

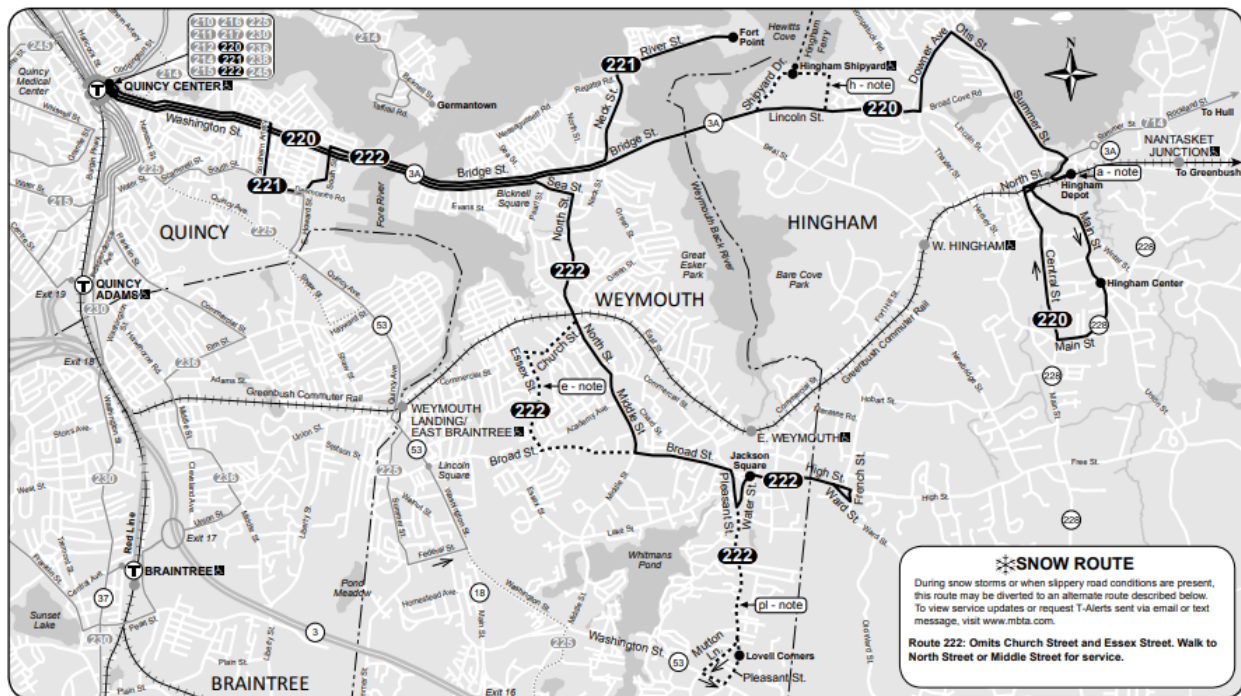
Route 221

Fort Point – Quincy Center Station

Route Overview

Route 221 Fort Point – Quincy Center Station is a Commuter route that operates four round-trips per day between Fort Point in Hingham and Quincy Center via Bridge Street, Des Moines Road, South Street, and Washington Street. Washington Street and Bridge Street are also served by Route 220 Quincy Center Station – Hingham and Route 222 Quincy Center Station – East Weymouth. South Street is served by Route 225 Quincy Center Station – Weymouth Landing or Columbian Square.

