & Browns Ave	1	26.36
Freedom & Browns Ave	Edgewood Rd & Susan St	6	17.14
Edgewood Rd & Susan St	Tuckaseegee Rd & I-85	31	10.43
Tuckaseegee Rd & I-85	Ashley Rd & Scott Futrell Dr	37	13.02
Ashley Rd & Scott Futrell Dr	Ashley Rd & Alleghany St	40	18.07
Ashley Rd & Alleghany St	Alleghany St & Ashley Rd	50	7.11
Alleghany St & Ashley Rd	Alleghany St @ 1335	17	20.35
Alleghany St @ 1335	Alleghany St @ 1203	4	17.3
Alleghany St @ 1203	Alleghany St & Freedom Dr	17	14.14
Alleghany St & Freedom Dr	Freedom Dr & Pacific St	168	9.99
Freedom Dr & Pacific St	Freedom Dr & Camp Greene St	73	15.56
Freedom Dr & Camp Greene St	Berryhill Rd & Freedom Dr	45	8.17
Berryhill Rd & Freedom Dr	Berryhill Rd & Tuckaseegee Rd	16	11.65
Berryhill Rd & Tuckaseegee Rd	Tuckaseegee Rd & Jay St	16	8.61
Tuckaseegee Rd & Jay St	Tuckaseegee Rd & Wesley Heights Way	6	18.54
Tuckaseegee Rd & Wesley Heights Way	4th St Ext & Grandin Rd	6	18.73
4th St Ext & Grandin Rd	4th St Ext & Sycamore St	5	23.14
4th St Ext & Sycamore St	4th St Ext & Victoria Ave	7	9.91
4th St Ext & Victoria Ave	4th St & Cedar St	69	13.36
4th St & Cedar St	Trade St & Graham St	29	14.11
Trade St & Graham St	Trade St & Church St	0	-
Trade St & Church St	Trade St & Tryon St	0	-
Trade St & Tryon St	Trade St & College St	0	-
Trade St & College St	Transit Center- Bay A	0	-

Note: Grey-highlighted cells will not be part of the future Route 34. Route 2 will serve Ashley Rd and Alleghany St, and Route 34 will travel into Uptown via Morehead St.

Route 34 AM Outbound

From Stop	To Stop	Trips in Sample	Average Running Speed
Transit Center- Bay E	4th St & Tryon St	3	5.22
4th St & Tryon St	4th St & Poplar St	0	-
4th St & Poplar St	4th St & Graham St	1	7.97
4th St & Graham St	4th St & Cedar St	16	11.79
4th St & Cedar St	4th St Ext & Victoria Ave	44	13.28
4th St Ext & Victoria Ave	4th St Ext & Sycamore St	4	14.35
4th St Ext & Sycamore St	4th St Ext & Grandin Rd	3	19.29
4th St Ext & Grandin Rd	4th St Ext & Wesley Heights Way	2	21.78
4th St Ext & Wesley Heights Way	Tuckaseegee Rd & Jay St	4	24.29
Tuckaseegee Rd & Jay St	Berryhill Rd & Tuckaseegee Rd	1	12.22
Berryhill Rd & Tuckaseegee Rd	Berryhill Rd & Freedom Dr	24	15.26
Berryhill Rd & Freedom Dr	Freedom Dr & Camp Greene St	25	12.18
Freedom Dr & Camp Greene St	Freedom Dr @ 2640	36	21.62
Freedom Dr @ 2640	Alleghany St & Crisman St	159	8.81
Alleghany St & Crisman St	Alleghany St @ Phillip Berry Academy	85	17.15
Alleghany St @ Phillip Berry Academy	Alleghany St & Ashley Rd	22	22.23
Alleghany St & Ashley Rd	Ashley Rd & Alleghany St	36	9.04
Ashley Rd & Alleghany St	Tuckaseegee Rd & Ashley Rd	52	18.48
Tuckaseegee Rd & Ashley Rd	Tuckaseegee Rd & Edgewood Rd	34	15.13
Tuckaseegee Rd & Edgewood Rd	Edgewood Rd & Major St	20	14.04
Edgewood Rd & Major St	Freedom Dr & Browns Ave	10	14.32
Freedom Dr & Browns Ave	Freedom Dr & Weststone Dr	3	25.25
Freedom Dr & Weststone Dr	Freedom Dr & Ranch Rd	1	19.68
Freedom Dr & Ranch Rd	Freedom Dr & Allenbrook Dr	1	34.8
Freedom Dr & Allenbrook Dr	Toddville Rd & Freedom Dr	1	24.94
Toddville Rd & Freedom Dr	Toddville Rd & Brooktree Dr	28	20.36
Toddville Rd & Brooktree Dr	Toddville Rd & CSX Way	43	19.97
Toddville Rd & CSX Way	Toddville Rd & Macon St	0	-
Toddville Rd & Macon St	Old Mt Holly Rd & Toddville Rd	0	-
Old Mt Holly Rd & Toddville Rd	Old Mt Holly Rd & Tank Farm Rd	2	25.74
Old Mt Holly Rd & Tank Farm Rd	Old Mt Holly Rd @ Post Office	1	26.28
Old Mt Holly Rd @ Post Office	Old Mt Holly Rd & Tom Sadler Rd	0	-
Old Mt Holly Rd & Tom Sadler Rd	Freedom Dr & Old Mt Holly Rd	2	11.67
Freedom Dr & Old Mt Holly Rd	Freedom Dr & Old Little Rock Rd	0	-

