

# ROUTE 2

## 20<sup>th</sup>-Johnston to Pulaski-Hunting Park

### KEY SERVICE CHARACTERISTICS, ISSUES, AND OPPORTUNITIES

- *Route 2 connects North and South Philadelphia traveling on the west side of Broad Street (via 16<sup>th</sup> and 17<sup>th</sup> Streets). Its alignment is simple and direct, and the route carried nearly 6,000 riders per weekday in Fall 2019.*
- *While Route 2 is a strong route in terms of ridership, it operates parallel service to several other SEPTA routes including the nearby Broad Street Line and bus routes 4, 16, 17 and 33.*
- *As with many SEPTA urban routes, Route 2's on-time performance is below standard and service is slow, in part because stops are spaced too closely.*

### ROUTE OVERVIEW

Route 2 operates between Nicetown-Tioga in North Philadelphia and Girard Estates in South Philadelphia (see Figure 1). It runs parallel to the Broad Street Line and serves a market similar to other SEPTA routes that operate north-south through Center City. Route 2 has a straight and direct alignment traveling northbound on 16<sup>th</sup> Street and southbound on 17<sup>th</sup> Street.

### SERVICE OVERVIEW

#### Schedule

Route 2 operates from approximately 4:55 AM to 2:12 AM on all days of the week. Frequencies vary by time of day (see Table 1):

- On weekdays, peak period frequencies are roughly every 10 minutes during the AM peak and every 12 minutes during the PM peak. Midday frequencies are approximately every 17 minutes on average.
- On weekend days, service frequencies average 30 minutes during the day and 35 minutes at night.

**Table 1 | Schedule Statistics**

Service Day	Span Of Service	Frequency (Range)	Frequency (Average)
<b>Weekdays</b>	4:52 AM to 2:12 AM		
Early AM	4:52 AM to 5:59 AM	11-25	17
AM Peak	6:00 AM to 8:59 AM	0-19	10
Midday	9:00 AM to 2:59 PM	15-18	17
PM Peak	3:00 PM to 5:59 PM	0-21	12
Evening	6:00 PM to 9:59 PM	0-41	23
Late Night	10:00 PM to 11:59 PM	38-46	41
Owl	Midnight to 2:12 AM	40-48	44
<b>Saturdays</b>	4:55 AM to 2:12 AM		
Day	8:00 AM to 5:59 PM	28 - 32	30
Night	Before 8:00 AM & After 5:59 PM	28 - 48	35
<b>Sundays</b>	4:55 AM to 2:12 AM		
Day	8:00 AM to 5:59 PM	29 - 32	30
Night	Before 8:00 AM & After 5:59 PM	28 - 48	35

