

# ROUTE 99

## Phoenixville to Norristown Transportation Center

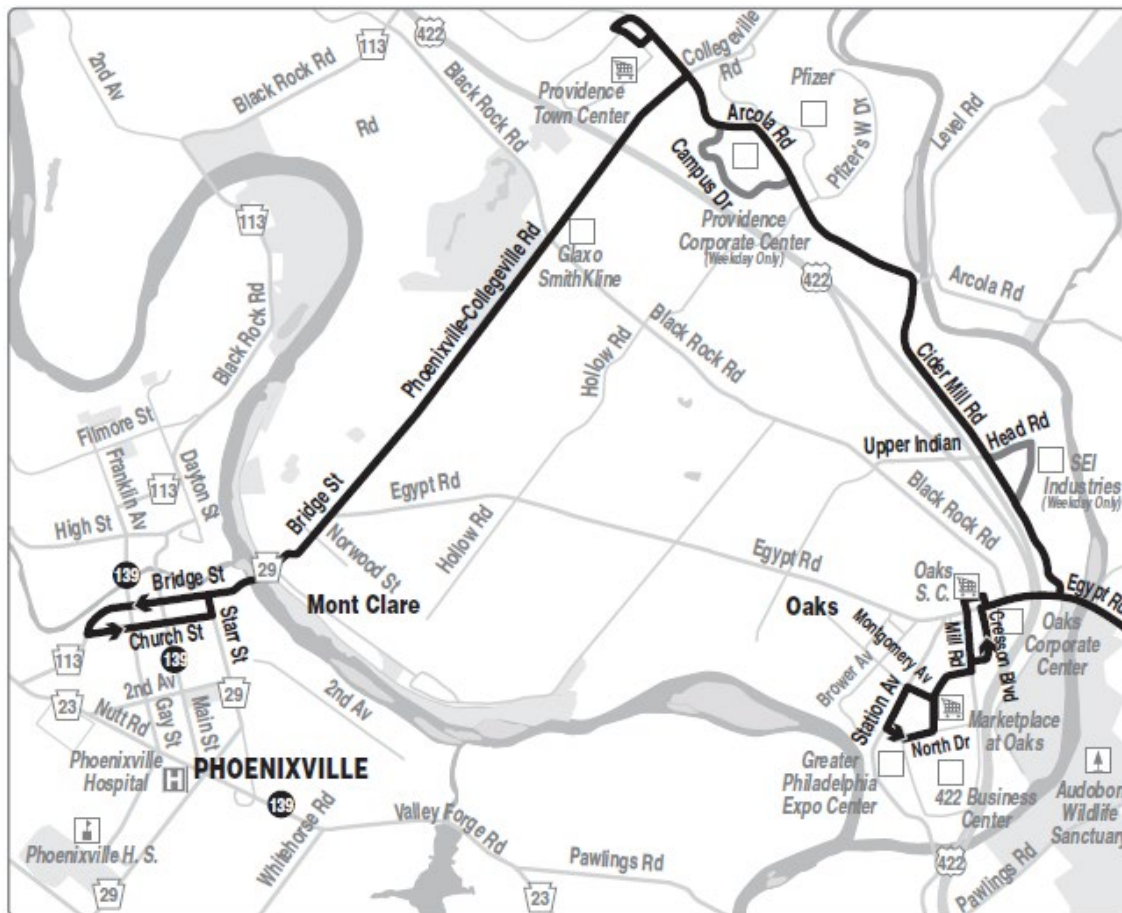
### KEY SERVICE CHARACTERISTICS, ISSUES, AND OPPORTUNITIES

