

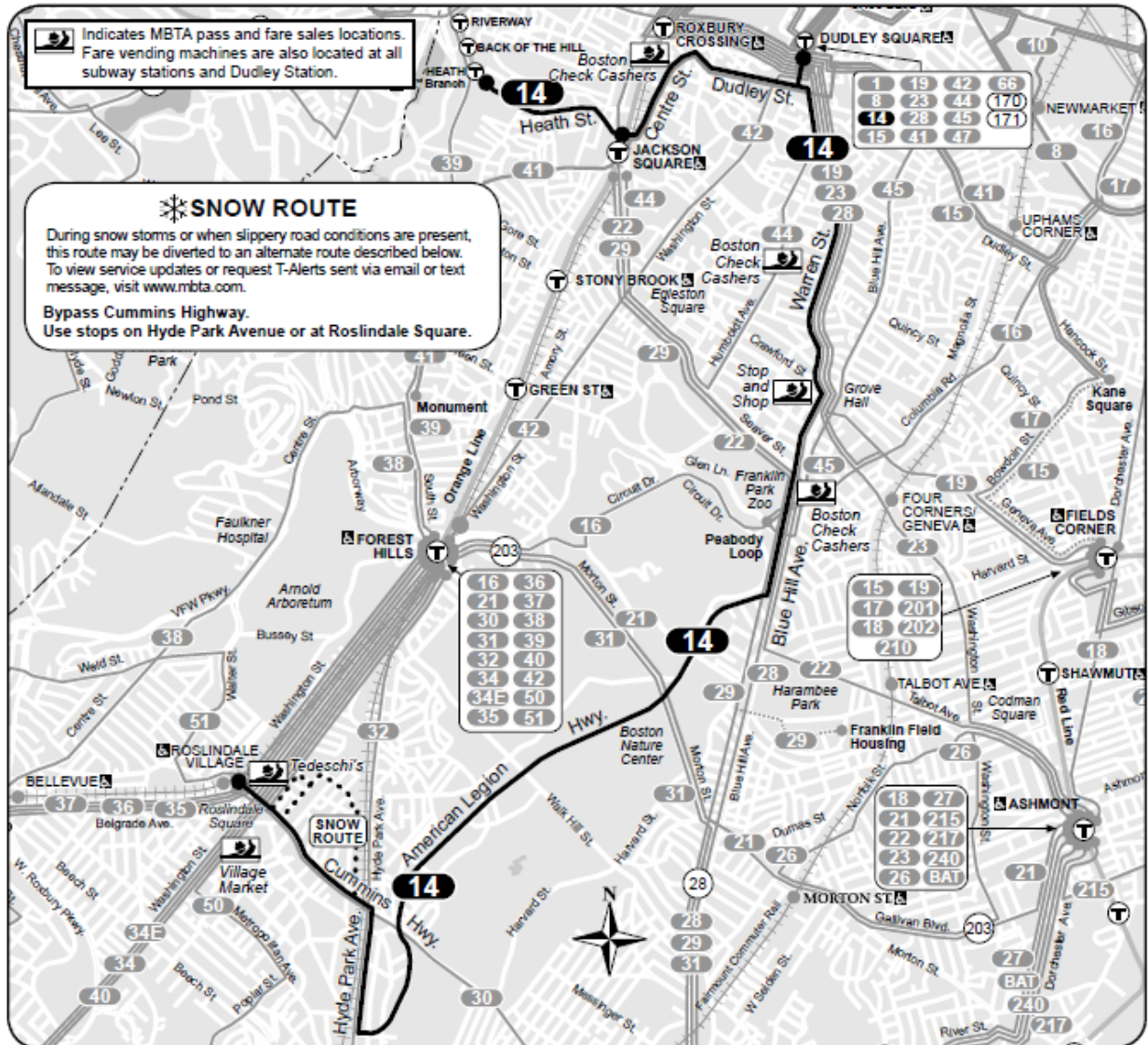
Route 14

Roslindale Square – Heath Street Station

Route Overview

Route 14 Roslindale Square – Heath Street Station is a Local route that operates between Roslindale Square and Heath Street Station via Cummins Highway, a semi-loop south of Cummins Highway via Hyde Park Avenue, American Legion Highway, Blue Hill Avenue, Warren Street, Dudley Square, and Jackson Square Station (see Figure 1).

