

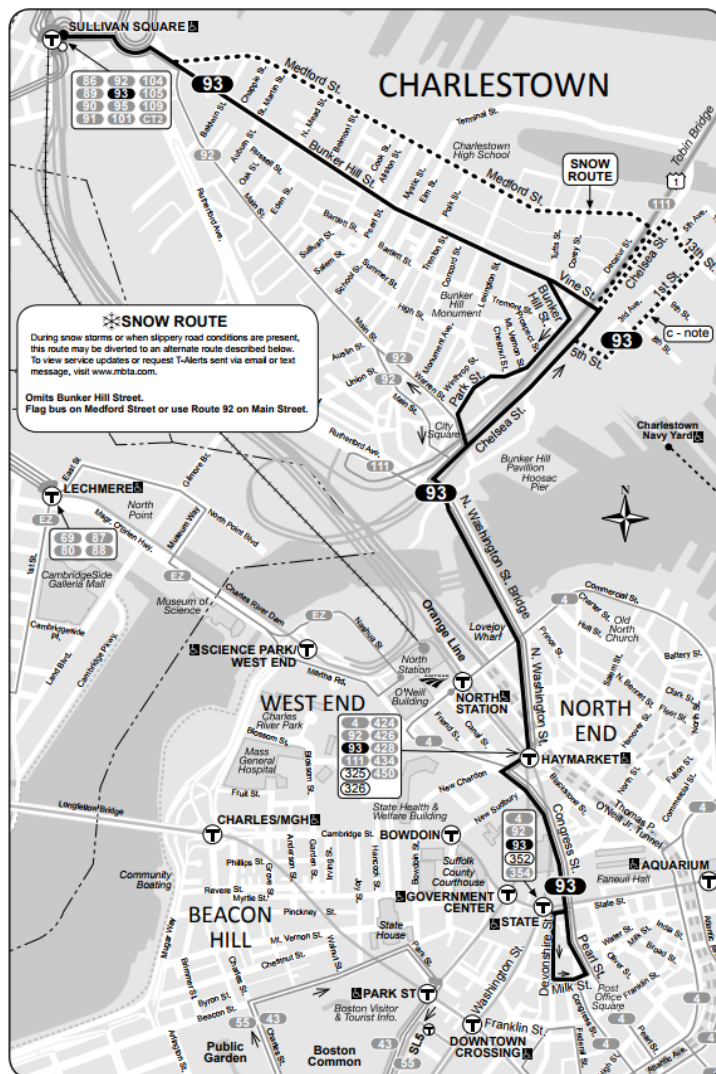
Route 93

Sullivan Square – Downtown Boston

Route Overview

Route 93 Sullivan Square – Downtown Boston is a Local bus route that operates between Sullivan Square Station and Downtown Boston (see Figure 1). It primarily operates along Bunker Hill Street in Charlestown, the North Washington Street Bridge and North Washington Street between Charlestown and Haymarket, and Congress Street between Haymarket and the financial district.

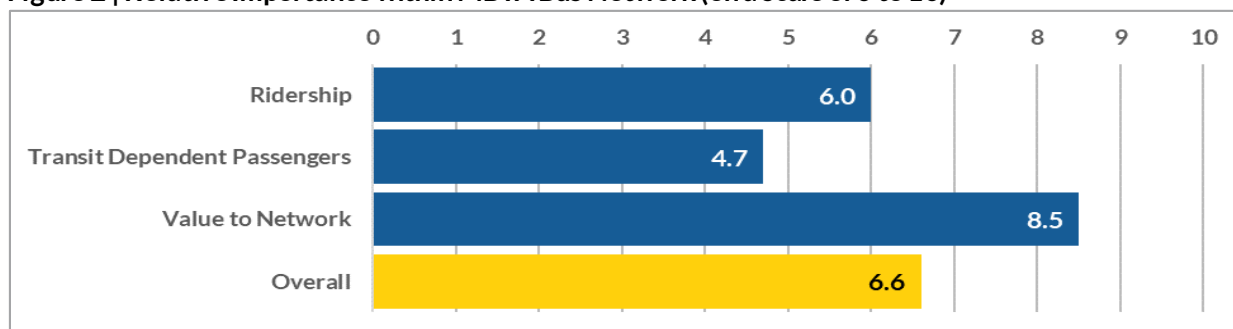
Figure 1 | Route Map



Network Importance

Route 93 is of significant importance to the overall network (see Figure 2). On a relative scale of 0 to 10, the route rates 6.0 in terms of ridership, 4.7 in terms of transit dependent ridership, and 8.5 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 6.6.

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



Service Overview

Schedule

On weekdays, Route 93 provides frequent service during peak periods, moderately frequent service during the midday, and infrequent service through most of the evening and night (see Table 1). Service operates from 4:48 AM to 1:30 AM with the following frequencies:

- Service prior to 6:00 AM operates every 30 to 48 minutes, but mostly every 30 minutes.
- Between 6:00 AM and 9:00 AM, service operates every seven to 34 minutes, but averages every 10 minutes in the early AM and eight minutes in the AM peak.
- Between 9:00 AM and 4:00 PM service operates every three to 20 minutes, and averages every 16 minutes.
- PM peak service operates every eight to 19 minutes, but averages every 11 minutes.
- Evening service transitions from as frequently as every eight minutes to every 36 minutes, but averages every 26 minutes.
- Late evening service operates every 35 minutes to every 60 minutes, but mostly every 60 minutes.
- Night service operates every 60 to 65 minutes, but mostly every 65 minutes.