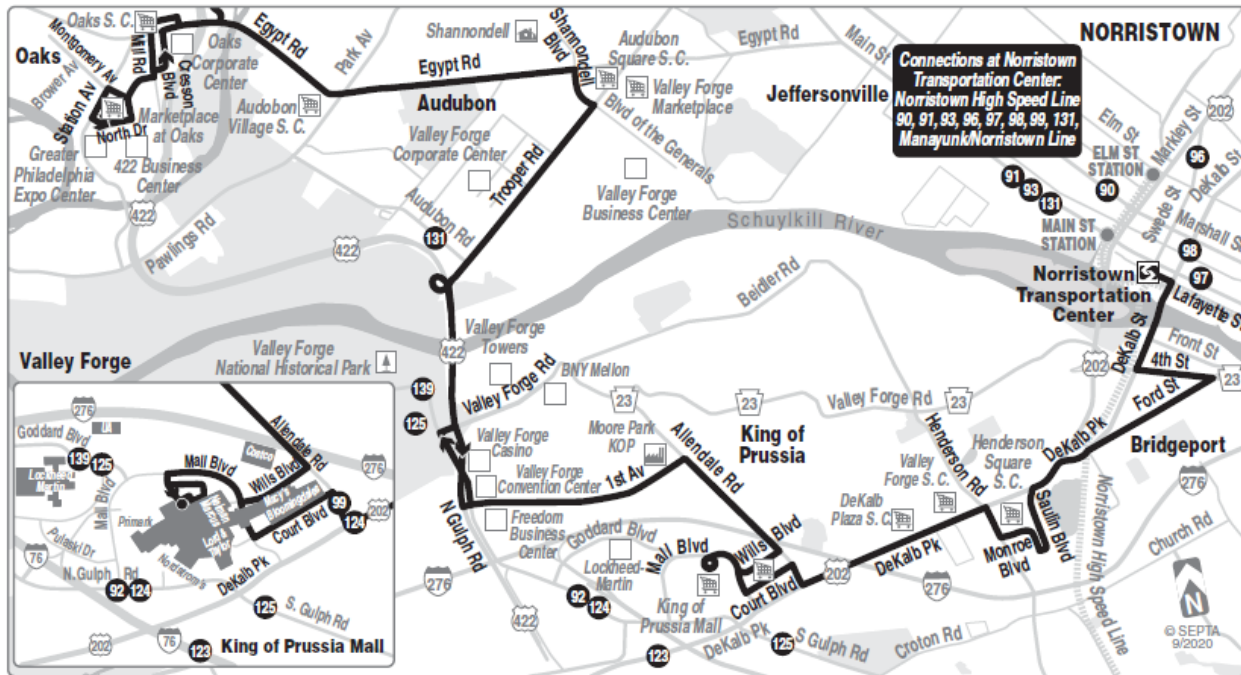
- *Route 99 carried roughly 1,360 passengers in the Fall of 2019.*
- *It is a long route that travels 23.5 miles on a one-way trip. The alignment is indirect; it changes direction several times and travels off-route into shopping malls and office parks. The route is also complex with eight operating patterns.*

### ROUTE OVERVIEW

Route 99 is a suburban route that operates between Phoenixville and Norristown Transportation Center. It serves the Marketplace at Oaks, Valley Forge Casino Resort, and King of Prussia Mall (see Figure 1).

Figure 1 | Route Map





## SERVICE OVERVIEW

### Schedule

Route 99 operates from 5:15 AM until 11:32 PM on weekdays (see Table 1). Average frequencies are between 30 and 40 minutes during the day and every 55 minutes at night.

Saturday service operates from 5:44 AM to midnight with average frequencies of 36 minutes during the day and 46 minutes at night. On Sundays, Route 99 is available between 6:18 AM and 11:30 PM; average frequencies for all times are around 60 minutes.

Actual frequencies, however, vary during all time periods, sometimes significantly.