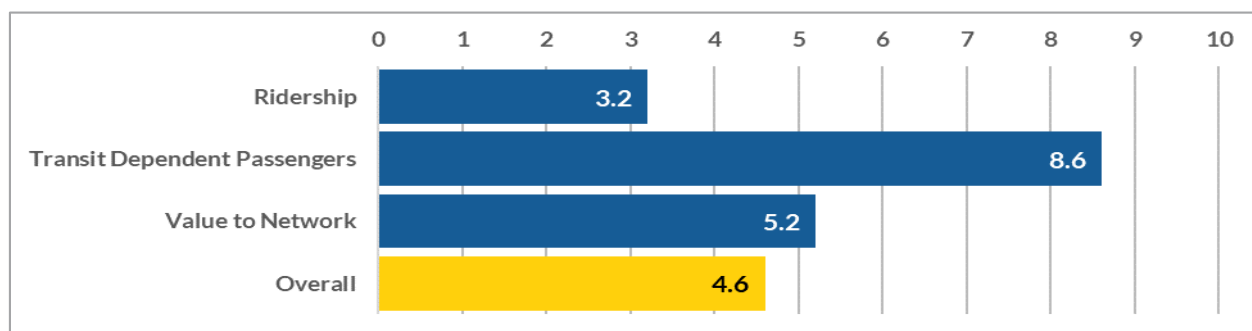
Figure 1 | Service Map



Network Importance

Route 14 is of moderate importance within the MBTA bus network (see Figure 2). On a relative scale of 0 to 10, the route rates 3.2 in terms of ridership, 8.6 in terms of transit dependent ridership, and 5.2 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 Overview

Schedule

Route 14 operates on weekdays and Saturdays, but not on Sundays (see Table 1). It provides infrequent service throughout the day on all days.

Table 1 | Schedule Statistics

SERVICEDAY	SPAN OF SERVICE	FREQUENCY (RANGE)	FREQUENCY (AVERAGE)	DAILY TRIPS (INBOUND/OUTBOUND)
Monday-Friday	6:00 AM to 7:38 PM			17/18
Sunrise	-	-	-	-
Early AM	6:00 AM to 6:59 AM	35 - 45	40	2/3
AM Peak	7:00 AM to 8:59 AM	45	45	3/2
Midday Base	9:00 AM to 1:29 PM	45 - 60	60	4/4
Midday School	1:30 PM to 3:59 PM	40 - 60	43	4/3
PM Peak	4:00 PM to 6:29 PM	45 - 55	55	3/4
Evening	6:30 PM to 7:38PM	55	55	1/2
Late Evening	-	-	-	-
Night	-	-	-	-
Saturday	6:45 AM to 7:40 PM	5 - 40	31	23/22
Sunday	-	-	-	-

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

On weekdays, service operates from 5:57 AM to 7:50 PM:

- Every 35 to 45 minutes in the Early AM and AM peak periods.
- Every 40 to 60 minutes during the Midday Base and Midday School periods.
- Every 45 to 55 minutes in the PM peak and Evening periods.

On Saturdays, service operates from 6:45 AM to 7:40 PM, mostly every 35 minutes, which is more frequent than on weekdays.

Route 14 fails to meet three schedule-related Service Delivery Policy (SDP) standards for Local routes in urban areas:

- Weekday peak period service should operate at least every 30 minutes.
- Saturday service should start by 8:00 AM. Although short-turn service between Dudley Station and Heath Street Station begins at 6:45 AM, this is a relatively short segment where demand is low. Full length service, which serves the majority of the route’s demand, does not start until 8:50 AM inbound and 9:05 AM outbound.
- Service should operate on Sundays.

Service Patterns

Most service operates via Pattern 14.0, which serves the full length of the route’s alignment (see Table 2). Exceptions to this operation include:

Weekdays

- The first outbound trip operates between Dudley Station and Roslindale Square only (Pattern 14.1).
- The last outbound trip operates between Heath Street and Dudley Station only (Pattern 14.2)

Saturdays

- Service before 8:50 AM inbound and 9:05 AM outbound operates between Heath Street and Dudley Station (Pattern 14.2).

Table 2 | Service Patterns

PATTERN	ORIGIN	DESTINATION	UNIQUE FEATURE	TRIPS PER WKD	TRIPS PER SAT	TRIPS PER SUN
INBOUND				17	23	-
14.0	Roslindale Square	Heath Street	Primary pattern	17	18	-
14.2	Dudley Station	Heath Street	Saturday morning	-	5	-
OUTBOUND				18	22	-
14.0	Heath Street	Roslindale Square	Primary pattern	16	18	-
14.1	Dudley Station	Roslindale Square	First weekday trip	1	-	-
14.2	Heath Street	Dudley Station	Last weekday trip	1	4	-

Ridership

Route 14 carries 1,290 passengers on weekdays and 830 passengers on Saturdays.