Note: Grey-highlighted cells will not be part of the future Route 34. Route 2 will serve Ashley Rd and Alleghany St, and Route 34 will travel out of Uptown via Morehead St.

Route 34 PM Outbound

From Stop	To Stop	Trips in Sample	Average Running Speed
Transit Center- Bay E	4th St & Tryon St	4	6.4
4th St & Tryon St	4th St & Poplar St	2	9.53
4th St & Poplar St	4th St & Graham St	25	8.98
4th St & Graham St	4th St & Cedar St	27	12.74
4th St & Cedar St	4th St Ext & Victoria Ave	16	13.91
4th St Ext & Victoria Ave	4th St Ext & Sycamore St	3	14.04
4th St Ext & Sycamore St	4th St Ext & Grandin Rd	6	19.12
4th St Ext & Grandin Rd	4th St Ext & Wesley Heights Way	5	21.26
4th St Ext & Wesley Heights Way	Tuckaseegee Rd & Jay St	0	-
Tuckaseegee Rd & Jay St	Berryhill Rd & Tuckaseegee Rd	4	7.69
Berryhill Rd & Tuckaseegee Rd	Berryhill Rd & Freedom Dr	44	16.49
Berryhill Rd & Freedom Dr	Freedom Dr & Camp Greene St	61	13.64
Freedom Dr & Camp Greene St	Freedom Dr @ 2640	91	19.34
Freedom Dr @ 2640	Alleghany St & Crisman St	153	9.87
Alleghany St & Crisman St	Alleghany St @ Phillip Berry Academy	49	18.14
Alleghany St @ Phillip Berry Academy	Alleghany St & Ashley Rd	12	22.11
Alleghany St & Ashley Rd	Ashley Rd & Alleghany St	52	9.59
Ashley Rd & Alleghany St	Tuckaseegee Rd & Ashley Rd	170	16.77
Tuckaseegee Rd & Ashley Rd	Tuckaseegee Rd & Edgewood Rd	132	14.25
Tuckaseegee Rd & Edgewood Rd	Edgewood Rd & Major St	141	14.75
Edgewood Rd & Major St	Freedom Dr & Browns Ave	99	11.84
Freedom Dr & Browns Ave	Freedom Dr & Weststone Dr	45	26.03
Freedom Dr & Weststone Dr	Freedom Dr & Ranch Rd	16	17.55
Freedom Dr & Ranch Rd	Freedom Dr & Allenbrook Dr	3	29.48
Freedom Dr & Allenbrook Dr	Toddville Rd & Freedom Dr	7	29.33
Toddville Rd & Freedom Dr	Toddville Rd & Brooktree Dr	143	20.86
Toddville Rd & Brooktree Dr	Toddville Rd & CSX Way	167	21.75
Toddville Rd & CSX Way	Toddville Rd & Macon St	8	20.64
Toddville Rd & Macon St	Old Mt Holly Rd & Toddville Rd	2	22.59
Old Mt Holly Rd & Toddville Rd	Old Mt Holly Rd & Tank Farm Rd	0	-
Old Mt Holly Rd & Tank Farm Rd	Old Mt Holly Rd @ Post Office	2	24.52
Old Mt Holly Rd @ Post Office	Old Mt Holly Rd & Tom Sadler Rd	1	22.38
Old Mt Holly Rd & Tom Sadler Rd	Freedom Dr & Old Mt Holly Rd	1	15.97
Freedom Dr & Old Mt Holly Rd	Freedom Dr & Old Little Rock Rd	4	14.65

Note: Grey-highlighted cells will not be part of the future Route 34. Route 2 will serve Ashley Rd and Alleghany St, and Route 34 will travel out of Uptown via Morehead St.