**Table 1 | Schedule Statistics**

Service Day	Span Of Service	Frequency (Range)	Frequency (Average)
<b>Weekdays</b>	4:00 AM to 12:18 AM		
Early AM	4:00 AM to 5:59 AM		
AM Peak	6:00 AM to 8:59 AM	21-64	37
Midday	9:00 AM to 2:59 PM	20-44	30
PM Peak	3:00 PM to 5:59 PM	24-40	31
Evening	6:00 PM to 9:59 PM	12-75	42
Late Night	10:00 PM to 11:59 PM	15-75	55
Owl	Midnight to 3:59 AM		
<b>Saturdays</b>	8:00 AM to 7:59 AM		
Day	8:00 AM to 5:59 PM	22-70	36
Night	5:59 PM to 7:59 AM	9-79	46
<b>Sundays</b>	6:43 AM to 10:29 PM		

Day	8:00 AM to 5:59 PM	57-97	63
Night	5:59 PM to 7:59 AM	53-75	62

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

## Service Patterns

Route 99 operates with 12 service patterns; six are used in each direction (see Table 2). Individual service patterns consist of series of short-turns and more direct alignments.

**Table 2 | Service Patterns**

Pattern	Origin	Destination	Unique Feature	Unique Stops	Trips Per Day		
					Wkd	Sat	Sun
<b>Westbound</b>							
230913 (A)	Norristown Transportation Center	Church St & Main St	Primary Pattern		18	0	0
230917 (B)	Norristown Transportation Center	Church St & Main St	Does not serve Providence Corporate Center or SEI	1	3	13	15
230915 (C)	Norristown Transportation Center	Plaza at King of Prussia	Short-turn: NTC to King of Prussia	0	6	11	0
230912 (D)	Norristown Transportation Center	1 <sup>st</sup> Ave & Freedom Business Center Dr	Two short-turn trips (AM Peak /Midday)	0	2	0	0
230916 (E)	Norristown Transportation Center	Shannondell Blvd & Egypt Rd	One early AM short-turn trip	0	1	0	0
230918 (F)	Norristown Transportation Center	Church St & Main St	Does not serve SEI, Providence Corp Ctr, or Providence Town Ctr	1	0	3	2
<b>Eastbound</b>							
230923 (A)	Church St & Main St	Norristown Transportation Center	Primary Pattern		17	0	0
230919 (B)	Plaza at King of Prussia	Norristown Transportation Center	Short-turn: King of Prussia to NTC	0	9	11	0
230921 (C)	Church St & Main St	Norristown Transportation Center	Does not serve SEI or Providence Corporate Center	1	3	15	15
230924 (D)	Montgomery Av & Station Av	Norristown Transportation Center	Short-turn: Oaks to NTC	0	2	0	0

230920 (E)	1 <sup>st</sup> Av & Freedom Business Center Dr	Norristown Transportation Center	One evening short-turn trip	0	1	0	0
230922 (F)	Church St & Main St	Norristown Transportation Center	Does not serve SEI, Providence Corp. Ctr or Providence Town Ctr	1	0	2	1

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

## RIDERSHIP

In the fall of 2019, Route 99 carried 1,361 passengers on weekdays, 969 on Saturdays, and 753 on Sundays (see Table 3).

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

	Weekdays	Saturdays	Sundays
<b>Daily Ridership</b>	<b>1,361</b>	<b>969</b>	<b>753</b>
Rank	84	74	70
<b>Passengers per Revenue Vehicle Hour</b>	<b>21.7</b>	<b>20.7</b>	<b>20.8</b>
Rank	108	89	84

## Transfer Patterns

The largest transfer volumes on Route 99 are to and from:

- Norristown High Speed Line (13.1% of all trips)
- Route 124 Chesterbrook and King of Prussia to 13<sup>th</sup>-Market (6.0%)
- Route 125 Valley Forge and King of Prussia to 13<sup>th</sup>-Market (4.7%)
- Route 93 Pottstown to Norristown Transportation Center (4.1%)
- Route 98 Blue Bell or Plymouth Meeting Mall to Norristown Transportation Center (3.5%)

Weekend transfer volumes are slightly lower but with similar patterns.