Table 1 | Schedule Statistics

SERVICE DAY	SPAN OF SERVICE	FREQUENCY (RANGE)	FREQUENCY (AVERAGE)	DAILY TRIPS (INBOUND/OUTBOUND)
Monday-Friday	4:49 AM to 1:31 AM			75/76
Sunrise	4:43 AM to 5:59 AM	30 - 48	30	1/2
Early AM	6:00 AM to 6:59 AM	9 - 34	10	6/4
AM Peak	7:00 AM to 8:59 AM	7 - 15	8	16/14
Midday Base	9:00 AM to 1:29 PM	6 - 18	17	16/18
Midday School	1:30 PM to 3:59 PM	3 - 20	15	9/10
PM Peak	4:00 PM to 6:29 PM	8 - 19	11	15/13
Evening	6:30 PM to 9:59 PM	8 - 36	26	8/11
Late Evening	10:00 PM to 11:59 PM	35 - 60	60	2/2
Night	12:00 AM to 1:31 AM	60 - 65	65	2/2
Saturday	4:48 AM to 1:40 AM	20 - 60	25	47/48
Sunday	5:28 AM to 12:23 AM	30 - 60	52	23/23

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

On Saturdays, service operates from 4:48 AM to 1:40 AM. With the exception of the first two inbound trips that are spaced further apart, service operates with clockface headways every 20 minutes until around 7:00 PM. Frequencies then lengthen to up to 60 minutes through the end of service.

On Sundays, service operates from 5:28 AM to 12:23 AM. Service before 9:30 AM mostly operates every 60 minutes. It then operates every 40 to 45 minutes until around 7:00 PM, and then returns to every 60 minutes

Route 93 meets the span of service and frequency standards for Local routes.

Since the development of this document, late night service was added in the fall of 2018.

Service Patterns

Pattern 93.1 is the primary service pattern, and operates between Sullivan Square Station and Downtown Boston via Bunker Hill Street, as shown in Figure 1, on all days. Additional service patterns include (see Table 2):

- Pattern 93.5 runs the first AM inbound trip on all days, departing from Clarendon Hill and traveling to Haymarket Station.
- Pattern 93.2 makes deviations via the Navy Yard inbound from 8:54 AM to 6:03 PM and outbound from 7:24 AM to 6:07 AM on weekdays, as shown with the dotted line labeled “c-note” in Figure 1.
- Pattern 93.4 runs one inbound school trip at 2:15 PM between Bunker Hill Street at Concord Street and Haymarket Station.

- Pattern 93.7 runs the last eight PM round-trips on weekdays, the last seven PM round-trips on Saturdays, and last six PM round-trips on Sundays, between Sullivan Square Station and Haymarket Station. Note that since this document was developed, the MBTA has reconfigured the busways at Sullivan Station and all Route 93 service now departs from the same level.
- Pattern 93.0 runs two outbound trips on weekdays, the first eight AM round-trips on Saturdays, and the first seven AM round-trips on Sundays, between Sullivan Square Station and Haymarket Station.

Table 2 | Service Patterns

PATTERN	ORIGIN	DESTINATION	UNIQUE FEATURE	TRIPS PER WKD	TRIPS PER SAT	TRIPS PER SUN
INBOUND				75	48	23
93.0	Sullivan Square Station	Haymarket Station	AM short turns; use upper busway at Sullivan	-	8	7
93.1	Sullivan Square Station	Devonshire at Milk Street	Primary pattern via Bunker Hill Street	52	33	11
93.2	Sullivan Square Station	Devonshire at Milk Street	Via Medford Street and Navy Yard	14	-	-
93.4	Bunker Hill at Concord	Congress at Haymarket Station	PM school trip	1	-	-
93.5	Clarendon Hill	Haymarket Station	First inbound trip	1	1	1
93.7	Sullivan Square Station	Haymarket Station	Evening short-turns; use lower busway at Sullivan Station	8	7	5
OUTBOUND				76	48	23
93.0	Haymarket Station	Sullivan Square Station	Short turns; use upper busway at Sullivan	2	8	7
93.1	Devonshire at Milk Street	Sullivan Square Station	Primary pattern	49	33	11
93.2	Devonshire at Milk Street	Sullivan Square Station	Via Medford Street and Navy Yard	17	-	-
93.7	Congress at Haymarket Station	Sullivan Square Station	PM Short turns; use upper busway at Sullivan	8	7	5

Ridership

Route 93 is one of the MBTA's higher ridership routes and carries 4,500 passengers on weekdays, 1,850 on Saturdays, and 900 on Sundays. It ranks 27th in terms of weekday ridership, 30th in terms of Saturday ridership, and 40th in terms of Sunday ridership.

