

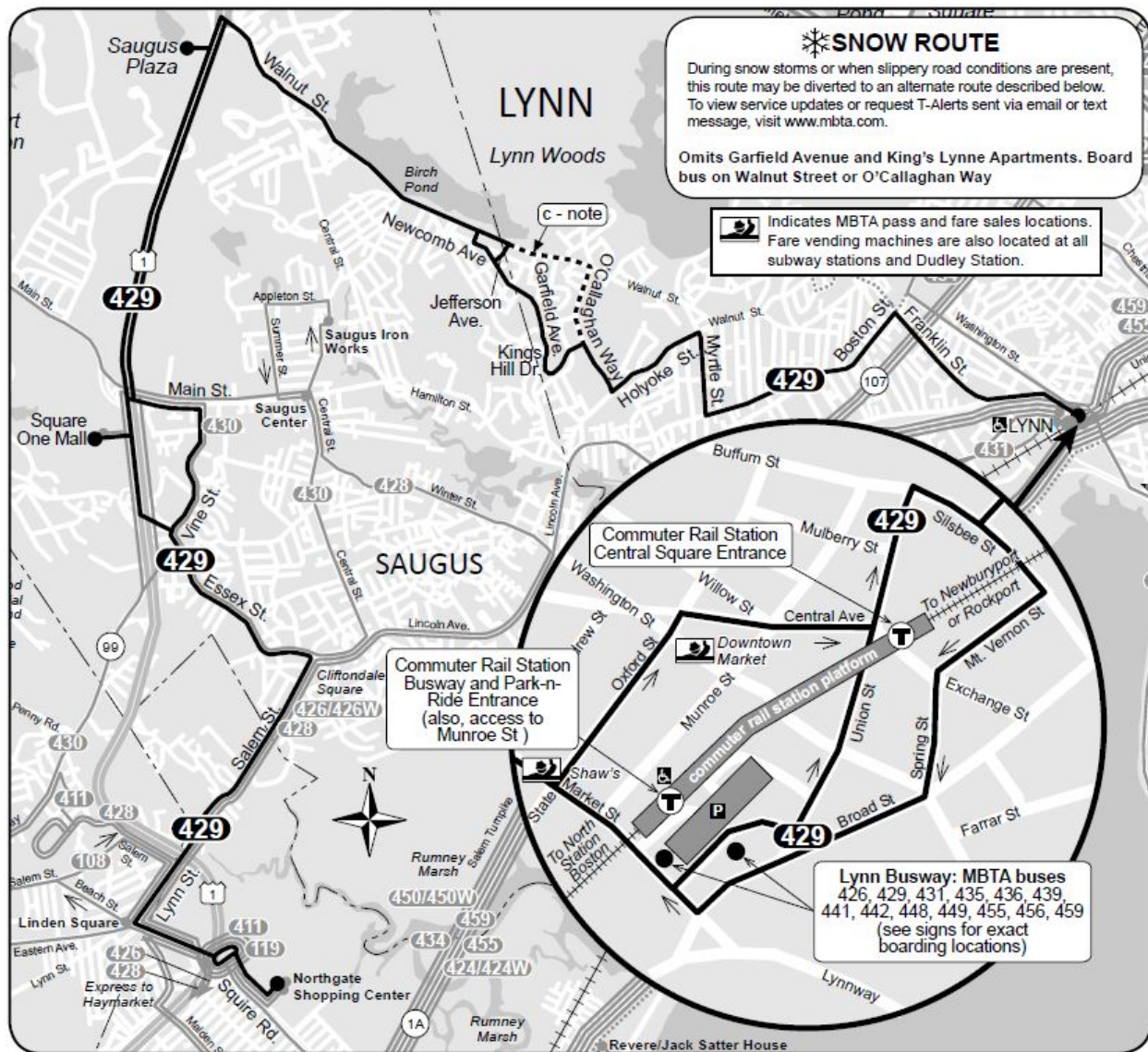
Route 429

Northgate Shopping Center – Central Square, Lynn

Route Overview

Route 429 Northgate Shopping Center – Central Square, Lynn is a Local bus route that operates between the Northgate Shopping Center in Revere and Central Square, Lynn via Salem Street, US-1, and Walnut Street.

