

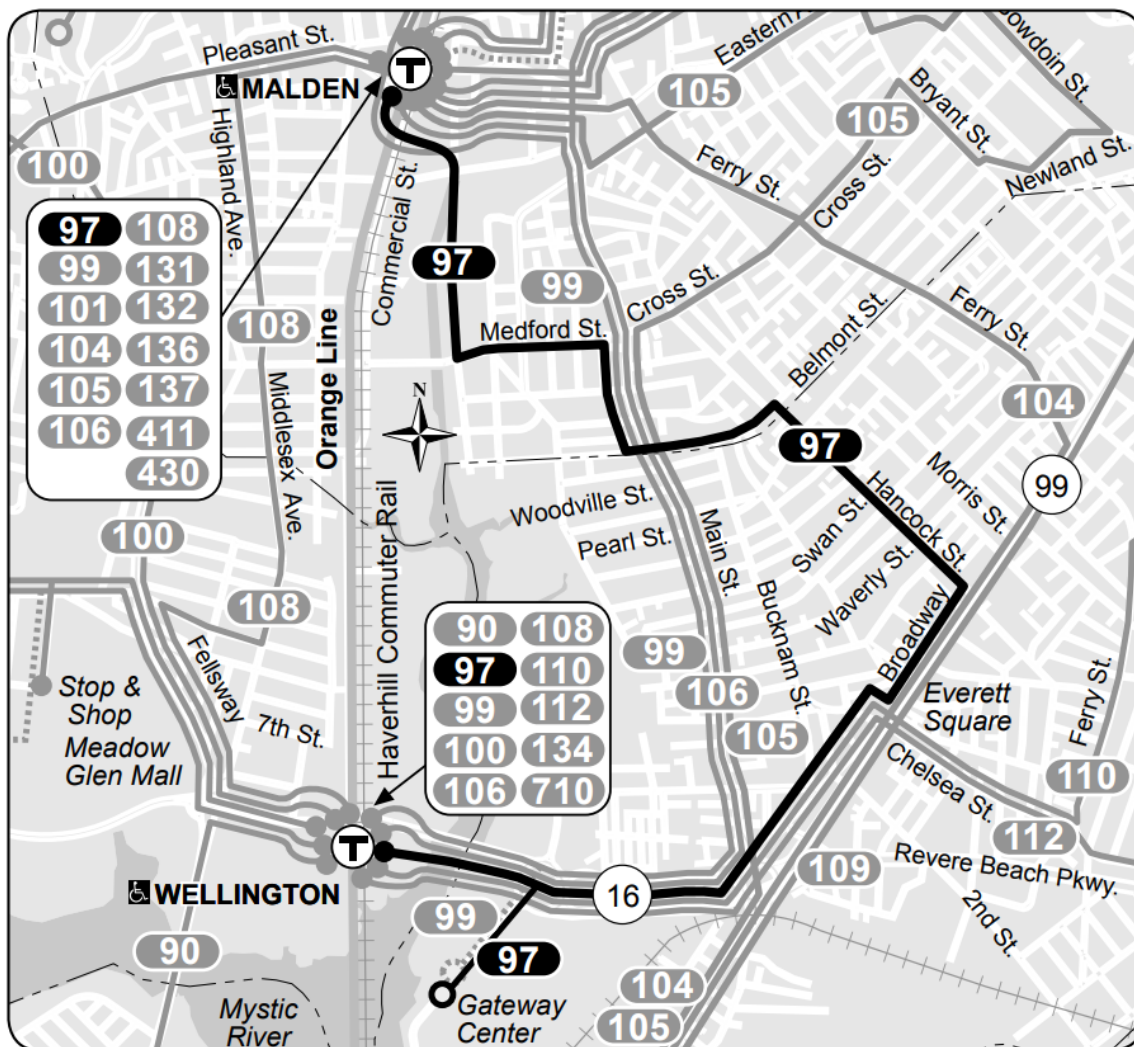
# Route 97

## Malden Center Station – Wellington Station

### Route Overview

Route 97 Malden Center Station – Wellington Station is a Local route that serves residential neighborhoods in Malden and Everett between Malden Center Station and Wellington Station via Everett Square (see Figure 1). The route provides very little unique service and virtually all of its unique segments are less than ½ mile from another route.

