

WESTCHESTER COUNTY BEE-LINE SYSTEM ROUTES 7 & 13 TRANSIT ANALYSES

ROUTE 13

A presentation by
Nelson\Nygaard Consulting Associates

May 24, 2016

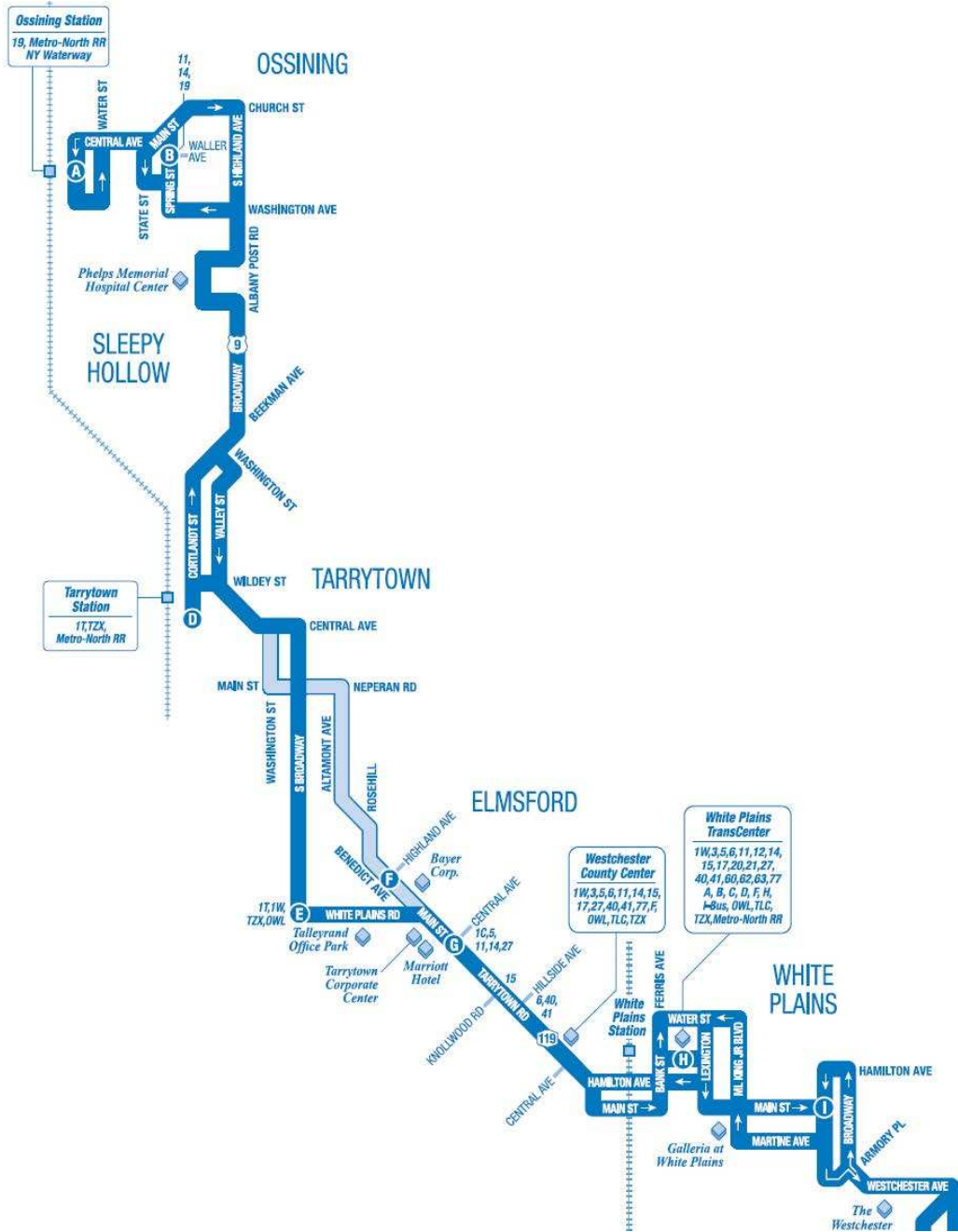