## Ridership by Stop

Ridership on Route 99 is concentrated on the segment between the Norristown Transportation Center and King of Prussia Mall. This segment has the most service and accounts for 60% of all boardings and nearly half of all riders boarding or alighting at either the NTC or the Plaza at King of Prussia (see Figure 2). High ridership stops along the route (eastbound) include:

- 349 riders board at Norristown Transportation Center (26.0% of all passengers)
- 3 board and 69 alight at Dekalb Street and Crooked Lane (5.3%)
- 183 riders board and 75 alight at the Plaza at King Prussia (19.2%)
- 29 board and 23 alight at Bally's and Mall Blvd (3.9%)

- 55 boarded and no one alighted at Church Street and Main Street (4.1%)

Westbound patterns mirror eastbound patterns and weekend patterns are similar but with lower volumes.

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



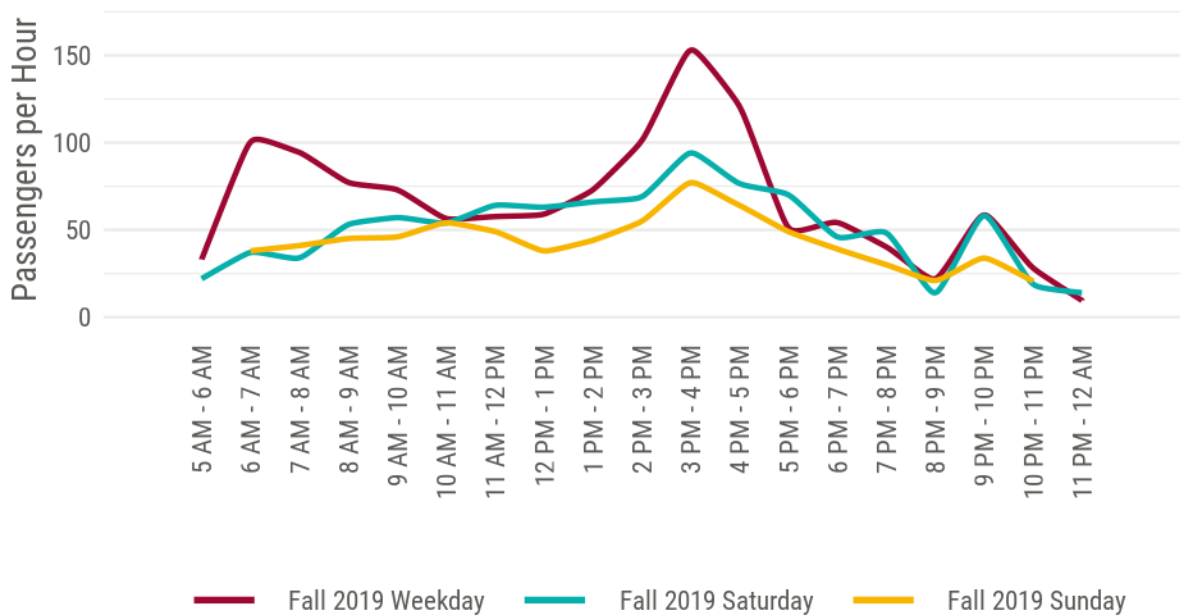
## Ridership by Time of Day

### Ridership by Hour

In Fall 2019, ridership was clustered around peak periods with a moderate peak at 6:00 AM and a larger peak during the 3:00 PM hour (see Figure 3). Midday ridership was about half of the AM Peak. Afternoon ridership starts to increase at 1:00 PM before peaking between 3:00 PM and 4:00 PM. It declines steadily from the afternoon peak until 9:00 PM where there is a smaller peak.

Saturday and Sunday have the same peak during the 3:00 PM hour, plus a second smaller peak at 9:00 PM.



**Figure 3 | Ridership by Hour: Pre-Pandemic; Fall 2019**


### Ridership and Maximum Loads by Trip

Pre-pandemic, boardings by trip data shows directional peaks, with higher demand in the morning traveling westbound (towards the King of Prussia Mall) with afternoon and evening peaks traveling eastbound. Most trips carried between 10 and 30 riders per trip (see Figure 4):

- Trips during the early morning period carried between 14 and 20 passengers.
- During the AM Peak, westbound trips carried up to 40 total passengers.
- Midday trips carried between 5 to 25 passengers.
- During the PM Peak, westbound trips carried over 30 passengers per trip, while eastbound trips carry between 30 and 46 passengers.
- During the evening, ridership was between 5 and up to 40 passengers per trip.