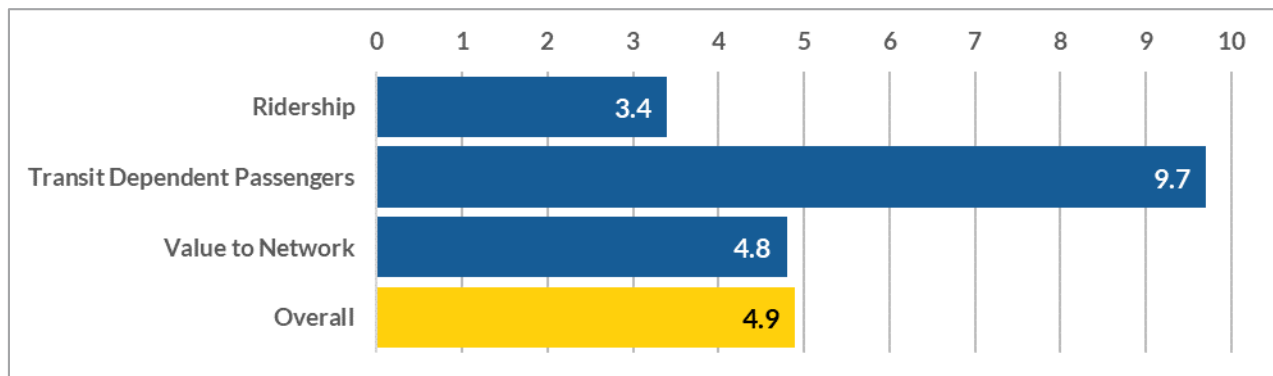
Figure 1 | Service Map



Network Importance

Route 429 is of moderate importance within the MBTA bus network (see Figure 2). On a relative scale of 0 to 10, the route rates 3.4 in terms of ridership, 9.7 in terms of transit dependent ridership, and 4.8 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% weight to overall ridership and a 15% weight to both other measures, is 4.9.

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



Service Patterns

Schedule

Route 429 runs seven days a week. On weekdays, service operates from 5:45 AM until 11:10 PM with service that is generally infrequent. In greater detail:

- The first trip departs at 5:45 AM and is followed by a 6:05 AM trip, 20 minutes later.
- From 6:00 AM until 8:00 AM, inbound headways range from three to 35 minutes. Operating primarily every 30 minutes.
- After 8:00 AM, trips are scheduled to run hourly until 2:13 PM.
- Five inbound trips between 2:20 PM and 2:40 PM serve students with scheduled headways of zero to 10 minutes. These trips are short turns.
- After 2:13 PM, headways range from 25 to 72 minutes, primarily every 33 minutes until 6:15 PM and every 60 minutes after.

Saturday service operates from 7:50 AM until 11:48 PM with average headways of 65 minutes. Sunday service runs hourly from 10:01 AM until 7:49 PM.

Route 429 meets the MBTA's span of service standards. Route 429 does not meet the MBTA's frequency standards due to headways that exceed 60 minutes during the week and Saturdays, and headways greater than 30 minutes during peak travel periods.

Table 1 | Schedule Statistics

SERVICEDAY	SPAN OF SERVICE	FREQUENCY (RANGE)	FREQUENCY (AVERAGE)	DAILY TRIPS (INBOUND/OUTBOUND)
Monday-Friday	5:45 AM to 11:10PM			27/25
Sunrise	5:45 AM to 5:59 AM	20	20	1/0
Early AM	6:00 AM to 6:59 AM	7 - 35	22	2/4
AM Peak	7:00 AM to 8:59 AM	5 - 60	33	3/5
Midday Base	9:00 AM to 1:29 PM	60	60	5/5
Midday School	1:30 PM to 3:59 PM	5 - 72	34	7/3
PM Peak	4:00 PM to 6:29 PM	25 - 72	36	4/4
Evening	6:30 PM to 9:59 PM	40 - 64	53	4/4
Late Evening	10:00 PM to 11:10PM	44	-	1/0
Night	-	-	-	-
Saturday	7:50 AM to 11:48PM	50 - 75	65	14/14
Sunday	10:01 AM to 7:49PM	60	53	9/9

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

Service Patterns

Route 429 primarily operates Pattern 429.0, which travels between the Northgate Shopping Center and downtown Lynn at Silsbee Street at Union Street (near Greater Lynn Senior Services). Other service patterns streamline service, to serve specific destinations, or are shorter versions of the primary route (see Table 2):

- On weekdays, the first four inbound trips of the day and outbound trips at 6:13 AM, 6:43 AM, and 7:13 AM skip the Square One Mall, providing more direct service to through riders when it is not open (Pattern 429.1).
- During the last three inbound and the last two outbound weekday trips of the day, Route 429 continues on Walnut Street until O’Callaghan Way, bypassing stops on Newcomb Avenue and Garfield Avenue, through residential streets. The route includes an out-and-back pattern serving the King’s Lynne Apartments (Pattern 429.2). This pattern operates Saturdays during the last three inbound and outbound trips.
- Route 429 includes several short-turn service patterns that serve school trips:
 - Pattern 429.3 serves three inbound trips and four inbound trips, and operates short-turn service between Central Square, Lynn and O’Callaghan Way at Osborne Street near Breed Park.
 - Pattern 429.4 serves two inbound trips, and operates short-turn service between Central Square, Lynn and O’Callaghan Way at Osborne Street, at Classical High School.

- Pattern 429.5 serves one outbound trip, and operates between Neptune Boulevard at Blossom Street and O’Callaghan Way at Osborne Street, serving St. Mary’s School and Lynn Vocational Technical Institute.

