

ROUTE 9

4th Walnut to Andorra

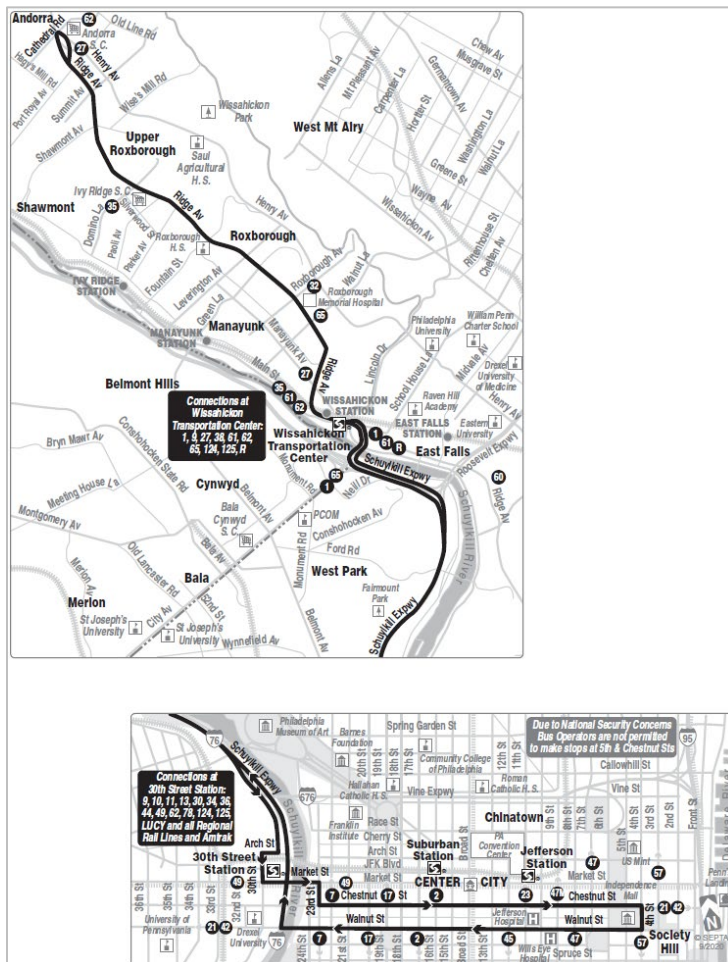
KEY SERVICE CHARACTERISTICS, ISSUES, AND OPPORTUNITIES

- Route 9 connects Roxborough with Wissahickon Transportation Center and Center City. It had moderately high ridership with roughly 5,000 riders per day in Fall 2019.
- Route 9 has a direct alignment but suffers from slow speeds and substandard on-time performance. Opportunities to improve Route 9 focus on making the route more frequent and eliminating the slowest portion of the route in Center City.

ROUTE OVERVIEW

Route 9 operates between Center City and Andorra, running express service from Center City to Wissahickon Transportation Center via the Schuylkill Expressway and then in local service, primarily on Ridge Avenue. It serves the William H. Gray III 30th Street Station, Wissahickon Transportation Center, Wissahickon Regional Rail Station, Roxborough Memorial Hospital, Saul High School, and Andorra Shopping Center.

Figure 1 | Route Map



SERVICE OVERVIEW

Schedule

On weekdays, Route 9 operates from 4:54 AM until approximately 1:37 AM (see Table 1). On weekdays:

- Average frequencies are between 13 and 16 minutes for most of the day, decreasing to 20-25 minutes in the evening and early morning.
- Late night service operates with average frequencies between 40 and 50 minutes.

On Saturdays, Route 9 has a slightly reduced service span, and operates less frequent service – on average – every 30 minutes during the day and 34 minutes at night.

On Sundays, Route 9 operates from 6:09 AM to 12:26 AM with an average frequency of approximately 60 minutes all day.

Actual frequencies vary during all time periods.

