

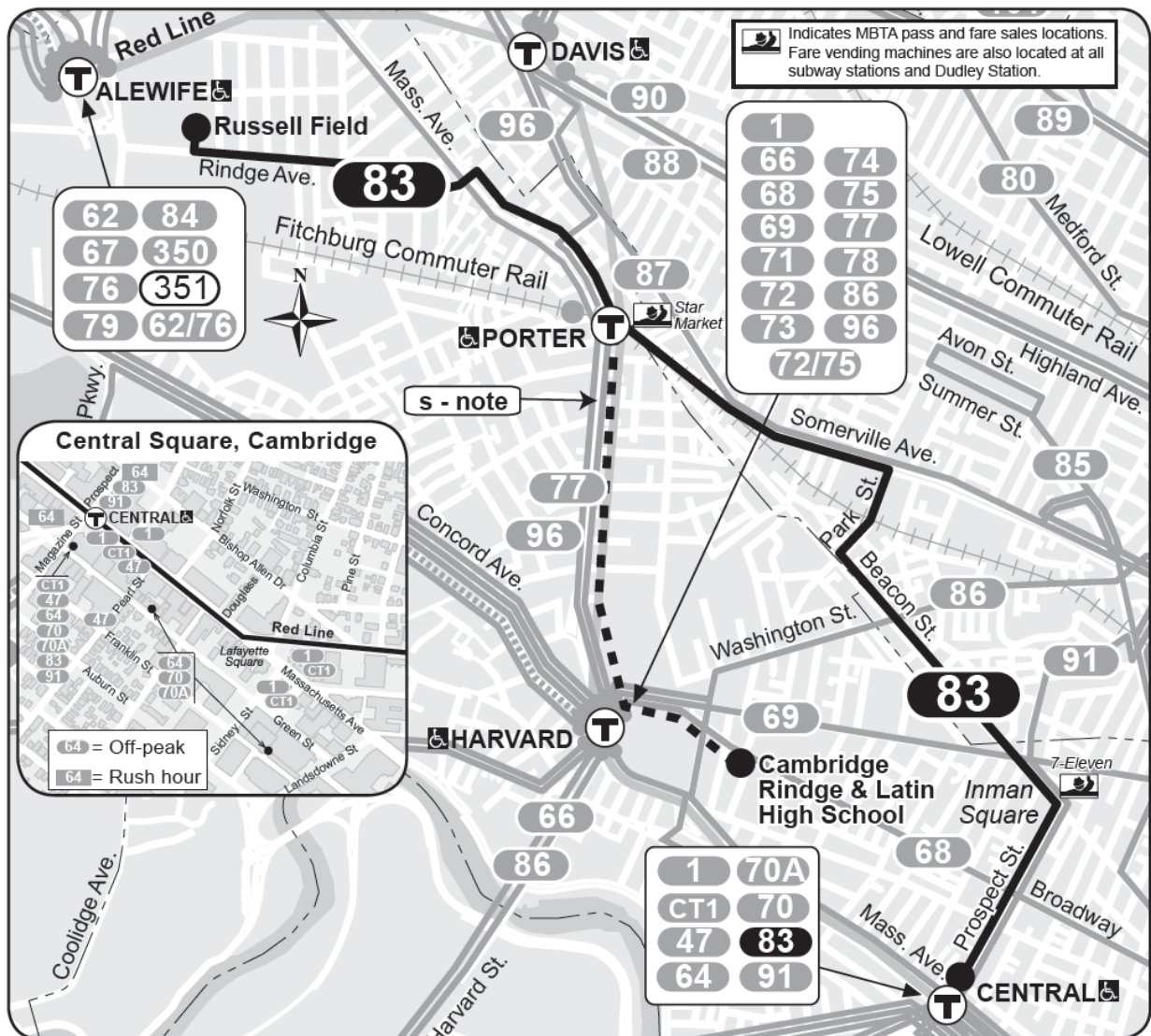
# Route 83

## Rindge Avenue – Central Square, Cambridge

### Route Overview

Route 83 Rindge Avenue – Central Square, Cambridge is a Local route that operates between North Cambridge and Central Square via Porter Square and Inman Square (see Figure 1).

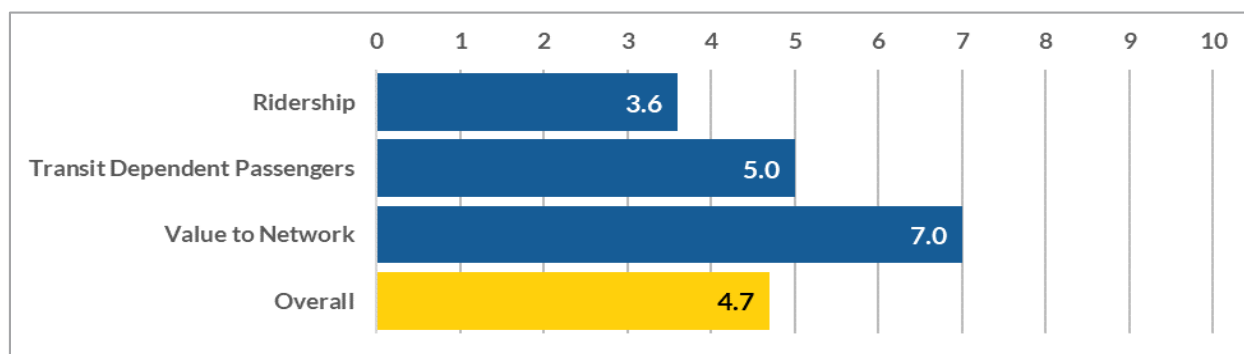
Figure 1 | Service Map



## Network Importance

Route 83 is moderately important within the overall MBTA bus network (see Figure 2). On a relative scale of 0 to 10, the route rates 3.6 in terms of ridership, 5.0 in terms of transit dependent ridership, and 7.0 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 4.7.