Table 2 | Service Patterns

PATTERN	ORIGIN	DESTINATION	UNIQUE FEATURE	TRIPS PER WKD	TRIPS PER SAT	TRIPS PER SUN
INBOUND				27	14	9
429.0	Northgate Shopping Center	Silsbee Street at Union Street	Primary pattern	15	11	9
429.1	Northgate Shopping Center	Silsbee Street at Union Street	Skips Square One Mall	4	-	-
429.2	Northgate Shopping Center	Silsbee Street at Union Street	Serves the Kings Lynne apartments	3	3	-
429.3	O’Callaghan Way at Osborne Street	Central Square, Lynn	Short-turn in Lynn	3	-	-
429.4	O’Callaghan Way at Holyoke Street	Central Square, Lynn	Short-turn in Lynn	2	-	-
OUTBOUND				25	14	9
429.0	Silsbee Street at Union Street	Northgate Shopping Center	Primary pattern	15	11	9
429.1	Silsbee Street at Union Street	Northgate Shopping Center	Skips Square One Mall	3	-	-
429.2	Silsbee Street at Union Street	Northgate Shopping Center	Serves the Kings Lynne apartments.	2	3	-
429.3	Central Square, Lynn	O’Callaghan Way opposite Osborne Street	Short-turn in Lynn	4	-	-
429.5	Neptune Boulevard at Blossom Street	O’Callaghan Way opposite Osborne Street	Service to St Mary’s School and Lynn Vocational Technical Institute	1	-	-

Ridership

Route 429 serves 1,429 passengers on weekdays, 786 passengers on Saturdays, and 448 passengers on Sundays.

Ridership by Stop

Ridership is very low along most of the route, with few stops attracting larger numbers of riders. This pattern changes starting along Kings Hill Drive and O’Callaghan Way, where ridership by stop becomes more moderate. On weekday inbound trips (see Figure 3):

- 86 passengers board at Northgate Shopping Center.
- Three passengers board at Squire Road at Showcase Cinema

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- 38 riders board and 12 alight at Wesley Street at Lynn Street.
 - A total of nine riders board and nine alight along Lynn Street, Salem Street, and Lincoln Avenue.
 - 13 riders board and eight alight at Essex Street at Staaf Road.
 - 16 riders board and 13 alight along Vine Street.
 - 104 riders board and 33 alight at Square One Mall.
 - 12 riders board and six alight along Walnut Street.
 - The route continues and turns east on Walnut Street, where 12 passengers board and 6 alight.
 - On trips that serve Walnut Street and O'Callaghan Way, 66 people board at O'Callaghan Way at Osborne Street.
 - A total of 104 riders board and 13 alight at O'Callaghan Way at Holyoke Street and Holyoke Street at Thorpe Road.
 - 122 riders board and 377 riders alight at the 20 stops along Holyoke Street, Myrtle Street, Boston Street, and Franklin Street, and Market Street.
 - 20 riders board and 114 alight at Central Square, Lynn.
 - Two riders board and 76 alight Route the last two stops, Union Street at Exchange Street and Silsbee Street at Union Street.

Weekday outbound ridership generally mirrors inbound ridership. Ridership by stop on weekends is, although with lower passenger volumes.

Ridership by Trip

Weekday ridership is generally highest during the AM and PM peak periods. On inbound trips (see Figure 4):

- Before 2:00 PM, trips typically carry 12 to 28 passengers.
- Ridership peaks between 2:00 PM and 5:00 PM, when trips carry between 30 and 41 passengers. Ridership is highest at 3:28 PM with 41 passengers.
- After 5:00 PM, most trips carry 10 to 20 passengers.
- Ridership is lowest on the last trip of the day at 10:28 PM, with eight passengers.

On outbound trips (see Figure 5):

- The 6:10 AM trip serves 31 passengers.
- Outbound ridership spikes after this first trip, with trips between 6:30 AM and 7:10 AM carrying 46 to 56 passengers. The 6:33 AM trip has the highest ridership, with 56 passengers.
- From 7:19 AM until 2:00 PM, trips serve between 24 and 37 passengers.
- Ridership peaks again in the afternoon, when the 2:10 PM trip carries 49 passengers and the 3:20 PM trip carries 59 passengers. Between these two peaks, the 2:36 PM trip serves 10 passengers.
- Ridership declines during the PM peak, from 39 passengers on the 4:30 PM trip to 15 passengers on the 6:20 PM trip.
- The last four trips of the day each serve 10 passengers.
- Ridership during peak outbound trips approaches and sometimes exceeds the MBTA's maximum comfortable passenger load.

On Saturdays, inbound trips carry 10 to 55 people, peaking during the 4:15 PM trip (see Figure 6). Ridership is lowest during the first and last trips of the day and increases over the course of the day. Outbound ridership begins with 24 passengers on each of the first three trips, and increases during the day reaching 60 passengers on the 3:05 PM trip (see Figure 7). Ridership declines thereafter, with four passengers on the last trip of the day.

On Sundays, inbound ridership is generally around 20 passengers per trip before 2:00 PM and around 30 passengers per trip after 2:00 PM (see Figure 8). Outbound ridership is highest on the first trip at 10:00 AM with 42 passengers, then declines through the morning and afternoon (see Figure 9). From 3:00 PM to 6:00 PM, trips carry about 20 passengers.