Ridership by Stop

Route 93 is used primarily by Charlestown residents to connect with the Orange Line and to travel to Downtown Boston. On weekday inbound trips (see Figure 3):

- 600 passengers, or 28% of all inbound riders, board at Sullivan Square Station. Most of these passengers are returning home to residences along Bunker Hill Street.
- Ridership per stop along Bunker Hill Street is relatively low between Sullivan Square and School Street, with 240 boardings and 90 alightings across six stops.
- Ridership increases significantly between School Street and the remaining four stops on Bunker Hill Street with 1,030 passengers boarding and 700 alighting.
- A total of 150 passengers board and 60 alight at the remaining three stops in Charlestown.
- 20 passengers board and 340 alight on North Washington Street at Medford Street in the North End.
- 20 passengers board and 620 alight at Haymarket Station. The alighting passengers represent 28% of all inbound passengers.
- 310 passengers, or 14% of all passengers, alight at the last stop on Devonshire Street at Milk Street.

The 14 inbound trips that deviate via the Navy Yard serve a total of 60 boardings and 40 alightings, or an average of four boardings and three alightings per trip. Outbound ridership on the 17 outbound trips is lower at 30 boardings and 40 alightings.

Weekday outbound ridership by stop patterns are generally the reverse of inbound patterns. However, outbound ridership is 16% higher than inbound ridership.

Weekend boardings and alightings by stop generally mirror weekday patterns, but with lower volumes. One exception is that proportionally more trips are made to and from Haymarket Station and fewer to and from the Financial District.

Figure 3 | Weekday Inbound Ridership by Stop Map



Ridership by Trip

On weekdays, inbound ridership is somewhat oriented toward commuter travel (see Figure 4):

- Ridership starts at close to 30 passengers on the 5:30 AM trip¹ and then increases to over 40 per trip by 6:30 AM.
- Between 6:30 AM and close to 9:00 AM, ridership per trip ranges from 50 to over 70. However, because of turnover along the route, no trips regularly exceed capacity.
- From 9:00 AM to 10:30 AM, ridership declines and then generally ranges from 20 to 30 passengers until 4:30 PM.
- Ridership per trip is below 20 on most PM peak trips.
- After 6:00 PM, ridership is less than 15 passengers per trip.

Outbound patterns are significantly different (see Figure 5):

- Ridership starts at 20 passengers on the first trip at 5:03 AM and then increases to nearly 40 by just before 6:00 AM.
- It then ranges from 40 to 50 passengers on most trips until 9:00 AM. Many of these passengers are making inbound trips via Sullivan Square Station to avoid congestion-related delays on inbound service.
- Ridership per trip then declines to 20 passengers per trip around 11:00 AM.
- It then increases steadily to 50 passengers per trip just before 3:00 PM and is as high as 61 through 5:00 PM. Many trips are just below, at, or just above capacity.
- After 5:00 PM, ridership per trip declines to 20 by 6:00 PM.
- It then remains at around 20 passengers per trip through 11:30 PM, and then declines to less than 10 passengers on the last outbound trip at 1:23 PM.

¹ Data was compiled before the implementation of the 4:48 AM trip.