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



## Service Overview

### Schedule

Route 83 generally provides moderately frequent service on weekdays in the early morning, and infrequent serve at other times and on weekends (see Table 1). In more detail, on weekdays, service operates:

- Every 20 minutes from the beginning of service until 8:10 AM.
- Every 20 to 25 minutes until 10:30 AM, but mostly every 25 minutes.
- Every 30 minutes from approximately 10:30 AM to 3:30 PM.
- Every 35 minutes from approximately 3:30 PM to 5:00 PM.
- Every 25 minutes from approximately 5:00 PM to 6:45 PM.
- Every 30 minutes from approximately 6:45 PM to 7:45 PM.
- Every 55 to 60 minutes from 7:45 PM until the end of service, but mostly hourly.

Route 83 operates with a similar span of service on Saturdays from 5:10 AM to 12:50 AM, with service every 40 minutes from the beginning of service until 8:30 AM, every 25 minutes until 11:00 AM, every 30 minutes until 7:00 PM, and every 40 minutes after 7:00 PM.

Sunday service begins later, at 7:45 AM, with trips every 50 to 62 minutes throughout the day, but mostly every 50 minutes between 9:40 AM and 9:40 PM.

**Table 1 | Schedule Statistics**

SERVICE DAY	SPAN OF SERVICE	FREQUENCY (RANGE)	FREQUENCY (AVERAGE)	DAILY TRIPS (INBOUND/OUTBOUND)
<b>Monday-Friday</b>	<b>5:10 AM to 1:04 AM</b>			<b>40/42</b>
Sunrise	5:10 AM to 5:59 AM	20	20	3/2
Early AM	6:00 AM to 6:59 AM	20	20	3/3
AM Peak	7:00 AM to 8:59 AM	20 – 25	22	6/5
Midday Base	9:00 AM to 1:29 PM	20 – 30	28	9/9
Midday School	1:30 PM to 3:59 PM	30 – 35	31	5/7
PM Peak	4:00 PM to 6:29 PM	25 – 35	27	6/6
Evening	6:30 PM to 9:59 PM	25 – 60	47	5/6
Late Evening	10:00 PM to 11:59 PM	55 – 60	58	2/2
Night	12:00 AM to 1:04 AM	55	-	1/2
<b>Saturday</b>	<b>5:10 AM to 1:15 AM</b>	<b>25 – 50</b>	<b>33</b>	<b>36/35</b>
<b>Sunday</b>	<b>7:45 AM to 1:08 AM</b>	<b>50 – 62</b>	<b>51</b>	<b>20/21</b>

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

On weekdays and Saturdays, Route 83 meets both the service span and service frequency standards. On Sundays, it meets the service span standards, but technically not the service frequency standards, as two trips are spaced 62 minutes apart versus the standard of at least every 60 minutes. This could be resolved with a minor scheduling change.

### Service Patterns

All service except two school trips operate as shown with the solid line in Figure 1 (Pattern 83.1). The two school trips (Pattern 83.2) both depart from Cambridge Rindge and Latin High School east of Harvard Square on Broadway at 2:40 PM and operate between the school and Porter Square as shown with the dotted line in Figure 1.

**Table 2 | Service Patterns**

PATTERN	ORIGIN	DESTINATION	UNIQUE FEATURE	TRIPS PER WKD	TRIPS PER SAT	TRIPS PER SUN
<b>INBOUND</b>				<b>40</b>	<b>36</b>	<b>20</b>
83.1	Rindge Avenue at Russell Field	Central Square	Primary service pattern	40	36	20
<b>OUTBOUND</b>				<b>42</b>	<b>35</b>	<b>21</b>
83.1	Central Square	Rindge Avenue at Russell Field	Primary service pattern	40	35	21
83.2	Cambridge Rindge and Latin School	Rindge Avenue at Russell Field	PM school trips from Cambridge Rindge and Latin School	2	-	-

## Ridership

Route 83 serves 2,120 passengers on weekdays, 1,140 passengers on Saturdays, and 560 on Sundays.