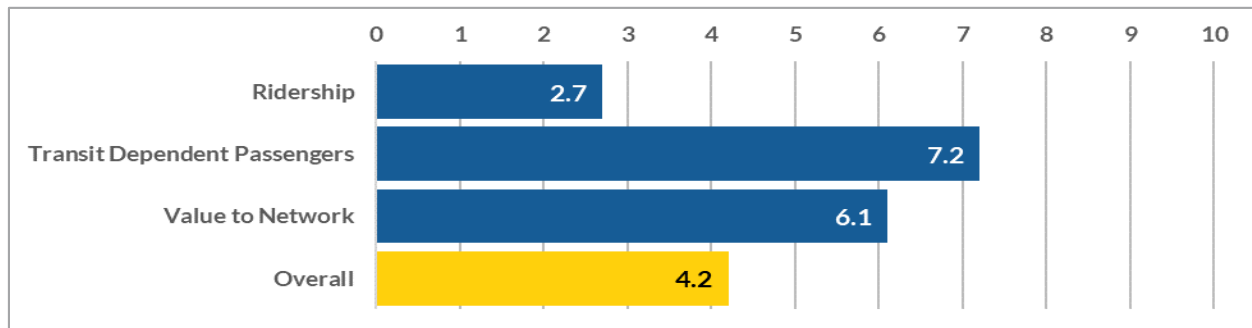
Figure 1 | Service Map



## Network Importance

Route 97 is of relatively low importance within the overall bus network (see Figure 2). On a relative scale of 0 to 10, the route rates 2.7 in terms of ridership, 7.2 in terms of transit dependent ridership, and 6.1 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 4.2.

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



## Service Overview

### Schedule

Route 97 operates seven days a week and provides infrequent service at all times (see Table 1):

- On weekdays, service operates from 6:10 AM to 7:01 PM, with 30 minute frequencies during peak periods and 60 minute headways at other times.
- On Saturdays, service operates from 10:00 AM until 7:18 PM with hourly headways except for a slightly longer 70 minute gap between 11:00 AM and 12:10 PM.
- On Sundays, service operates hourly between 10:00 AM and 7:17 PM.

Saturday service fails to meet the MBTA's span of service standard, with service starting at 10:00 instead of at or before 8:00 AM. The 70 minute gap in service between 11:00 AM and 12:10 PM also exceeds the maximum Saturday frequency standard of 60 minutes.

### Service Patterns

Route 97 operates a single consistent single service pattern between Malden Center Station and Wellington Station as shown in Figure 1 (see also Table 2).

**Table 1 | Schedule Statistics**

SERVICE DAY	SPAN OF SERVICE	FREQUENCY (RANGE)	FREQUENCY (AVERAGE)	DAILY TRIPS (INBOUND/OUTBOUND)
<b>Monday-Friday</b>	<b>6:10 AM to 7:01 PM</b>			<b>19/19</b>
Sunrise	-	-	-	-
Early AM	6:10 AM to 6:59 AM	30	30	2/1
AM Peak	7:00 AM to 8:59 AM	30	30	4/4
Midday Base	9:00 AM to 1:29 PM	30-60	60	5/4
Midday School	1:30 PM to 3:59 PM	30-60	40	3/4
PM Peak	4:00 PM to 6:29 PM	30	30	5/5
Evening	6:30 PM to 7:18 PM	-	-	-/1
Late Evening	-	-	-	-
<b>Night</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Saturday</b>	<b>10:00 AM to 7:18 PM</b>	<b>60-70</b>	<b>60</b>	<b>9/9</b>
<b>Sunday</b>	<b>10:00 AM to 7:18 PM</b>	<b>60-60</b>	<b>54</b>	<b>10/10</b>

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

**Table 2 | Service Patterns**

PATTERN	ORIGIN	DESTINATION	UNIQUE FEATURE	TRIPS PER WKD	TRIPS PER SAT	TRIPS PER SUN
<b>INBOUND</b>				<b>19</b>	<b>9</b>	<b>10</b>
97.5	Malden Center Station	Wellington Station		19	9	10
<b>OUTBOUND</b>				<b>19</b>	<b>9</b>	<b>10</b>
97.5	Wellington Station	Malden Center Station		19	9	10

## Ridership

Route 97 serves 970 riders on weekdays, 450 on Saturdays, and 420 on Sundays.

### Ridership by Stop

Nearly all Route 97 passengers travel to or from Malden Center and Wellington Station. On weekday inbound trips (see Figure 3):

- 170, or 40% of all passengers, board at Malden Center Commuter Rail Station.
- 30 passengers board and 40 alight at the four stops along Commercial Street, Canal Street, and Medford Street before Main Street. This is one of three unique segments that Route 97 serves.
- 20 passengers board and 30 alight at the three stops on or at Main Street.

- 80 passengers board and 60 alight at the four stops on Belmont Street and Hancock Street between Main Street and Broadway. This is the second unique segment that Route 97 serves.
- 120 passengers board and 60 alight at the seven stops along Broadway.
- 50 passengers board and 70 alight between Broadway and Wellington Station. 40 of the boardings and 60 of the alightings are at Gateway Center, where there is a Target, and which is the third unique market that Route 97 serves (other routes serve Gateway Center via stops at the north side on Santelli Circle rather than operate in and out).
- 210, or 45% of all passengers, alight at Wellington Station.

In total, 170 of Route 97 boardings and 170 alightings are to or from stops that are uniquely served by Route 97, and 290 boardings and alightings are to locations served by other routes. Those riders would typically use Route 97 when a Route 97 bus is the first to arrive at their stop and other routes when they arrive first.