Weekend day trips also showed a peak directional pattern, with stronger demand in the morning traveling westbound and stronger demand eastbound in the afternoon.

No trips on Route 98 reached the maximum seated capacity (see Figure 5).

Figure 4 | Weekday Ridership by Trip

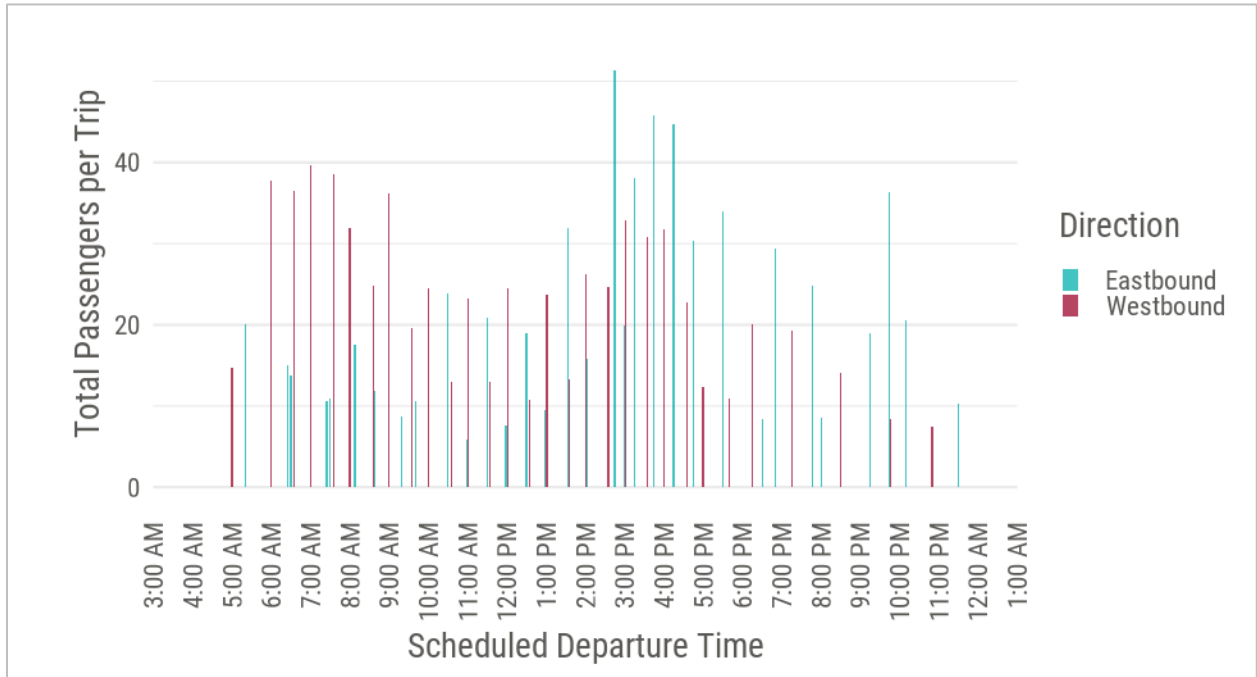
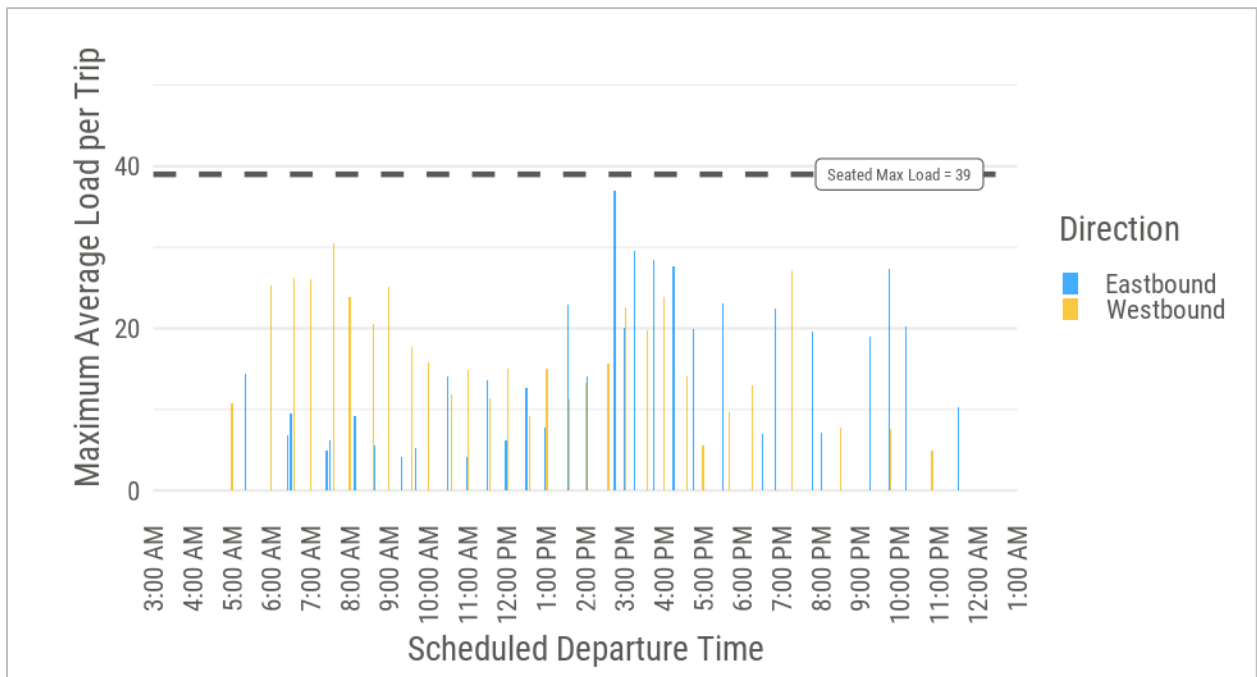