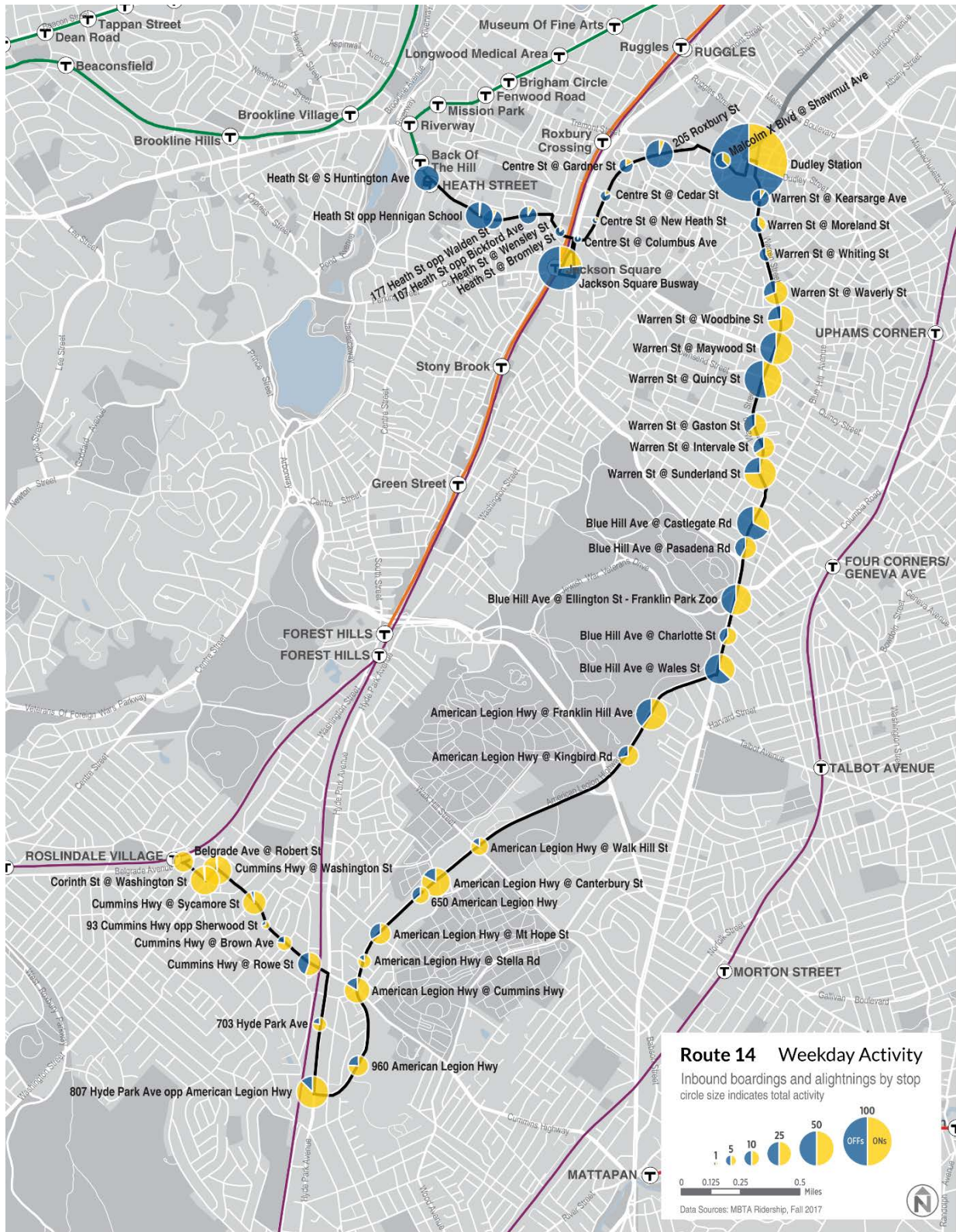
Ridership by Stop

Ridership is low along most of Route 14. Exceptions include Dudley Station and, to a lesser extent, Jackson Square Station. On weekday inbound trips (see Figure 3):

- 50 passengers board at the two stops in Roslindale Village.
- 80 passengers board and 15 alight at the five stops along Cummins Highway.
- 60 passengers board and 10 alight at the three stops on the semi-loop south of Cummins Highway along Hyde Park Avenue and American Legion Highway. This 1.1-mile out-of-direction segment, which adds about three minutes of travel time, is designed to serve a small shopping center on American Legion Highway, and 13 passengers board and four alight at that stop. (The shopping center is also served by Route 30 Mattapan Station-Forest Hills Station with stops on Cummins Highway.)
- 120 passengers board and 50 alight at the eight stops along American Legion Highway between Cummins Highway and Blue Hill Avenue. Route 14 provides unique service along this segment.
- 230 passengers board and 200 alight at the 15 stops along Blue Hill Avenue and Warren Street before Dudley Station. This segment is served by three other bus routes that provide very frequent service. Many of the Route 14 riders in this segment are “opportunistic” riders who use the first bus to arrive.
- 80 passengers board and 170 alight at Dudley Station.
- 10 passengers board and 50 alight at the six stops between Dudley Station and Jackson Square Station.
- 20 passengers board and 60 alight at Jackson Square Station.
- Fewer than five passengers board and 60 alight at the five stops on Heath Street between Jackson Square Station and Heath Street Station. The highest ridership stop is at the Hennigan School, with 30 alightings. This segment is approximately three-quarters of a mile long, and nearly all riders are within a five-minute walk of either Jackson Square Station or Heath Street Station.

