

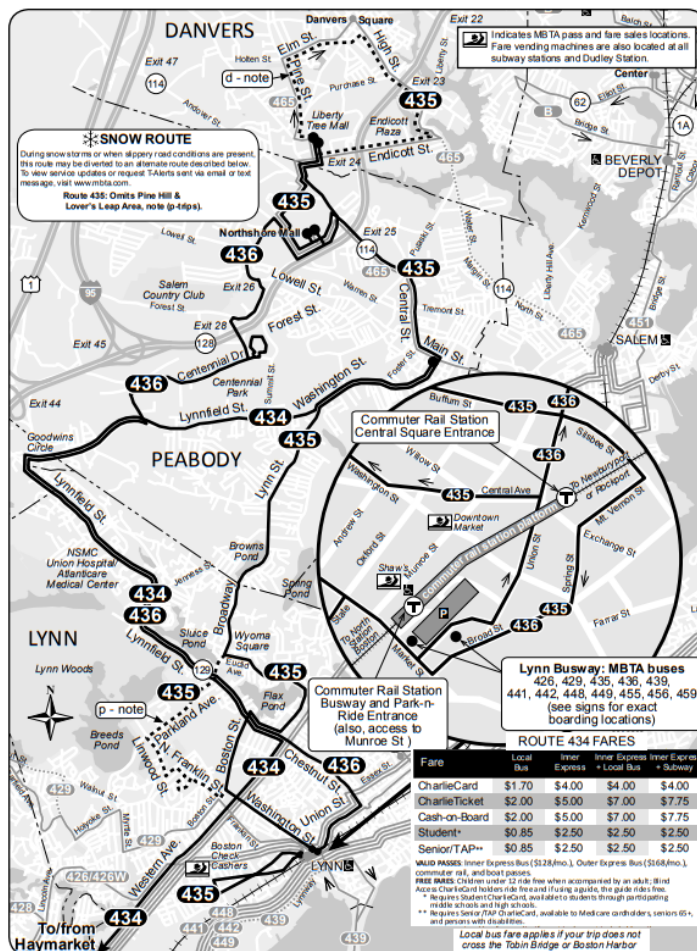
Route 434

Peabody Square - Haymarket

Route Overview

Route 434 Peabody Square – Haymarket is a Commuter route that provides service from Peabody through Lynn to Haymarket station in downtown Boston (see Figure 1). Route 434 provides neighborhood circulation via Washington Street/Lynnfield Street in Peabody, Lynnfield Street /Broadway in Lynn, Western Avenue in Lynn, and an express segment on Route 1A from Lynn to downtown Boston. Route 434 shares its alignment with Route 435 Liberty Tree Mall - Central Square (via Peabody Square) and Route 436 Liberty Tree Mall - Central Square (via Goodwin Circle). Along Western Avenue, Route 434 is one of many that operate between Lynn and downtown Boston.