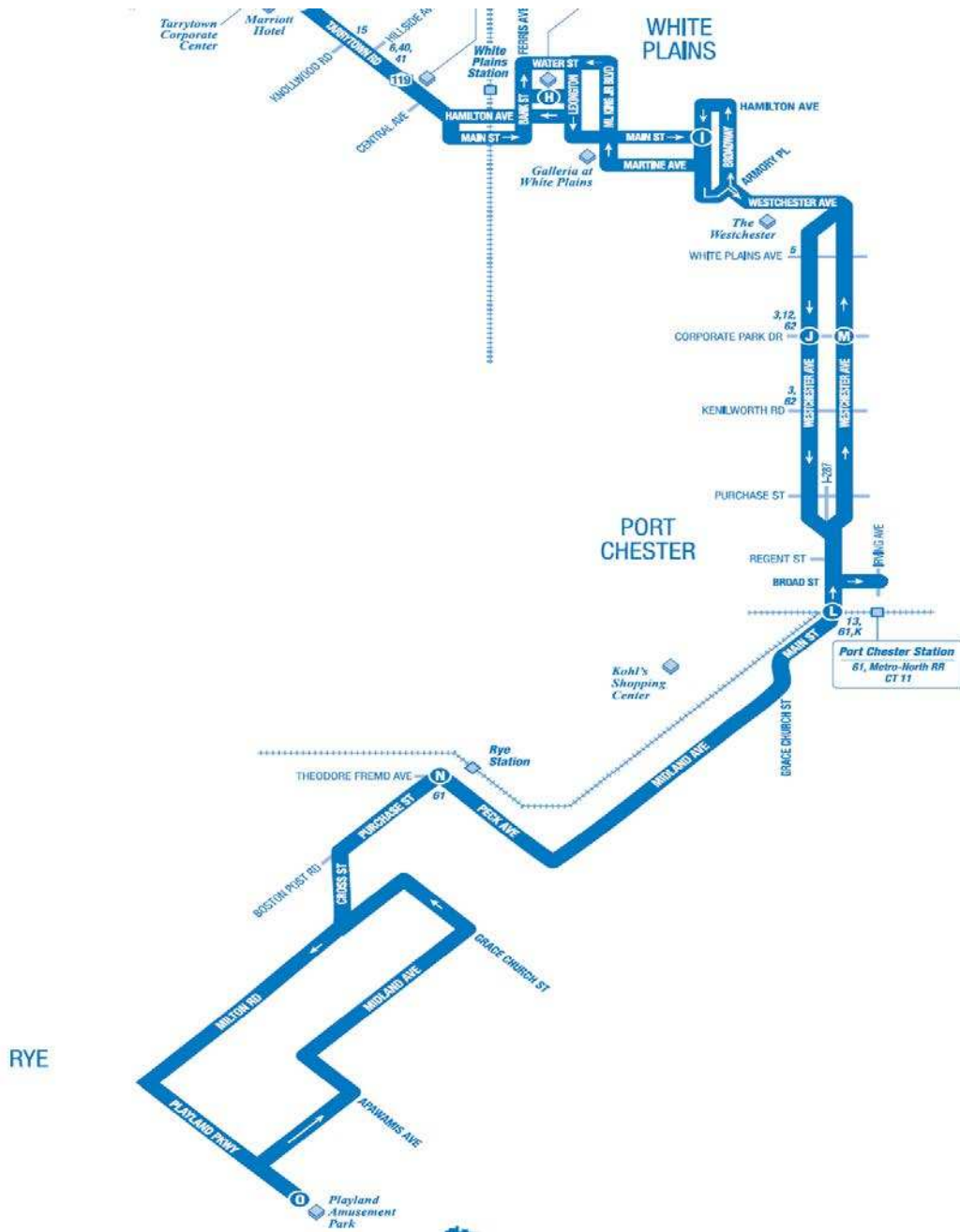
OVERVIEW OF STUDY

Route Profile

- **Ridership:** 4,490 (weekday daily average)
- **Stops:** 110 westbound, 109 eastbound
- **Signalized Intersections:** 96 westbound, 97 eastbound