Table 1 | Schedule Statistics

| Service Day | Span Of Service | Frequency (Range) | Frequency (Average) |
|------------------|--------------------------------|-------------------|---------------------|
| Weekdays | 4:37 AM to 2:26 AM | | |
| Owl | Midnight to 4:00 AM | 38-59 | 49 |
| Early AM | 4:00 AM to 5:59 AM | 24-26 | 25 |
| AM Peak | 6:00 AM to 8:59 AM | 8-25 | 13 |
| Middy | 9:00 AM to 2:59 PM | 10-19 | 16 |
| PM Peak | 3:00 PM to 5:59 PM | 6-19 | 14 |
| Evening | 6:00 PM to 9:59 PM | 10-37 | 22 |
| Late Night | 10:00 PM to 11:59 PM | 32-42 | 38 |
| Saturdays | 24 hours | | |
| Day | 8:00 AM to 5:59 PM | 28-32 | 30 |
| Night | Before 8:00 AM & After 5:59 PM | 27-60 | 34 |
| Sundays | 24 hours | | |
| Day | 8:00 AM to 5:59 PM | 59-63 | 60 |
| Night | Before 8:00 AM & After 5:59 PM | 43-66 | 59 |

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

Service Patterns

Route 9 operates with 4 service patterns – a primary pattern and short-turn in either direction that runs exclusively on the local segment between Andorra and Wissahickon Transportation Center (see Table 2). The short-turn pattern operates only three times on Sundays only.

Table 2 | Service Patterns

| Pattern | Origin | Destination | Unique Feature | Unique Stops | Trips Per Day | | |
|----------------|-------------------------|--------------------------------|-----------------|--------------|---------------|-----|-----|
| | | | | | Wkd | Sat | Sun |
| Inbound | | | | | | | |
| 229929 | Ridge Av & Cathedral Rd | 4 th St & Walnut St | Primary Pattern | | 63 | 36 | 17 |

| | | | | | | | |
|-----------------|--|--|-----------------|---|----|----|----|
| 229928 | Ridge Av & Cathedral Rd | Ridge Av & Wissahickon Transfer Center | Short-turn | 0 | 0 | 0 | 2 |
| Outbound | | | | | | | |
| 229932 | 4 th St & Walnut St | Ridge Av & Cathedral Rd | Primary Pattern | | 65 | 36 | 18 |
| 229931 | Ridge Av & Wissahickon Transfer Center | Ridge Av & Cathedral Rd | Short-turn | 0 | 9 | 3 | 1 |

Note: Unique stops are those not served by the primary pattern

RIDERSHIP

In Fall 2019, Route 9 carried approximately 4,864 passengers on weekdays, 1,928 on Saturdays, and 1,143 on Sundays (see Table 3).

Table 3 | Fall 2019 Ridership and Productivity

| | Weekdays | Saturdays | Sundays |
|--|--------------|--------------|--------------|
| Daily Ridership | 4,864 | 1,928 | 1,143 |
| Rank | 42 | 50 | 56 |
| Passengers per Revenue Vehicle Hour | 40.2 | 31.4 | 40.9 |
| Rank | 60 | 65 | 33 |

Transfer Patterns

The largest transfer rates on Route 9 are to and from:

- The Market Frankford Line (9.8% of all trips)
- Route 65 Germantown-Chelten to 69th Street Transportation Center (5.9%)
- The Broad Street Line (3.7%)
- Route 47 Whitman Plaza to 5th-Godfrey (2.3%)
- Route 27 Broad-Carpenter to Plymouth Meeting Mall (2.3%)

Weekend transfer patterns are similar.