Outbound patterns are essentially the reverse of inbound patterns. Saturday patterns are also similar but with lower overall passenger volumes.

Figure 3 | Weekday Inbound Ridership by Stop Map



Ridership by Trip

On weekday inbound trips (see Figure 4):

- Ridership per trip starts high at 47 passengers on the first trip at 6:00 AM and ranges from 39 to 53 passengers on the next three trips through 8:05 AM.
- Ridership then declines to 20 to 30 passengers between 8:30 AM and 1:30 PM.
- After 1:30 PM, ridership increases to nearly 40 to over 50 passengers per trip until 5:30 PM.
- It then declines steadily to slightly fewer than 20 passengers on the last trip at 7:08 PM.

On weekday outbound trips (see Figure 5):

- The first trip from Dudley Station to Roslindale Square at 6:15 AM carries 11 passengers.
- The next two trips at 6:15 AM and 6:55 AM carry 51 passengers.
- Ridership per trip is around 30 until 1:00 PM.
- After 1:00 PM to 5:30 PM, trips carry from 40 to over 50 passengers.
- After 5:30 PM, ridership per trip declines to 20 passengers on the 7:05 PM trip and only two on the 7:38 PM trip (which only operates between Heath Street Station and Dudley Station, which is the lowest ridership segment of the route).

On Saturdays, the first four round trips, which only operate between Dudley Station and Heath Street Station, carry one to four passengers per trip (see Figure 6 and Figure 7). After that time, when service operates the full length of the route, ridership is generally 20 to 30 passengers per trip.