Route 2 AM Inbound

From Stop	To Stop	Trips in Sample	Average Running Speed
Thriftwood Dr & Freedom Dr	Thriftwood Dr & Marble St	12	15.05
Thriftwood Dr & Marble St	Thriftwood Dr & Interurban Ave	3	14.15
Thriftwood Dr & Interurban Ave	Interurban Ave & Westridge Dr	5	11.06
Interurban Ave & Westridge Dr	Interurban Ave & Willard St	18	13.03
Interurban Ave & Willard St	Interurban Ave & Hovis Rd	4	15.2
Interurban Ave & Hovis Rd	Hovis Rd & Bradford Dr	8	13.45
Hovis Rd & Bradford Dr	Hovis Rd & Wildwood Ave	33	11.37
Hovis Rd & Wildwood Ave	Hovis Rd & Hoskins Rd	46	15.86
Hovis Rd & Hoskins Rd	Welling Ave & Hoskins Rd	59	9.05
Welling Ave & Hoskins Rd	Rowan St & Fair St	32	14.5
Rowan St & Fair St	Rowan St & Hoskins Rd	6	14.59
Rowan St & Hoskins Rd	Bradford Dr & Key St	26	10.53
Bradford Dr & Key St	Bradford Dr & Hoover St	118	11.98
Bradford Dr & Hoover St	Freedom Dr & Edgewood Rd	76	20.16
Freedom Dr & Edgewood Rd	Freedom Dr & Ashley Rd	32	12.65
Freedom Dr & Ashley Rd	Ashley Rd & Tuckaseegee Rd	41	12.2
Ashley Rd & Tuckaseegee Rd	Ashley Rd & Scott Futrell Dr	11	6.59
Ashley Rd & Scott Futrell Dr	Ashley Rd & Alleghany St	15	19.73
Ashley Rd & Alleghany St	Ashley & Allegany	2	6.12
Ashley & Allegany	Ashley Rd & Alleghany St	0	-
Ashley Rd & Alleghany St	Ashley Rd & Bullard St	1	15.75
Ashley Rd & Bullard St	Ashley Rd & Kempton Pl	3	17.99
Ashley Rd & Kempton Pl	Ashley Rd & Dublin Rd	4	21.28
Ashley Rd & Dublin Rd	Ashley Rd & Meredith Ave	0	-
Ashley Rd & Meredith Ave	Wal-Mart @ Ashley & Wilkinson	7	13.4
Wal-Mart @ Ashley & Wilkinson	Greenland Ave & Weyland Ave	17	7.1
Greenland Ave & Weyland Ave	Greenland Ave & Weyland Ave	10	11.18
Greenland Ave & Weyland Ave	Remount Rd & Wilkinson Blvd	9	10.04
Remount Rd & Wilkinson Blvd	Remount Rd & Parker Dr	10	8.22
Remount Rd & Parker Dr	Remount Rd & West Blvd	34	13.85
Remount Rd & West Blvd	Remount & Barringer	5	9.44
Remount & Barringer	Remount Rd & Toomey Ave	5	28.75
Remount Rd & Toomey Ave	Remount Rd & Baltimore Ave	30	20.67
Remount Rd & Baltimore Ave	Tryon St & Griffith St	18	18.91
Tryon St & Griffith St	Tryon St & Herman Ave	30	18.5
Tryon St & Herman Ave	Clanton Rd & Dewitt Ln	21	8.63
Clanton Rd & Dewitt Ln	Scaleybark Station	3	13.94

Note: Grey-highlighted cells will not be part of the future Route 2.