Figure 5 | Weekday Maximum Loads by Trip



# ON-TIME PERFORMANCE AND RUNNING TIMES

## On-Time Performance

In the fall of 2019, Route 99's on-time performance was 75% on weekdays, 80% on Saturdays, and 83% on Sundays (see Table 4). On weekdays, off-schedule trips were evenly split between early and late arrivals.

Dropped trips were not a significant issue.

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

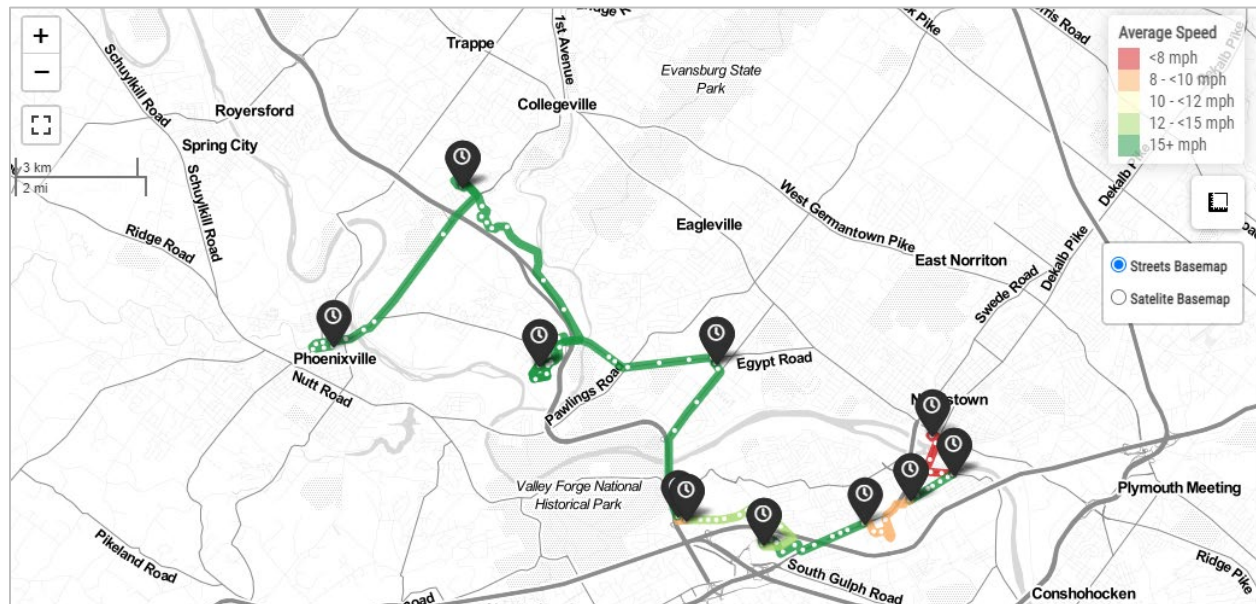
	Early (>2 Mins Early)	On Time (<2 Mins Early to 6 Mins Late)	Late (>6 Mins Late)	Missed Trips
<b>Goal</b>		<b>80%</b>		
<b>Fall 2019 Actual</b>				
Weekday	11.7%	75.0%	13.2%	0.7%
Saturday	14.3%	80.2%	5.5%	0.0%
Sunday	11.5%	82.8%	5.7%	0.9%

