

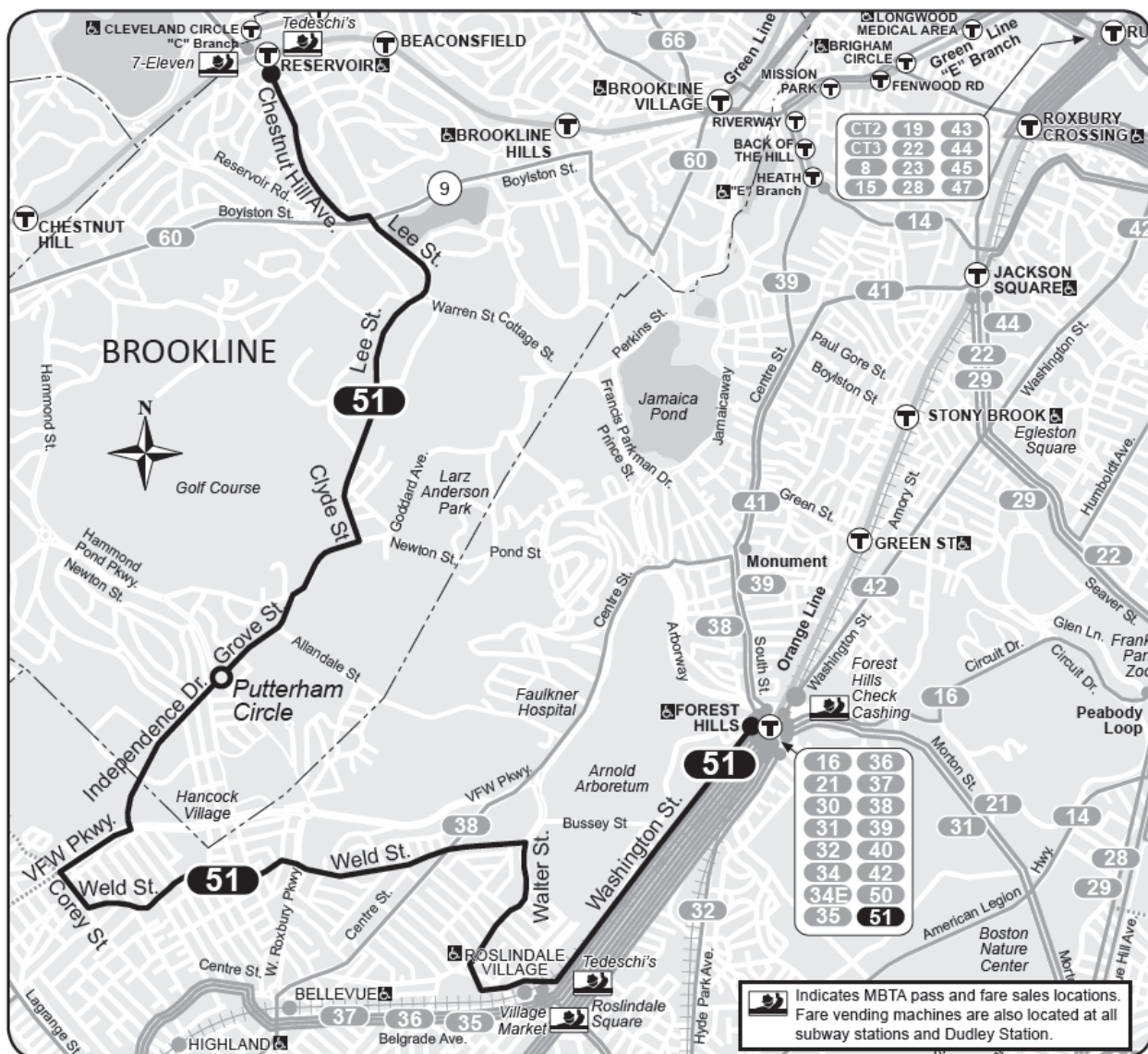
Route 51

Reservoir – Forest Hills Station

Route Overview

Route 51 Reservoir – Forest Hills Station is a Local route that operates between Reservoir Station on the Green Line D Branch and Forest Hills Station on the Orange Line via South Brookline and Roslindale Village (see Figure 1). It operates Monday through Saturday.