Outbound ridership patterns match the reverse of inbound ridership but with slightly higher volumes. Weekend patterns are also similar but with lower volumes.

### Ridership by Trip

Ridership per trip is moderate on all days. On weekdays, inbound ridership per trip is between 20 and 30 for most of the day, except for two AM trips that are below 30 and two PM trips that are above 30 (see Figure 4). Outbound ridership fluctuates much more (see Figure 5). The first three trips carry 35 to 46 passengers. Ridership per trip then declines to 20 through 10:40 AM, and then increases to around 30 passengers through 5:10 PM. It is then around 20 passengers per trip on the last three trips.

On Saturdays, ridership per trip is closer to 30 passengers per trip, except for inbound trips after 5:00 PM and outbound trips before 2:00 PM (see Figure 6 and Figure 7). Ridership on those trips is closer to 20.

On Sundays, inbound ridership ranges from 20 to 30 passengers per trip (see Figure 8). Outbound ridership is around 20 throughout the day except for early trips that carry closer to 10 passengers (see Figure 9).

Figure 3 | Weekday Inbound Ridership by Stop Map

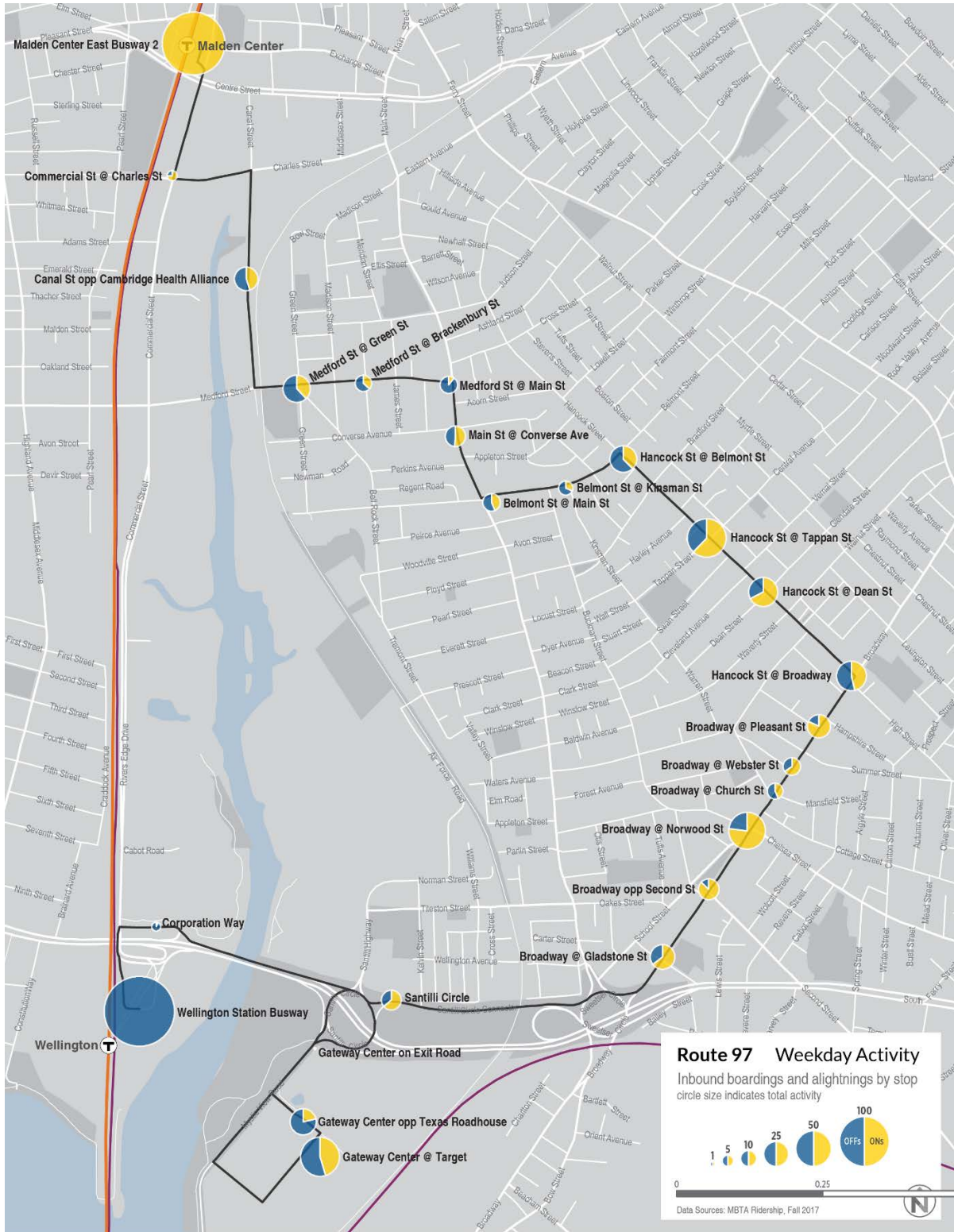


Figure 4 | Weekday Ridership by Trip: Inbound