Segment	Direction	Running Time	Length
Playland-Ossining	Westbound	117 minutes	25 miles
Port Chester-Ossining	Westbound	92 minutes	21 miles
Playland-Tarrytown	Westbound	88 minutes	17 miles
Port Chester-Tarrytown	Westbound	72 minutes	14 miles
Ossining-Playland	Eastbound	118 minutes	25 miles
Ossining-Port Chester	Eastbound	92 minutes	21 miles
Tarrytown-Playland	Eastbound	100 minutes	17 miles
Tarrytown-Port Chester	Eastbound	93 minutes	14 miles





Issues

- Routes cobbled together from a series of local corridors
- Slow for passengers, costly and delay prone
- Hobbled by excessive turns, signal delay and congestion

Challenges

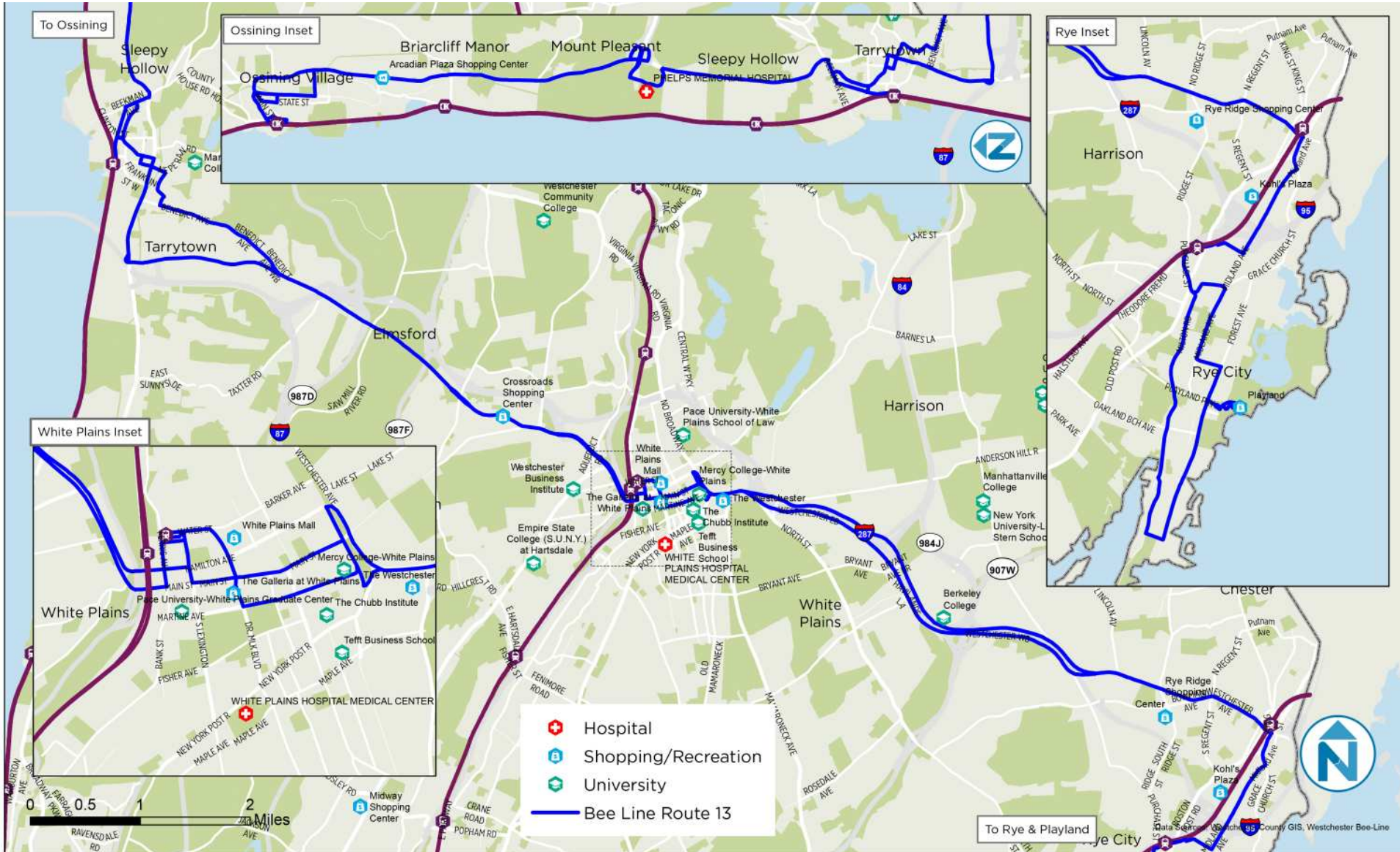
- Three major route variations beyond the main route
- In downtown White Plains, requires 10 turns in each direction
- In Harrison, serves office parks not well suited to traditional transit