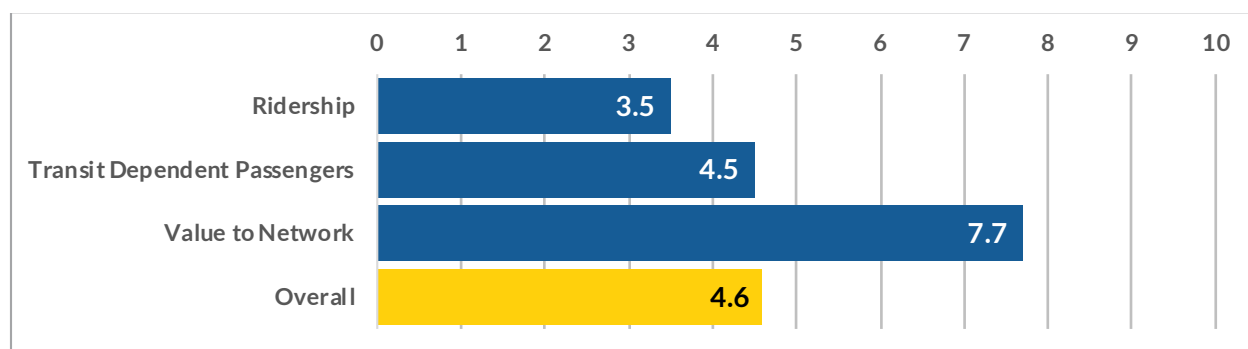
Figure 1 | Service Map



Network Importance

Route 51 is a moderately important route within the MBTA bus network (see Figure 2). On a relative scale of 0 to 10, the route rates 3.5 in terms of ridership, 4.5 in terms of transit dependent ridership, and 7.7 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% weight to overall ridership and a 15% weight to both other measures, is 4.6.

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



Service Patterns

Schedule

Route 51 operates infrequent weekday peak service, and very infrequent service during weekday off-peak and on Saturdays (see Table 1). The route does not operate on Sundays.

On weekdays, Route 51 operates from 5:55 AM to 10:30 PM at the following frequencies:

- Every 25 minutes from the start of service until about 7:30 AM inbound and 6:30 AM outbound.
- Every 12-18 minutes from 7:30 AM to 8:00 AM inbound and 6:30 AM to 7:00 AM outbound. There are also two departures at 6:45 AM, one of which is a school trip.
- Every 30 minutes from 8:00 AM inbound and 7:00 AM outbound to 10:00 AM.
- Every hour from 10:00 AM to about 2:00 PM.
- Every 30 minutes from 2:00 PM to 3:00 PM inbound and 3:30 PM outbound, and then every 33-45 minutes in both directions until 6:00 PM.
- Every 21-33 minutes from 6:00 PM to about 7:30 PM.
- Every 45 to 60 minutes from 7:30 PM until the end of service.

On Saturdays, Route 51 runs from 6:15 AM to 10:09 PM, with trips every hour from the start of service until about 9:00 AM and then every 65 minutes through the end of service.

Route 51 meets the MBTA guidelines for span of service on weekdays and Saturdays, but fails the frequency guidelines for Saturdays due to trips mostly departing every 65 minutes rather than every 60 minutes

Table 1 | Schedule Statistics

SERVICE DAY	SPAN OF SERVICE	FREQUENCY (RANGE)	FREQUENCY (AVERAGE)	DAILY TRIPS (INBOUND/OUTBOUND)
Monday-Friday	5:55: AM to 10:30 PM			28/27
Sunrise	5:55 AM to 5:59 AM	1 trip	1 trip	-/1
Early AM	6:00 AM to 6:59 AM	10 - 30	25	1/4
AM Peak	7:00 AM to 8:59 AM	12 - 30	24	6/4
Midday Base	9:00 AM to 1:29 PM	27 - 60	53	5/5
Midday School	1:30 PM to 3:59 PM	9 - 60	22	6/5
PM Peak	4:00 PM to 6:29 PM	24 - 45	38	4/4
Evening	6:30 PM to 9:59 PM	21 - 60	43	5/4
Late Evening	10:00 PM to 10:30 PM	1 trip	1 trip	1/-
Night	-	-	-	-
Saturday	6:15 AM to 10:09 PM	60 - 65	64	15/15
Sunday	-	-	-	-