Route 2 PM Inbound

From Stop	To Stop	Trips in Sample	Average Running Speed
Thriftwood Dr & Freedom Dr	Thriftwood Dr & Marble St	11	16.51
Thriftwood Dr & Marble St	Thriftwood Dr & Interurban Ave	10	15.28
Thriftwood Dr & Interurban Ave	Interurban Ave & Westridge Dr	21	12.3
Interurban Ave & Westridge Dr	Interurban Ave & Willard St	11	14.48
Interurban Ave & Willard St	Interurban Ave & Hovis Rd	3	14.04
Interurban Ave & Hovis Rd	Hovis Rd & Bradford Dr	12	14.95
Hovis Rd & Bradford Dr	Hovis Rd & Wildwood Ave	39	12.28
Hovis Rd & Wildwood Ave	Hovis Rd & Hoskins Rd	68	17.13
Hovis Rd & Hoskins Rd	Welling Ave & Hoskins Rd	52	10.07
Welling Ave & Hoskins Rd	Rowan St & Fair St	59	16.13
Rowan St & Fair St	Rowan St & Hoskins Rd	45	13.88
Rowan St & Hoskins Rd	Bradford Dr & Key St	74	11.63
Bradford Dr & Key St	Bradford Dr & Hoover St	82	13.2
Bradford Dr & Hoover St	Freedom Dr & Edgewood Rd	42	24.46
Freedom Dr & Edgewood Rd	Freedom Dr & Ashley Rd	25	12.77
Freedom Dr & Ashley Rd	Ashley Rd & Tuckaseegee Rd	36	13.06
Ashley Rd & Tuckaseegee Rd	Ashley Rd & Scott Futrell Dr	7	6.46
Ashley Rd & Scott Futrell Dr	Ashley Rd & Alleghany St	9	18.15
Ashley Rd & Alleghany St	Ashley & Allegany	0	-
Ashley & Allegany	Ashley Rd & Alleghany St	0	-
Ashley Rd & Alleghany St	Ashley Rd & Bullard St	0	-
Ashley Rd & Bullard St	Ashley Rd & Kempton Pl	8	16.77
Ashley Rd & Kempton Pl	Ashley Rd & Dublin Rd	2	25.76
Ashley Rd & Dublin Rd	Ashley Rd & Meredith Ave	1	10.42
Ashley Rd & Meredith Ave	Wal-Mart @ Ashley & Wilkinson	5	16.98
Wal-Mart @ Ashley & Wilkinson	Greenland Ave & Weyland Ave	34	5.46
Greenland Ave & Weyland Ave	Greenland Ave & Weyland Ave	7	11.17
Greenland Ave & Weyland Ave	Remount Rd & Wilkinson Blvd	4	13.14
Remount Rd & Wilkinson Blvd	Remount Rd & Parker Dr	4	9.96
Remount Rd & Parker Dr	Remount Rd & West Blvd	18	18.25
Remount Rd & West Blvd	Remount & Barringer	14	11.33
Remount & Barringer	Remount Rd & Toomey Ave	10	26.78
Remount Rd & Toomey Ave	Remount Rd & Baltimore Ave	28	18.08
Remount Rd & Baltimore Ave	Tryon St & Griffith St	21	18.2
Tryon St & Griffith St	Tryon St & Herman Ave	12	17.48
Tryon St & Herman Ave	Clanton Rd & Dewitt Ln	24	8.59
Clanton Rd & Dewitt Ln	Scaleybark Station	1	15.71

Note: Grey-highlighted cells will not be part of the future Route 2.

Route 2 AM Outbound

From Stop	To Stop	Trips in Sample	Average Running Speed
Scaleybark Station	Tryon St & Herman Ave	25	21.77
Tryon St & Herman Ave	Tryon St & Griffith St	22	12.13
Tryon St & Griffith St	Remount Rd & Tryon St	21	14.92
Remount Rd & Tryon St	Remount Rd & Brookhill Rd	15	18.74
Remount Rd & Brookhill Rd	Remount & Barringer	13	30.23
Remount & Barringer	Remount Rd & West Blvd	19	15.19
Remount Rd & West Blvd	Remount Rd & Parker Dr	13	20.15
Remount Rd & Parker Dr	Remount Rd & Wilkinson Blvd	9	12.64
Remount Rd & Wilkinson Blvd	Greenland Ave & Weyland Ave	16	10.85
Greenland Ave & Weyland Ave	Greenland Ave & Ashley Rd	43	14.18
Greenland Ave & Ashley Rd	Ashley Rd & Dublin Rd	31	15.37
Ashley Rd & Dublin Rd	Ashley Rd @ 2401	8	16.04
Ashley Rd @ 2401	Ashley Rd & Kempton Pl	8	21.11
Ashley Rd & Kempton Pl	Ashley Rd & Bullard St	10	14.35
Ashley Rd & Bullard St	Ashley & Alleghany	16	16.32
Ashley & Alleghany	Ashley Rd & Alleghany St	32	10.01
Ashley Rd & Alleghany St	Ashley Rd & Scott Futrell Dr	62	15.29
Ashley Rd & Scott Futrell Dr	Ashley Rd & Tuckaseegee Rd	10	16.85
Ashley Rd & Tuckaseegee Rd	Ashley Rd & Freedom Dr	11	9.57
Ashley Rd & Freedom Dr	Freedom Dr & Ashley Rd	29	6.71
Freedom Dr & Ashley Rd	Freedom Dr & Bradford Dr	11	17.12
Freedom Dr & Bradford Dr	Freedom Dr & Browns Ave	0	-
Freedom Dr & Browns Ave	Thriftwood Dr & Freedom Dr	0	-

