

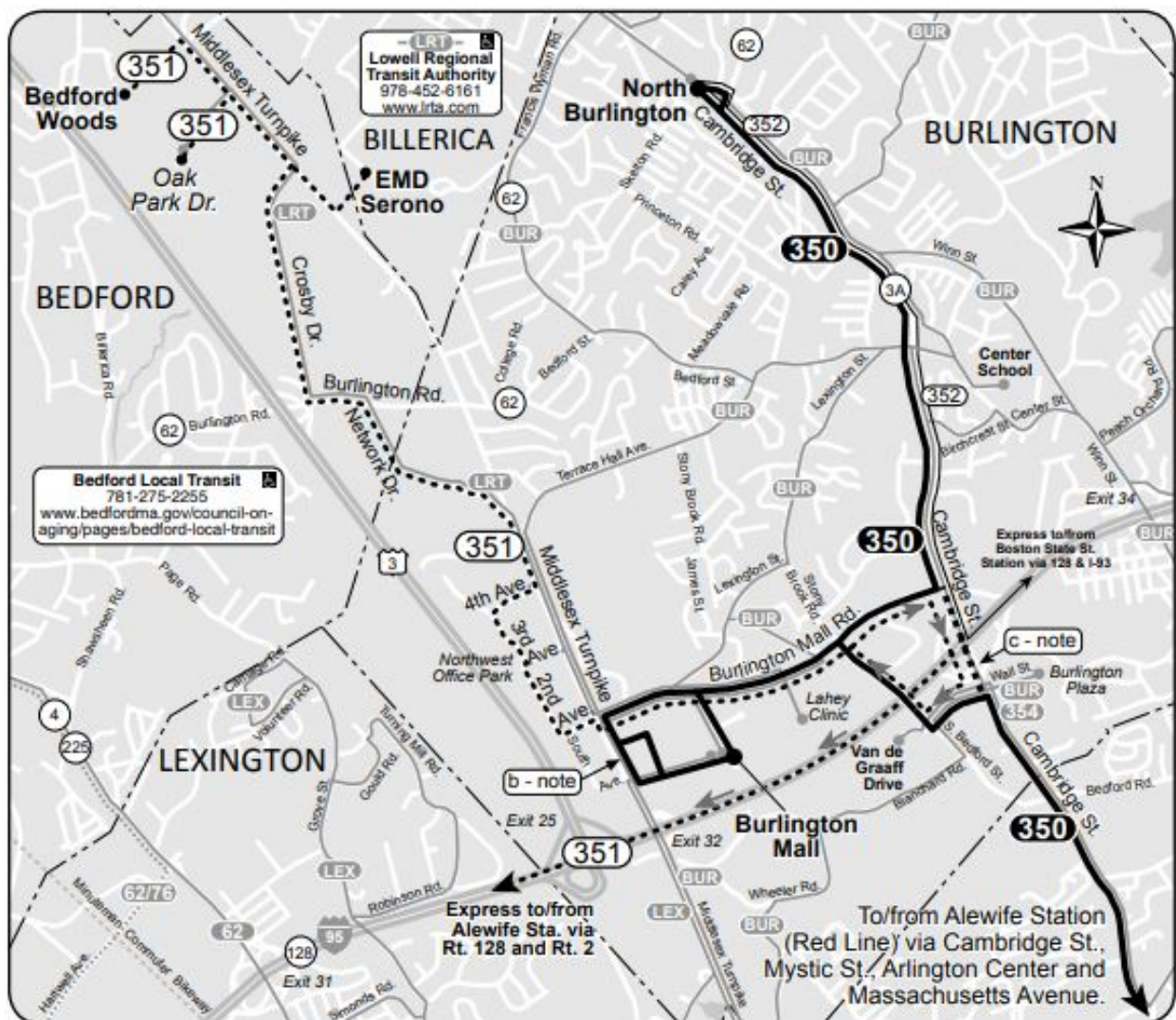
Route 351

Bedford Woods – Alewife Station

Route Overview

Route 351 Bedford Woods – Alewife Station is a Commuter route that provides reverse commute service to Bedford and Burlington through Lexington and Arlington (see Figure 1). This route operates primarily along Route 128 and Route 2.