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

## Service Patterns

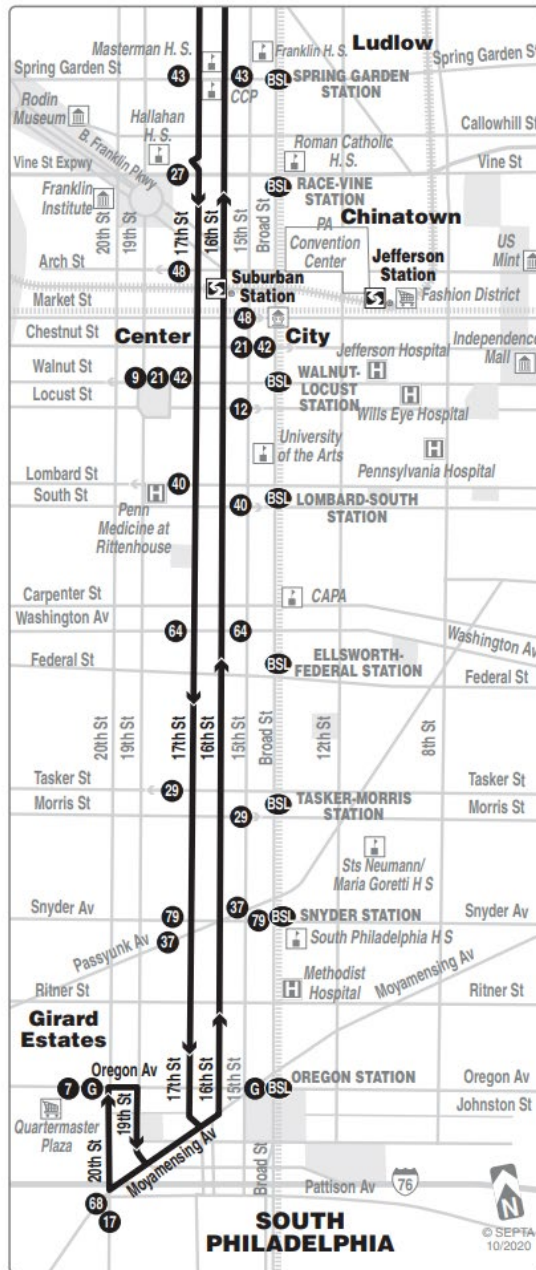
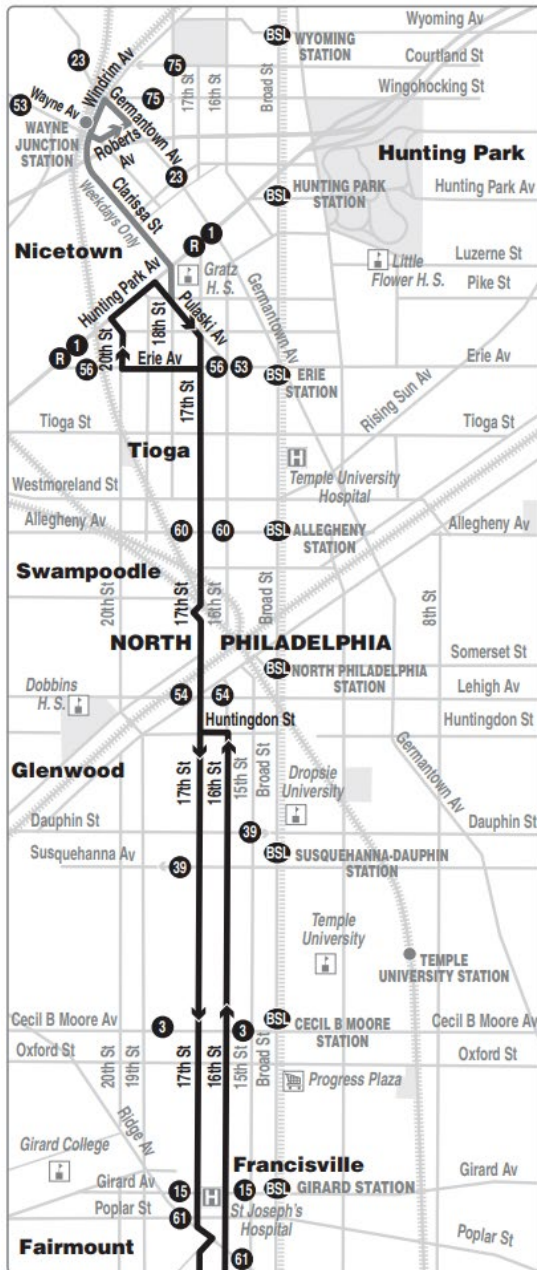
Route 2 has four weekday service patterns, two in each direction. During the weekday peak periods, some Route 2 trips extend to Wayne Junction Station north of Hunting Park Avenue. Midday and weekend service uses the primary pattern only (see Table 2).

**Table 2 | Service Patterns**

Pattern	Origin	Destination	Unique Feature	Unique Stops	Trips Per Day		
					Wkd	Sat	Sun
<b>Southbound</b>							
229346	Pulaski Av & Pike St	20th St & Johnston St	Primary Pattern	0	56	39	39
229344	Windrim Av & Wayne Av	20th St & Johnston St	Serve Wayne Junction	7	11	0	0
<b>Northbound</b>							
229351	20th St & Johnston St	Pulaski Av & Pike St	Primary Pattern	0	59	39	39
229348	20th St & Johnston St	Windrim Av & Wayne Av	Serve Wayne Junction	7	12	0	0

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

Figure 1 | Route Map



## RIDERSHIP

In Fall 2019, Route 2 carried 5,707 passengers on weekdays, 1,881 on Saturdays, and 1,536 on Sundays (see Table 3). Based on weekday ridership, it was SEPTA’s 33<sup>rd</sup> highest ridership route.