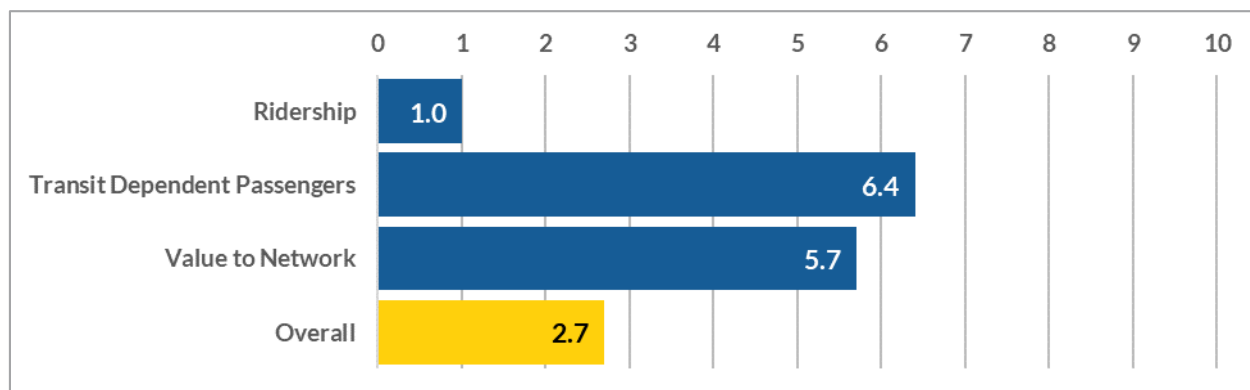
Figure 1 | Service Map



Network Importance

Route 221 is a less important route within the overall MBTA bus network (see Figure 2). On a scale of 0 to 10, Route 221 rates 1.0 in terms of ridership, 6.4 in terms of transit dependent ridership, and 5.7 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 2.7.

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



Service Patterns

Schedule

Route 221 has very limited service, with two round trips in the morning and two round trips in the afternoon. Inbound trips depart at 7:15 AM, 7:58 AM, 3:00 PM, and 6:15 PM. Outbound trips depart at 6:50 AM, 7:35 AM, 2:37 PM, and 5:55 PM.

Route 221 does not meet the MBTA’s frequency standards for Commuter bus routes, which require a minimum of three trips in the peak direction during both the AM peak and PM peak.

Table 1 | Schedule Statistics

SERVICEDAY	SPAN OF SERVICE	FREQUENCY (RANGE)	FREQUENCY (AVERAGE)	DAILY TRIPS (INBOUND/OUTBOUND)
Monday-Friday	6:50 AM to 8:18 AM 2:37 PM to 6:30 PM			4/4
Sunrise	-	-	-	-
Early AM	6:50 AM to 6:59 AM	1 Trip	1 Trip	0/1
AM Peak	7:00 AM to 8:18 AM	43	43	2/1
Midday Base	-	-	-	-
Midday School	2:37 PM to 3:59 PM	1 Trip	1 Trip	1/1
PM Peak	4:00 PM to 6:30 PM	1 Trip	1 Trip	1/1
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

All Route 221 trips operate using the same service pattern (see Table 2).

Table 2 | Service Patterns

PATTERN	ORIGIN	DESTINATION	UNIQUE FEATURE	TRIPS per WKD	TRIPS per SAT	TRIPS per SUN
INBOUND				4	-	-
221.5	River Street at Weymouth Port	Quincy Center Station	Primary pattern	4	-	-
OUTBOUND				4	-	-
221.5	Quincy Center Station	River Street at Weymouth Port	Primary pattern	4	-	-

Ridership

Route 221 averages 115 passengers per day, and is one of the lowest ridership routes in the MBTA bus network.

Ridership by Stop

Route 221 has very low ridership, and very few boardings on its unique segments. On inbound trips:

- 10 passengers board and no passengers alight at the 10 stops on River Street and Neck Street. Seven of these boardings are at the first stop of Route 221.
- Four passengers board and three alight on Bridge Street between Neck Street and South Street. This corridor is also served by Route 220 Quincy Center Station – Hingham and Route 222 Quincy Center Station – East Weymouth, which both provide significantly more frequent service.
- Four passengers board and no passengers alight at four stops on South Street and Des Moines Road, which are unique served by Route 221.
- 32 passengers board and no passengers alight at Southern Artery at South Street, representing just under half of all 221 inbound boardings. This stop is adjacent to a senior center and several large apartment complexes, and is also served by Route 225 Quincy Center Station – Weymouth Landing or Columbian Square.
- 14 passengers board and seven passengers alight at the 11 stops on Washington Street before Quincy Center Station. These stops are all served much more frequently by Route 220 Quincy Center Station – Hingham and Route 222 Quincy Center Station – East Weymouth.
- 57 passengers alight at Quincy Center Station, 85% of all Route 221 alightings.

Ridership patterns on outbound trips are generally similar to inbound trips – though overall ridership is somewhat lower, primarily due to fewer passengers using the Southern Artery at South Street stop.

Ridership by Trip

Route 221 boardings almost exclusively occur on peak direction trips. In the morning, 28 passengers ride the 7:15 AM inbound trip and 34 passengers ride the 7:58 AM inbound trip. Only one passenger rides the 6:50 AM outbound trip and four passengers ride the 7:35 AM trip. Ridership is lower in the afternoon, with 21 passengers on the 2:37 PM outbound trip and 25 passengers on the 5:55 PM outbound trip. The 3:00 PM inbound trip serves no riders on average, and the 6:15 PM inbound trip serves three. Nearly all passengers board or alight at Quincy Center Station, but no trip serves enough passengers to exceed MBTA comfort standards.