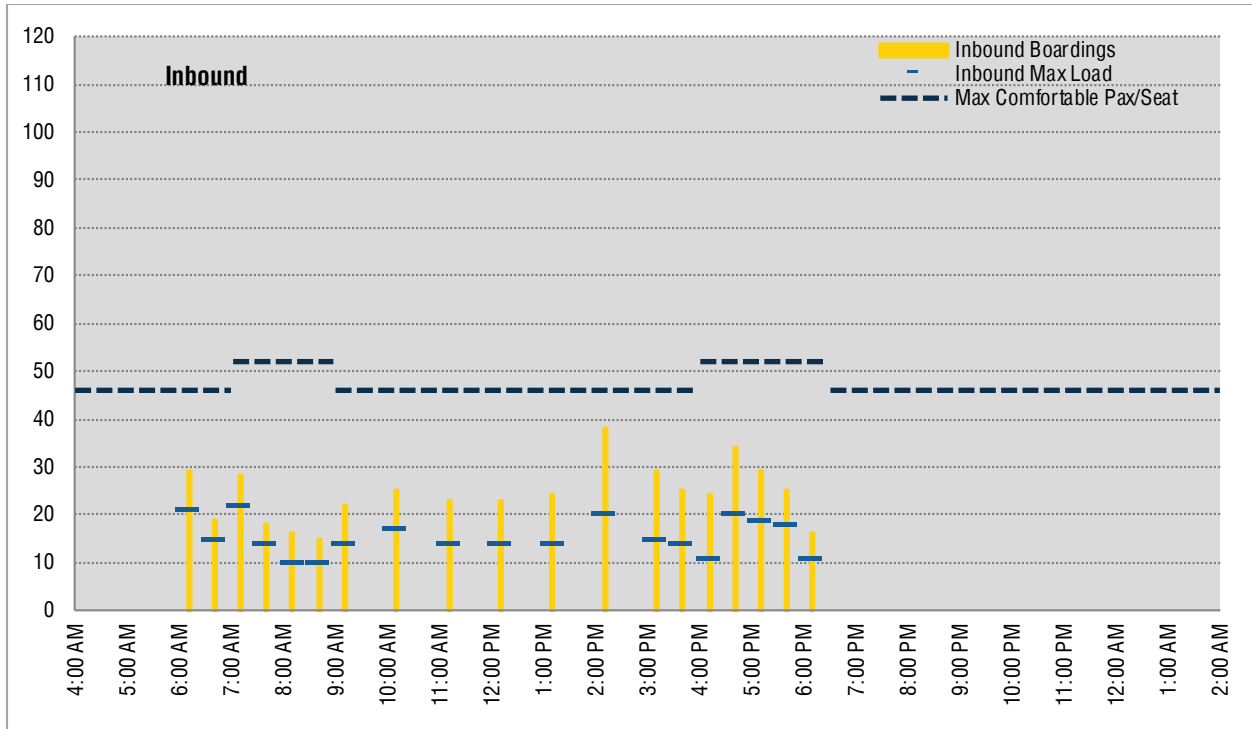


Figure 5 | Weekday Ridership by Trip: Outbound

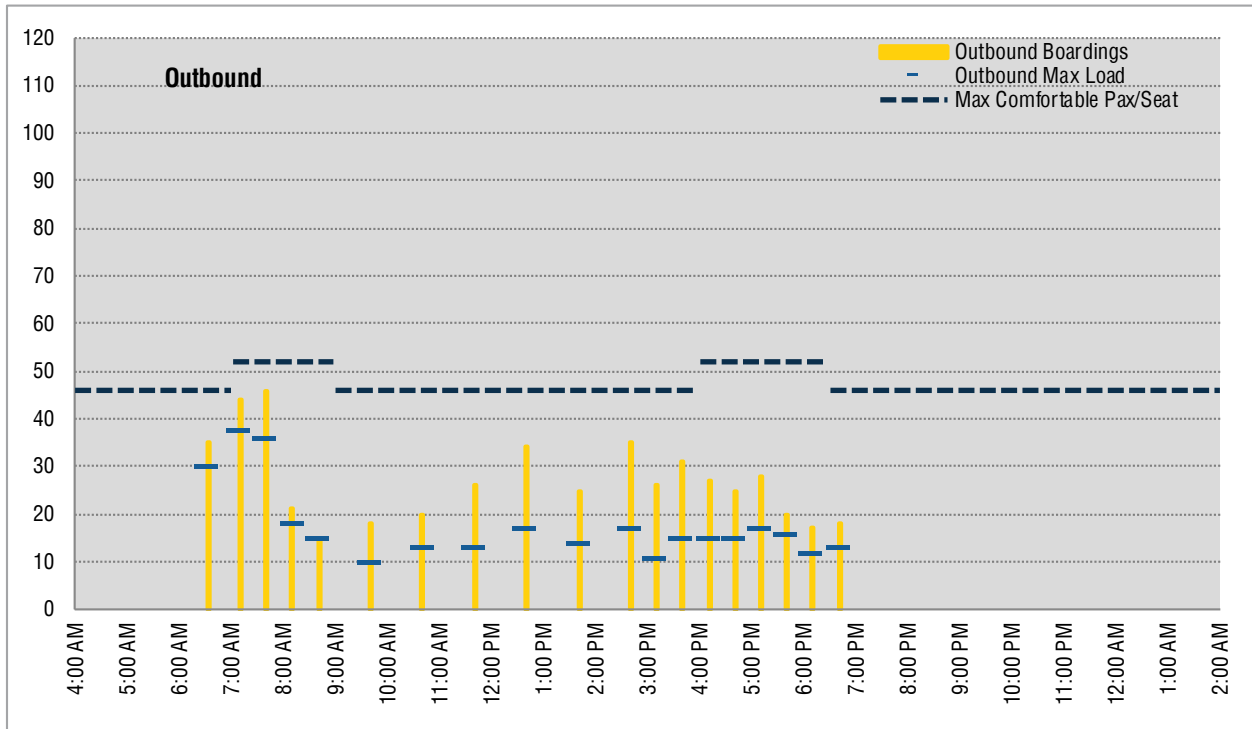


Figure 6 | Saturday Ridership by Trip: Inbound

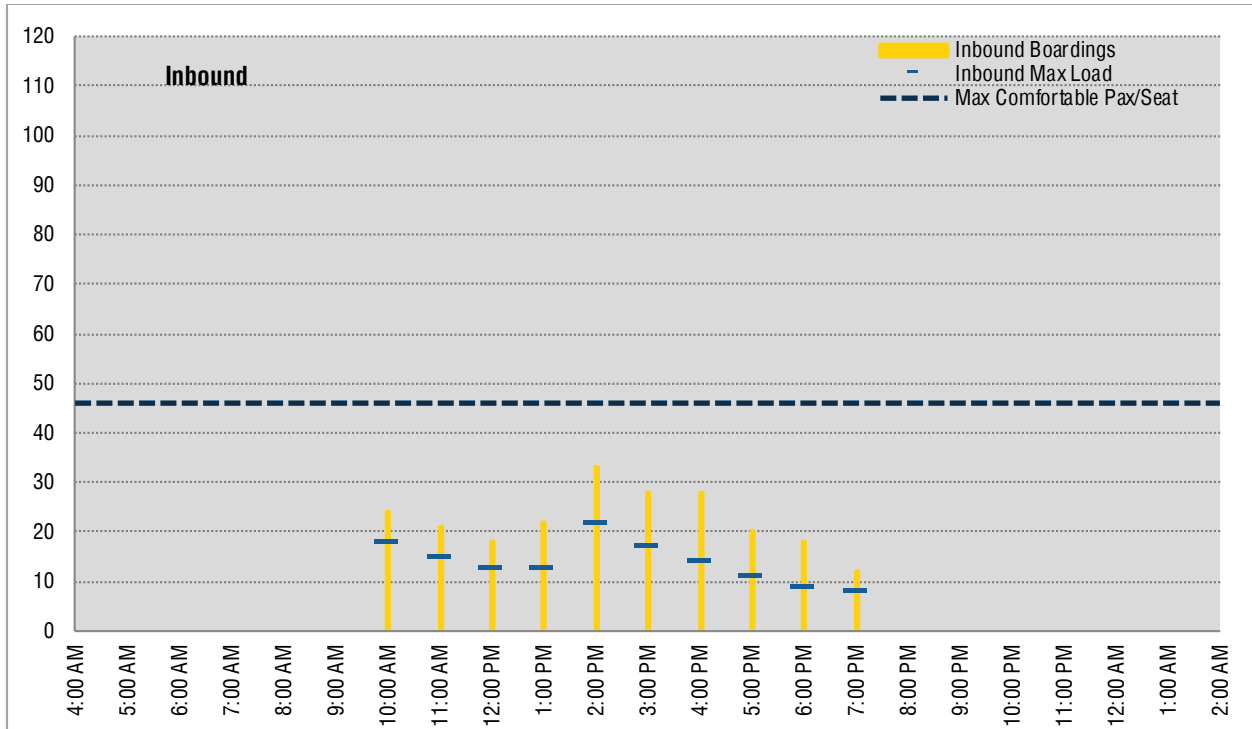


Figure 7 | Saturday Ridership by Trip: Outbound

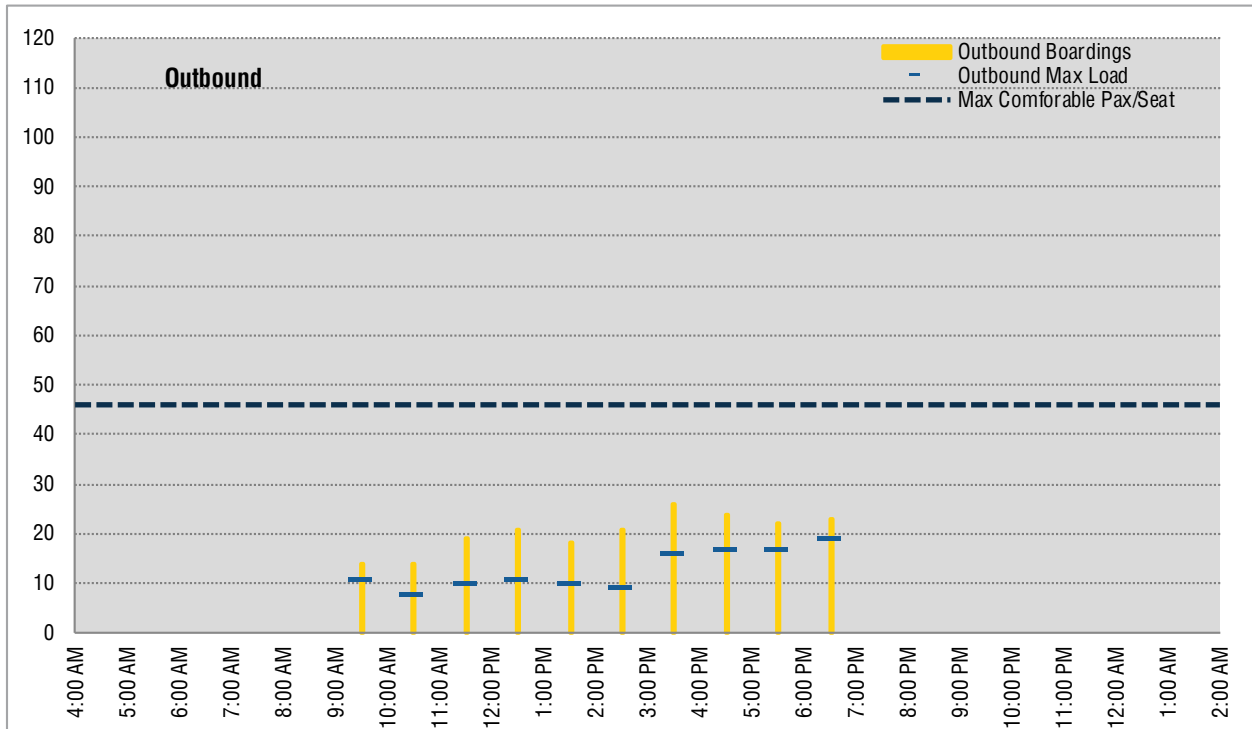


Figure 8 | Sunday Ridership by Trip: Inbound

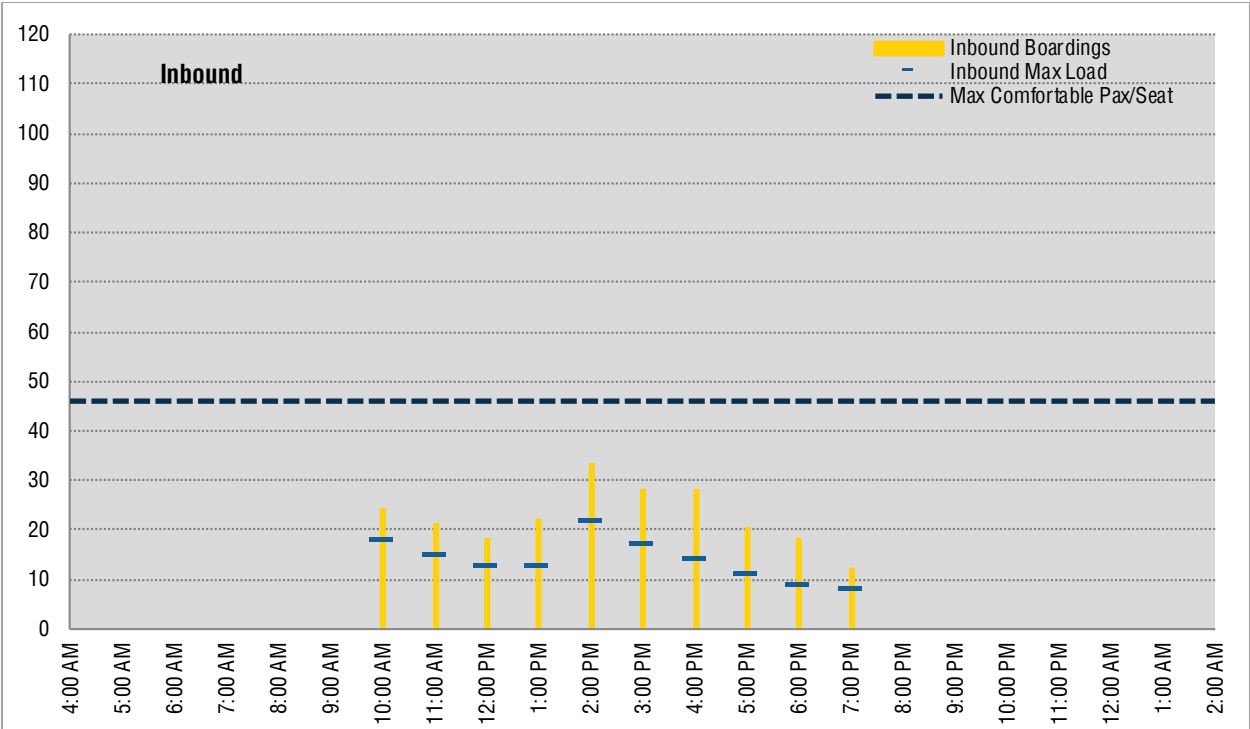
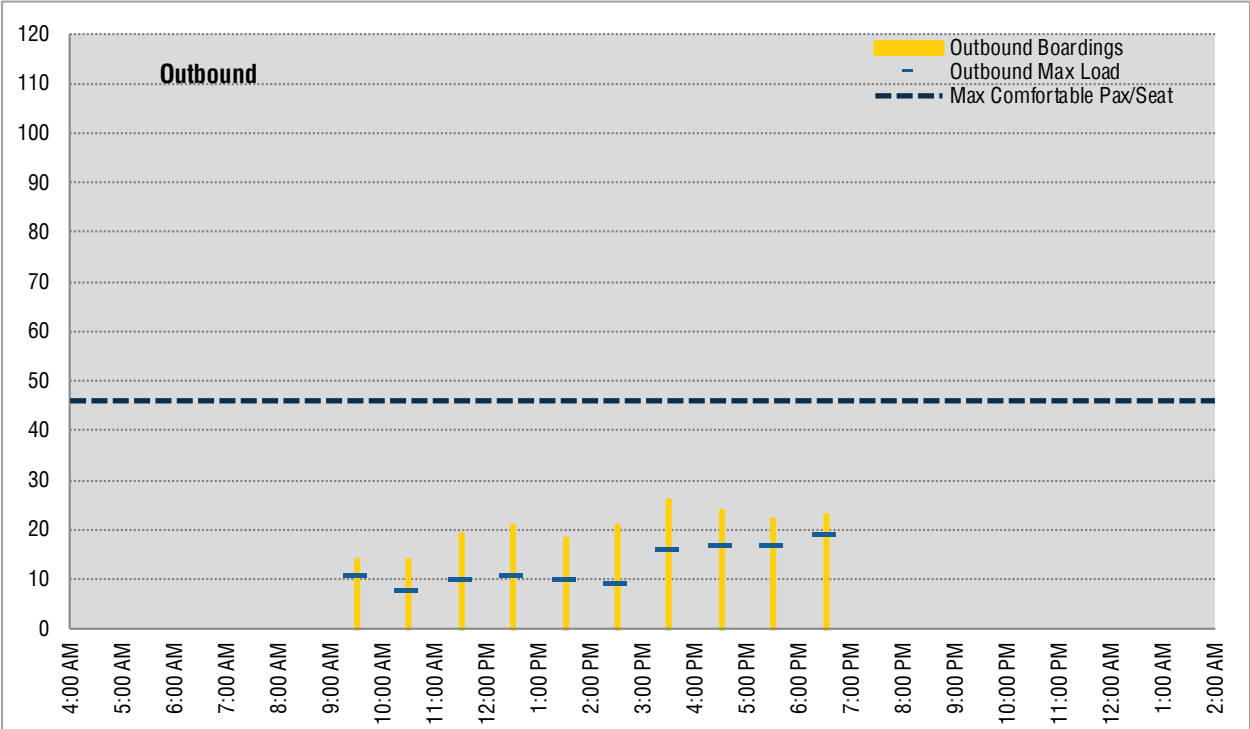


Figure 9 | Sunday Ridership by Trip: Outbound





## 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 97, 99% of weekday passenger minutes are in comfortable conditions (see Table 3).