**Table 3 | Fall 2019 Ridership and Productivity**

	Weekdays	Saturdays	Sundays
<b>Daily Ridership</b>	<b>5,707</b>	<b>1,881</b>	<b>1,536</b>
Rank	33	51	47
<b>Passengers per Revenue Vehicle Hour</b>	<b>45.5</b>	<b>28.8</b>	<b>25.5</b>
Rank	47	71	74

### Transfer Patterns

While the single largest transfer point is the Market-Frankford Line, some Route 2 riders transfer to SEPTA routes traveling both east/west and north/south. The largest transfer volumes are to and from:

- Market-Frankford Line (5.1 percent of all trips)
- Broad Street Line (3.4 percent)
- Route 17 (Penn’s Landing to 20<sup>th</sup> Street and Johnston Street and Broad Street and Pattison Avenue) (2.1 percent)
- Route 21 (Penn’s Landing to 69<sup>th</sup> Street Transportation Center) (2.1 percent)
- Route 42 (Penn’s Landing to Wycombe Avenue or 61<sup>st</sup> Street and Pine Street) (1.9 percent)

Weekend transfer rates are nearly identical to weekday.

### Ridership by Stop

Most riders use Route 2 to travel in and out of Center City; 32 percent of all riders use the stops between Spring Garden Street and Locust Street (see Figure 2). Outside of travel to Center City, the next highest ridership stops are stops that offer opportunities to transfer to east-west routes. For northbound trips, some examples include:

- 54 riders board and another 54 alight at 16<sup>th</sup> Street and Cecil B Moore Avenue (transfer to Route 3)
- 7 riders board and 98 alight at 17<sup>th</sup> Street
- 162 riders board and 26 alight at 16<sup>th</sup> Street and Snyder Avenue (transfer to Route 79)

There is notable ridership activity at the southern end of the route where 20<sup>th</sup> Street intersects with Oregon Avenue and Johnston Avenue, likely due to retail at Quatermaster Plaza and the surrounding area. There is also a cluster of boardings and alightings at the northern end of the route near Pulaski Avenue and Hunting Park.

Outside of these stops and ridership clusters, ridership on Route 2 is dispersed throughout the corridor, with lots of turnover and many stops used by 50 or fewer riders per day. Only 32 combined northbound riders alight at the stops on the extension to Wayne Junction during rush hours.