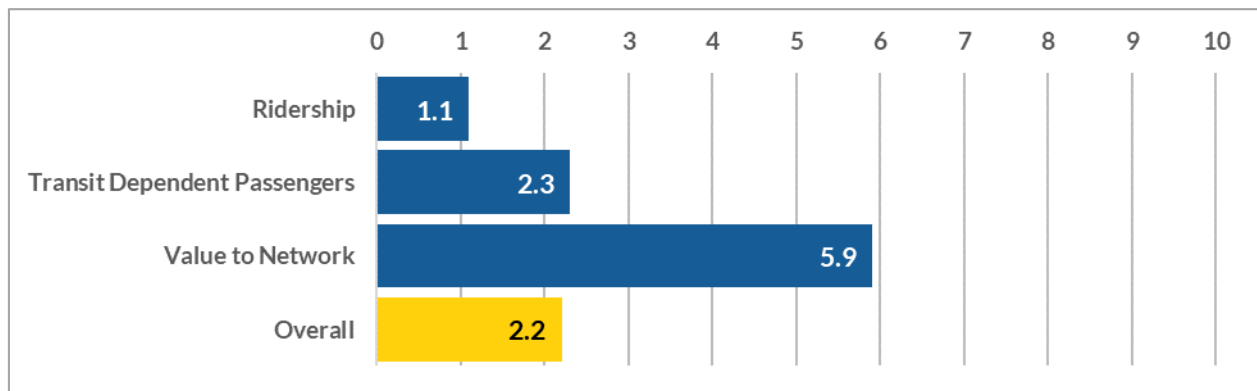
Figure 1 | Route 351 Service Map



Network Importance

Route 351 is of low importance to the MBTA network (see Figure 2). On a relative scale of 0 to 10, Route 351 rates 1.1 in terms of ridership, 2.3 in terms of transit dependent ridership, and 5.9 in terms of its value to the network (which reflects the number of people who are uniquely served, the number of jobs and other important destinations, and the number of transferring passengers). Its overall score, which gives a 70% weighting to overall ridership and a 15% weight to both other measures, is 2.2.

Figure 2 | Relative Importance within MBTA Bus Network (on a scale of 0 to 10)



Service Overview

Schedule

Route 351 operates Monday through Friday, providing four trips between 6:15 AM and 9:30 AM and four trips between 3:20 PM and 6:20 PM. (See Table 1)

Route 351 does not operate on weekends.

Route 351 meets both the Span of Service and Frequency Standards for Commuter routes.

Table 1 | Schedule Statistics

SERVICE DAY	SPAN OF SERVICE	FREQUENCY (RANGE)	FREQUENCY (AVERAGE)	DAILY TRIPS (INBOUND/OUTBOUND)
Monday-Friday	6:15 AM to 9:30 AM 3:20 PM to 6:20 PM			4/4
Sunrise	-	-	-	-
Early AM	6:15 AM to 6:59 AM	1 trip	-	0/1
AM Peak	7:00 AM to 9:30 AM	50	50	0/3
Midday Base	-	-	-	-
Midday School	3:20 PM to 3:59 PM	1 trip	-	1/0
PM Peak	4:00 PM to 6:20 PM	60	60	3/0
Evening	-	-	-	-
Late Evening	-	-	-	-
Night	-	-	-	-
Saturday	-	-	-	-
Sunday	-	-	-	-

Note: Span of service reflects the time the first bus begins service until the time the last bus finishes service.

Service Patterns

Route 351 features a single service pattern that operates on weekdays between Alewife Station and Bedford/Billerica (see Table 2).

Table 2 | Service Patterns

PATTERN	ORIGIN	DESTINATION	UNIQUE FEATURE	TRIPS PER WKD	TRIPS PER SAT	TRIPS PER SUN
INBOUND				4	-	-
351.3	Bedford Wood Drive at Building 174	Alewife Station	-	4	-	-
OUTBOUND				4	-	-
351.3	Alewife Station	Dawes Drive	-	4	-	-

Ridership

Route 351 carries about 160 riders on weekdays. This route does not operate on weekends.