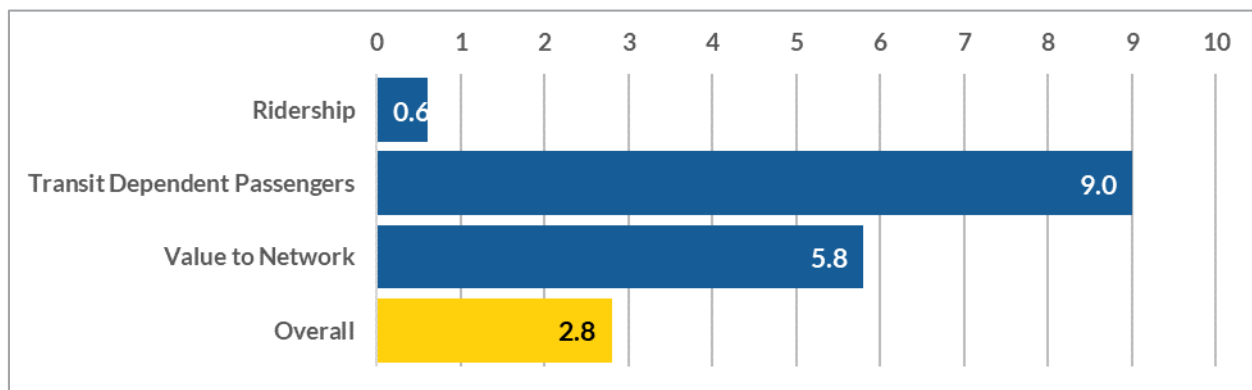
Figure 1 | Service Map



Network Importance

Route 434 is a moderately important route within the overall MBTA bus network (see Figure 2). On a relative scale of 0 to 10, Route 434 rates 0.6 in terms of ridership, 9 in terms of transit dependent ridership, and 5.8 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 2.8.

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



Service Patterns

Schedule

Route 434 operates two trips per day on weekday. An inbound trip departs Peabody Square at 6:45 AM, while an outbound trip departs Haymarket at 5:20 PM. There is no weekend service.

Route 434 does not meet the MBTA’s Span of Service and Service Frequency Standards for Commuter routes, which mandates three trips in both directions, and operation between 7:00 AM to 9:00 AM and 4:00 PM to 6:30 PM.

Table 1 | Schedule Statistics

SERVICE DAY	SPAN OF SERVICE	FREQUENCY (RANGE)	FREQUENCY (AVERAGE)	DAILY TRIPS (INBOUND/OUTBOUND)
Monday-Friday	6:45 AM to 6:59 AM 4:00 PM to 6:29 PM			1/1
Sunrise	-	-	-	-
Early AM	6:45 AM	1 Trip	-	1/0
AM Peak	-	-	-	-
Midday Base	-	-	-	-
Midday School	-	-	-	-
PM Peak	5:20 PM	1 Trip	-	0/1
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 434 consists of a single service pattern, which operates the entire route from Washington Street at Main Street to Haymarket Station on weekdays.

Table 2 | Service Patterns

PATTERN	ORIGIN	DESTINATION	UNIQUE FEATURE	TRIPS PER WKD	TRIPS PER SAT	TRIPS PER SUN
INBOUND				1	-	-
434.0	Washington Street at Main Street	Haymarket	Via Route 1A	1	-	-
OUTBOUND				1	-	-
434.0	Haymarket	Washington Street at Main Street	Via Route 1A	1	-	-

Ridership

Ridership on Route 434 is extremely low, at 42 passengers per day on average.

Ridership by Stop

Ridership at Route 434 stops is low (see Figure 3). Ridership does not exceed the passengers at any stop and 33 stops have no ridership. What ridership exists is concentrated on the Lynnfield Street/Broadway and Western Avenue portions of Route 434. In the inbound direction:

- Three passengers board at Washington Street at Main Street
- Three passengers board and one alights at the 21 stops between Washington Street at Main Street and Lynnfield Street at Trevett Avenue
- Five passengers board and zero alight at the 17 stops between Lynnfield Street at Trevett Avenue and Western Avenue opposite Linden Terrace.
- Eight passengers board and one alights at the 18 stops along Western Avenue from Western Avenue opposite Linden Street to Western Avenue at Cooper Street.
- One passenger boards and two alight at the seven stops between Western Avenue at Cooper Street and Haymarket.
- 17 passengers alight at Haymarket.

In the outbound direction, ridership generally mirrors the inbound trip. Only the stop at Haymarket and American Legion Highway at Bell Circle average more than two boardings per day and 55 stops have no ridership at all.

Ridership by Trip

Route 434's inbound trip carries 22 passengers on average (see Figure 4). Its outbound trip carries 20 passengers on average.