**Figure 2 | Weekday Northbound Ridership by Stop**


## Ridership by Time of Day

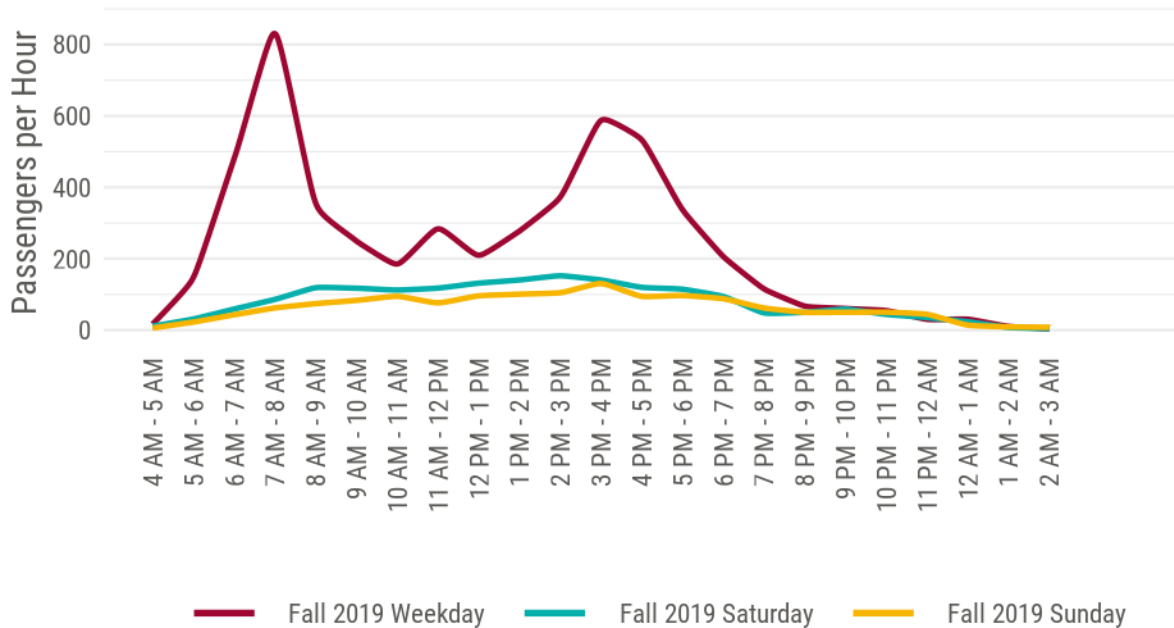
### Ridership by Hour

In Fall 2019, weekday ridership was very peaked with the highest ridership during the AM peak (between 6:30 AM and 7:30 AM). Ridership during the PM peak (2:00 PM and 5:00 PM) was also strong, albeit lower than in the morning (see Figure 3).

Midday ridership, on a per hour basis, was less than half of the AM peak and about half of the PM peak period. Evening ridership was much lower and fell quickly after 6:00 PM. Weekend ridership did not exhibit peaks and remained steady between 7:00 AM and 7:00 PM.



Figure 3 | Ridership by Hour: Fall 2019



### Ridership and Maximum Loads by Trip

In Fall 2019, weekday ridership per trip is high on most trips (see Figure 4):

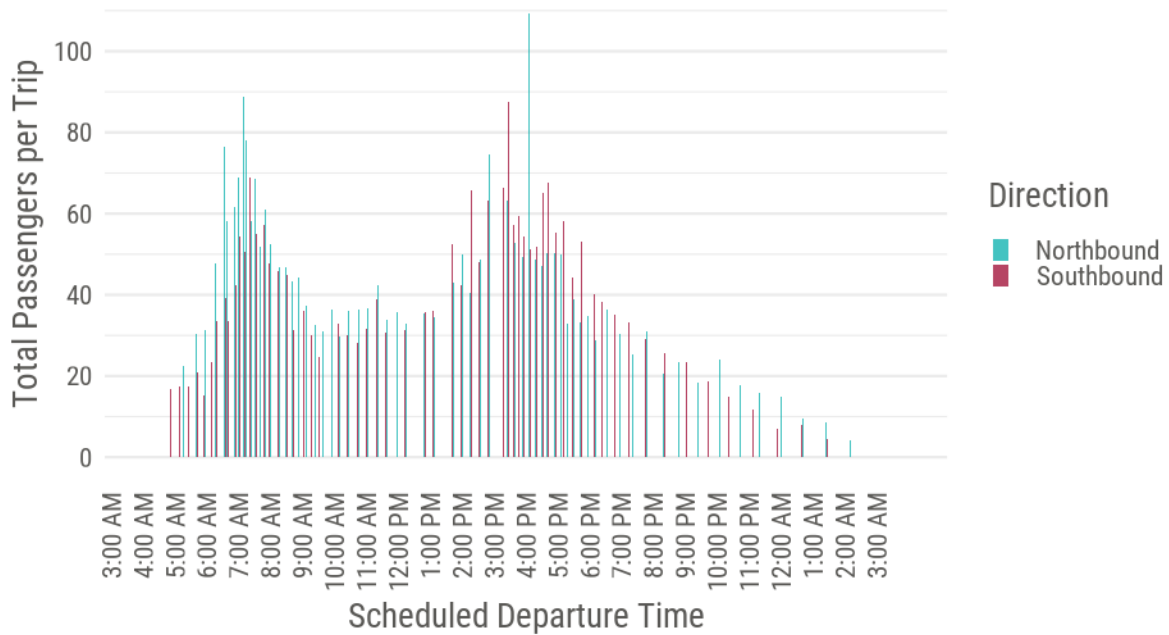
- AM peak trips carried 40 to 80 passengers
- Midday trips carried 30 to 40 passengers
- PM peak trips carried 40 to 80 passengers
- After 6:00 PM, ridership decreased steadily from 40 passengers to around 20.
- After 10 PM ridership continued to drop to fewer than 10 on the last trips.