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

Service Patterns

The majority of Route 51 trips serve the route’s full alignment between Reservoir Station and Forest Hills Station (Pattern 51.0) in both directions (see Table 2). In addition:

- On weekdays, one inbound trip starts at Brookline High School before traveling directly to Lee Street, where it continues along the primary route (Pattern 51.1).
- On weekdays only, one inbound trip and two outbound trips extend north from Reservoir Station to serve Brighton High School, Saint Joseph Preparatory High School, and Jackson/Mann K-8 School in Allston (Pattern 51.9).

Table 2 | Service Patterns

PATTERN	ORIGIN	DESTINATION	UNIQUE FEATURE	TRIPS PER WKD	TRIPS PER SAT	TRIPS PER SUN
INBOUND				28	15	-
51.0	Reservoir Station	Forest Hills Station	Primary service pattern	26	15	-
51.1	Tappan Street at Greenough Street	Forest Hills Station	Starts at Brookline High School	1	-	-
51.9	Brighton Avenue opposite Quint Avenue	Forest Hills Station	Serves St. Joseph Prep High School	1	-	-
OUTBOUND				27	15	-
51.0	Forest Hills Station	Reservoir Station	Primary service pattern	25	15	-
51.9	Forest Hills Station	Brighton Avenue at Cambridge Street	Serves St. Joseph Prep High School	2	-	-

Ridership

Route 51 has moderate ridership. The route serves about 1,590 riders per weekday and about 490 riders on Saturdays. Route 51 does not have Sunday service.

Ridership by Stop

Route 51 has relatively low ridership at most stops, apart from several stops on Independence Drive and on Washington Street from Roslindale Village to Forest Hills Station. On weekday inbound trips (see Figure 3):

- 383 passengers board at Reservoir Station.
- 30 passengers board and 57 passengers alight at the 12 stops between Reservoir Station and Grove Street at South Street.
- 65 passengers board and 175 passengers alight at Grove Street at South Street and the four stops on Independence Drive.
- 122 passengers board and 84 passengers alight at the 22 stops between Independence Drive and Roslindale Village, which are primarily on Weld Street and Walter Street.
- 108 passengers board and 75 alight at the three stops in Roslindale Village.
- 87 passengers board and 38 passengers alight at the six stops on Washington Street between Cummins Highway and Forest Hills Station.
- 409 passengers alight at Forest Hills Station.

Figure 3 | Weekday Inbound Ridership by Stop Map



Ridership patterns are similar on weekday outbound trips. Patterns are also similar on Saturdays, although with a slightly greater proportion of boardings on Washington Street and fewer on Independence Drive.

Ridership by Trip

On weekdays, trips generally follow a typical commuting pattern, with ridership highest in the peak periods and moderate in the off-peak periods. Very few trips in either direction have fewer than 20 passengers, and no trips have fewer than 10 passengers (see Figure 4 and Figure 5).

On inbound trips:

- The first trip of the day at 6:35 AM serves 34 passengers.
- The first two AM peak trips each serve about 50 passengers.
- Trips between 7:30 AM and 2:45 PM serve 20-30 passengers.
- Most trips between 2:45 PM and 7:15 PM serve 25-45 passengers.
- The school trip serving Brookline High School (3:05 PM) has 60 passengers.
- Trips after 7:15 PM serve 10-20 passengers.

On Saturdays, ridership is consistent but low for the entire service day, with nearly all trips in either direction serving 10-20 passengers (see Figure 6 and Figure 7).