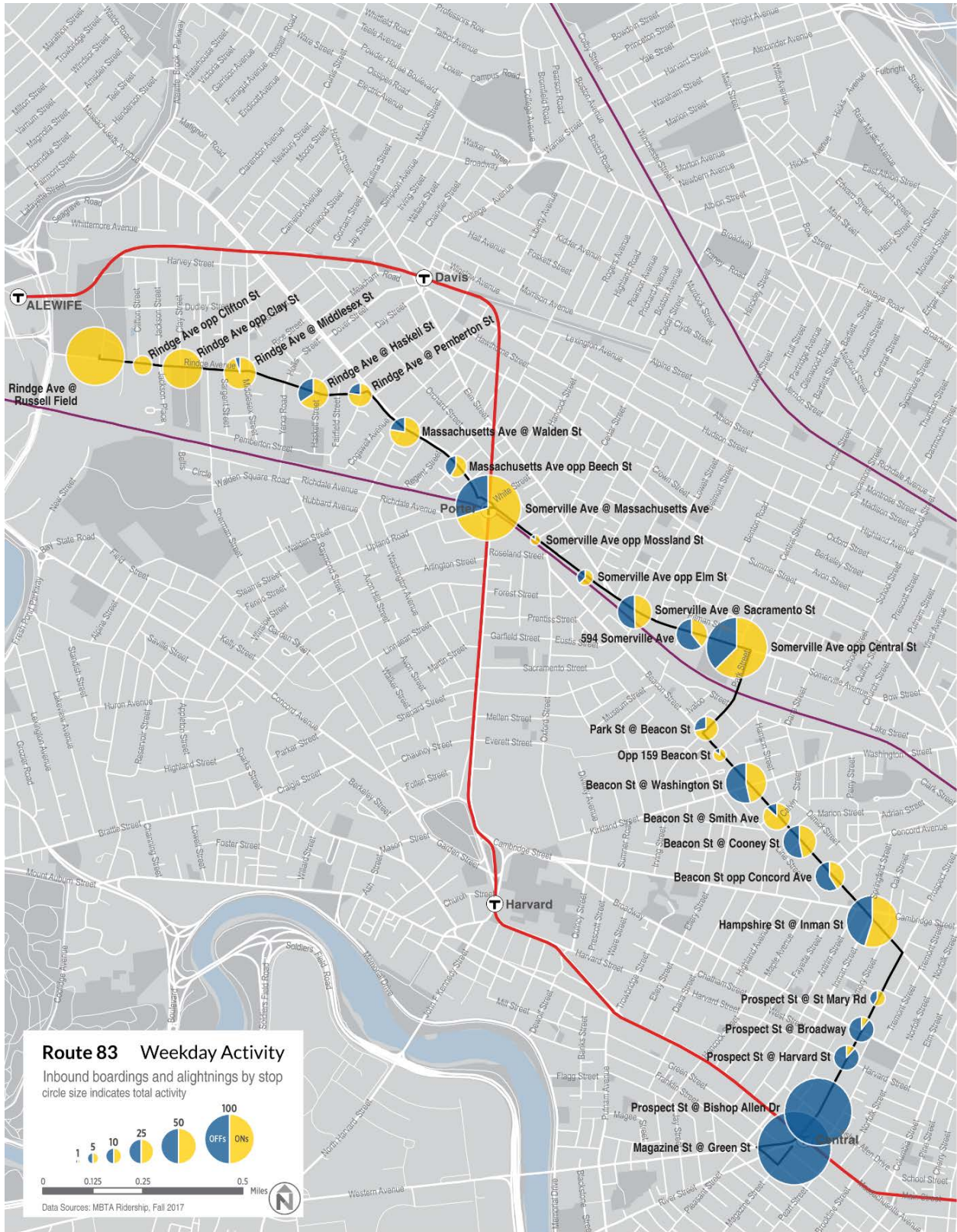
### Ridership by Stop

Route 83 serves a mix of ridership to and from intermediate locations as well as connections with the Red Line at Porter Station and Central Station. On weekday inbound trips (see Figure 3):

- 140 passengers board at the first stop at Russell Field. This stop connects with Alewife Station via the Alewife Linear Path.
- 160 passengers board and 20 alight at the five stops along Rindge Avenue.
- 40 passengers board and 20 alight at the two stops on Massachusetts Avenue before Porter Square Station.
- 120 passengers board and 50 alight at the stop at Porter Station.
- 170 passengers board and 120 alight at the five stops on Somerville Avenue and the two stops on Park Street.
- 90 passengers board and 90 alight at the four stops on Beacon Street.
- 60 passengers board and 50 alight at the stop in Inman Square.
- 10 passengers board and 240 alight at the four stops on Prospect Street. Most of the alightings – 190 – are at the stop at Bishop Allen Drive, which serves Central Square and is the most convenient for outbound Red Line transfers.
- 220 passengers alight at the last stop on Magazine Street at Green Street in Central Square. This stop is the most convenient for inbound Red Line transfers. In total, 410 passengers, or 51%, of inbound riders, alight at the two Central Square stops.

Outbound patterns are roughly the reverse of inbound. Weekend patterns are also similar, but with lower volumes.

Figure 3 | Weekday Inbound Ridership by Stop Map



## Ridership by Trip

On weekdays, ridership is highest inbound in the AM peak and outbound in the afternoon and PM peak. On inbound trips (see Figure 4):

- The first five trips between 5:10 AM and 6:30 AM all have fewer than 20 boardings.
- Ridership per trip increases until the 7:30 AM trip, which has 54 boardings and a maximum load of 31 passengers.
- Ridership declines through the midday to 14 boardings on the 12:00 PM trip, before gradually increasing again through 3:00 PM to nearly 30 passengers.
- Between 3:00 PM and 5:30 PM, all trips except one carry 20 to 30 passengers.
- Ridership then declines from 29 passengers on the 5:30 PM trip to 10 passengers on the 7:45 PM trip.
- Trips carry 10 or fewer passengers through the end of service.

On outbound trips (see Figure 5):

- Trips carry fewer than 20 passengers through 7:00 AM.
- Ridership ranges from 15 to 25 riders per trip between 7:00 AM and 2:30 PM.
- Ridership increases to 25 to 35 passengers per trip between 2:30 PM and 7:00 PM. The two school trips at 2:40 PM from Cambridge Rindge and Latin School each carry 45 passengers.
- Ridership then declines through the evening, with four passengers on the last trip at 1:04 AM.