Figure 3 | Weekday Inbound Ridership by Stop Map

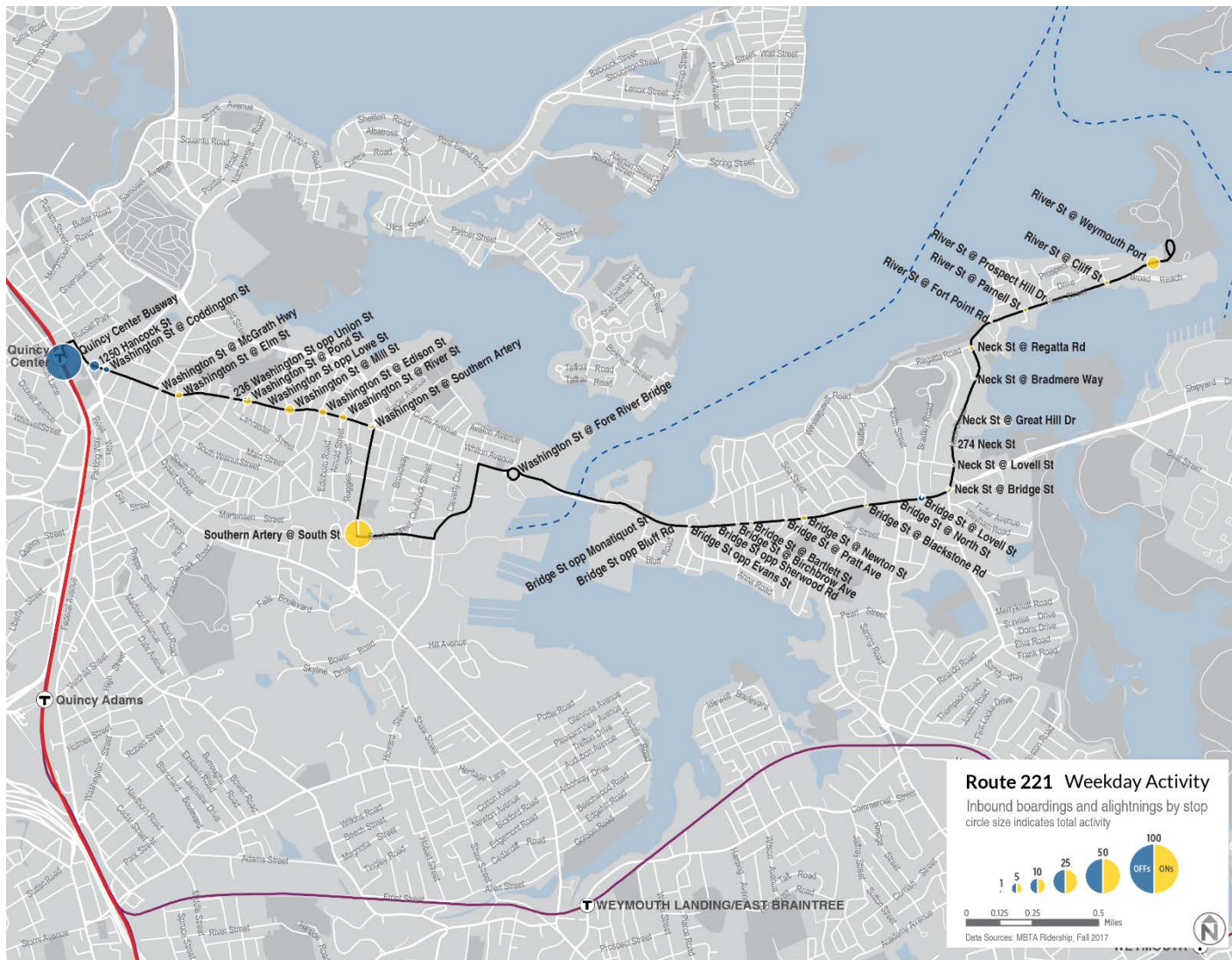


Figure 4 | Weekday