Ridership by Stop

Ridership by stop patterns in the inbound direction, as riders return to Alewife in the PM are as follows:

- At the start of the inbound route, Bedford Wood Drive at Building 174 generates five boardings.

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- The next nine stops along Middlesex Turnpike, Oak Park Drive, and Crosby Drive account for a total of 28 boardings.
 - Network Drive generates 14 boardings, the second most heavily utilized stop in the inbound direction,
 - The five stops before Mall Road account for a total of 15 boardings.
 - Burlington Mall Road at NE Executive Park, the third most heavily utilized stop in the inbound direction, generates nine boardings.
 - The final five stops, prior to Alewife Station feature a combined six boardings.
 - All passengers alight at Alewife Station, generate 80 alighting on average.

Outbound ridership by stop patterns and volumes are roughly the reverse of inbound ridership.

Note that service is only provide in the outbound direction in the AM and in the inbound direction in the PM.

Ridership by Trip

In the inbound direction, Route 351 ridership by trip is as follows:

- The first trip, at 3:35 PM, carries 20 passengers.
- The second trip, at 4:35 PM carries 28 passengers.
- The third trip, at 5:20 PM carries 24 passengers.
- The fourth trip, at 6:20 PM carries 10 passengers.

In the outbound direction, Route 351 ridership by trip is as follows:

- The first trip, at 6:15 AM, carries 12 passengers.
- The second trip, at 7:05 AM carries 22 passengers.
- The third trip, at 7:55 AM carries 28 passengers.
- The fourth trip, at 8:45 AM PM carries 26 passengers.

Neither direction of travel features trips on which seating capacity is exceeded.