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

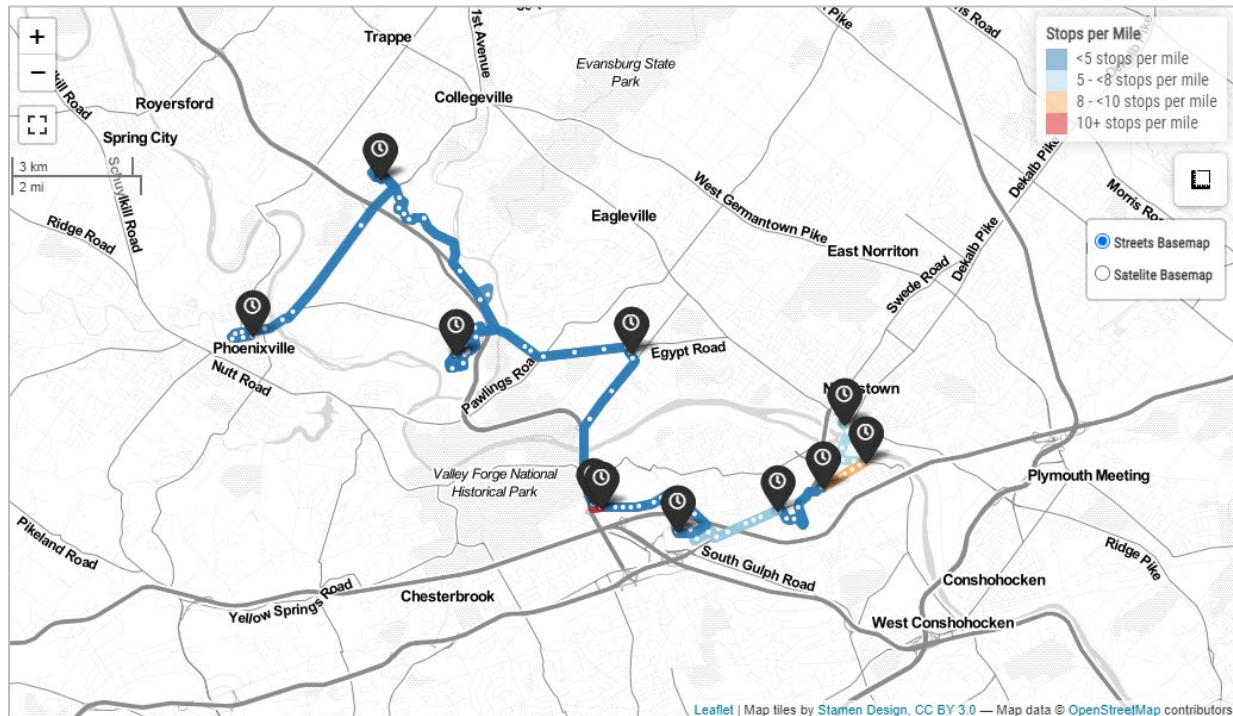
## AVERAGE SPEEDS AND STOP SPACING

Route 99 generally operates with good speeds, however, there are times and places where speeds slow down (see Figure 6). Generally, stops on Route 99 are spaced to balance access and operating speeds (see Figure 7). Some segments have stops that are closely spaced together, especially in the area close to the Norristown Transportation Center and the segment between Freedom Business Center Drive and North Gulph Road.

**Figure 6 | Average Speeds: PM Peak Westbound**





**Figure 7 | Stop Spacing by Route Segment**


## RIDER CHARACTERISTICS

In most respects Route 99's service area is typical of SEPTA's service area as a whole (see Table 5). Exceptions include a higher percentage of white riders, a lower percentage of Black riders and a lower share of seniors.

**Table 5 | Rider Characteristics**

	Route 99 Riders	Systemwide Average
Median Household Income	\$33,980	\$32,713
Share in Poverty	30%	30%
Ethnicity		
White	43%	38%
Black	33%	46%
Hispanic	14%	10%
Other	9%	7%
Without a Vehicle	34%	37%
Seniors	7%	15%
With a Disability	2%	2%

## SERVICE IMPROVEMENT OPPORTUNITIES

Opportunities to strengthen Route 99 are listed below. Some suggestions may be contradictory, as there is usually more than one approach to improving a route.

- **Shorten Route:** Nearly 80% of Route 99's ridership as well as much of its service is concentrated between the Norristown Transportation Center and the King of Prussia Mall. The route could be shortened to focus on this segment. This step would make it easier to address other issues challenging Route 99, including on-time performance, lots of service patterns, and complicated schedules.