Figure 4 | Weekday Ridership by Trip: Inbound

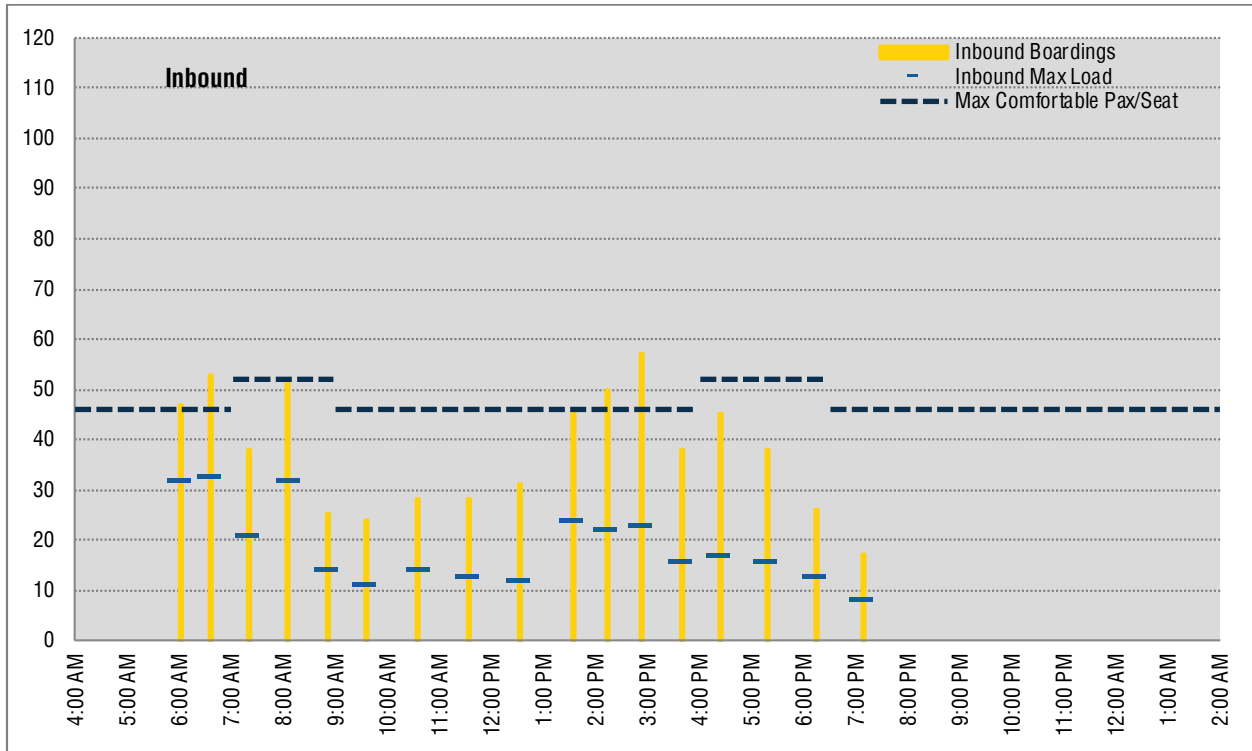


Figure 5 | Weekday Ridership by Trip: Outbound