Figure 4 | Weekday Ridership by Trip: Inbound

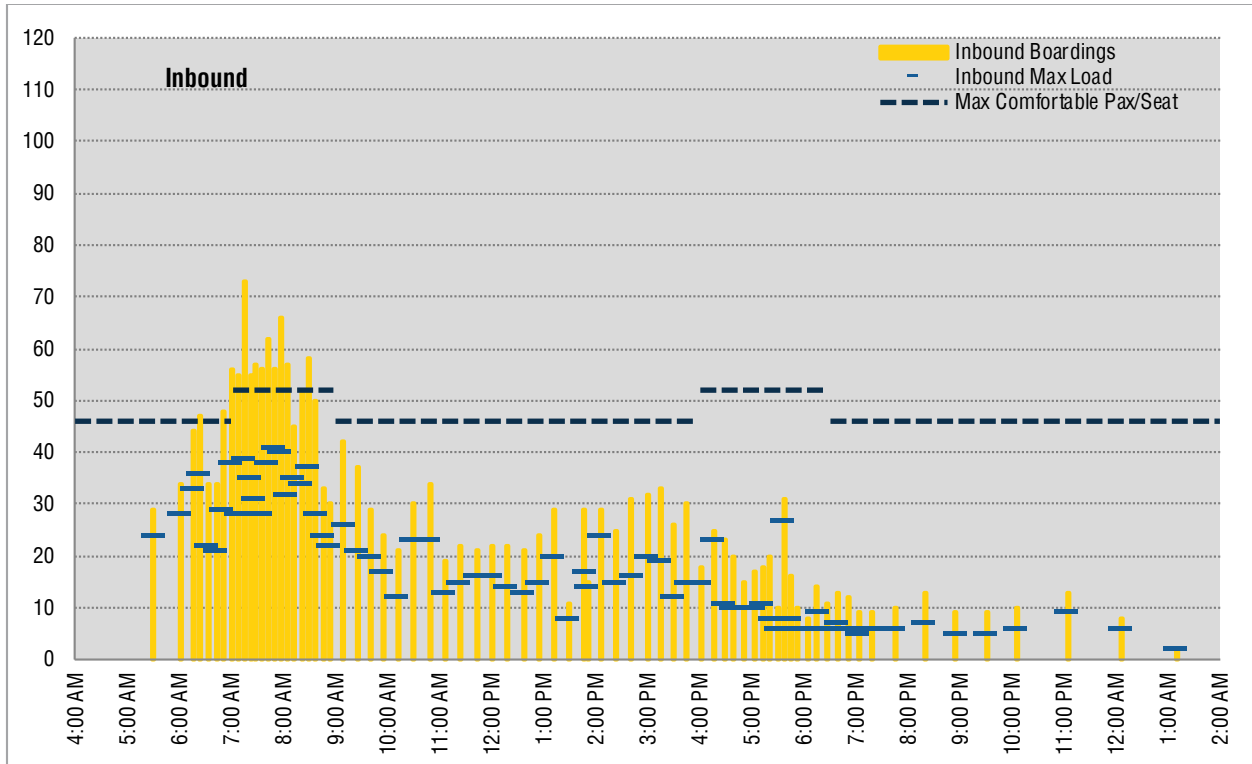
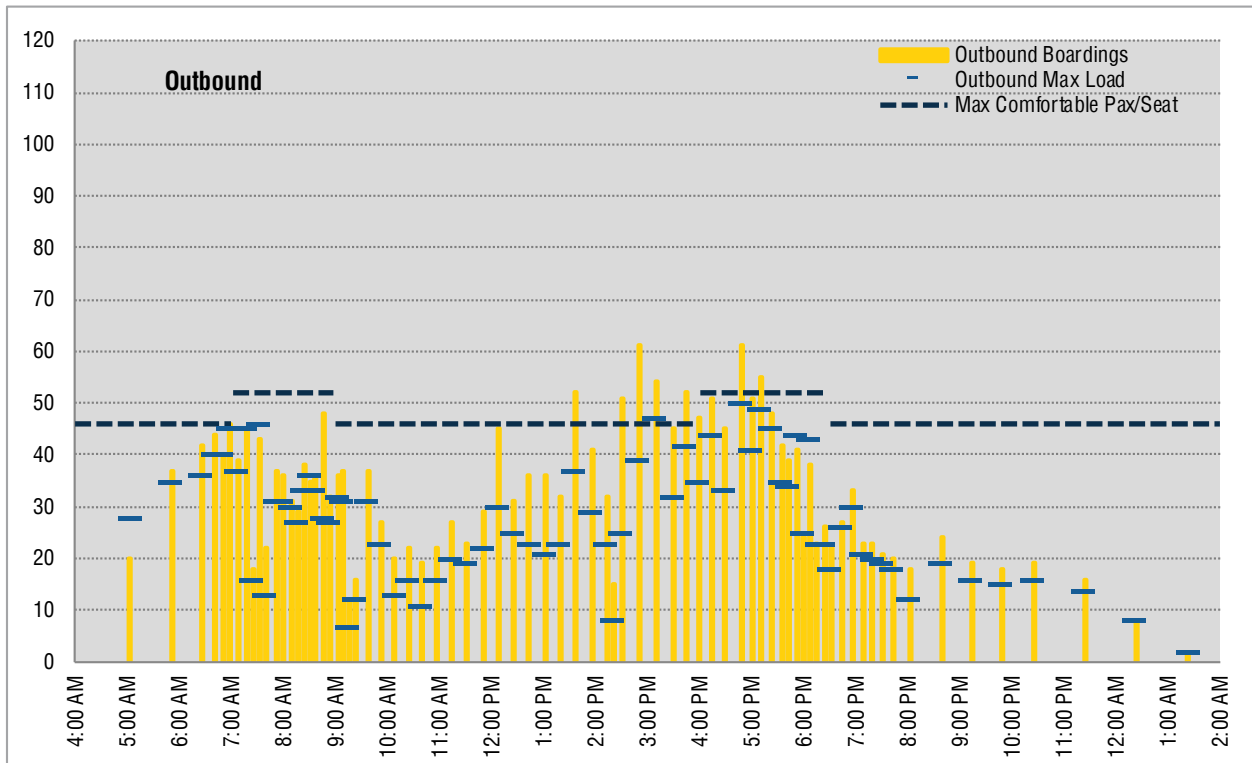


Figure 5 | Weekday Ridership by Trip: Outbound



On Saturdays:

- Inbound trips generally carry 20-plus passengers per trip between 7:30 AM and 7:00 PM and 10 or less before and after those times (see Figure 6).
- Outbound trips carry higher ridership per trip; generally 20 to 30 passengers per trip between 8:45 AM and 7:30 PM (see Figure 7). However, some trips carry close to 40 passengers and one carries over 50.
- Early outbound trips carry around 10 passengers, and trips after 7:30 PM generally carry 10 to 20 passengers. However, the last two trips carry fewer than five.

On Sundays:

- Inbound trips generally carry 20 to 30 passengers per trip from the start of service to 4:00 PM.
- Ridership then declines to less than 10 through the end of service with the exception of the 10:00 PM trip which carries 30 (see Figure 8).
- Outbound trips start with fewer than 10 passengers and then grows to over 30 riders by 11:30 AM (see Figure 9).
- Outbound ridership then ranges from 30 to over 40 passengers per trip until after 6:00 PM, when it declines rapidly to fewer than 10 by 8:30 PM, where it remains through the end of service.