Ridership by Stop

Route 9 brings people to and from Center City Philadelphia and major transit centers, including Wissahickon Transportation Center and William H. Gray III 30th Street Station. Ridership is distributed throughout the route with strong segments in Center City and along Ridge Avenue. Highest ridership locations traveling northbound include (also see Figure 2):

- 115 riders board and 75 alight at Walnut and Broad Streets (4% of all passengers)
- 303 riders board and 60 alight at Schuylkill Avenue and JFK Boulevard (7%)
- 242 board and 85 alight at Ridge Avenue and the Wissahickon Transportation Center (5%)
- 207 board and 69 alight at Ridge Avenue and Walnut Lane (6%)
- 51 board and 223 alight at Ridge Avenue and Fountain Street (6%)

- 237 alight at Ridge Avenue and Cathedral Road (5%)

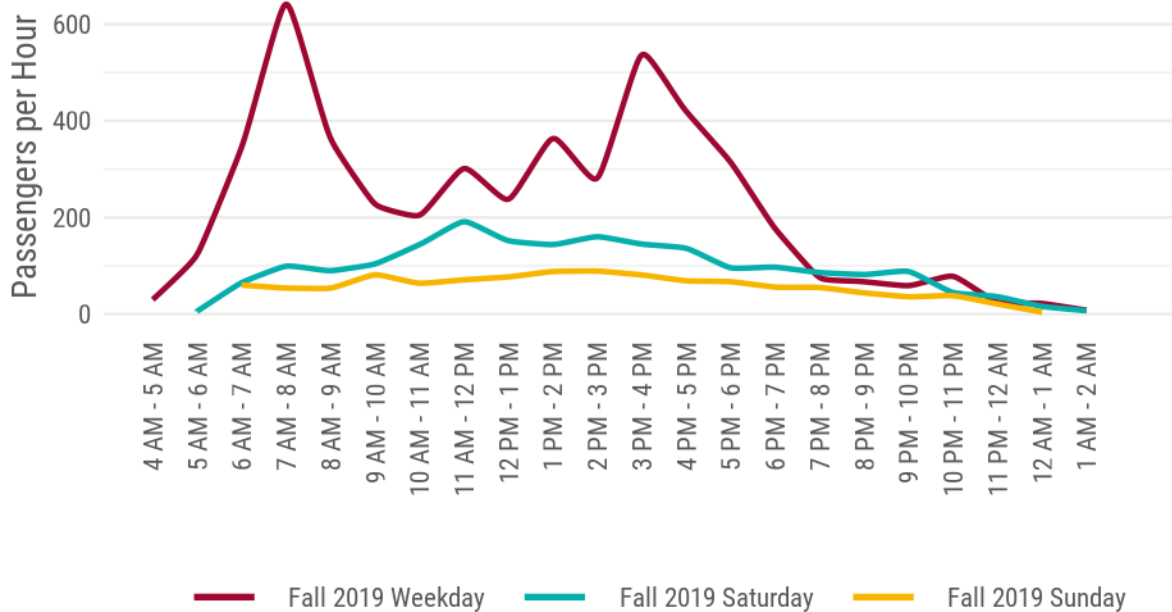
Figure 2 | Weekday Southbound Ridership by Stop


Ridership by Time of Day

Ridership by Hour

On weekdays, pre-pandemic ridership was peaked, with more than 600 riders per hour during the AM peak and more than 500 riders during the PM peak (see Figure 3). Ridership dropped after the AM peak, climbing steadily throughout the afternoon and then dropped again after the PM peak.

Saturday and Sunday ridership did not exhibit peaks. Saturday service increased gradually until midday and stayed at around 100 – 150 riders per hour until the evening. Sunday ridership hovered just below 100 riders per hour all day.

Figure 3 | Ridership by Hour


Ridership and Maximum Loads by Trip

Weekday ridership per trip is high on most trips between the beginning of the AM peak and the end of the PM peak but lower earlier and late (see Figure 4):

- During the AM Peak, ridership is between 30 and 65 passengers per trip
- Midday trips carried between 20 and 55 riders, with higher ridership trips occurring in the early afternoon
- PM Peak trips carried 20 to 70 passengers.
- After 6:00 PM, ridership slowly declines from 20 to 30 riders per trip to less than 20 after 10:30 PM
- Turnover on the route means no trips reach SEPTA's maximum capacity standard (see Figure 5).

Saturday ridership on a per trip basis was low. It grew to around 30 riders per trip by 7:30 AM and increased to 30-40 riders per trip for most of the day. Ridership dropped after 7:00 PM. Sunday ridership by trip patterns are very similar to those on Saturday.