Figure 4 | Weekday Ridership by Trip: Inbound

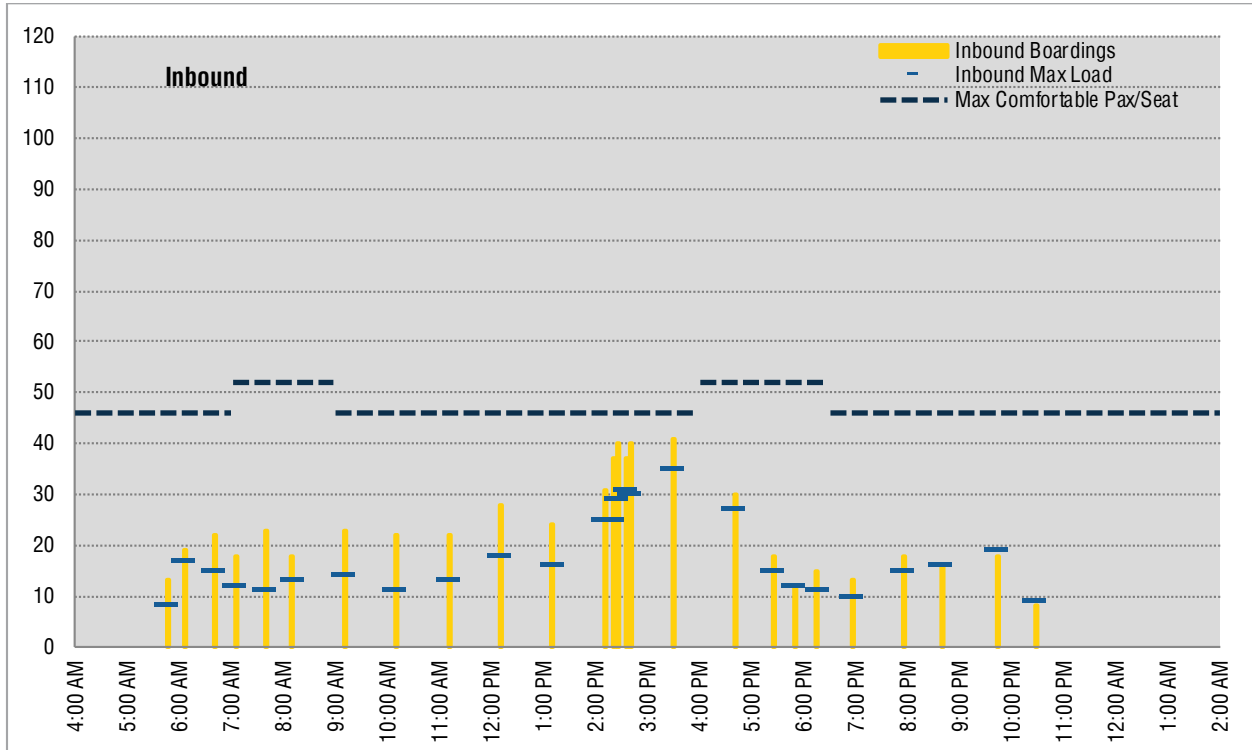


Figure 5 | Weekday Ridership by Trip: Outbound

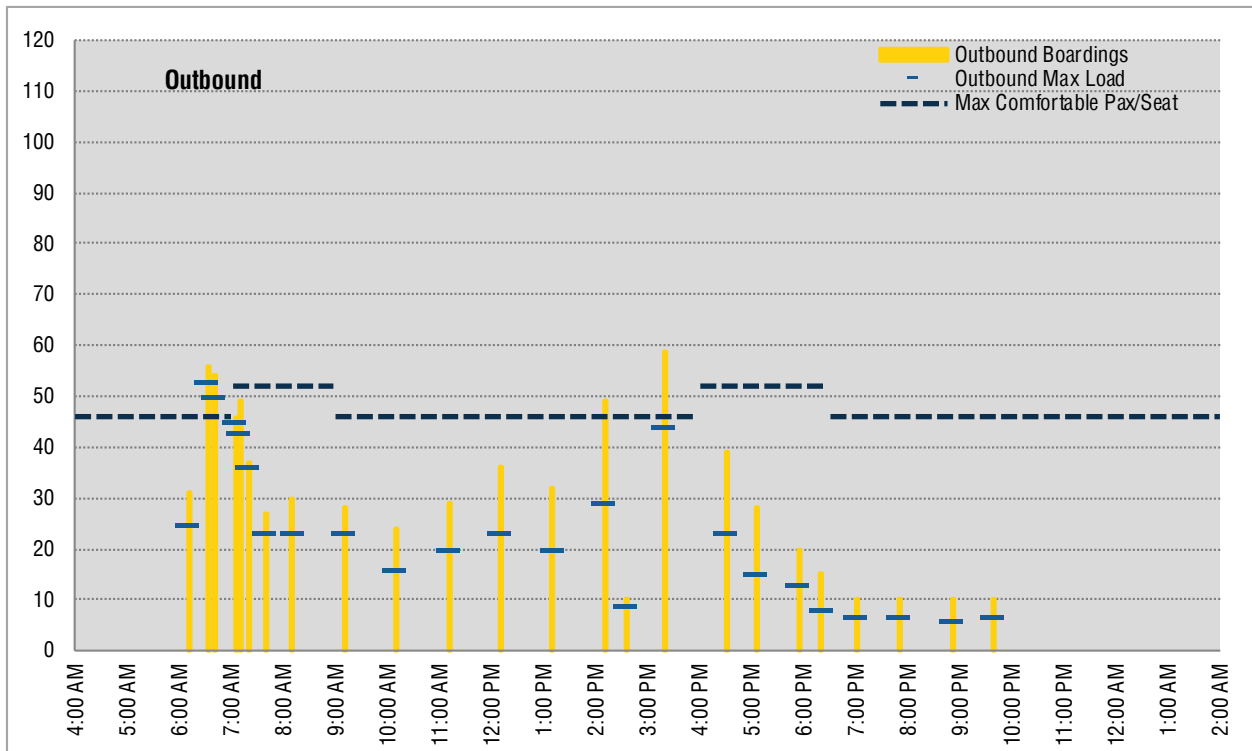