Figure 4 | Weekday Ridership by Trip: Inbound

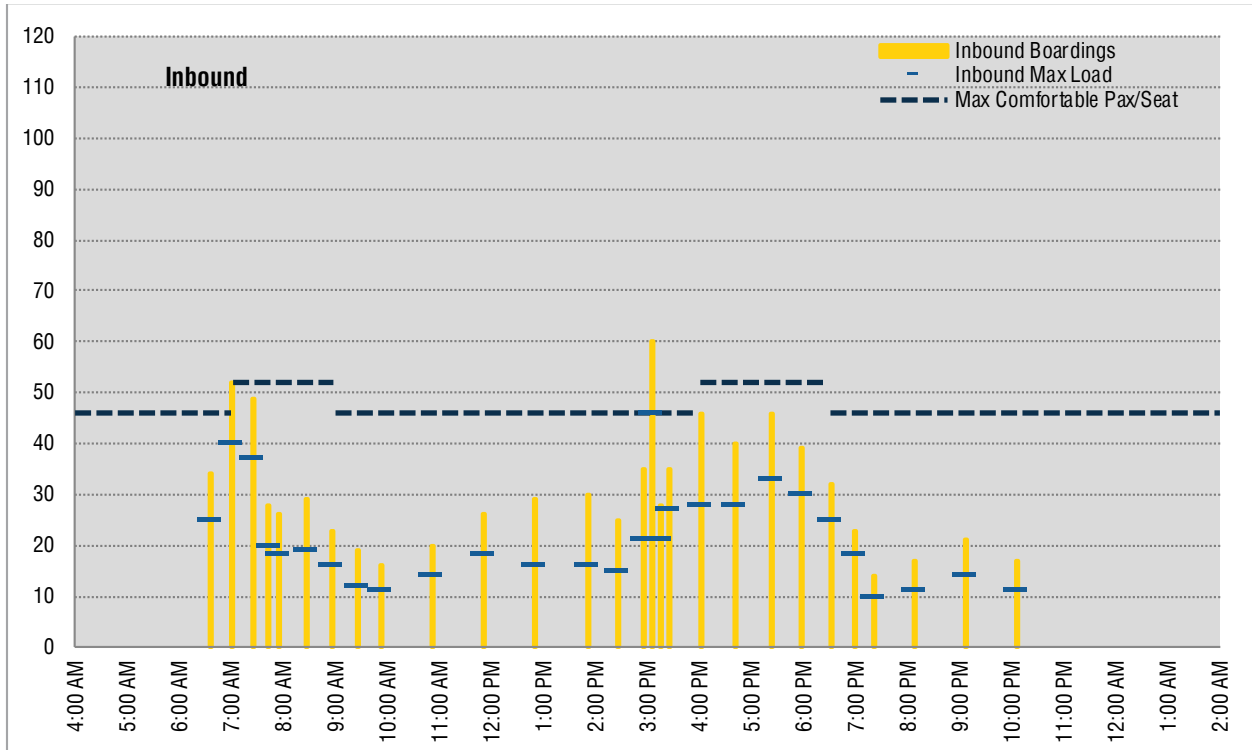


Figure 5 | Weekday Ridership by Trip: Outbound

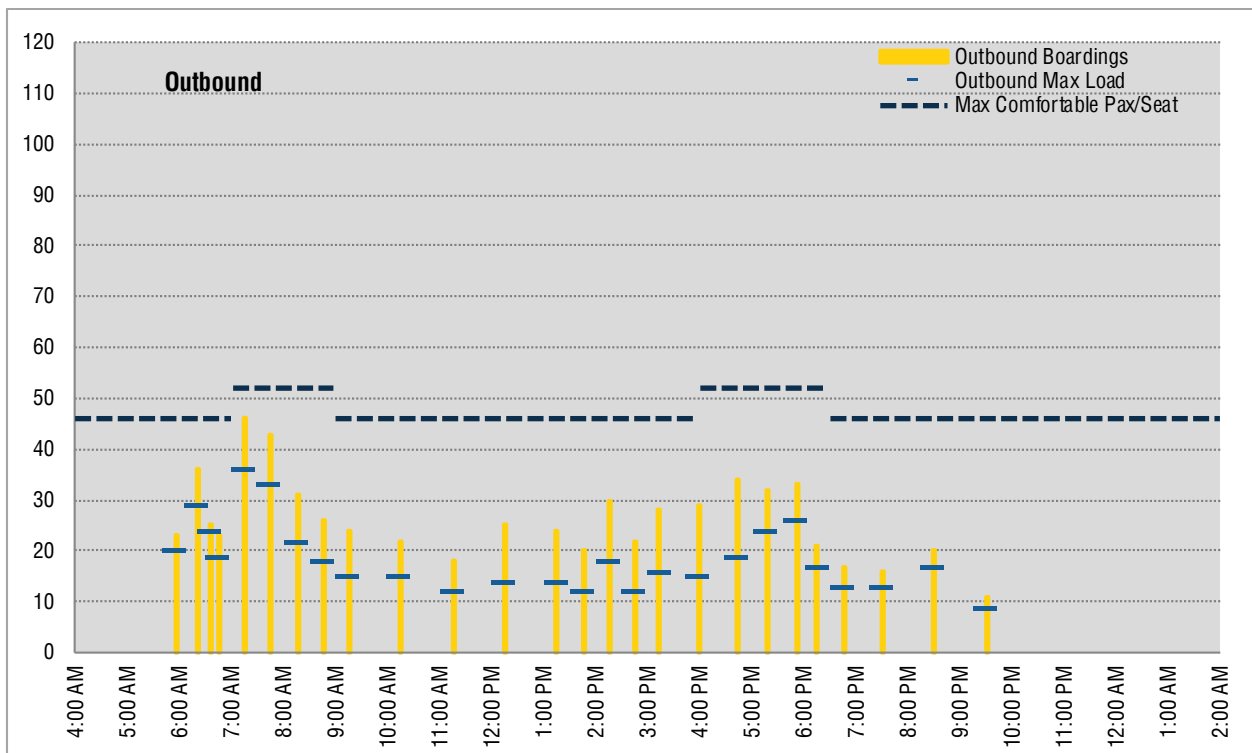