Figure 4 | Weekday Ridership by Trip

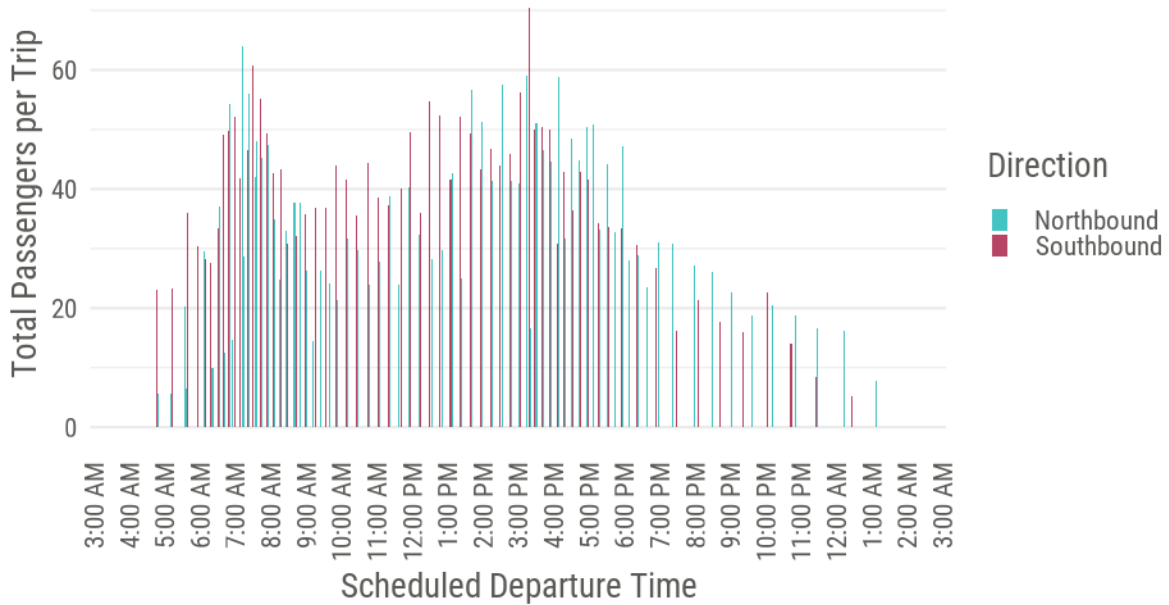
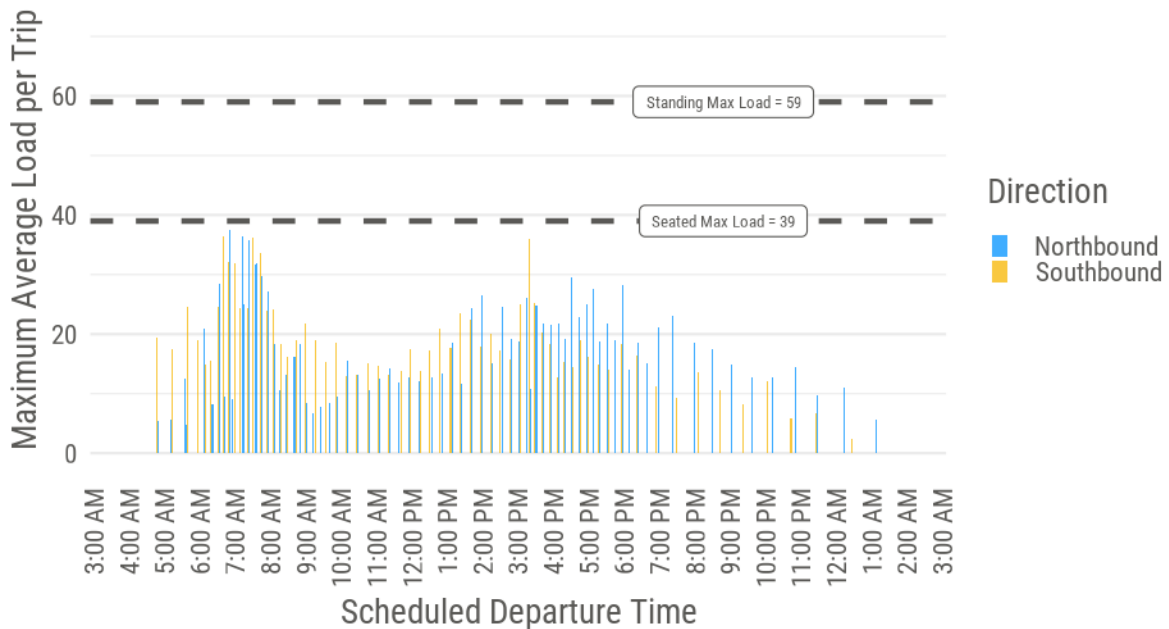