Figure 3 | Weekday Inbound Ridership by Stop Map

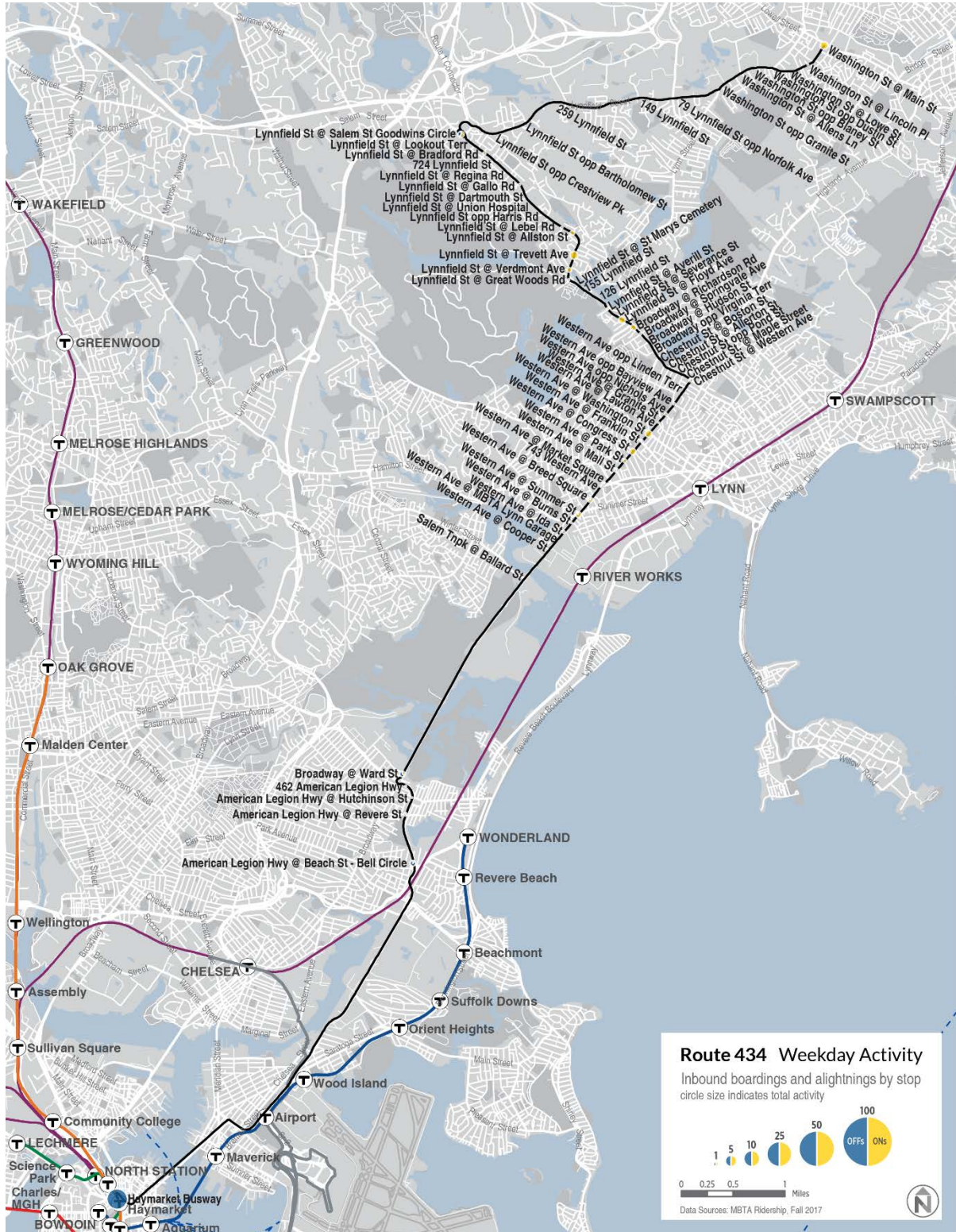


Figure 4 | Weekday Ridership