On Saturdays, inbound and outbound ridership is strongest during the midday, with close to 30 passengers per trip (see Figure 6 and Figure 7). Early morning and late evening trips attract five boardings or fewer.

Sunday ridership is generally low to moderate. Inbound ridership is highest in the morning and mid-afternoon, when most trips carry more than 20 passengers (see Figure 8). Inbound ridership after 5:00 PM is generally below 10 passengers per trip. Outbound ridership is close to 20 passengers per trip through 6:00 PM and then around 10 passengers per trip after that time (see Figure 9).

Figure 4 | Weekday Ridership by Trip: Inbound

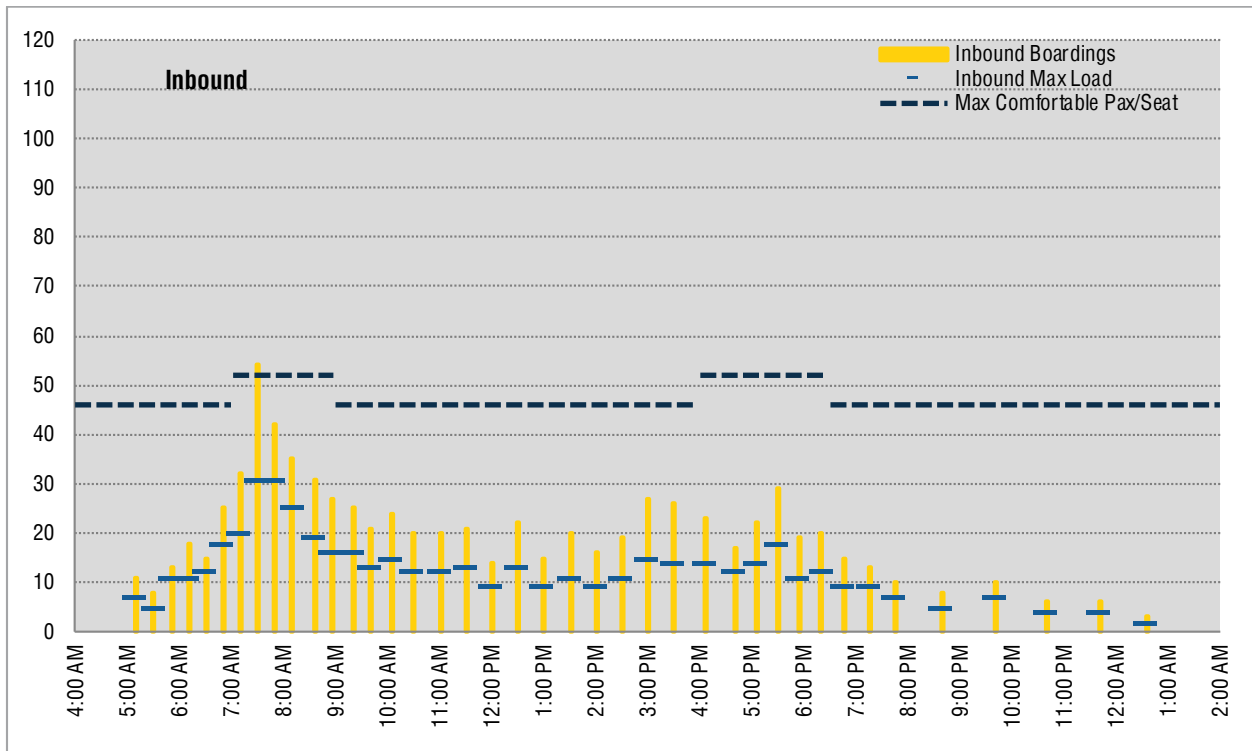


Figure 5 | Weekday Ridership by Trip: Outbound

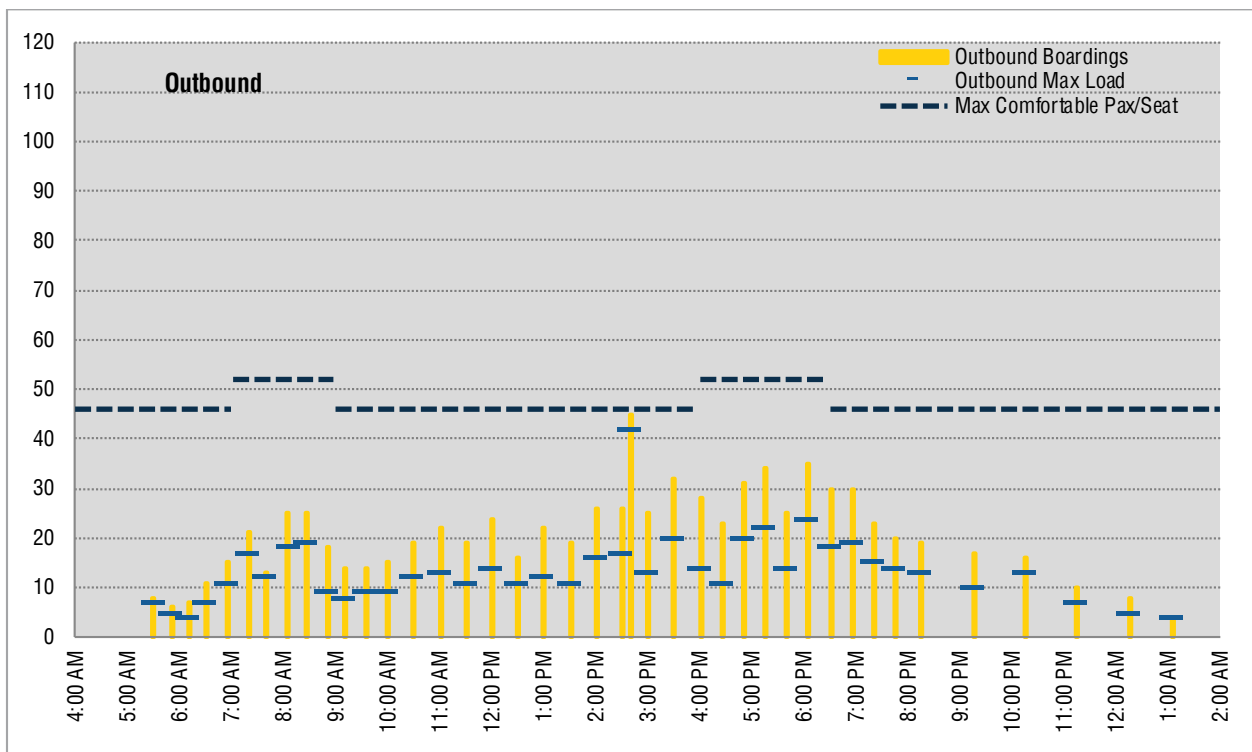


Figure 6 | Saturday Ridership by Trip: Inbound

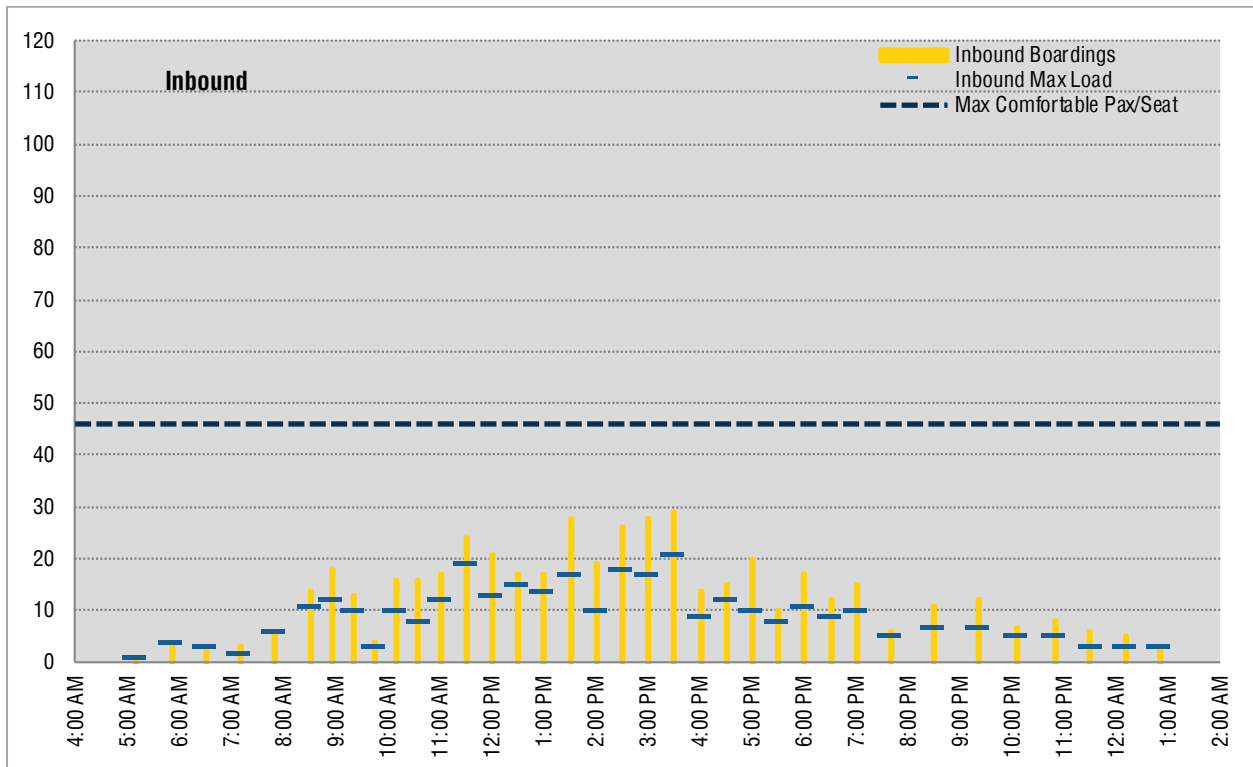


Figure 7 | Saturday Ridership by Trip: Outbound

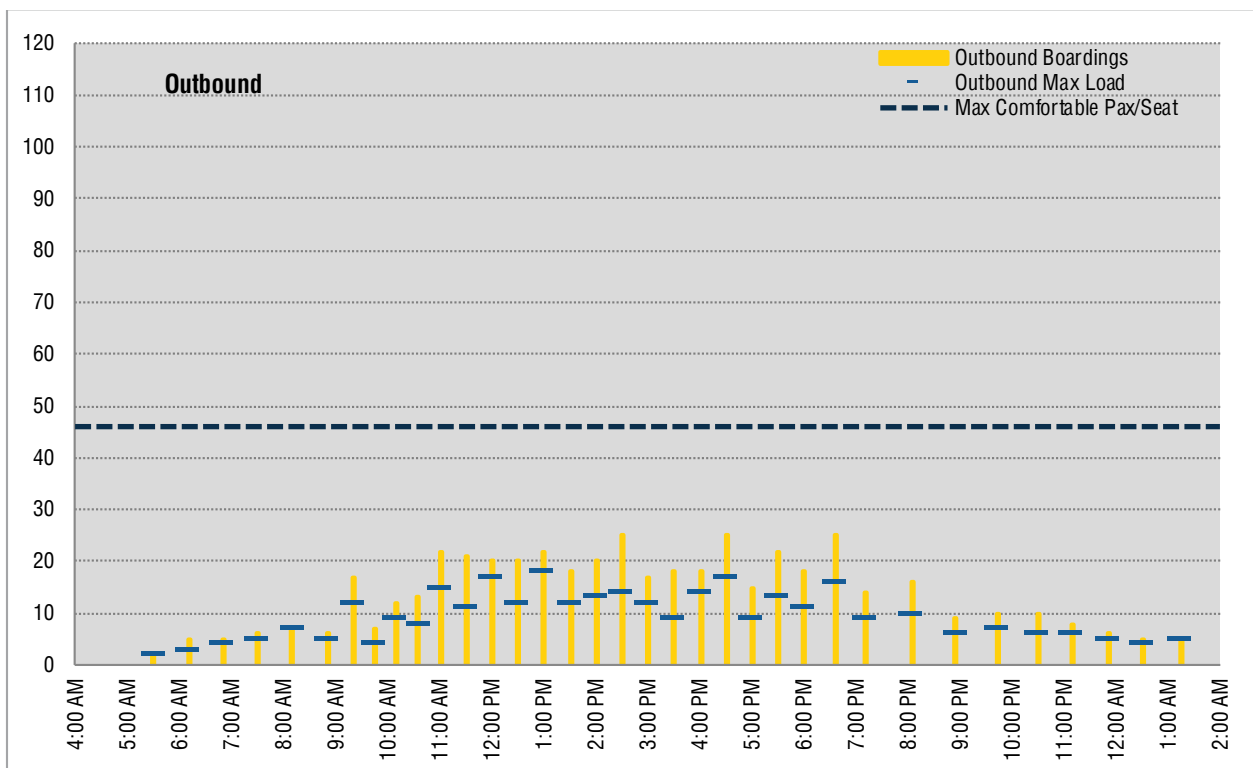




Figure 8 | Sunday Ridership by Trip: Inbound

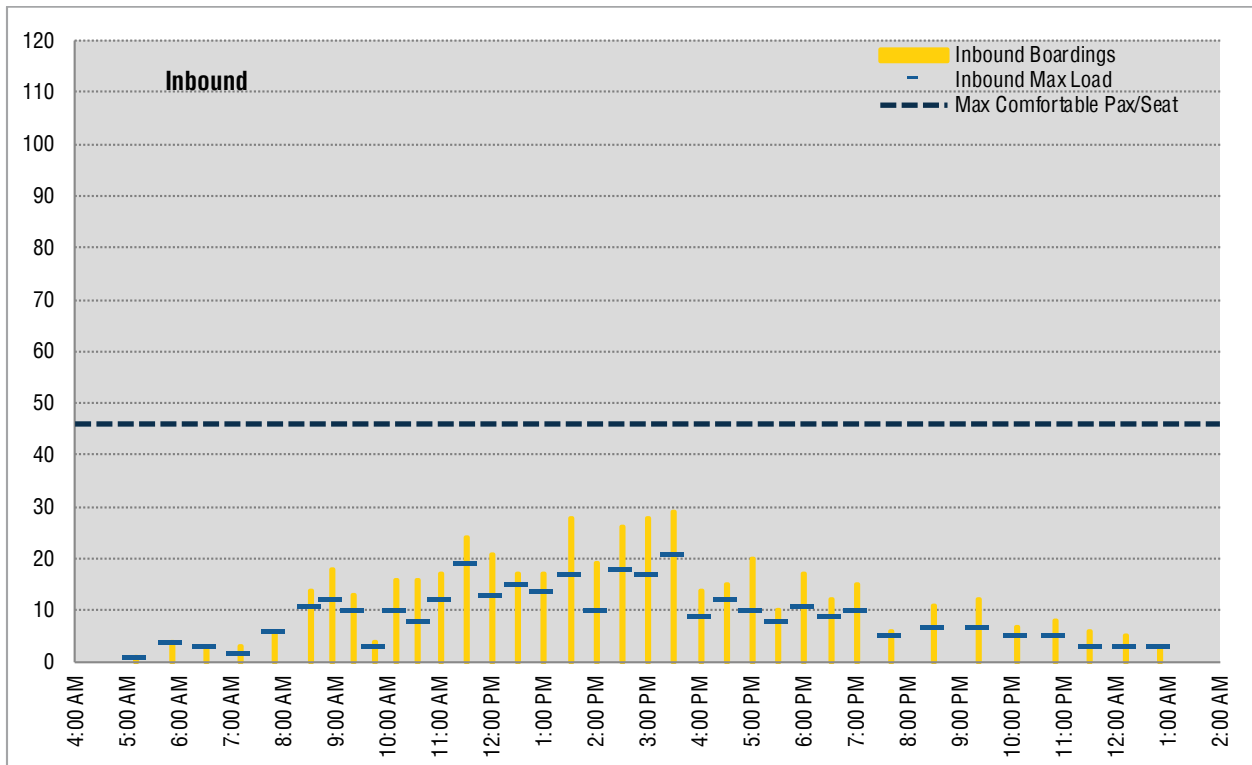
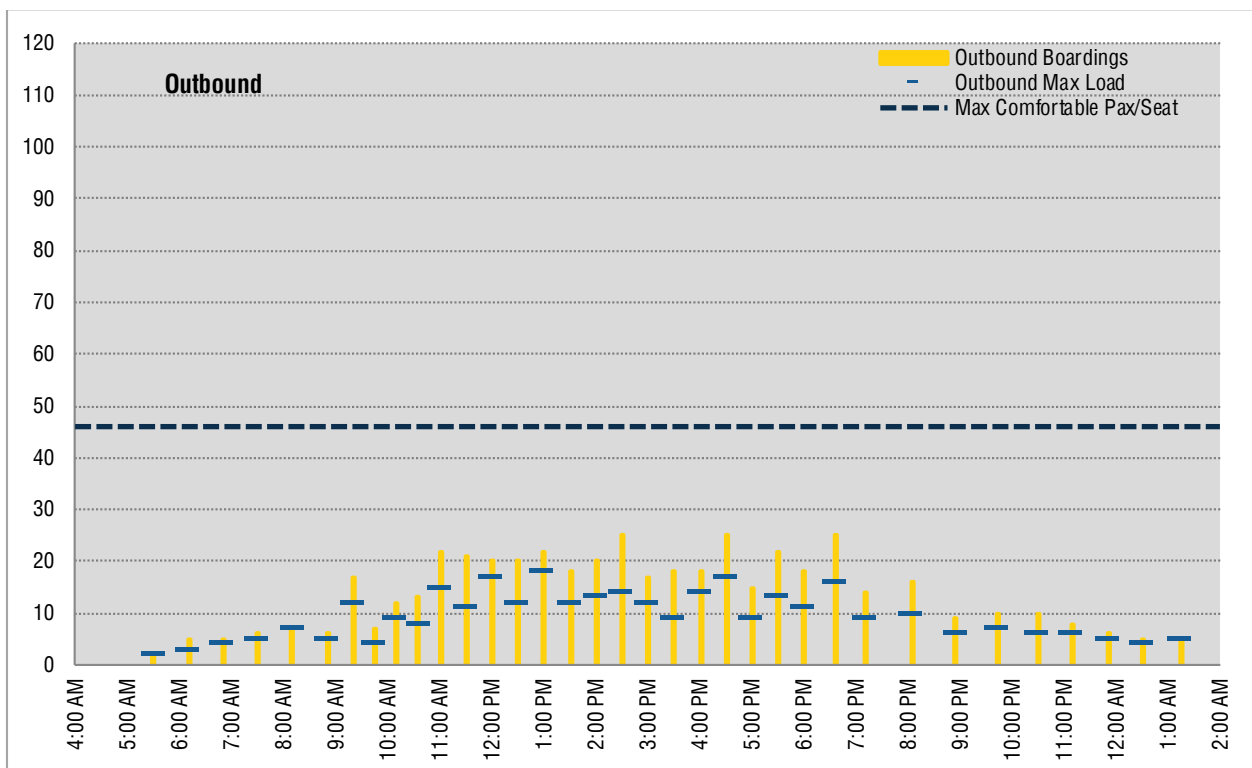


Figure 9 | Sunday Ridership by Trip: Outbound



## Passenger Comfort

On weekdays, 99.6% of passenger minutes are in comfortable conditions, which is above the target of 96% (see Table 4). On weekends, 100% of passenger minutes are in comfortable conditions.

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>	99.6%	100%	100%

## Reliability and Speed

### Reliability

Route 83’s overall reliability is 67% on weekdays, 65% on Saturdays, and 66% on Sundays (see Table 5). These levels are all below the minimum standard of 70% and due mostly to peak period running times that are longer than 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>	67%	65%	67%	0.3%
<b>Saturday</b>	67%	65%	65%	-
<b>Sunday</b>	67%	65%	66%	-

### Running Times

Actual running times are longer than scheduled on most trips throughout the day in both directions (see Figure 10 and Figure 11). Differences generally are generally small in both directions, but up to five minutes during the AM peak inbound and the PM peak outbound.

### Stop Spacing

Route 83 has an average of 7.2 stops per mile, which exceeds the four to seven stops per mile recommended for urban areas under MBTA guidelines.