Figure 5 | Weekday Maximum Loads by Trip



ON-TIME PERFORMANCE AND RUNNING TIMES

On-Time Performance

In Fall 2019, Route 9’s on-time performance was 61% on weekdays, 65% on Saturdays, and 66% on Sundays (see Table 4), with off-schedule performance split relatively equally between early and late service. Route 9 is often subject to traffic congestion on the Schuylkill

Expressway, especially during peak periods. This traffic congestion makes trip times difficult to predict.

Table 4 | On-Time Performance

| | Early (>2 Mins Early) | On Time (<2 Mins Early to 6 Mins Late) | Late (>6 Mins Late) | Missed Trips |
|-------------------------|--------------------------|--|-------------------------|-----------------|
| Goal | | 80% | | |
| Fall 2019 Actual | | | | |
| Weekday | 15.0% | 61.3% | 23.7% | 4.3% |
| Saturday | 16.9% | 64.5% | 18.6% | 4.9% |
| Sunday | 18.8% | 66.1% | 15.1% | 7.1% |

Note: On-time percentages are for trips that are run (do not include dropped trips)

AVERAGE SPEEDS AND STOP SPACING

Route 9 is a slow route, especially within Center City and along the Schuylkill Expressway during peak periods (see Figure 6). In Fall 2019, average speeds towards Center City in the AM Peak and towards Wissahickon in the PM Peak averaged less than 15 mph on Route 9’s express segment. Contributing to slow speeds, bus stops are closely spaced (10+ bus stops per mile) in Center City with stops spaced further apart after the Route 9 departs from Wissahickon Transportation Center (see Figure 7).