Table 3 | Passenger Time Spent Traveling in Comfortable Conditions

	WEEKDAYS	SATURDAYS	SUNDAYS
<b>Minimum Standard</b>	92%	92%	92%
<b>Target</b>	96%	96%	96%
<b>Actual</b>	99.5%	100%	100%

## Reliability and Speed

### Reliability

Route 97’s overall reliability is very poor on weekdays and Saturdays, at 57% and 44% respectively (see Table 4). This is well below the minimum standard of 70% for local routes. Sunday’s on-time performance, at 76%, exceeds the target of 75%. As described in the next section, poor on-time performance is due, in large part, to actual running times that exceed scheduled running times.

Table 4 | Reliability

SERVICE DAY	ORIGIN/MID-ROUTE ON-TIME PERFORMANCE	DESTINATION ON-TIME PERFORMANCE	OVERALL RELIABILITY	DROPPED TRIPS
<b>Monday-Friday</b>	59%	49%	57%	0.1%
<b>Saturday</b>	48%	28%	44%	-
<b>Sunday</b>	76%	72%	76%	-

### Running Times

Route 97’s observed running times routinely exceed scheduled running times throughout the service day, with the exception of inbound trips in the morning between 6:00 and 8:00 AM and outbound trips close to 10:00 AM. Trips during the midday, evening peak, and the evening can run five minutes longer than scheduled running times.