Ridership by Trip: Inbound

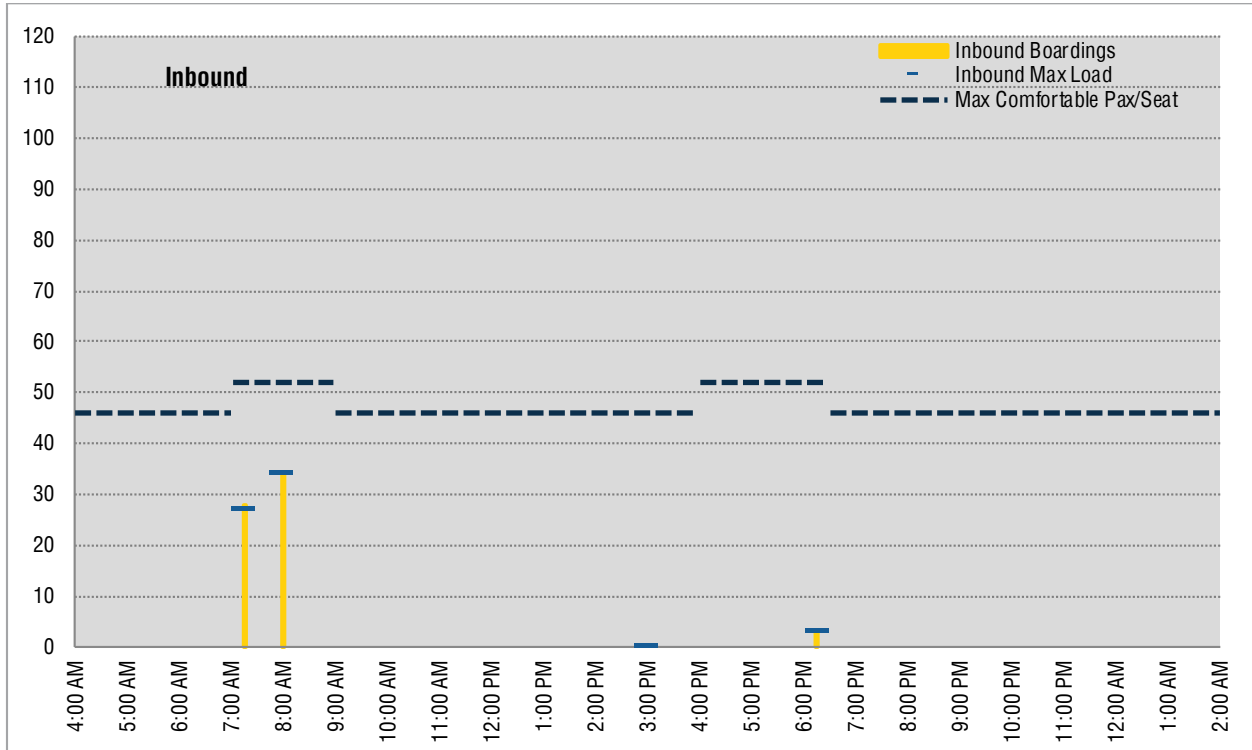
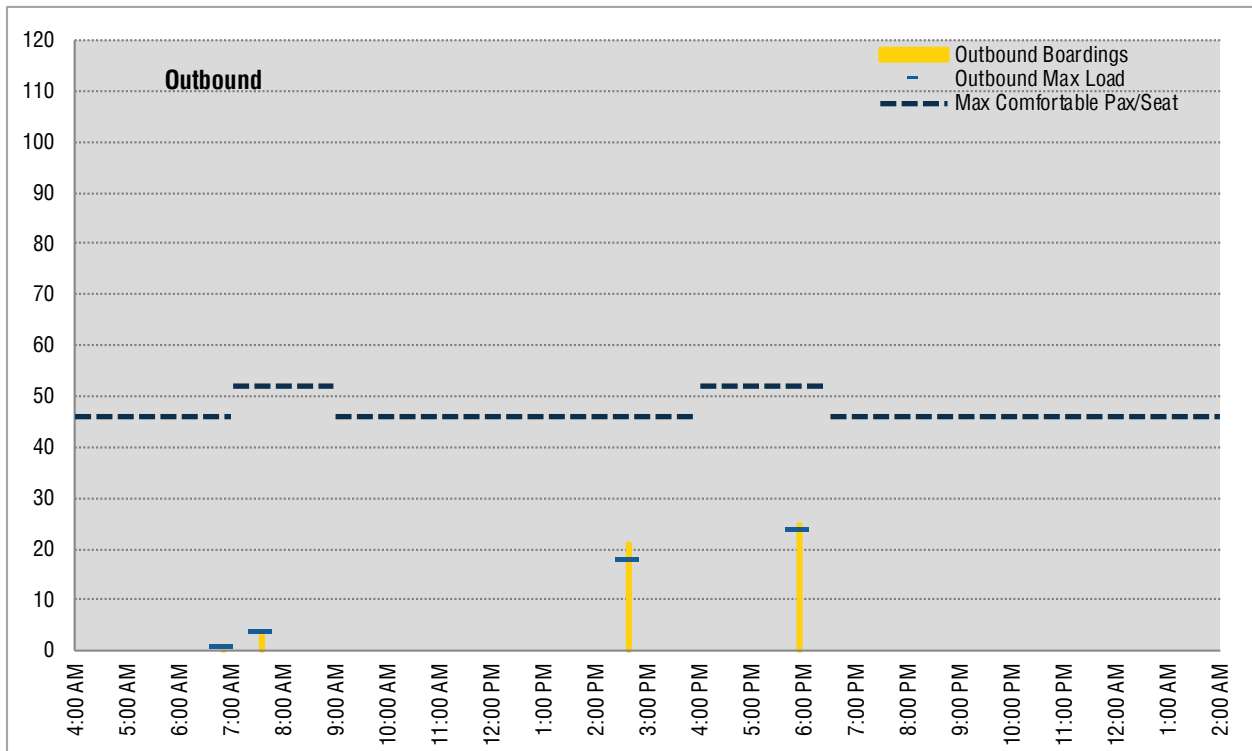