Figure 6 | Average Speeds: PM Peak Southbound

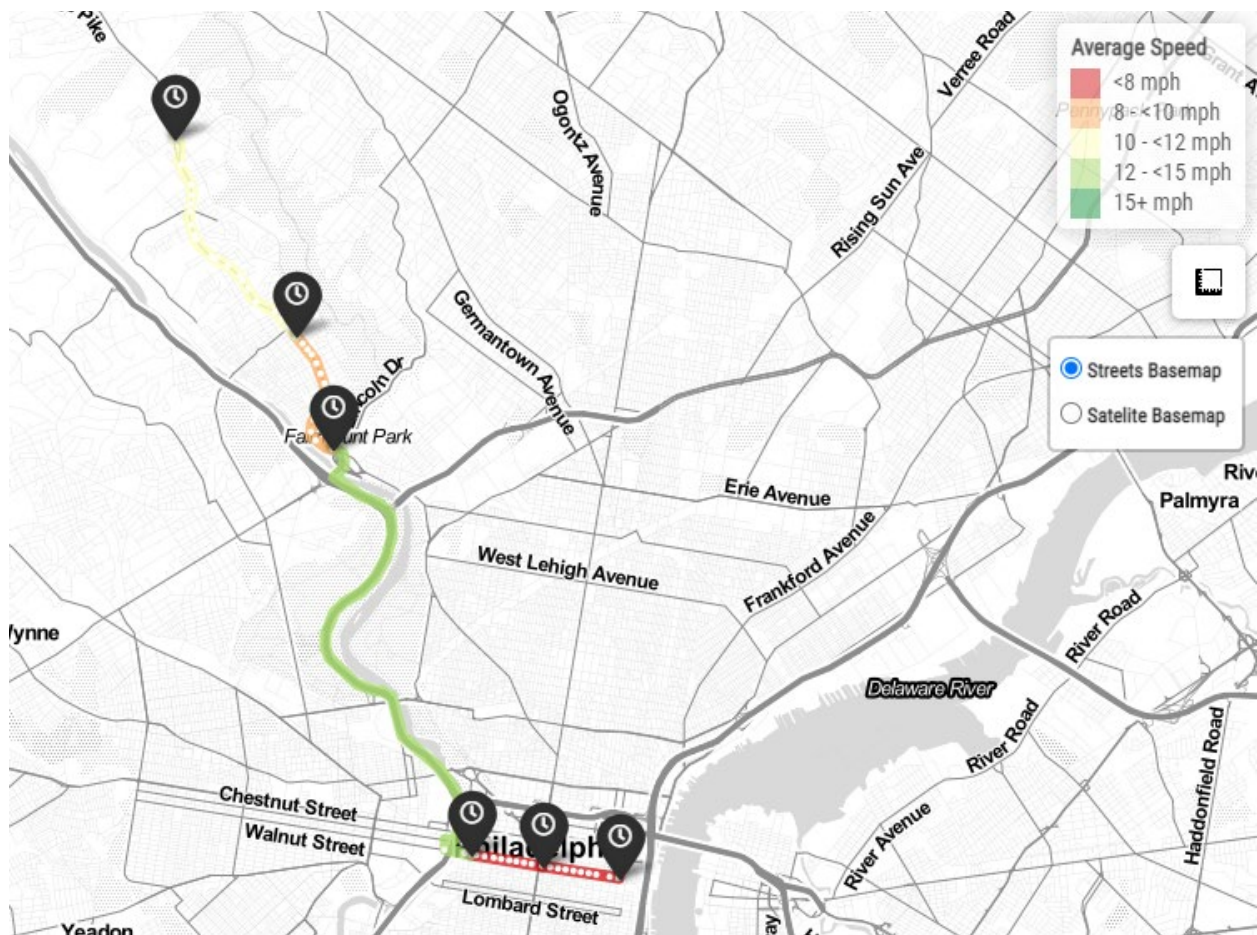
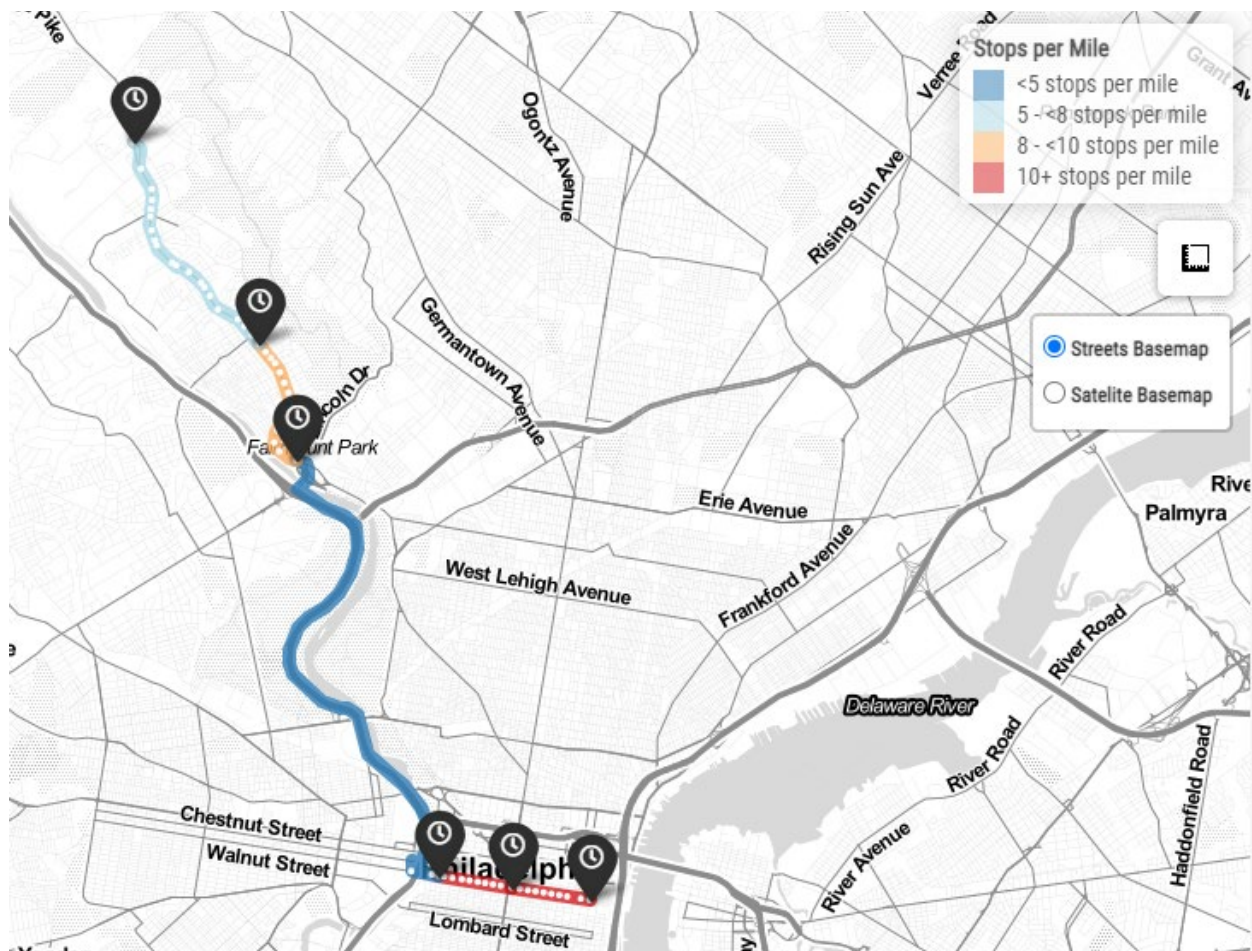