Goals

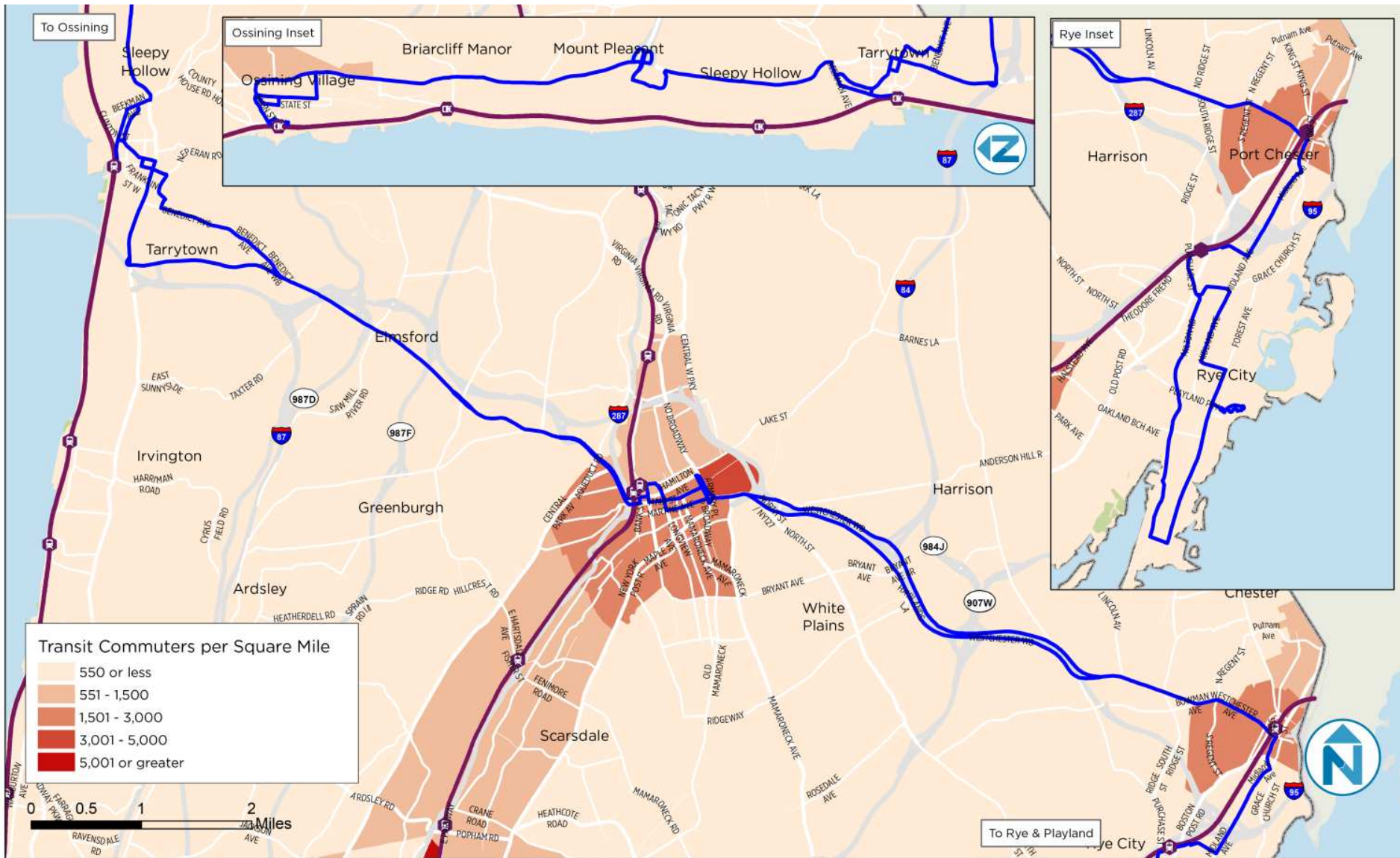
- Improving efficiency
- Improving directness
- Improving movement in traffic
- Balancing the needs of existing and potential riders