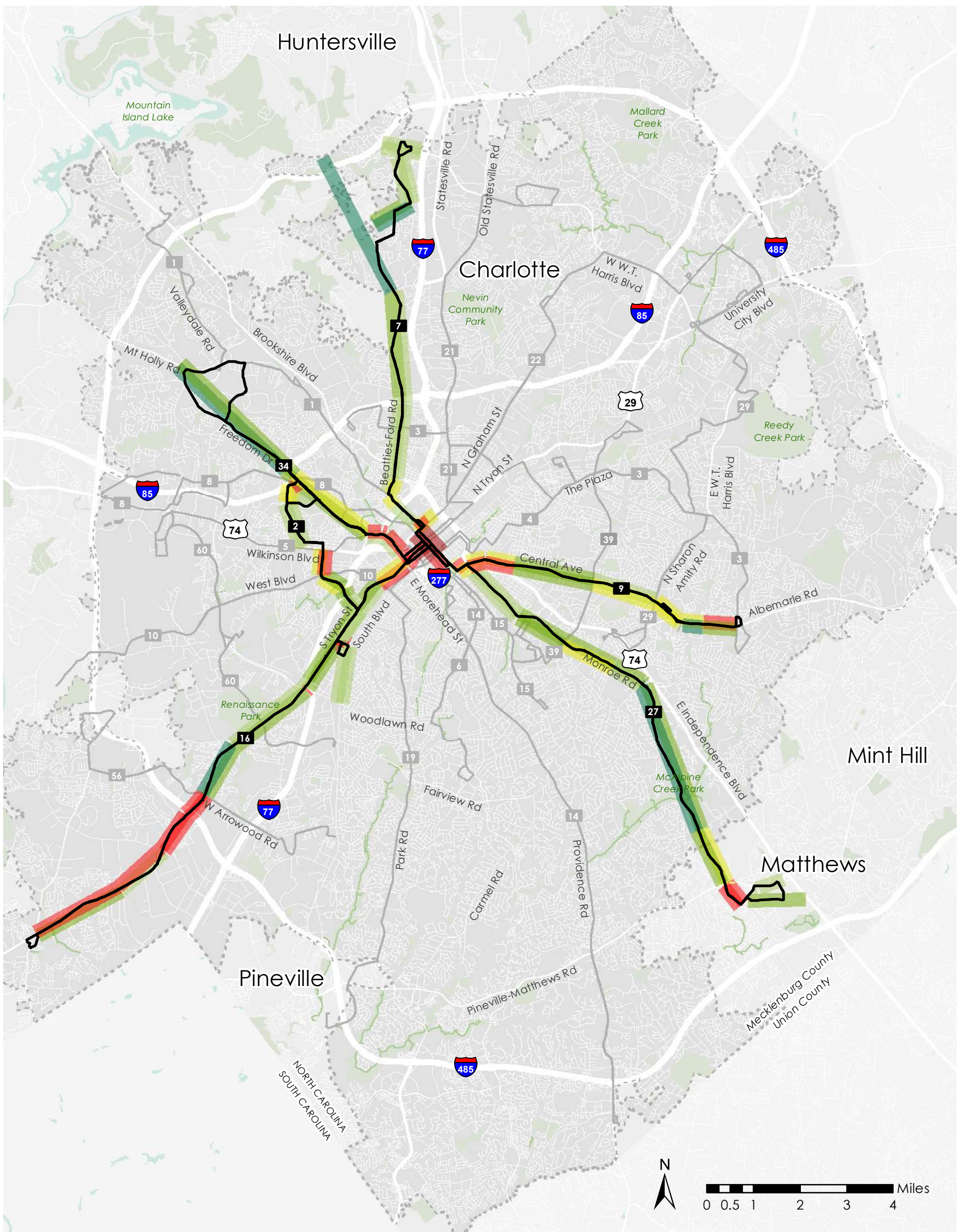
Note: Grey-highlighted cells will not be part of the future Route 2.