Figure 3 | Weekday Inbound Ridership by Stop Map

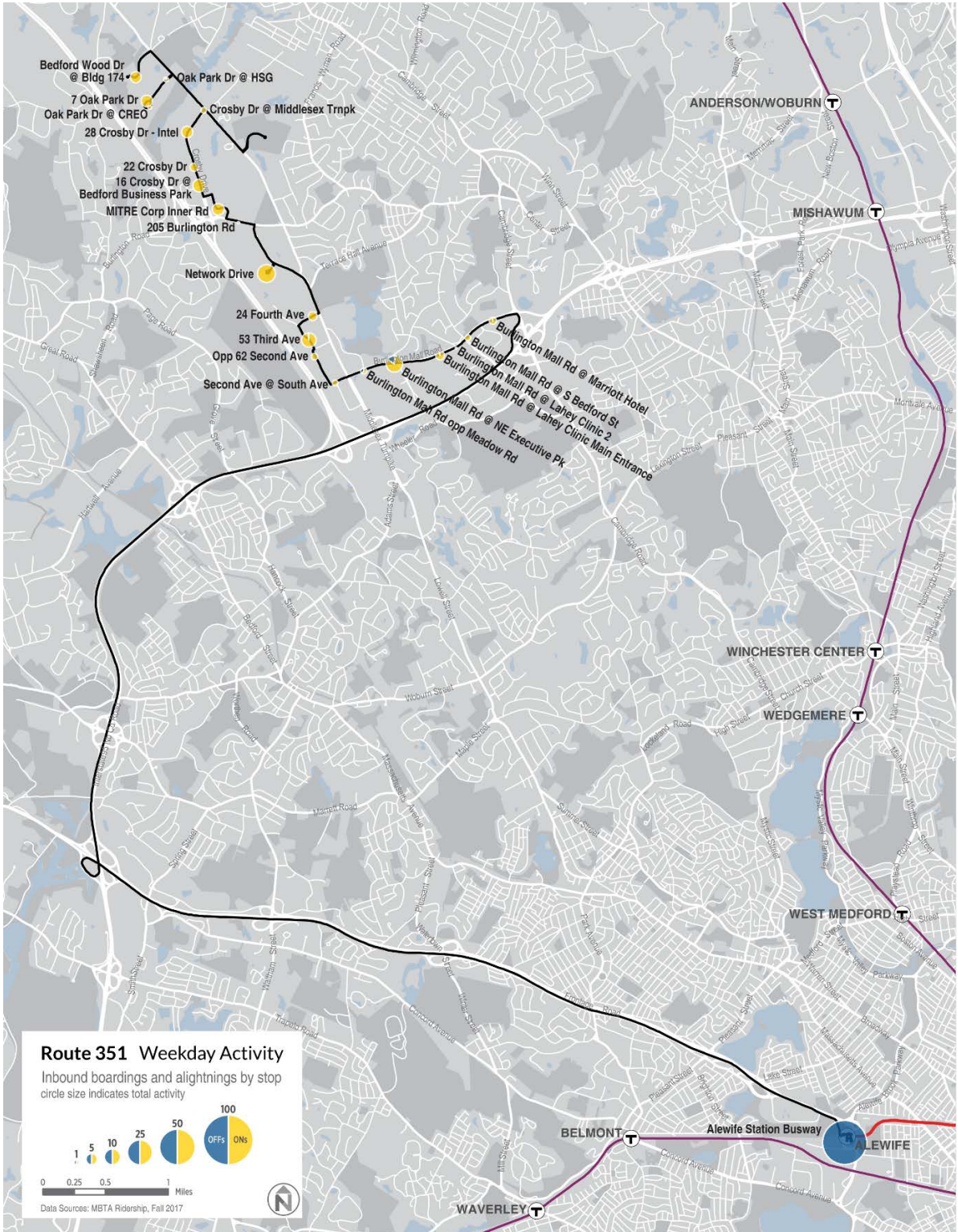


Figure 4 | Weekday Ridership by Trip: Route 351 | Inbound

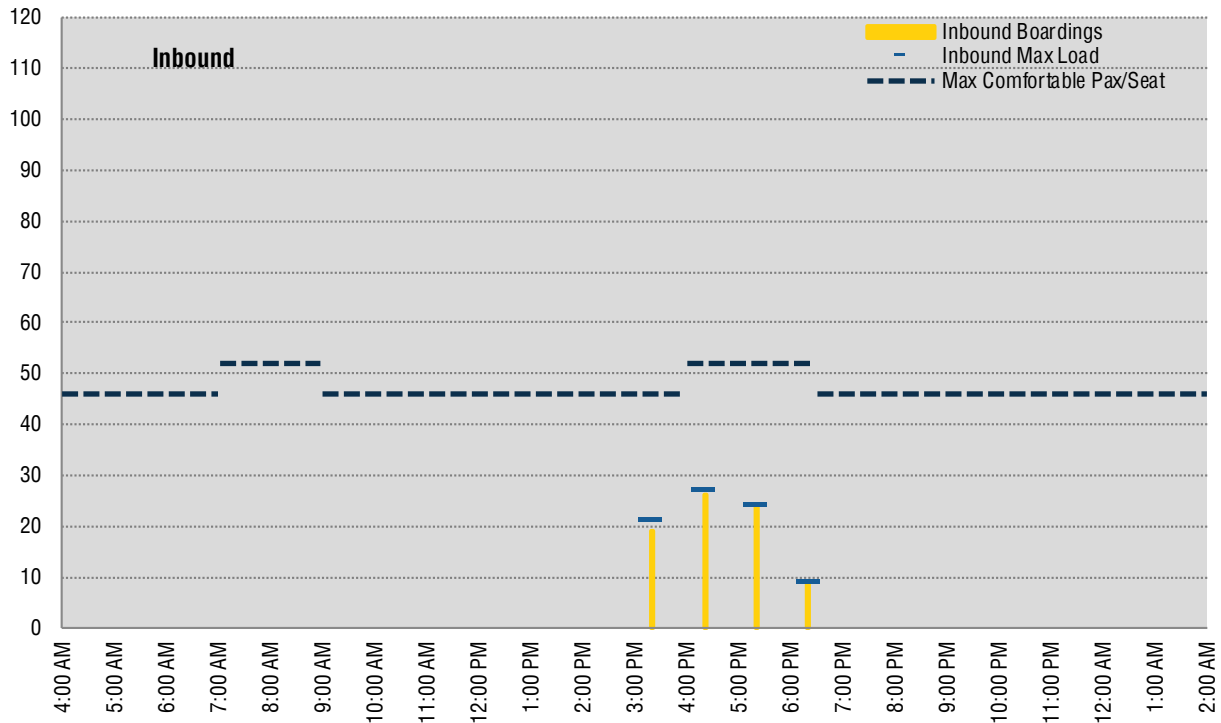
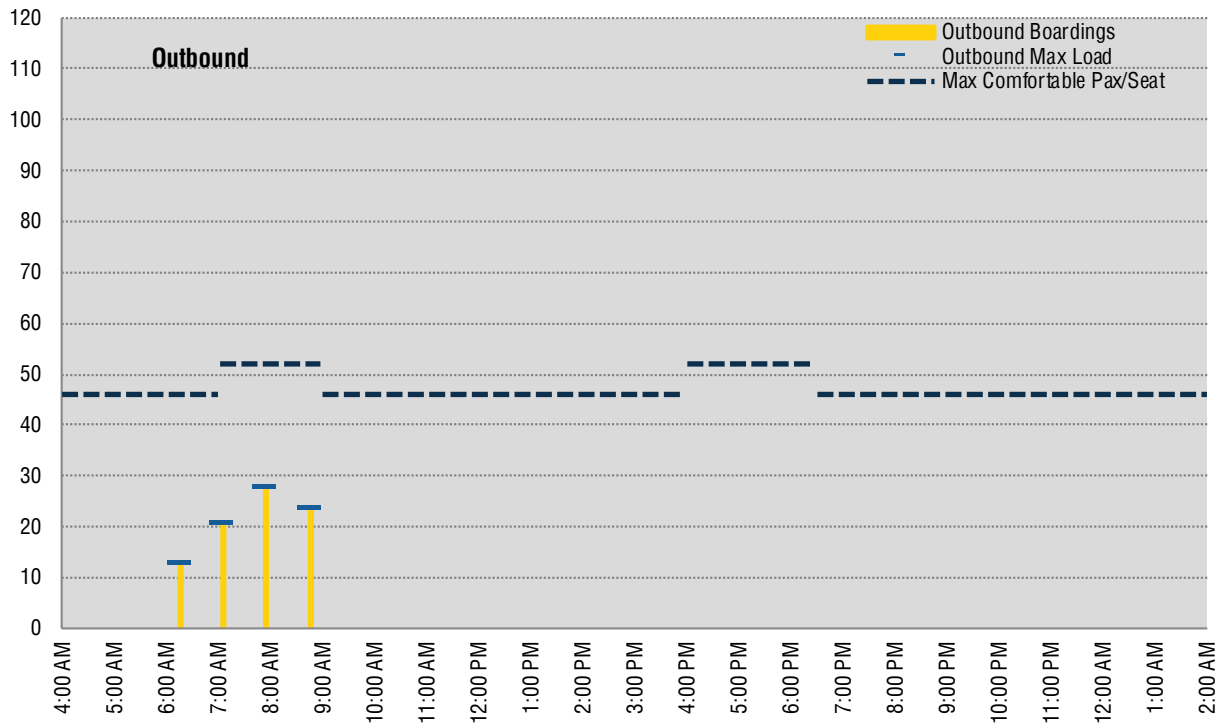


Figure 5 | Weekday Ridership by Trip: Route 351 | Outbound



Passenger Comfort

The MBTA desires that passengers travel in relatively comfortable conditions. At the same time, the MBTA’s definition of comfort reflects the very high volume environment in which the MBTA operates, and that some passengers may have to stand for a portion of their trip. More specifically, at least 92% of passengers’ travel times should be in comfortable conditions, and ideally, at least 96% of travel times should be in comfortable conditions. Comfortable conditions are considered to be 140% or less of seated capacity during high volume periods and 125% or less during other periods.

On Route 351, 100% of passenger minutes are in comfortable conditions, which is above both the MBTA minimum standard and target (see Table 3).