Figure 6 | Saturday Ridership by Trip: Inbound

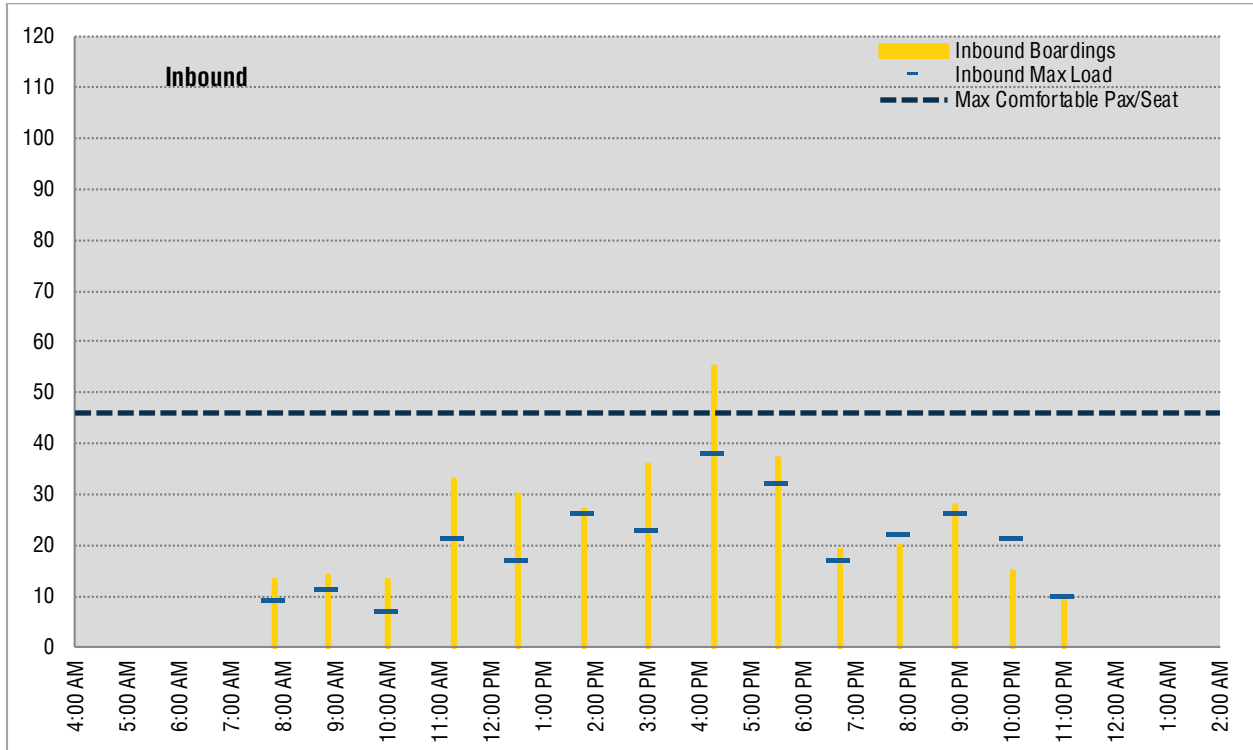


Figure 7 | Saturday Ridership by Trip: Outbound