Although turnover along the route is high, there are a handful of peak period trips where maximum loads approach or exceed seating capacity (see Figure 5). Substandard on-time performance, however, increases the likelihood that peak trips had standing loads due to bus bunching. Outside of the peak period, average loads remain below the seated capacity.

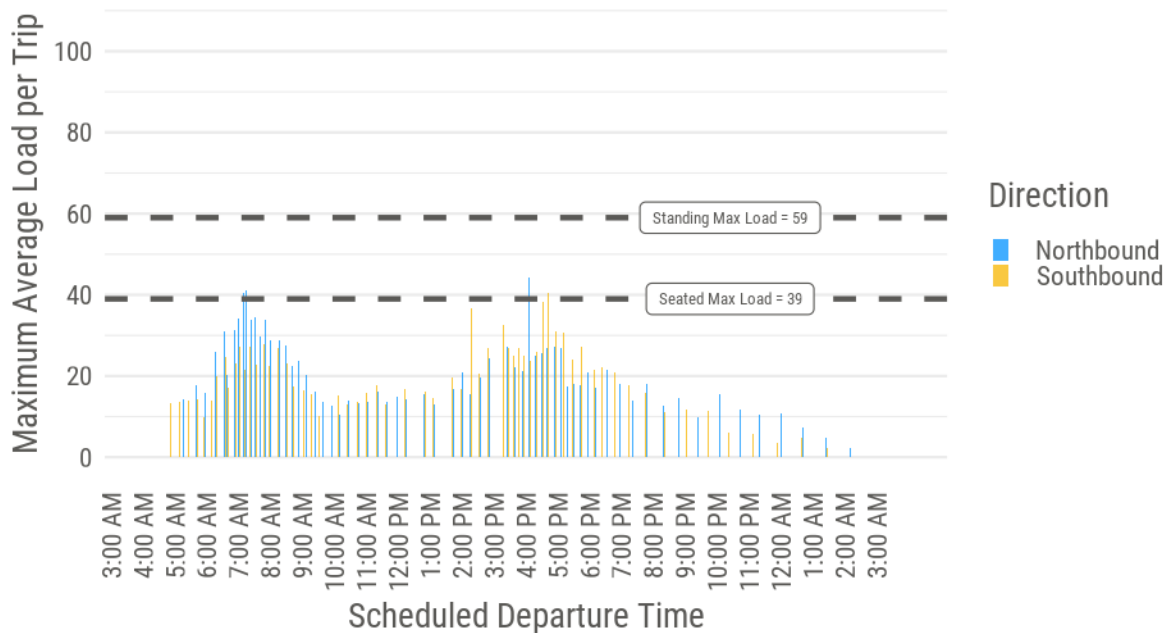
Starting around 7:00 AM on Saturdays, Route 2 carries approximately 20 riders per trip, increasing to around 40 riders per trip at 2:00 PM. Ridership ramps down slowly until around 9:00 PM, when trips start to carry fewer than 20 riders. After midnight trips carry around 10 riders.

Sunday ridership patterns are very similar to those on Saturday but with lower ridership overall. Late night trips carry fewer than 10 riders per trip.

**Figure 4 | Fall 2019 Weekday Ridership by Trip**



**Figure 5 | Fall 2019 Weekday Maximum Loads by Trip**



## ON-TIME PERFORMANCE AND RUNNING TIMES

### On-Time Performance

In Fall 2019, Route 2’s on-time performance was 68.9 percent on weekdays, 74.5 percent on Saturdays, and 75.4 percent on Sundays (see Table 4). On weekdays trips are more likely to be late than early but on weekend days, trips are as likely to be late as they are early.