Figure 6 | Saturday Ridership by Trip: Inbound

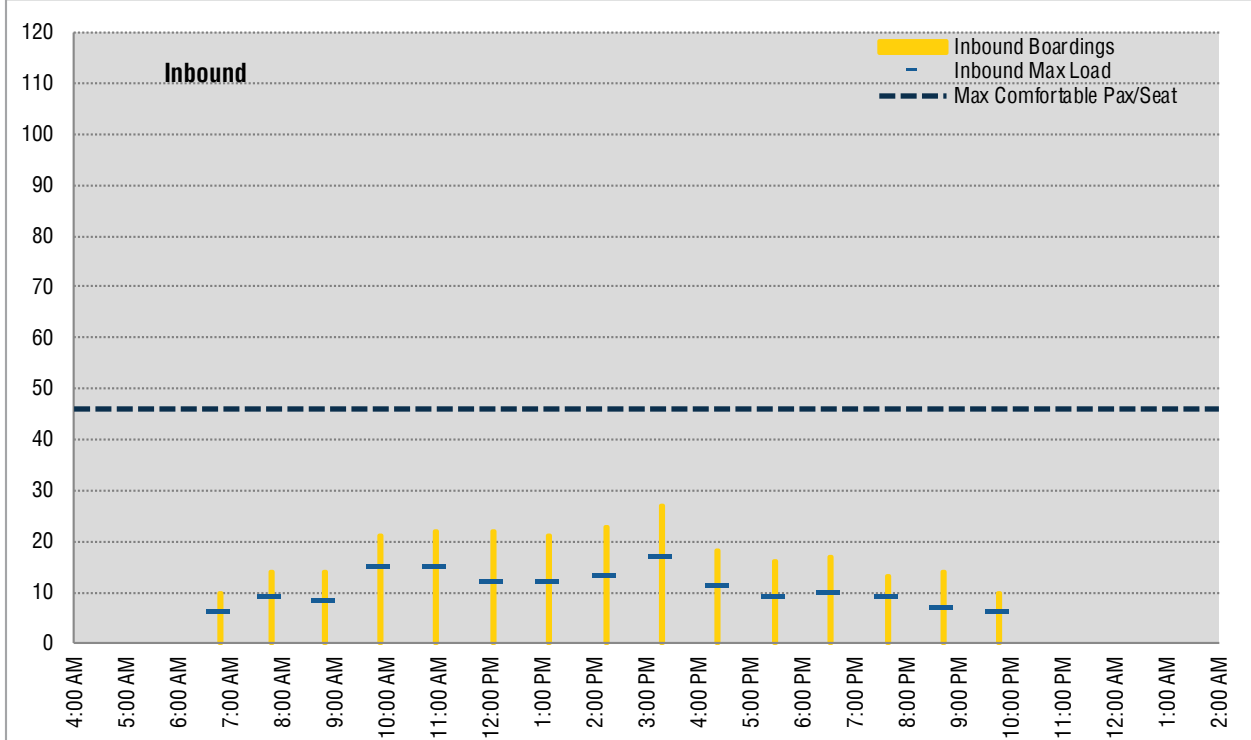
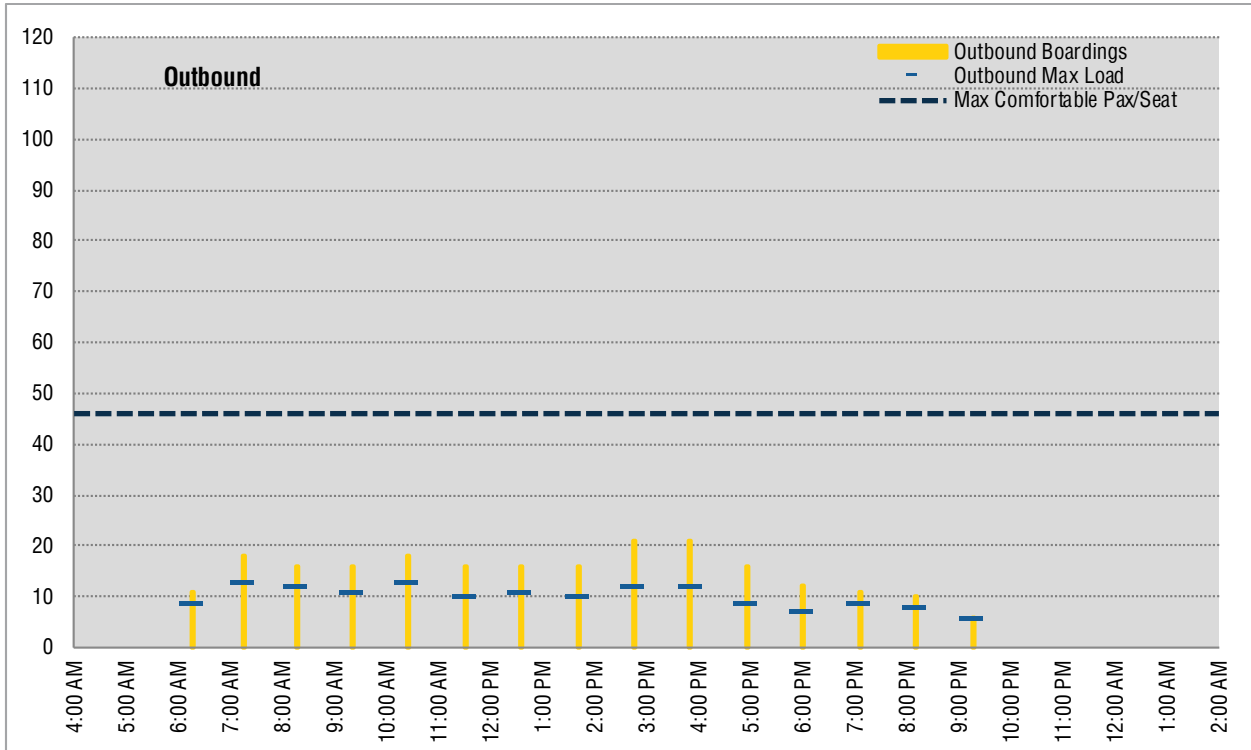


Figure 7 | Saturday Ridership by Trip: Outbound



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 51, 94% of passenger minutes are in comfortable conditions on weekdays, which meets the minimum standard (see Table 3). On Saturdays, 100% of passenger minutes are in comfortable conditions.