Figure 10 | Scheduled & Median Travel Time by Trip: Route 97 Inbound

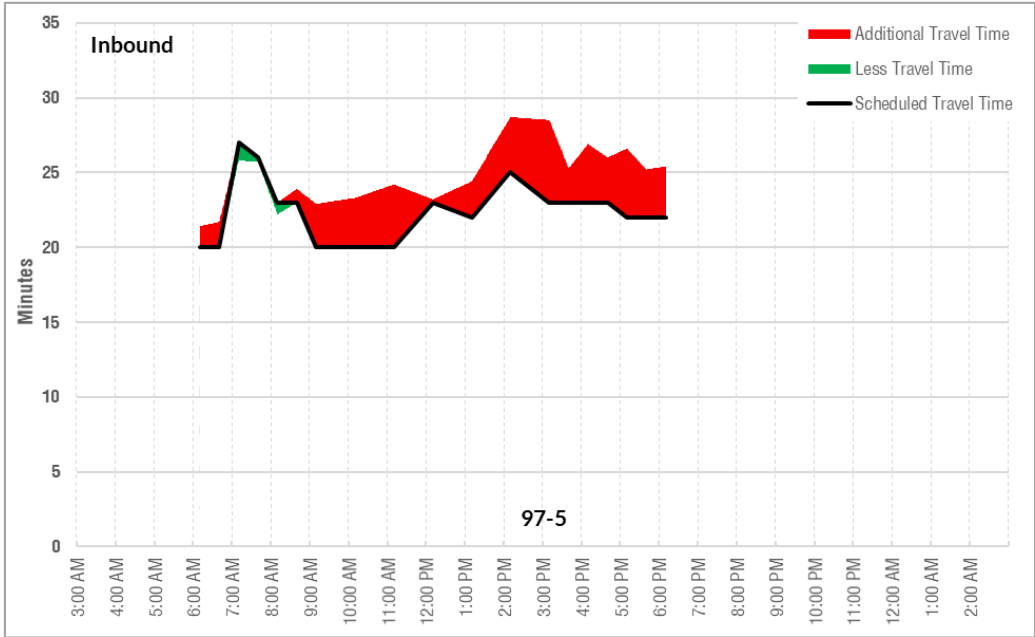
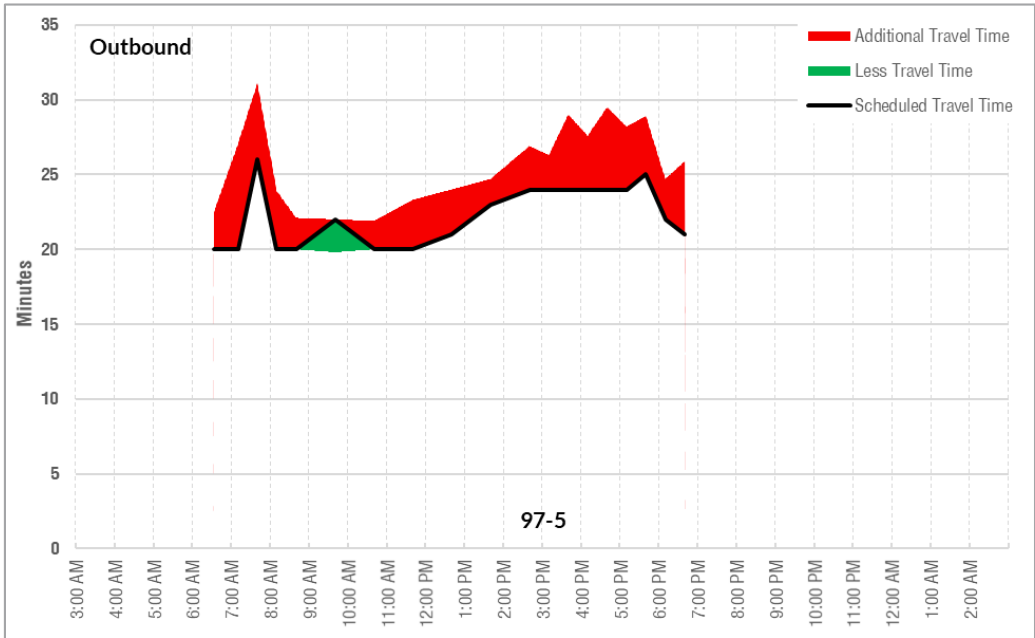


Figure 11 | Scheduled & Median Travel Time by Trip: Route 97 Outbound



### **Stop Spacing**

Route 97 has five stops per mile, which is within the four to seven stops per mile recommended for urban areas under MBTA guidelines.

### Summary

Route 97 is a niche route that is designed to provide coverage service between other area routes. 360 of 970 weekday passengers travel to stops that are not served by other routes.