**Table 4 | Fall 2019 On-Time Performance**

	Early (>2 Mins Early)	On Time (<2 Mins Early to 6 Mins Late)	Late (>6 Mins Late)	Missed Trips
<b>Goal</b>		<b>80%</b>		
<b>Fall 2019 Actual</b>				
Weekday	9.5%	68.9%	21.6%	5.3%
Saturday	11.8%	74.5%	13.7%	3.6%
Sunday	12.2%	75.4%	12.5%	3.1%

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

## AVERAGE SPEEDS AND STOP SPACING

On weekdays, Route 2 travels between 8 and 10 mph outside of Center City and less than 8 mph when it travels through Center City (see Figure 6). Slow speeds are attributable to traffic congestion, narrow streets, and streeteries in Center City as well as stop spacing along the route. Route 2 has an average of 11 stops per mile over its entire length; but some segments have more than 13 and as high as 15 stops per mile (see Figure 7).

**Figure 6 | Fall 2019 PM Peak Northbound Speeds**

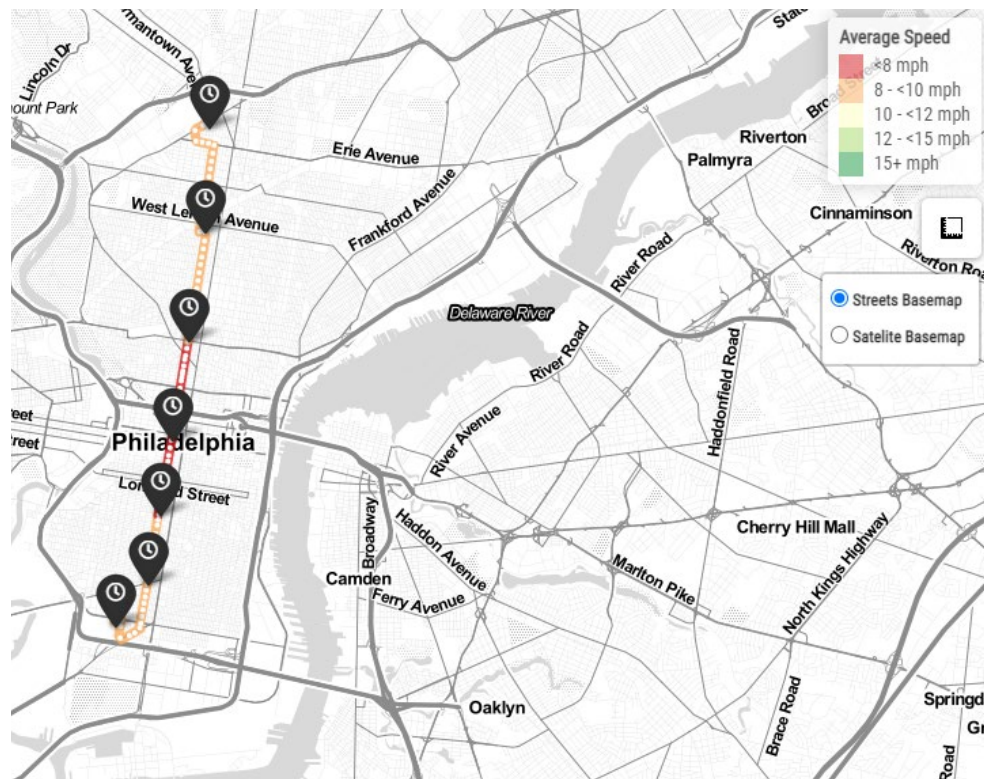
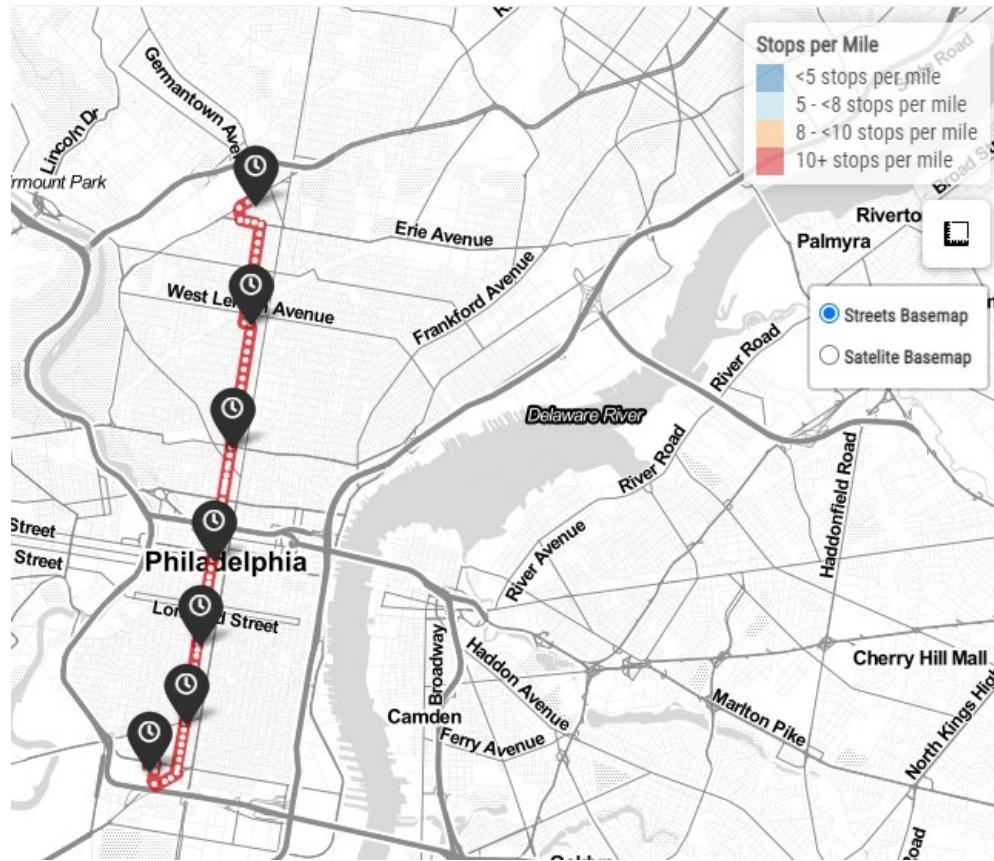