Table 3 | Passenger Time Spent Traveling in Comfortable Conditions

	WEEKDAYS	SATURDAYS	SUNDAYS
Minimum Standard	92%	92%	92%
Target	96%	96%	96%
Actual	94%	100%	-

Reliability and Speed

Reliability

On weekdays, Route 51 trips leave on time 63% of the time and arrive on time 65% of the time. Route 51 has an overall reliability of 64%. Dropped trips are not a notable issue on this route, with 0.3% of trips not operated, which meets MBTA service standards. Saturday trips perform slightly better than weekday trips, with 70% of trips completing on time and an overall reliability of 70% (see Table 4).

Table 4 | Reliability

SERVICE DAY	ORIGIN/MID-ROUTE ON-TIME PERFORMANCE	DESTINATION ON-TIME PERFORMANCE	OVERALL RELIABILITY	DROPPED TRIPS
Monday-Friday	63%	65%	64%	0.3%
Saturday	70%	68%	70%	-
Sunday	-	-	-	-

Running Times

Route 51 trips run one to five minutes behind schedule for much of the day in both directions (see Figure 8 and Figure 9). Outbound trips run six to seven minutes behind schedule during the PM peak.

Figure 8 | Scheduled & Median Travel Time by Trip: Route 51 Inbound

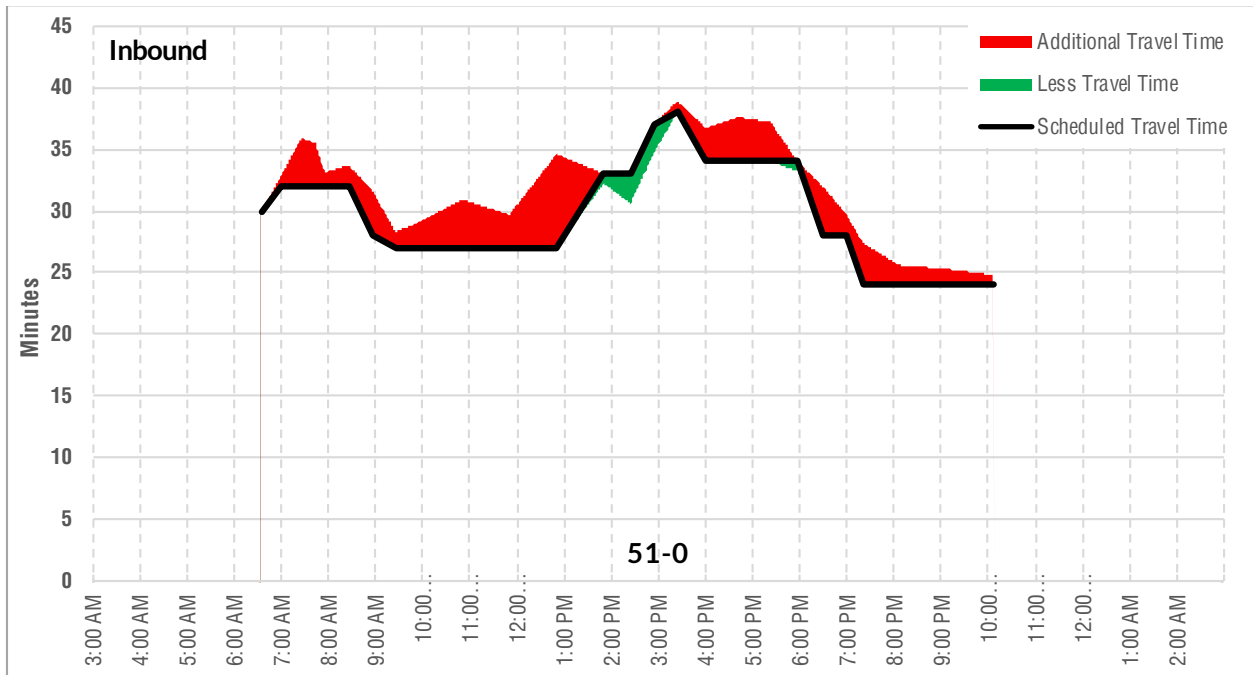
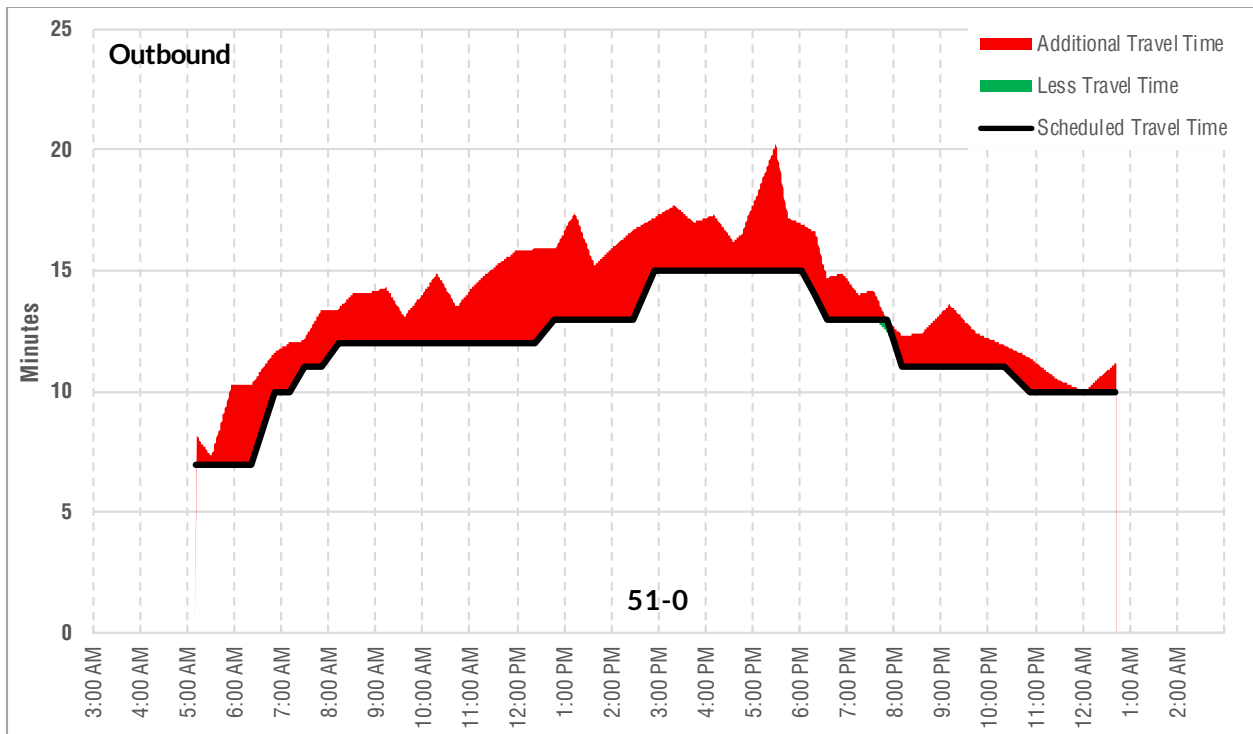


Figure 9 | Scheduled & Median Travel Time by Trip: Route 51 Outbound



Stop Spacing

The average stop spacing along the primary route is about 775 feet, which is too close together according to the MBTA's standard of about 800-1,300 feet between stops. This indicates that some stops could be consolidated, particularly those with low ridership.

Summary

Route 51 is the primary public transit service for South Brookline residents, and also provides a suburban crosstown connection between Brookline and Roslindale Village. The route is relatively simple, though circuitous, and connects to rapid transit stations at both end points. Ridership is very low apart from stops on Independence Drive in South Brookline, and on Washington Street from Roslindale to Forest Hills Station, where passengers likely board whatever bus comes first, rather than wait specifically for Route 51. The route is also unreliable, with trips frequently running behind schedule.