Figure 6 | Saturday Ridership by Trip: Inbound

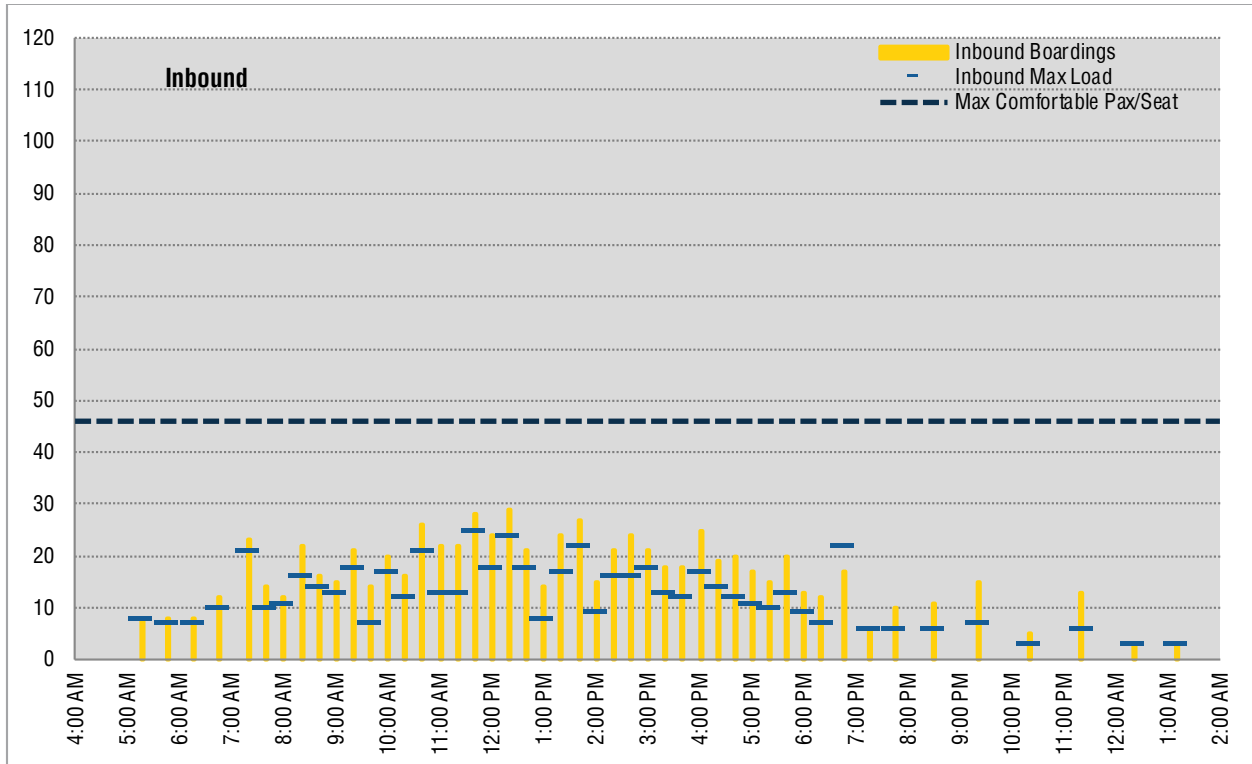


Figure 7 | Saturday Ridership by Trip: Outbound