Figure 5 | Weekday Ridership by Trip: Outbound



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.

Passenger comfort data is unavailable for Route 221, but given ridership information, it can be inferred that likely 100% of passenger minutes are in comfortable conditions, which is above the minimum and target standards.

Reliability and Speed

Reliability

Route 221 has poor reliability, with 60% of trips operating on-time (see Table 2). Dropped trips are not a major issue on Route 221, with 0.1% of trips not operating in Fall 2017.

Table 3 | Reliability

SERVICE DAY	ORIGIN/MID-ROUTE ON-TIME PERFORMANCE	DESTINATION ON-TIME PERFORMANCE	OVERALL RELIABILITY	DROPPED TRIPS
Monday-Friday	60%	60%	60%	0.1%
Saturday	-	-	-	-
Sunday	-	-	-	-

Running Time

Route 221 trips take five minutes longer than scheduled during its peak period peak direction trips. Trips take the scheduled amount of time in the off-peak times and off-peak directions.

Figure 6 | Scheduled & Median Travel Time by Trip: Route 221 Inbound

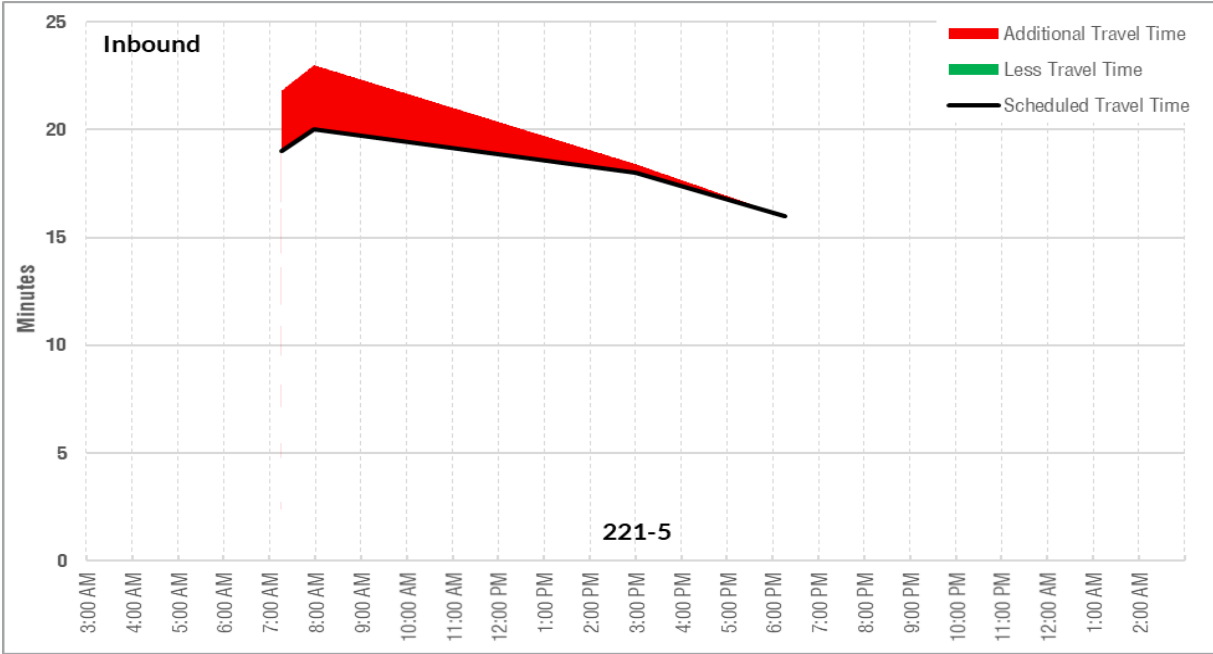
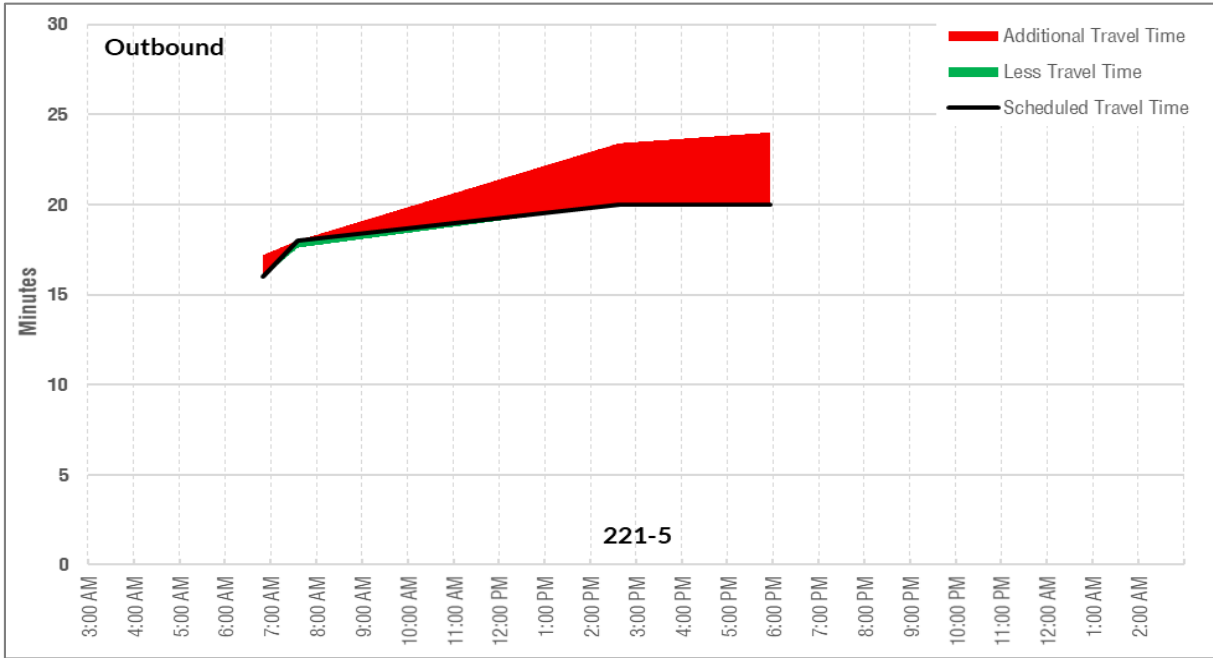


Figure 7 | Scheduled & Median Travel Time by Trip: Route 221 Outbound



Stop Spacing

Route 221's stops are too closely spaced along its entire length, with most stops averaging 720 feet apart. There are 40 stops along Route 221's 5.4-mile alignment.

- There are nine stops along the 0.9 mile commercial corridor on Bridge Street east of the Fore River Bridge, resulting in inconsistent ridership activity at each stop and slowing down service.
- Stops along Route 221's alignment on South Street and Des Moines Road are especially close. The South Street @ 1000 Southern Artery stop and the Southern Artery @ South Street stop are only 250 feet apart. Closely spaced stops like these slow down service and result in inconsistent boarding patterns. The first of these stops has two passengers per day; the latter has 32 passengers per day.

Summary

Route 221 provides coverage service to Fort Point, a neighborhood with low transit ridership but without any transit alternatives. It also serves to connect the largely senior citizen community on South Street and Des Moines Road in Quincy Point to Quincy Center. However, Route 221 experiences extremely low ridership, even among stops that are not served by other routes. Most of the passengers currently taking Route 221 have access to at least one other route (Route 220 Quincy Center Station – Hingham, Route 222 Quincy Center Station – East Weymouth, and Route 225 Quincy Center Station – Weymouth Landing or Columbian Square). This, in combination with Route 221's infrequent service that does not meet MBTA service delivery guidelines, may explain why ridership is so low.