Figure 7 | Stop Spacing by Route Segment


RIDER CHARACTERISTICS

Route 9 riders are less transit reliant than SEPTA overall; they have a higher median household income, less likely to be in poverty and are whiter. But Route 9 riders are more likely to be seniors (see Table 5).

Table 5 | Rider Characteristics

| | Route 9 Riders | Systemwide Average |
|-------------------------|----------------|--------------------|
| Median Household Income | \$43,715 | \$32,713 |
| Share in Poverty | 22% | 30% |
| Ethnicity | | |
| White | 58% | 38% |
| Black | 30% | 46% |
| Hispanic | 8% | 10% |
| Other | 4% | 7% |
| Without a Vehicle | 33% | 37% |
| Seniors | 21% | 15% |
| With a Disability | 1% | 2% |

SERVICE IMPROVEMENT OPPORTUNITIES

Opportunities to strengthen Route 9 are listed below. Some suggestions may be contradictory, as there is usually more than one approach to improving a route.

- **Operate to 30th Street Station:** Instead of traveling into Center City, Route 9 could terminate at 30th Street Station, where there are multiple opportunities to connect to transfer to services that go into Center City and other parts of Philadelphia. Between 30th Street Station and 4th Street, Route 9 duplicates multiple routes. Shortening Route 9 and avoiding travel into Center City would also help address on-time performance issues. This change would require identifying a suitable layover location near 30th Street Station.
- **Upgrade to Frequent Transit Service:** Route 9 nearly meets SEPTA's standard for frequent bus service, narrowly missing the standard in the midday and evening. Ridership is strong enough to warrant additional investments, especially because the route provides fast and direct service from north/northwest Philadelphia into Center City.