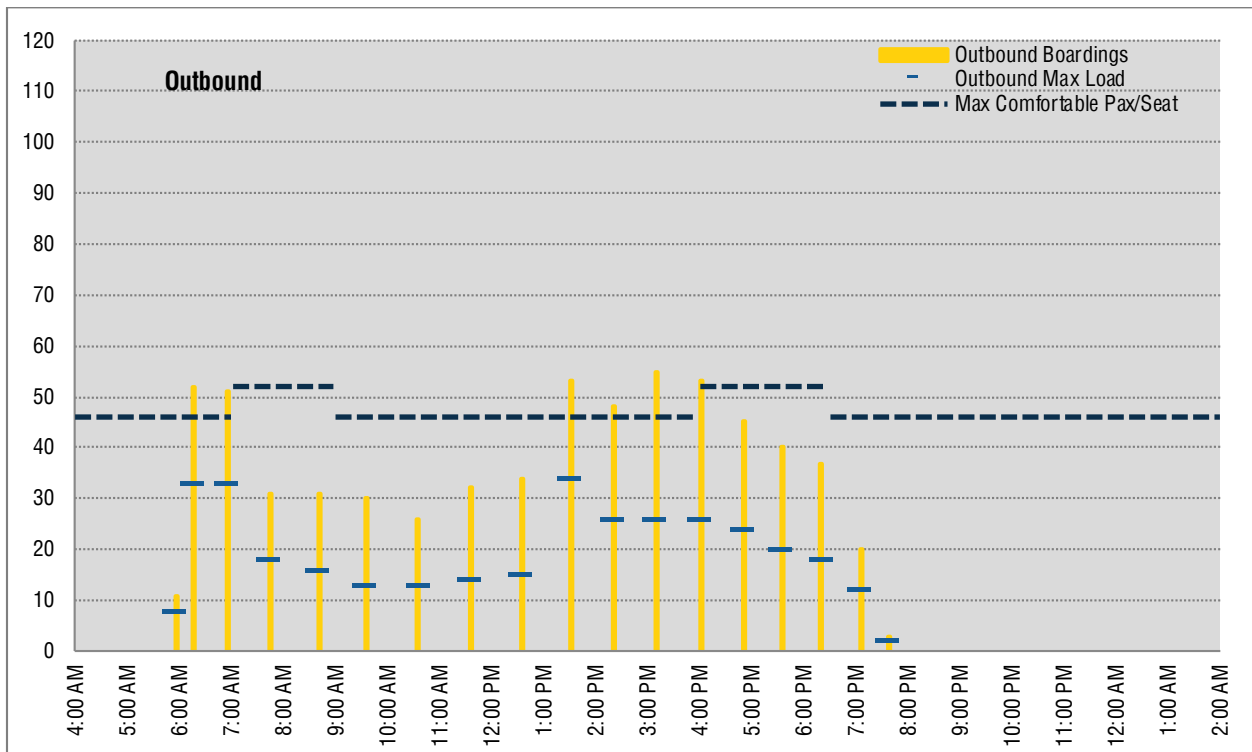


Figure 6 | Saturday Ridership by Trip: Inbound

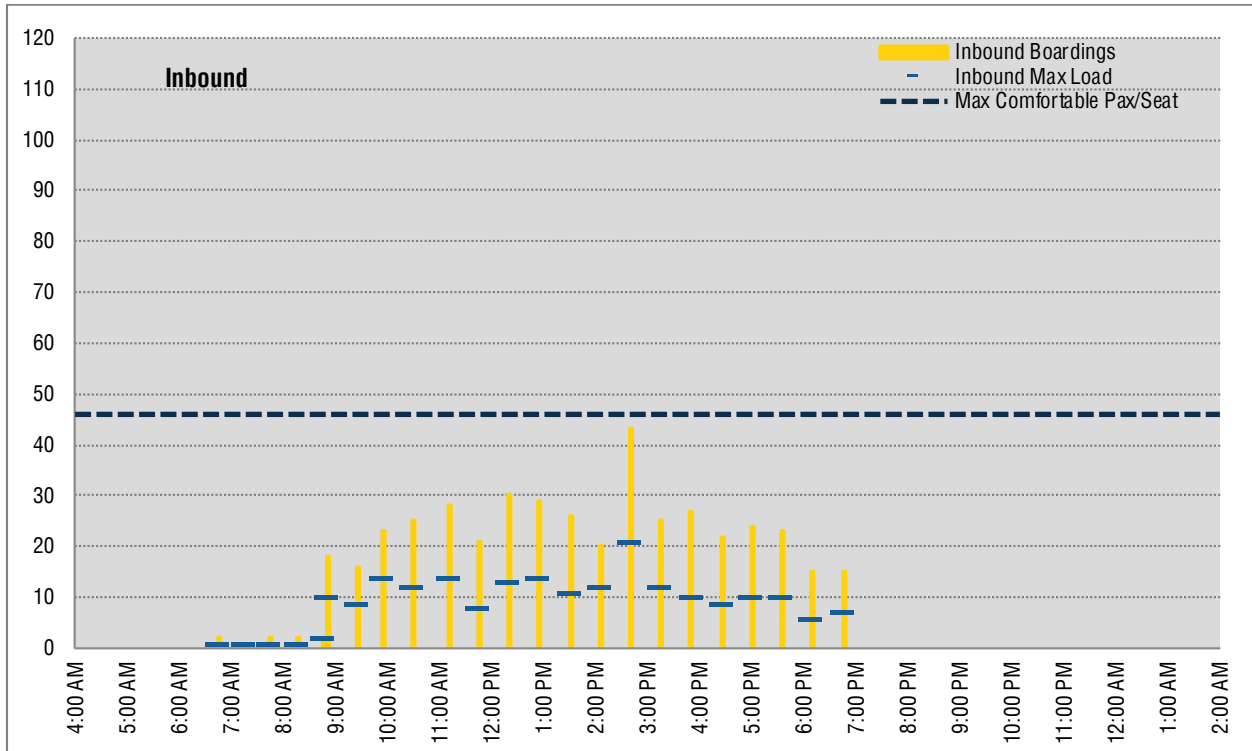
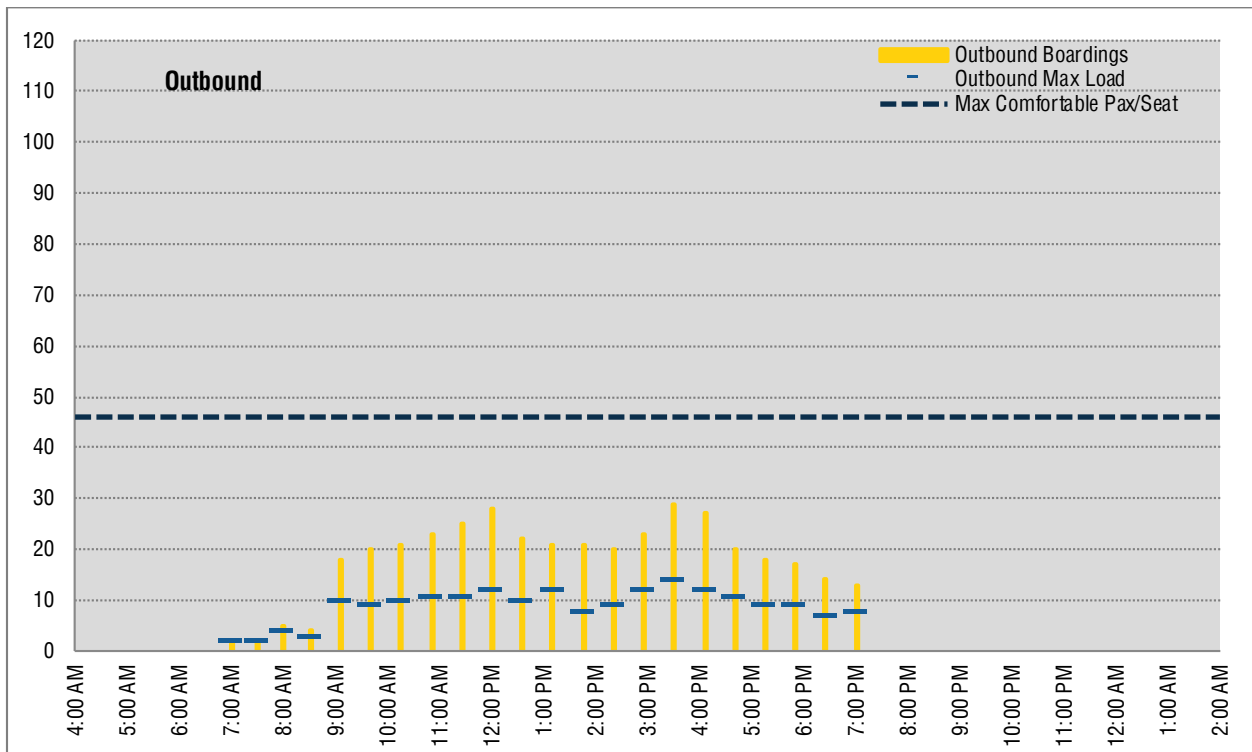