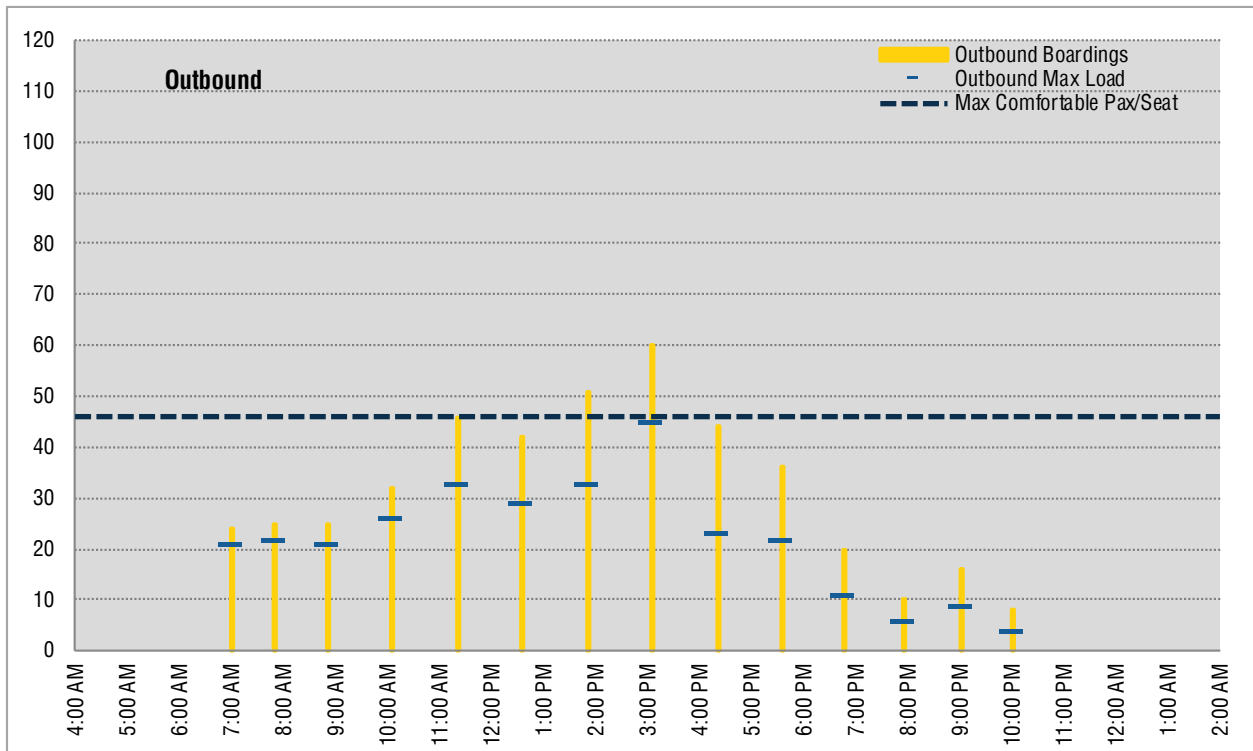


Figure 8 | Sunday Ridership by Trip: Inbound

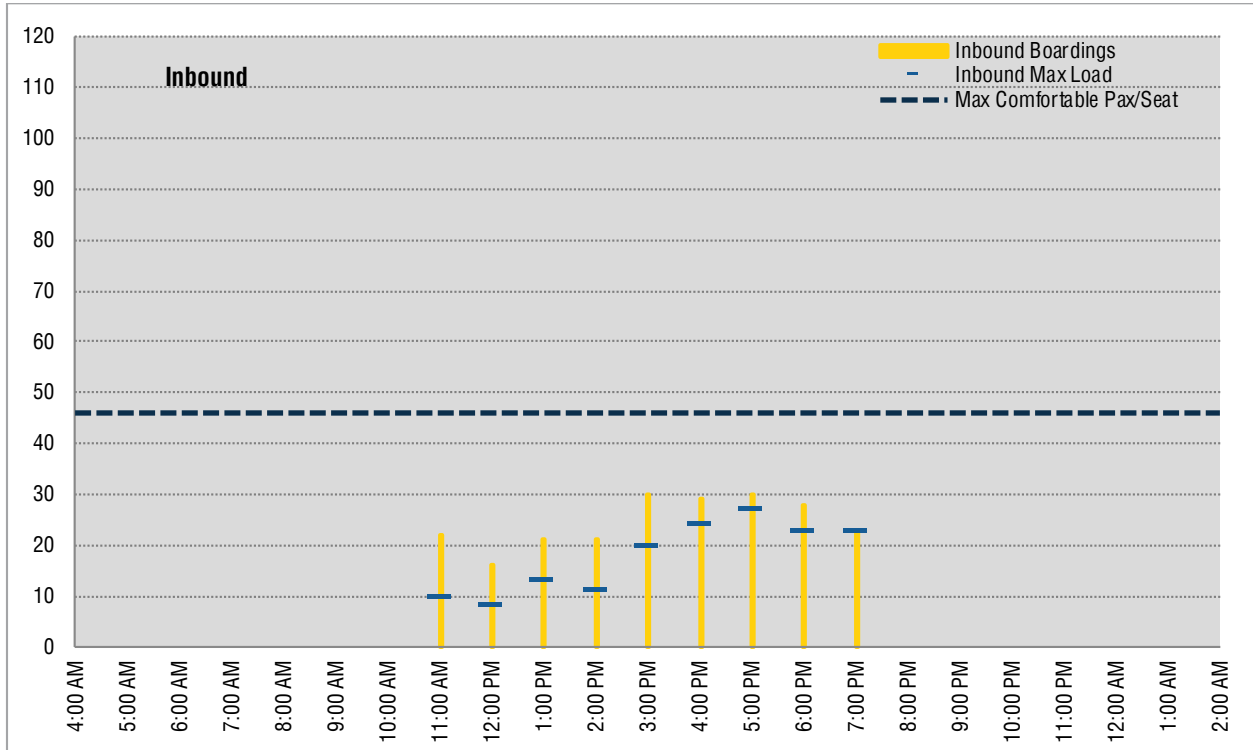
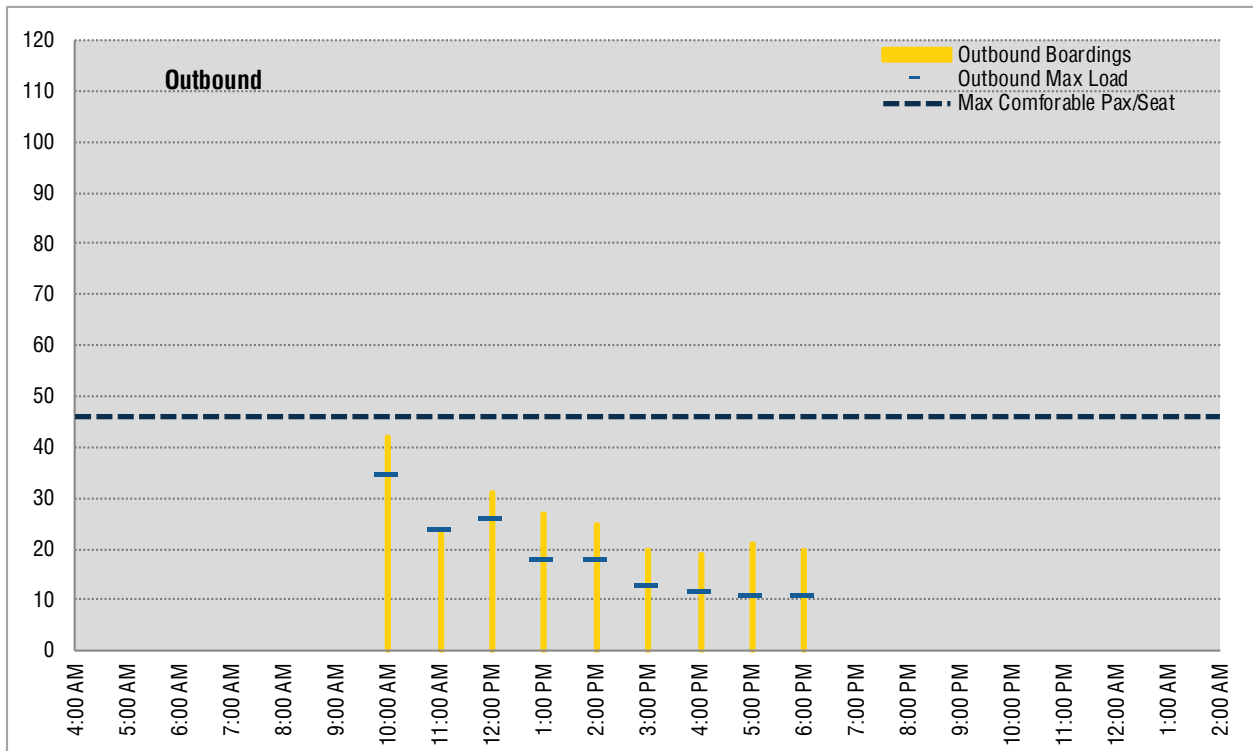