by Trip: Route 434 | Inbound

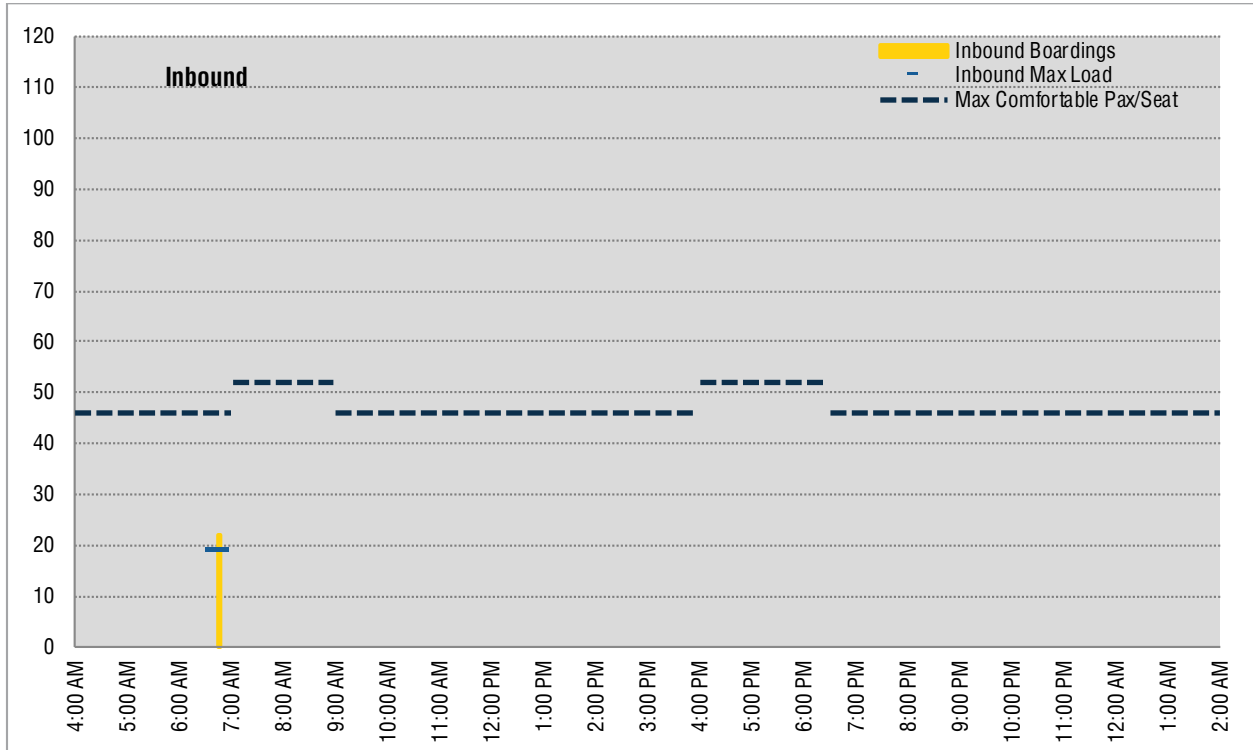
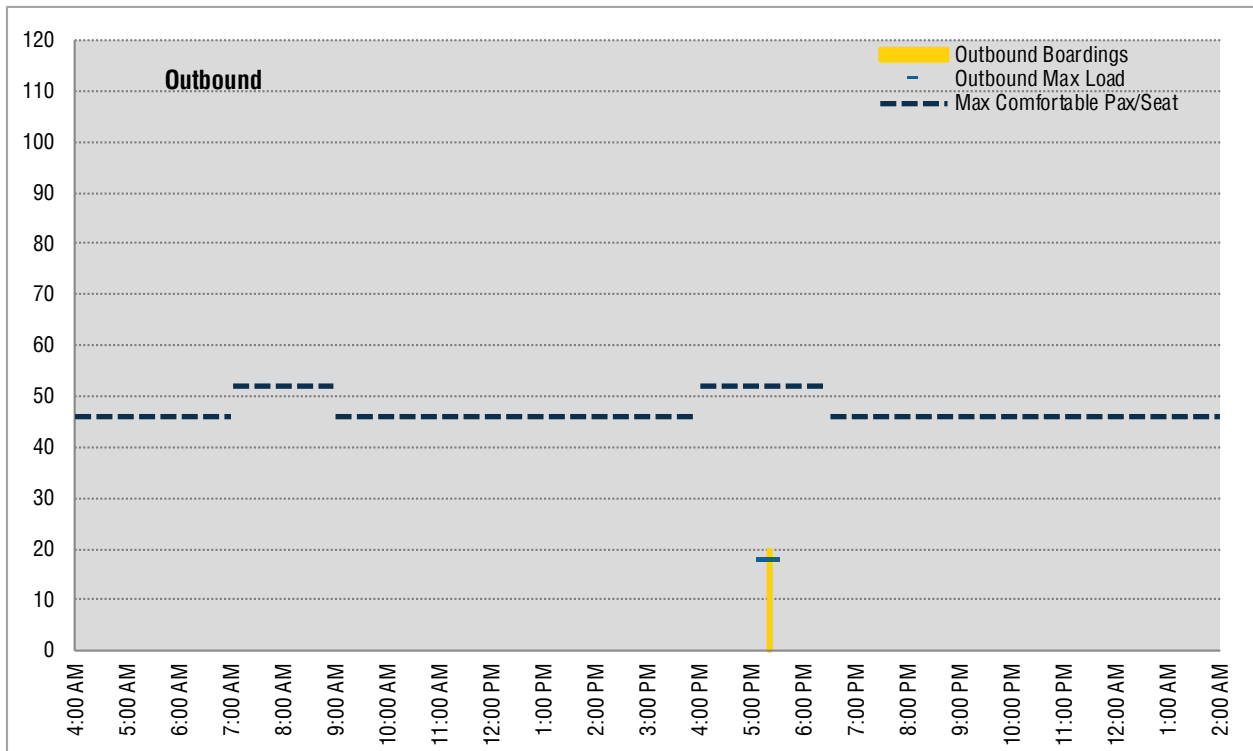