Table 3 | Passenger Time Spent Traveling in Comfortable Conditions

	WEEKDAYS	SATURDAYS	SUNDAYS
Minimum Standard	92%	92%	92%
Target	96%	96%	96%
Actual	100%	-	-

Reliability and Speed

Reliability

On weekdays, Route 351’s overall reliability is 70%, which meets the minimum standard of 70%, but fails to meet the MBTA’s target of 75%. Though Route 351 suffers from fairly poor reliability, dropped trips are not an issue on this route as 100% of trips complete their scheduled run.

Table 4 | Reliability

SERVICE DAY	ORIGIN/MID-ROUTE ON-TIME PERFORMANCE	DESTINATION ON-TIME PERFORMANCE	OVERALL RELIABILITY	DROPPED TRIPS
Monday-Friday	70%	76%	70%	0.0%
Saturday	-	-	-	-
Sunday	-	-	-	-

Running Time

On Route 351, all outbound trips, which take place between 6:30 AM and 9:00 AM, complete their run in less time than scheduled by up to 4 minutes (Figure 7). Conversely, all inbound trips, which take place between 3:00 PM and 6:30 PM, complete their run in excess of their scheduled travel time by up to as many as 10 minutes (Figure 6).

Figure 6 | Scheduled & Median Travel Time by Trip: Route 351 Inbound