Figure 10 | Scheduled & Median Travel Time by Trip: Route 83 Inbound

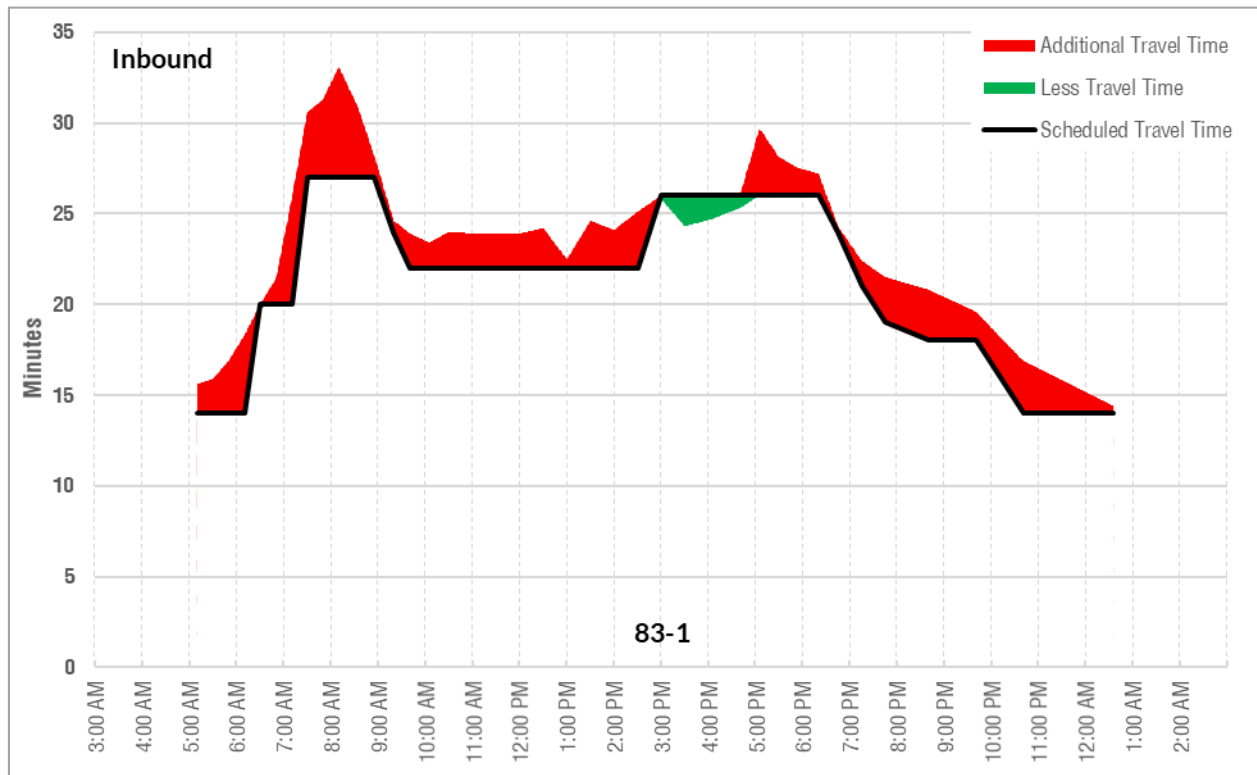
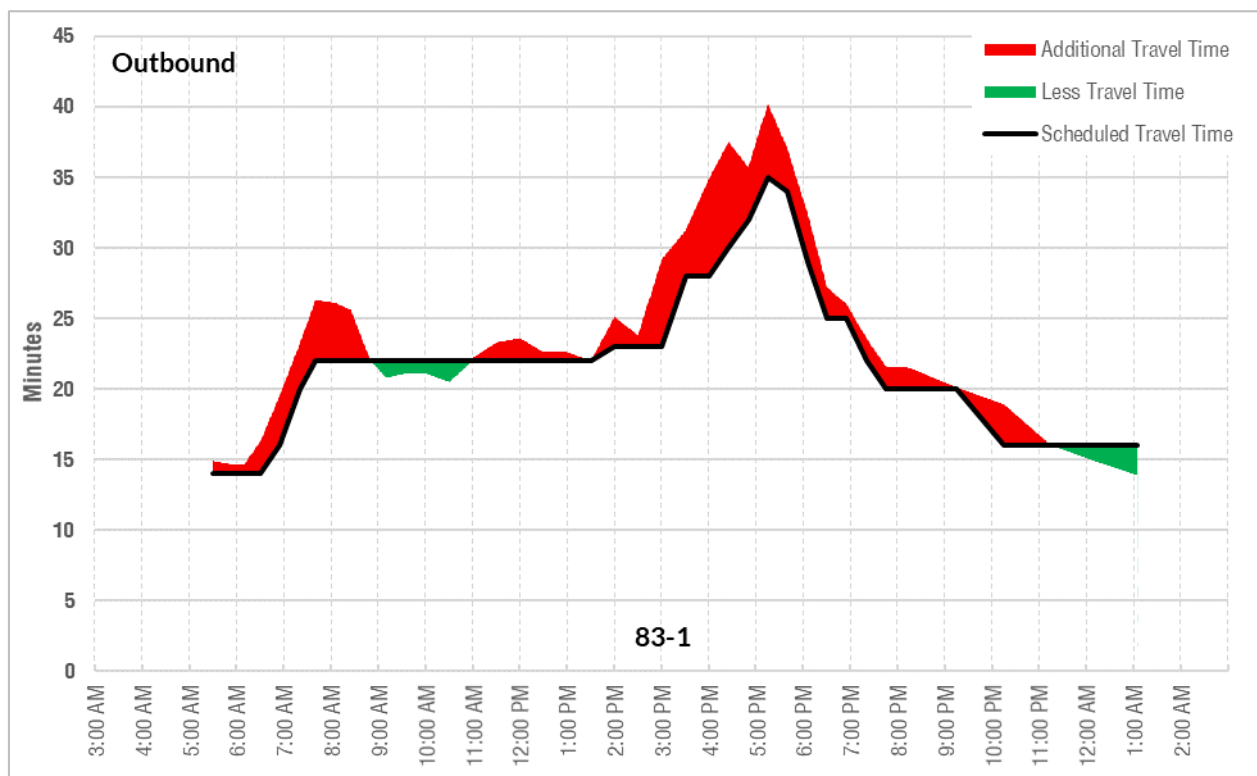


Figure 11 | Scheduled & Median Travel Time by Trip: Route 83 Outbound



## Summary

Route 83 is designed primarily to fill gaps in the Cambridge bus network and performs relatively well. Its major issue is that on-time performance is below standard.