Route 2 PM Outbound

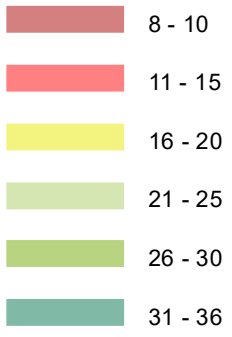
From Stop	To Stop	Trips in Sample	Average Running Speed
Scaleybark Station	Tryon St & Herman Ave	31	36.46
Tryon St & Herman Ave	Tryon St & Griffith St	9	14.52
Tryon St & Griffith St	Remount Rd & Tryon St	15	9.52
Remount Rd & Tryon St	Remount Rd & Brookhill Rd	43	21.14
Remount Rd & Brookhill Rd	Remount & Barringer	9	32.27
Remount & Barringer	Remount Rd & West Blvd	15	9.57
Remount Rd & West Blvd	Remount Rd & Parker Dr	18	16.56
Remount Rd & Parker Dr	Remount Rd & Wilkinson Blvd	15	13.71
Remount Rd & Wilkinson Blvd	Greenland Ave & Weyland Ave	46	10.6
Greenland Ave & Weyland Ave	Greenland Ave & Ashley Rd	70	15.28
Greenland Ave & Ashley Rd	Ashley Rd & Dublin Rd	23	13.53
Ashley Rd & Dublin Rd	Ashley Rd @ 2401	0	-
Ashley Rd @ 2401	Ashley Rd & Kempton Pl	1	18.75
Ashley Rd & Kempton Pl	Ashley Rd & Bullard St	7	15.91
Ashley Rd & Bullard St	Ashley & Allegany	4	15.37
Ashley & Allegany	Ashley Rd & Alleghany St	16	9.85
Ashley Rd & Alleghany St	Ashley Rd & Scott Futrell Dr	15	15.27
Ashley Rd & Scott Futrell Dr	Ashley Rd & Tuckaseegee Rd	2	13.76
Ashley Rd & Tuckaseegee Rd	Ashley Rd & Freedom Dr	13	12.71
Ashley Rd & Freedom Dr	Freedom Dr & Ashley Rd	67	5.08
Freedom Dr & Ashley Rd	Freedom Dr & Bradford Dr	59	19.68
Freedom Dr & Bradford Dr	Freedom Dr & Browns Ave	21	23.16
Freedom Dr & Browns Ave	Thriftwood Dr & Freedom Dr	0	-

Note: Grey-highlighted cells will not be part of the future Route 2.

APPENDIX B: VEHICLE PROBE SPEED RESULTS



**Vehicle Speed: Average
AM Inbound / PM
Outbound**



- Initial 6 Bus Routes
- Other High Frequency Routes

Source: RITIS. Note: Segments do not follow the roadway geography since they are based on the XY coordinates of the endpoints.

APPENDIX C: AGENCY COMMENT RESPONSES

Agency	Page #	Section #	Reviewer Comment	Contractor Response
CATS	44	Table 18	Change stop at Valerie Woodard Center (Ashley and Freedom) to Level 3 hub. This location is an important connection and has the potential to serve additional modes aside from fixed route service (on-demand, rideshare, etc.)	Changed stop at Ashley and Freedom to mobility center.
CATS	Throughout	Tables with Bus Amenity and Balancing Details	Could you add the stop description/name to this table as well? That way it's easier to follow	Added stop names to tables in report. Note, some names may be changed in the context of stop relocation.
CATS	5	Table 5	Apologies for the back and forth on this. It was decided during our last round of engagement to change Level 3 hubs back to "Mobility Center," while treating each of the tiers (1, 2 & 3) as subcategories of a "Mobility Hub." So a Mobility hub would be the broader term and Levels 1, 2, and 3 would be used to define the hub type that's appropriate at a given location	We have updated the FITP Bus Stop Guidelines Memo, and will do so in the Final Recommendations report and renderings as well.
CATS	7	Figure 7	Love this chart. Is there a way to also incorporate crosswalks as an evaluation metric? It doesn't always line up but I think this is an important measure, especially as we aim to support Vision 0 goals.	We did consider crosswalks during qualitative review, but not in a systematic way that merits including in the chart due to the large study area. Added note about considering crosswalks during implementation of every stop improvement/relocation.
CATS	11 and where applicable	N/A	At mobility intersections, will a deeper evaluation for stop relocation/consolidation be performed? Particularly to clean up stops at Central and Eastway and similar intersections. On that note, can we also look at spacing impacts on the intersecting routes?	Added verbiage that cross-route bus stop spacing should be evaluated as part of corridor implementation and Level 2/Level 3 bus stop implementation
CATS	24	Figure 7	I think Tryon and Ayrslley Town Blvd would be another candidate or Level 1 stop enhancements. There may be room to shift some stops around (i.e. shifting 44905 further south and adding an outbound far side enhanced stop at Tryon and Ayrslley/Whitehall Park Dr).	We moved this stop pair up to the Ayrslley Town Blvd intersection.
CATS	38	Figure 11	Relocate Old Mt. Holly & Fred Alexander Hub; to Freedom Dr and Toddville Rd.	Relocated mobility plaza to Freedom Drive and Toddville Road.
CATS	36	5.5	CATS has had internal discussions to realign/extend Route 34 to the Moores-Chapel/I-485 area. Because of this, a Level 3 hub at this location would make sense. CATS will send over a shapefile of this layer to the project team.	Updated corridor recommendations for Route 34 using shapefile received from CATS 1/24/22.
City of Charlotte - CDOT	6	BUS STOP AND PASSENGER FACILITY EVALUATION METHOD	It would be good to have more descriptions of Level 1-3 bus stops . Maybe this will be added in APPENDIX C? - Alex	Descriptions have been included in Bus Stop Guidelines Memo; we can make reference to this in Final Recommendations (and in Final Report)
City of Charlotte - CDOT	Document	Document	Overall reads very well. I appreciate the detailed tables and the recommendations breakdown. - Alex	Thank you.