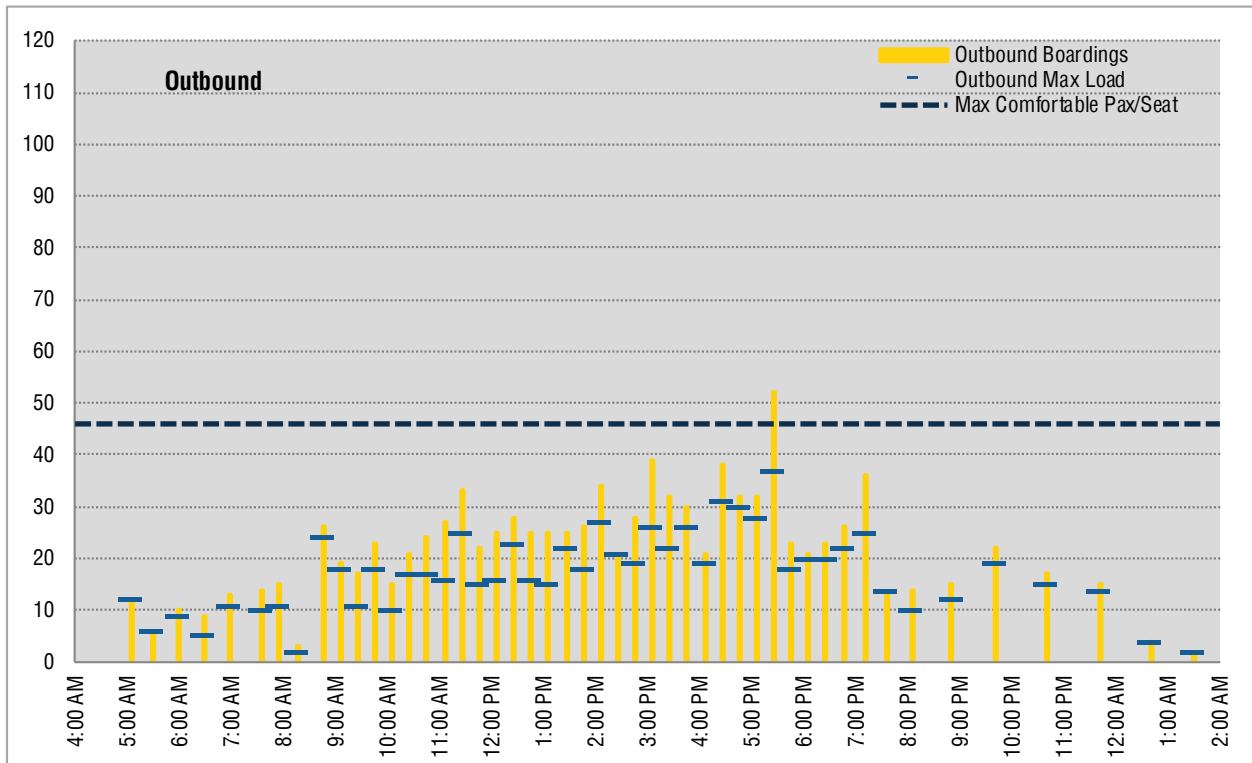


Figure 8 | Sunday Ridership by Trip: Inbound

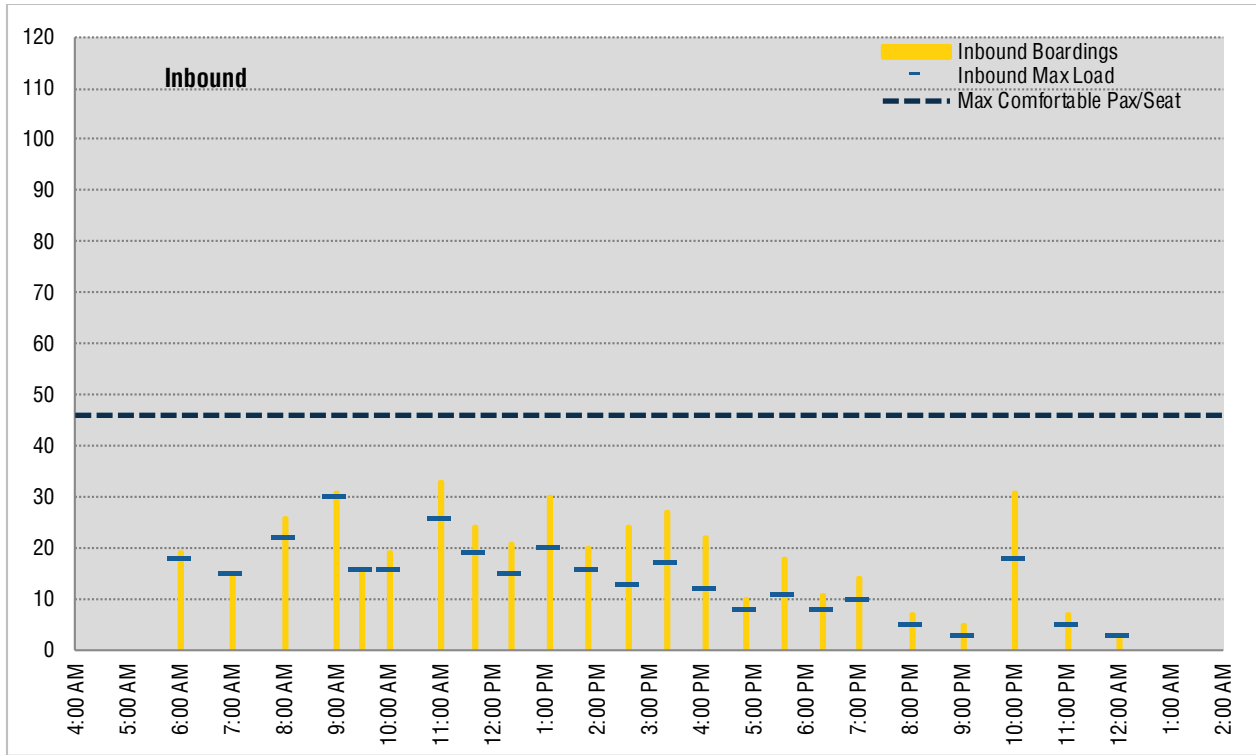
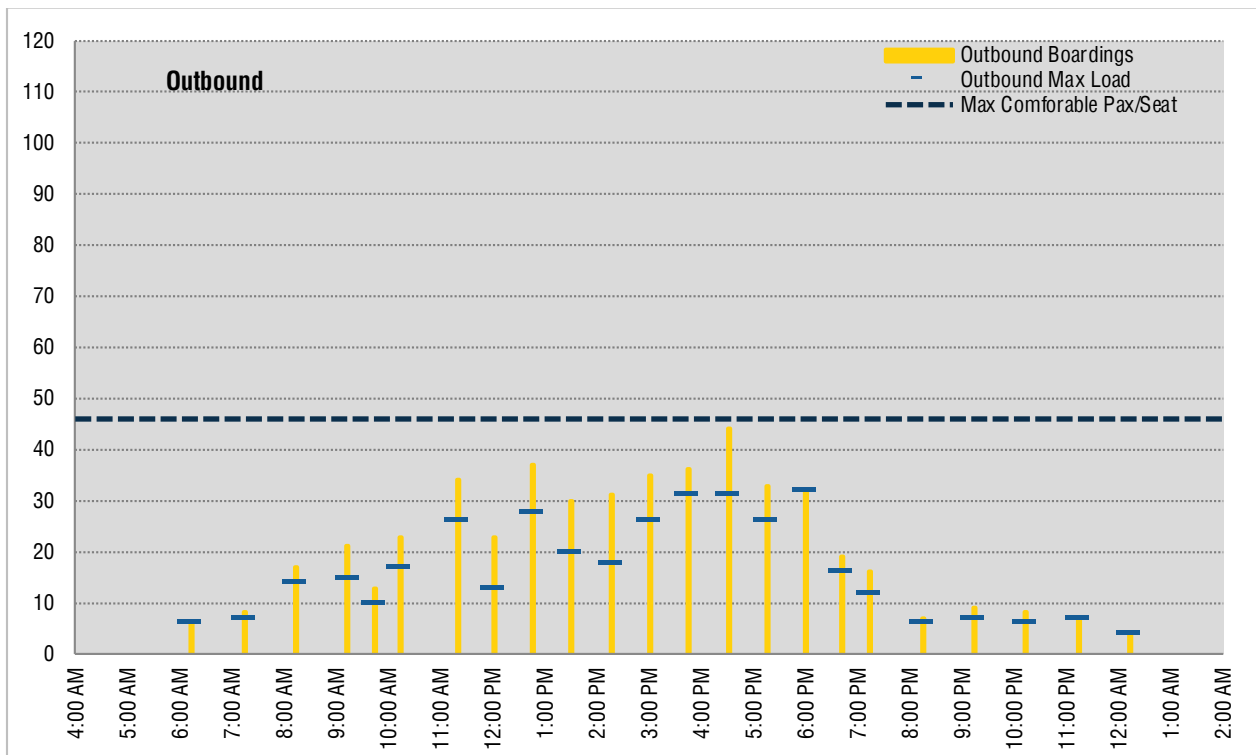