Figure 9 | Sunday Ridership by Trip: Outbound



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 429, 96% of passenger minutes are in comfortable conditions, which meets the target (see Table 4).

Table 3 | Passenger Time Spent Traveling in Comfortable Conditions

	WEEKDAYS	SATURDAYS	SUNDAYS
Minimum Standard	92%	92%	92%
Target	96%	96%	96%
Actual	96%	98.8%	100%

Reliability and Speed

Reliability

Route 429 has problems with reliability. Although the number of dropped trips is small (0.1%), just 56% of weekday trips are on time. Service reliability is marginally better on Saturday (61%) and Sundays (58%). On all days, reliability falls short of the MBTA's minimum standard of 70%.

Table 4 | Reliability

SERVICE DAY	ORIGIN/MID-ROUTE ON-TIME PERFORMANCE	DESTINATION ON-TIME PERFORMANCE	OVERALL RELIABILITY	DROPPED TRIPS
Monday-Friday	56%	57%	56%	0.1%
Saturday	59%	78%	61%	-
Sunday	58%	53%	58%	-

Running Times

Weekdays, Route 429 trips are often longer than scheduled, and can run up to five minutes longer than scheduled. However, some periods typically have shorter running times than scheduled. This contributes to the poor reliability of the route.

Figure 10 | Scheduled & Median Travel Time by Trip: Route 429 Inbound

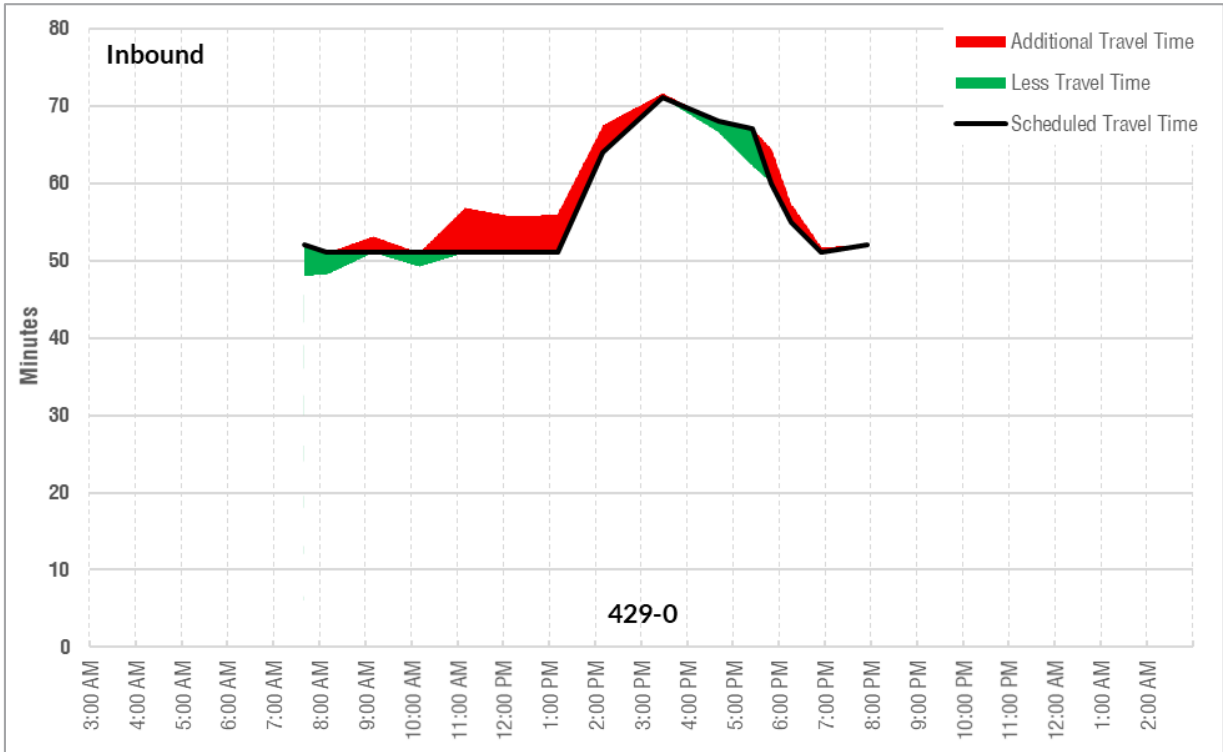
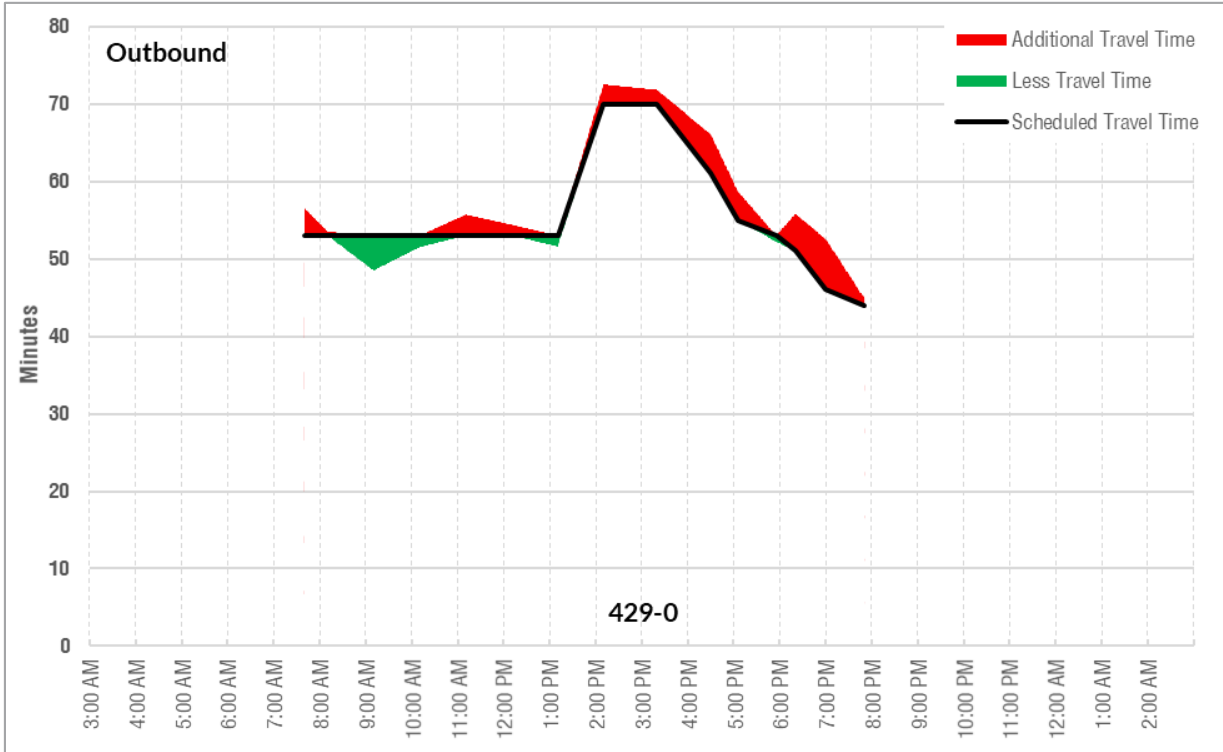


Figure 11 | Scheduled & Median Travel Time by Trip: Route 429 Outbound



Stop Spacing

Route 429 has an average of 7.9 stops per mile. Some stops are particularly close together, such as stops along Lincoln Street and Essex Street in Saugus and along Holyoke Street in Lynn, which can be less than 300 feet apart. This current stop spacing exceeds the maximum number of stops in MBTA's stop spacing guidelines.

Summary

Route 429 is a long bus route connecting the Northgate Shopping Center in Revere to downtown Lynn. Route 429 is the only route that travels through Saugus and Lynn from Route 1 to Central Square, Lynn. The route does not have high ridership overall, but there are periods when passenger loads on some trips exceed the MBTA's maximum comfortable passenger load. Many of the stops along the route are close together and many stops serve very few riders. The bus is not reliable and often takes more time than scheduled to complete a trip.