APPENDIX D: FEEDBACK FROM BUS OPERATORS (FOCUS GROUP DISCUSSION AND ONLINE SURVEY)

Table 1. General Notes and Considerations from Bus Operators

TOPIC	NOTES
Visibility	<p>Suggestions for increased signage to be able to see more passengers; there is a need for reflectors, solar lights, etc. on buses (hard to see passengers at night especially when driving a new route)</p> <p>Some bus stops have parked vehicles at designated bus stops; also need more light at these bus stops at night</p>
Boarding delay	The most delay observed to be experienced by operators was during boarding (e.g., with fare collection) as buses can't move until all passengers are seated
Passengers in wheelchairs	<p>Wheelchairs have also been observed to contribute to hold-ups during boarding process, as some passengers in wheelchairs don't use the tie-downs to strap in;</p> <p><i>Response during discussion that this could be a potential educational campaign</i></p>
Passenger experience	<p>Part of hold up experienced by operators is dealing with passenger behavior that can create delays - some noted there is driver accountability, but not passenger accountability; <i>Response during discussion that this is a separate topic (operational component); BPS is focusing on service component</i></p> <p>Passengers desire increased frequency and also want to add more bus stops. Passengers also complain about not getting courtesy stops.</p>

Table 2. Recommendations from Bus Operators for High Priority Corridors

ROUTE	BUS STOP CONSIDERATIONS	TSP CONSIDERATIONS	OTHER CONSIDERATIONS
2 – Ashley/ Scaleybark Crosstown	Consider removing the outbound stop(s) at Freedom Dr and Ashley Rd, and at Bradford Dr - very dangerous as cars don't let buses over and buses are in the way of turns.		<p>Operators have experienced challenges meeting schedules</p> <p>Turns can be too tight and difficult to make at Remount Rd and Greenland Ave, and turning off of Rowan St and Bradford Dr.</p>
7 – Beatties Ford	<p>Between Sunset Rd and Reames Rd, the stops are a nightmare for wheelchairs and even able-bodied people.</p> <p>Consider removing the shelters at Lasalle St and Beatties Ford Rd, as partiers tend to loiter there.</p>	<p>Areas of identified slow bus speed are as expected. Traffic is heavy at the LaSalle St and Rosa Parks Pl stops. The light outbound at Rosa Parks Pl turning left back onto Beatties Ford Rd is long, causing at least 2 minutes of delay - address that.</p>	<p>Tight turns in neighborhoods near Lakeview Rd and Trinity Rd; lighting is lacking</p> <p>Turns can be too tight and difficult to make on Reames Rd</p>
9 – Central Ave	<p>Intersection difficulties experience at stop at Regal Oaks Dr - need to cross over 3 lanes to be able to make left turn at E W.T. Harris Blvd</p> <p>Suggestion to have last outbound stop near Regal Oaks Dr to remove the need to cross 3 lanes to make left turn at E W.T. Harris Blvd</p> <p>Suggestion to remove the last outbound stop before the Albemarle Rd & Lawyers Rd Park and Ride - many passengers are trying to catch Route 3 (which is also served by the stop), which holds up Route 9</p> <ul style="list-style-type: none"> Consider having bus stop for Route 9 only at Park and Ride or at corner 	<p>Outbound turn from Eastland Mall to Central Ave - difficult to come out at light</p> <p>Areas of identified slow bus speed are as expected. Albemarle Rd is extremely backed up during rush hours (no surprises there). The last stop on Albemarle makes it very difficult to drop off and get over. That stop needs to be moved back.</p> <p>During rush hours, it's difficult to stay on schedule. The length of lights at the Rosa Parks and Eastland transit centers are too long.</p>	