Figure 9 | Sunday Ridership by Trip: Outbound



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 93, 89% of weekday passenger minutes are in comfortable conditions, which is below the minimum standard of 92% (see Table 3). This is mostly attributable to poor on-time performance.

Table 3 | Passenger Time Spent Traveling in Comfortable Conditions

	WEEKDAYS	SATURDAYS	SUNDAYS
Minimum Standard	92%	92%	92%
Target	96%	96%	96%
Actual	89%	99%	100%

Reliability and Speed

Reliability

Route 93's overall reliability is very poor, at 62% on weekdays, 59% on Saturdays, and 52% on Sundays (see Table 4). This is well below the minimum standard of 70% for Local routes. A contributing factor to poor on-time performance and overcrowding is a relatively high number of dropped trips – 1.8% of all trips in the fall of 2017.

Table 4 | Reliability

SERVICE DAY	ORIGIN/MID-ROUTE ON-TIME PERFORMANCE	DESTINATION ON-TIME PERFORMANCE	OVERALL RELIABILITY	DROPPED TRIPS
Monday-Friday	63%	57%	62%	1.8%
Saturday	61%	52%	59%	-
Sunday	53%	48%	52%	-

Running Times

Actual running times exceed scheduled running times for much of the day; inbound before 8:00 AM and between 2:00 PM and 7:00 PM by up to eight minutes, and outbound before noon and after 1:00 PM by up to five minutes (see Figure 10 and Figure 11).