Figure 5 | Weekday Ridership by Trip: Route 434 | Outbound



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 434, 100% of passenger minutes are in comfortable conditions, which is above the 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

Route 434's overall reliability is poor, at 43%. Route 434 does not experience any dropped trips.

Table 4 | Reliability

SERVICE DAY	ORIGIN/MID-ROUTE ON-TIME PERFORMANCE	DESTINATION ON-TIME PERFORMANCE	OVERALL RELIABILITY	DROPPED TRIPS
Monday-Friday	46%	23%	43%	0
Saturday	-	-	-	-
Sunday	-	-	-	-

Running Times

Because Route 434 only operates a single trip per direction, there is no way to measure median trip times.

Stop Spacing

Route 434 has an average of 6.4 stops per mile, when segments with no stops are excluded. This figure is at the top end of the four to seven stops per mile recommended for

urban areas under MBTA guidelines. There are locations where stops are even closer together:

- On Lynnfield Street between Goodwins Circle and Western Avenue there are 8.3 stops per mile, in excess of the four to seven stops per mile recommended for urban areas under MBTA guidelines.
- On Western Avenue between Chestnut Street and Cooper Street, there are 7.9 stops per mile.

Summary

Route 434 provides a single AM and PM commute trip to an area northeast of Boston that lacks rapid transit access. Route 434's limited schedule greatly minimizes the impact and value of Route 434 to the MBTA network as a whole. However, Route 434 is the only express route option to Boston. With only about 40 daily boardings, Route 434 has very low ridership when compared to other MBTA service. Route 434 is also challenged by too many stops, an indirect alignment, a limited schedule, and suffers from reliability issues. Overall, Route 434 serves a limited function to a very small group of commuters.