ROUTE	BUS STOP CONSIDERATIONS	TSP CONSIDERATIONS	OTHER CONSIDERATIONS
	<ul style="list-style-type: none"> Consider moving Route 9 stop to other side of intersection so Routes 3 and 9 are served by different stops <p>There are safety issues where the bus stop is directly situated at the corner of an intersection and passengers are waiting at the bus stop sign, causing the rear of the bus to hang out into the intersection - Route 9 has a few of those stops.</p> <p>The last outbound stop on Albemarle is very difficult for getting over to make the turn.</p>		
16 – South Tryon	<p>At the inbound and outbound stops at Remount Rd, there are issues for waiting passengers (and especially passengers in wheelchairs) since there is not a lot of curb and many driveways.</p> <p>The section from E Carson Blvd to West Blvd is a nightmare because of construction and South End; many stops in South End are in unfavorable locations (behind poles and unlit).</p> <p>Passengers have expressed a desire for more stops between Remount Rd and Griffith St going outbound.</p> <p>Need increased lighting at the two inbound stops on Tryon at Target</p> <p>Consider removing the shelters at S Tryon St and Clanton Rd, as partiers tend to loiter there.</p>	<p>Very heavy traffic in the morning coming inbound; traffic light improvements (TSP, etc.) would be helpful</p> <p>S Tryon St from W Arrowwood Rd to Steele Creek Rd becomes very congested during certain times of the day. Also, S Tryon St at W Woodlawn Rd inbound is a nightmare any time of day with the I-77/Billy Graham interchange. The stop before Woodlawn needs to be moved back and the buses need to be allowed to move over to the left lane to avoid interacting with interchange traffic.</p> <p>Traffic congestion is an issue during the evening rush hour outbound towards Steel Creek Rd; the turn signal at Steel Creek doesn't allow enough time for all vehicles to go through. Inbound at W Woodlawn Rd, there are backups due to the interchange.</p> <p>During rush hours, it's difficult to stay on schedule – have experienced being at least 45 minutes late due to traffic from the Yorkmont area. It seems that runs are timed to force operators to run 3-5 miles over the speed limit to be on time. Route 16 beyond Arrowwood is a nightmare and, during high traffic times, there is no layover time given. The same is true on other routes.</p> <p>Allow the Route 16 buses into the left lane at W Woodlawn Rd inbound to Pressley Rd.</p>	<p>The roads in the section to and from Uptown are especially narrow and hard to navigate.</p> <p>Turns can be too tight and difficult to make in South End</p>
34 – Freedom Dr			<p>Outbound at Freedom Dr and Ashley Rd, the turning lane is too narrow. Operators have experienced hitting the sign in the middle of the highway with their mirror. Inbound, the turn from Freedom onto Berryhill Rd is also very narrow and difficult to maneuver.</p>

Table 3. Recommendations from Bus Operators for Other Routes

ROUTE	BUS STOP CONSIDERATIONS	TSP CONSIDERATIONS	OTHER CONSIDERATIONS
1 – Mt. Holly Rd			Certain areas very dark - have to use high beams
3 – The Plaza	Very few passengers at end of line (outbound) near Albemarle Rd and Old Lawyers Rd Stop near Norris Ave and Statesville Ave - large tree blocking stop, limiting passenger visibility		Tight turn at 36th St and The Plaza Tight turn at end of line from outbound coming inbound Besides the Albemarle & Lawyers Park and Ride, there is no place to use restroom except at the Mecklenburg County Health Department near the Rosa Parks Place CTC; <i>Response during discussion is that there is a potential for Route 3 to connect to the Rosa Parks CTC, leaving neighborhood service to on-demand services</i>
8 – Tuckaseegee Rd	When crossing Billy Graham Pkwy to make a left to come inbound, there are issues at the bus stop that contribute to driver safety and road hazards		
11 – North Tryon		Delays experienced at last outbound stop before turning off N Tryon St due to traffic light at Blue Line taking a long time to turn green (since Blue Line has priority)	
17 – Commonwealth Ave		Large delays experienced when driving this route; <i>Response during discussion that CATS is potentially considering all-day crosstown service on Independence Blvd as, currently, some of Route 17 duplicates Route 9</i>	Operators have experienced challenges meeting schedules
26 – Oaklawn Ave			Tight left turns in locations where cars parked on both sides of the street
39 – Westway			Tight turns going through Grier Heights neighborhood
51 – Pineville-Matthews Rd		A lot of traffic experienced when driving this route, as it's the main crosstown for South Charlotte	
57 – Archdale/South Park			Operators have experienced challenges meeting schedules Not efficient for route to go into LYNX Archdale Station twice
Routes in NoDa			Turns back onto The Plaza are tight