Figure 10 | Scheduled & Median Travel Time by Trip: Route 93 Inbound

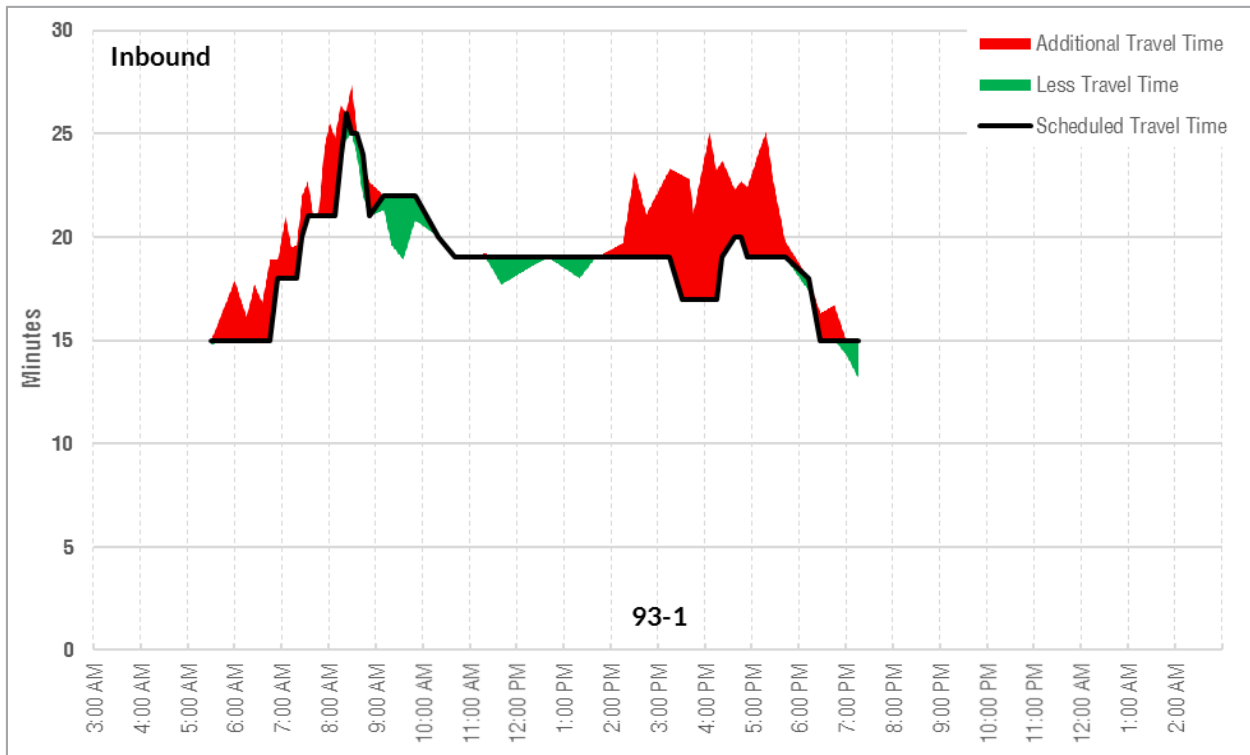
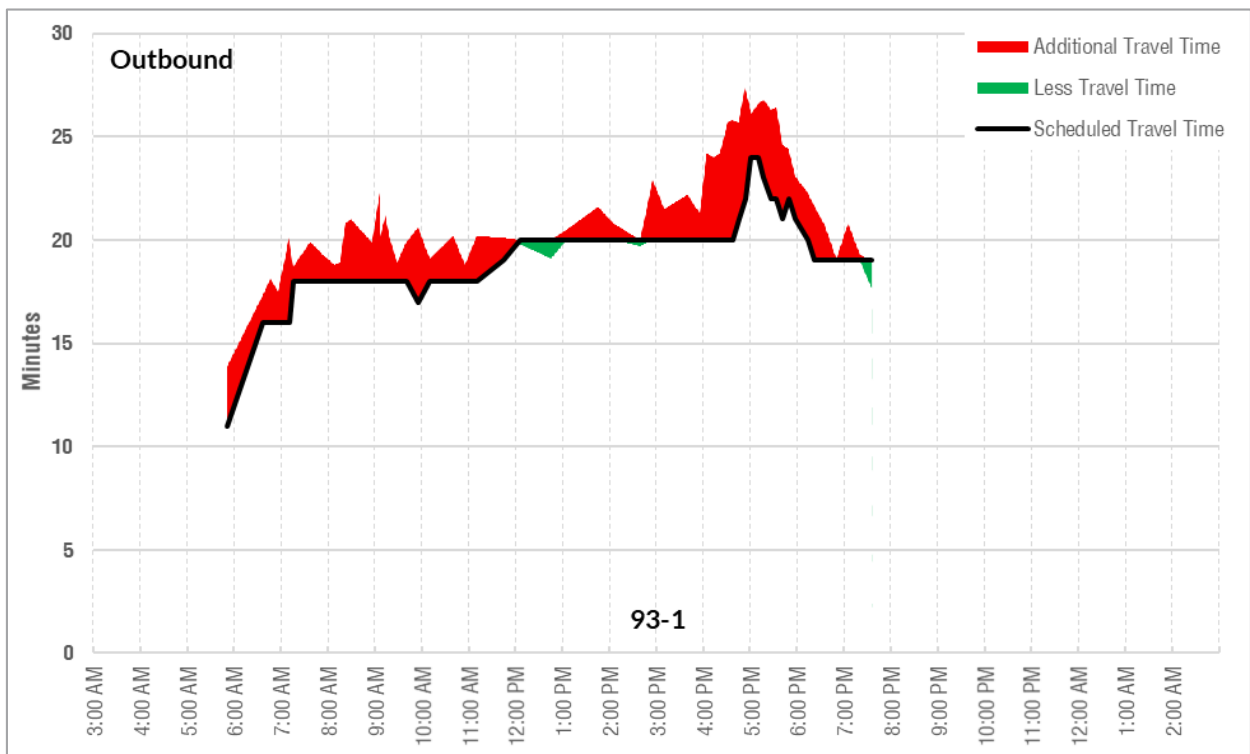


Figure 11 | Scheduled & Median Travel Time by Trip: Route 93 Outbound



Stop Spacing

In Charlestown, Route 93 has 10 stops per mile, which is well above the four to seven stops specified by the MBTA's bus stop guidelines for urban areas. This is a contributing factor to slow bus speeds and poor reliability.

Summary

Route 93 provides the primary transit connection between Charlestown and Downtown Boston and the rapid transit system. It is one of the top 30 ridership routes on weekdays and Saturdays. The route's major issues are:

- Very poor reliability
- Service that is often infrequent
- Low ridership variant service to the Charlestown Navy Yard
- Irregular schedules