- **Divide Route in Half with service to Phoenixville:** Route 99 could be divided into two routes: one that operates between the Norristown Transportation Center and King of Prussia Mall and another that operates between the King of Prussia Mall and Phoenixville. This would allow SEPTA to balance service levels according to demand (more service on eastern half of the route and less on western half). Changes would require coordination with other SEPTA routes, like Route 139.
- **Divide Route in Half with service to the Marketplace at Oaks:** Another option would be to split Route 99 into two routes: one that operates between the Norristown Transportation Center and King of Prussia Mall and another that operates between the King of Prussia Mall and the Marketplace at Oaks. Shortening the route to operate between the Marketplace at Oaks and King of Prussia would capture most riders but lose some service to Providence Town Center. Ridership at this area is low, but there are no alternative service options. Riders in Phoenixville could continue to use Route 139. This would allow SEPTA to balance service levels according to demand (more service on eastern half of the route and less on western half).
- **Straighten Route:** Route 99 travels off the main corridor to drive into office parks and shopping malls. Keeping bus service on the primary corridor will make service faster and simpler. Depending on ridership and the pedestrian environment, some destinations can be served from the main streets. In the case of Route 99, there are a handful of deviations that serve relatively small numbers of riders:
  - **SEI Complex** – average daily ridership is 8 people
  - **Oak Mill Shopping Center** – about 75 riders get on or off at stops in the Oak Mill shopping area. The loop deviates 3 miles off route to serve these riders.
  - **Shopping Center off Dekalb Pike** – the segment along Saulin Boulevard and S. Henderson Road carries about 30 daily riders
- **Minimize Variations to Simplify Service:** Route 99 has lots of service patterns, which complicate the route for riders. While the patterns attempt to tie service to the underlying market, they make the difficult to understand and use.