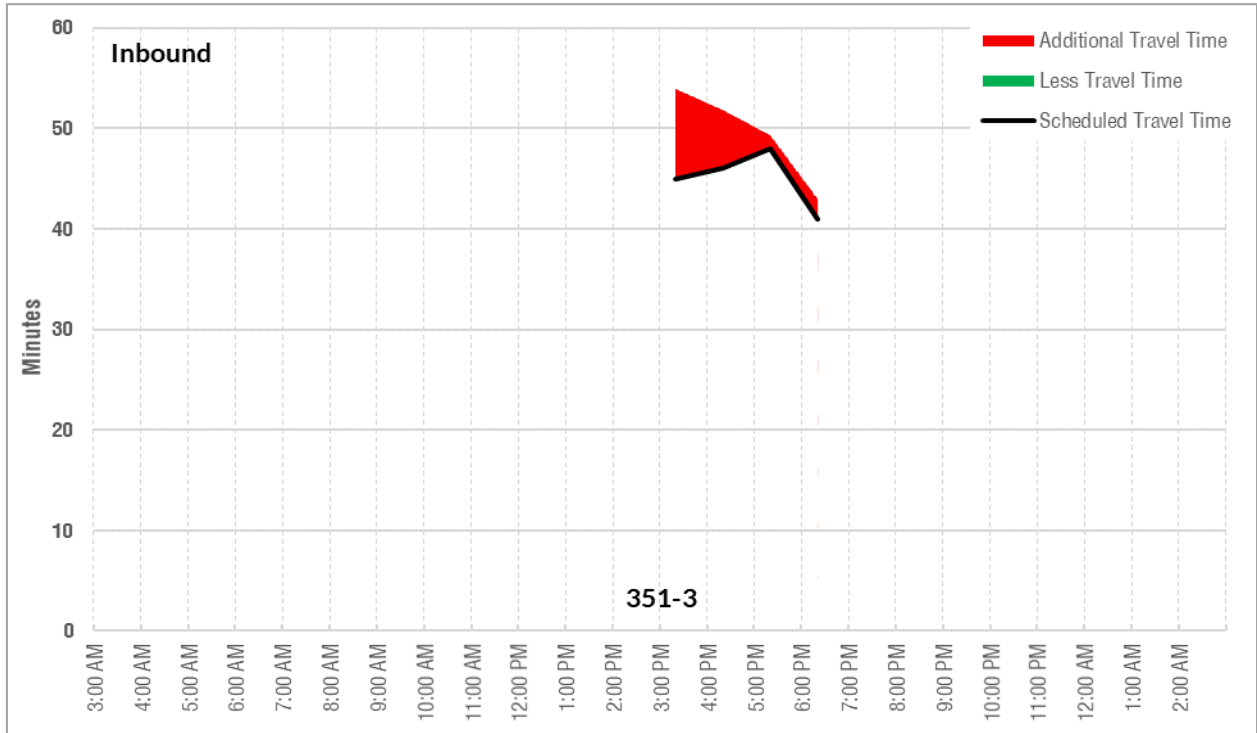
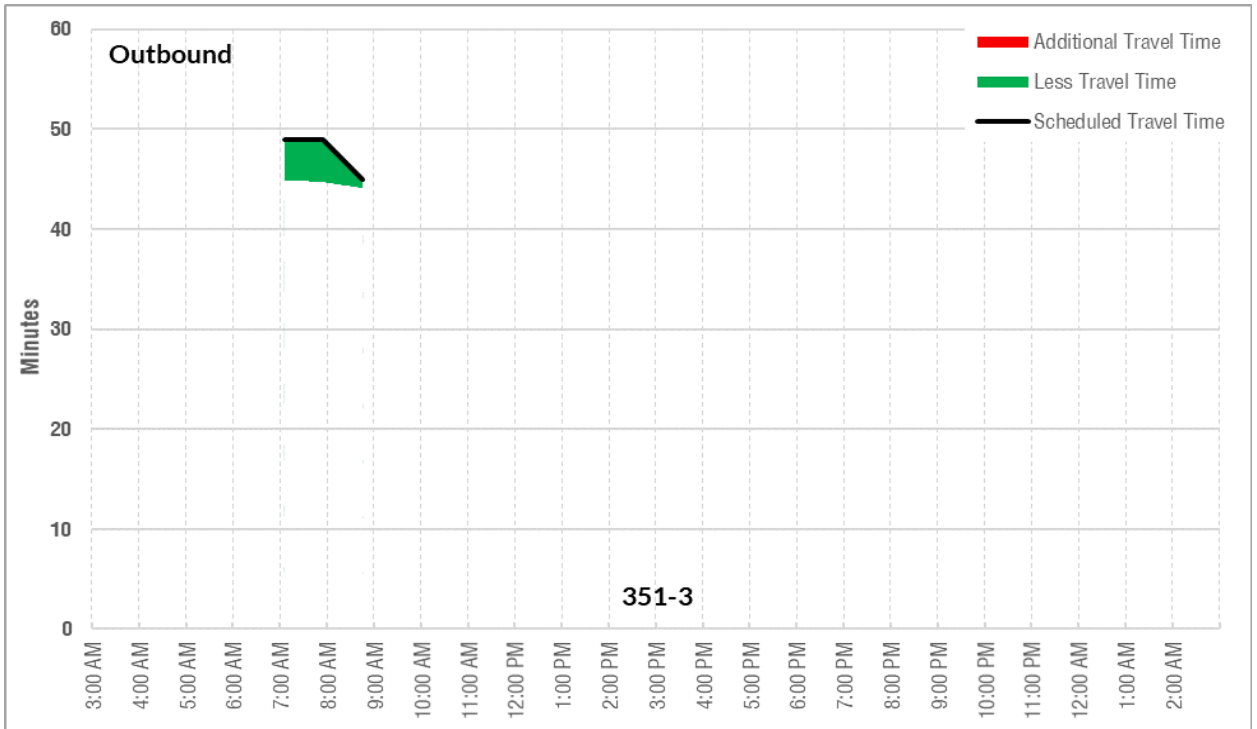


Figure 7 | Scheduled & Median Travel Time by Trip: Route 351 Outbound



Stop Spacing

Along Burlington Mall Road, stops range in distance apart from 600 to 2000 feet, most often about 1200 feet. This translates to 4.4 stops per mile, which falls within the recommended four to five stops per mile for suburban areas. North of Burlington Mall Road, all other local stops on Route 351 range widely in spacing from 450 to 32000 feet. Most often, these stops are about 1500 feet apart – 3.5 stops per mile. These stops are weaved into and out of cul-de-sacs and office parks and, for such a function, are generally appropriately spaced.

Summary

Route 351 is a weekday-only, reverse commute route that features a single service pattern in either direction and runs eight total daily trips – four outbound in the morning and four inbound in the evening. While ridership is overall quite low, Route 351 serves a growing employment area of office parks and other jobs.