Figure 7 | Saturday Ridership by Trip: Outbound



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 14, almost 100% of passenger minutes are in comfortable conditions (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	99.7%	100%	-

Reliability and Speed

Reliability

Route 14's overall reliability is very poor, at only 53% on weekdays and 52% on Saturdays (see Table 4). These reliability figures are well below the minimum standard of 70%. Poor on-time performance is caused by actual running times that are significantly longer than scheduled times (as described below) and circuitous service on many congested roadways.

Table 4 | Reliability

SERVICE DAY	ORIGIN/MID-ROUTE ON-TIME PERFORMANCE	DESTINATION ON-TIME PERFORMANCE	OVERALL RELIABILITY	DROPPED TRIPS
Monday-Friday	52%	69%	53%	0.2%
Saturday	52%	50%	52%	-
Sunday	-	-	-	-

Running Times

Actual running times on nearly all Route 14 trips are longer than scheduled, which means that buses cannot stay on time. Inbound trips run 10 to 15 minutes longer than scheduled running times (see Figure 8), and outbound trips run up to 12 minutes longer (see Figure 9).

Figure 8 | Scheduled & Median Travel Time by Trip: Route 14 Inbound

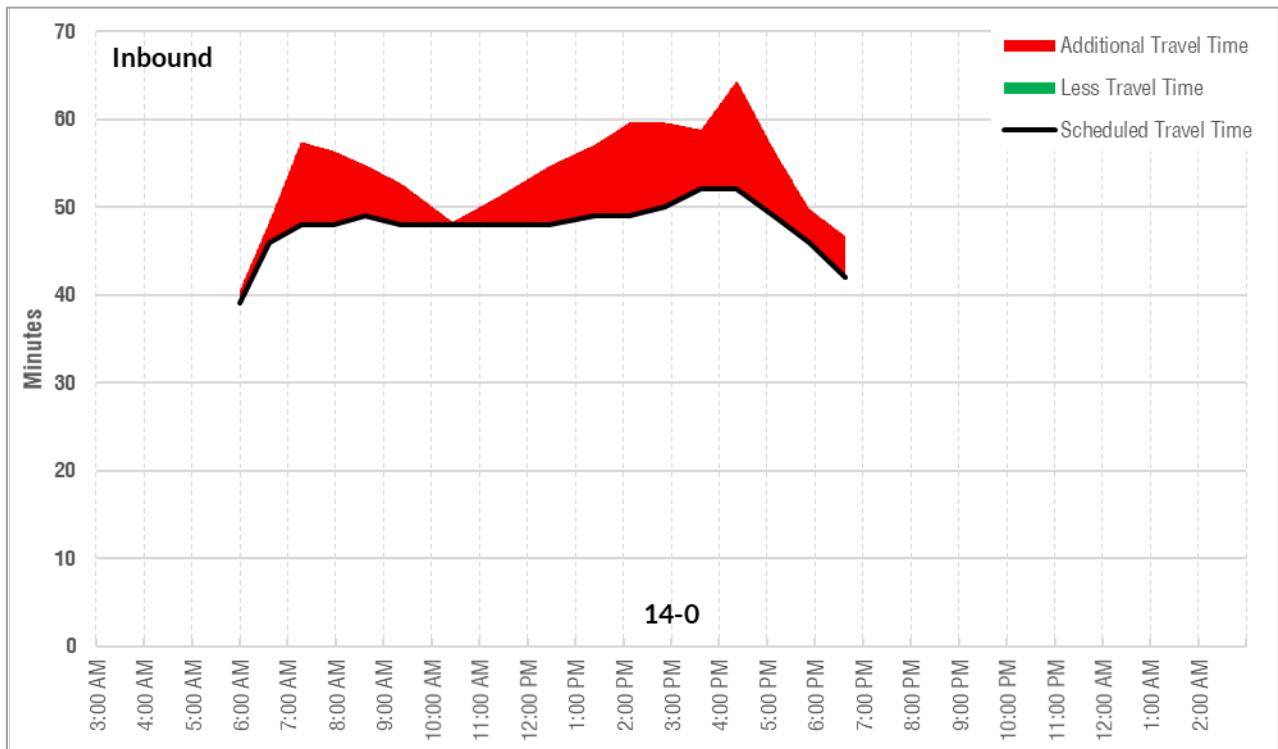
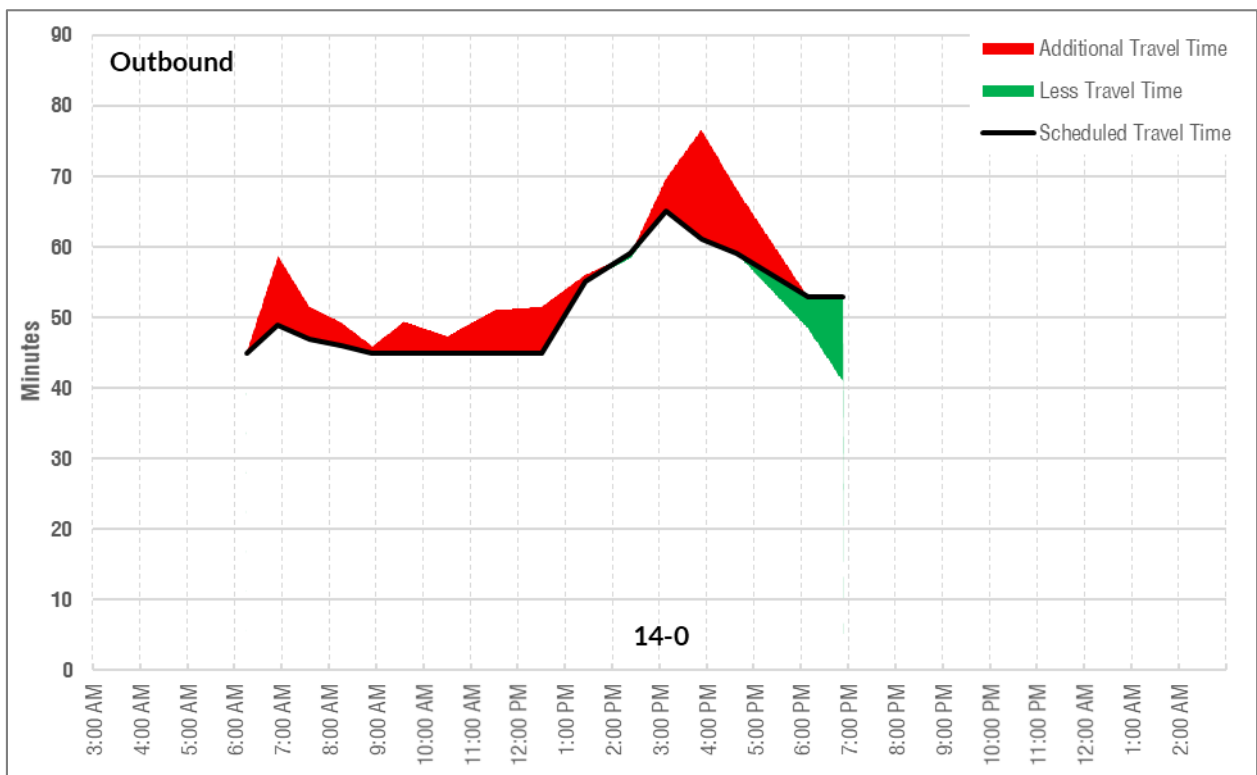


Figure 9 | Scheduled & Median Travel Time by Trip: Route 14 Outbound



Stop Spacing

The MBTA's stop spacing guidelines specify there should be four to seven stops per mile in urban areas. Route 14 has stop spacing that is very close to the maximum or higher in many areas:

- An average of 8.8 stops per mile between Roslindale Village and Hyde Park Avenue.
- An average of 6.8 stops per mile along Blue Hill Avenue and Warren Street.
- An average of just over seven stops per mile between Dudley Station and Jackson Square and between Jackson Square Station and Heath Street Station.

The consolidation of stops in these areas would speed service and improve reliability.

Summary

Route 14 is a long and circuitous route that is designed primarily to fill gaps between other higher ridership routes and to maximize connections to the rapid transit network, the Silver Line, and other bus routes. Relatively little of its service is unique, and service is infrequent and falls short of SDP span of service, frequency, and days of service standards. Its on-time performance is extremely poor, at only slightly above 50%. Still, overall ridership is moderately good.

Many of the route's issues are due to its length and circuitous alignment through congested areas, both of which negatively impact on-time performance and stretch headways beyond SDP limits. This is especially true between Dudley Square and Heath Street Station, where Route 14 runs through multiple highly congested intersections.