Figure 7 | Stop Spacing by Route Segment



## RIDER CHARACTERISTICS

Route 2’s rider demographics are typical of SEPTA’s entire service area (see Table 5). The one major difference is that the route carries a higher percentage of riders who don’t have access to a vehicle.

Table 5 | Rider Characteristics

	Route 2 Riders	Systemwide Average
Median Household Income	\$32,813	\$32,713
Share in Poverty	34%	30%
Ethnicity		
White	40%	38%
Black	48%	46%
Hispanic	9%	10%
Other	3%	7%
Without a Vehicle	49%	37%
Seniors	18%	15%
With a Disability	3%	2%

## SERVICE IMPROVEMENT OPPORTUNITIES

Opportunities to strengthen Route 2 are listed below. Some suggestions may be contradictory, as there is usually more than one approach to improving a route.

- **Consolidate Route 2 with Routes 17 and 33:** These other parallel routes operate close to Route 2 and serve similar markets. Consolidating routes on or near 20<sup>th</sup> Street would allow SEPTA to increase service frequency on the remaining routes and would make service similar to that currently offered east of Broad Street and north of Market Street. There would still be only approximately half-mile between service on Broad Street and service to the west. Community College of Philadelphia would continue to be served by other routes in the future network. Additionally, Temple University would be within a quarter mile of the consolidated service while also directly served by Route 16.
- **Simplify Service by Eliminating Peak Period Extension to Wayne Junction:** Demand is relatively low at Wayne Junction and the destination is served by Route 23 on Germantown Avenue. The demand may not justify the additional operational complexity of the extension; however, it is important to acknowledge the positive role regional rail could play in generating ridership here.
- **Smooth Headways and Market Route 2 as a Frequent Transit Route:** The route currently has frequent service and high ridership during peak periods. Additional service at other times may attract more ridership and upgrade the route to meet the frequent service standard.