INITIAL ANALYSIS

Key Destinations



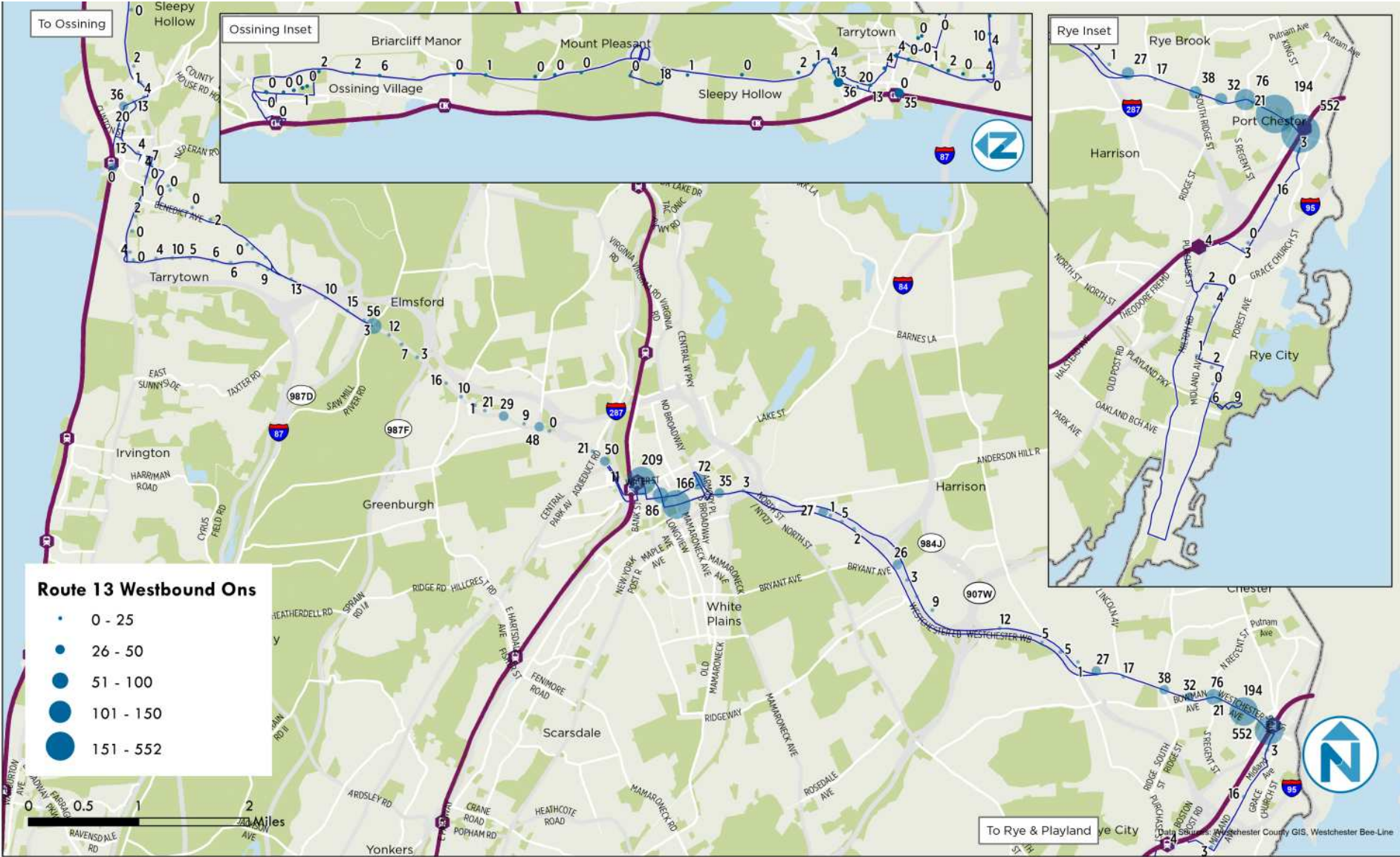
Transit Users



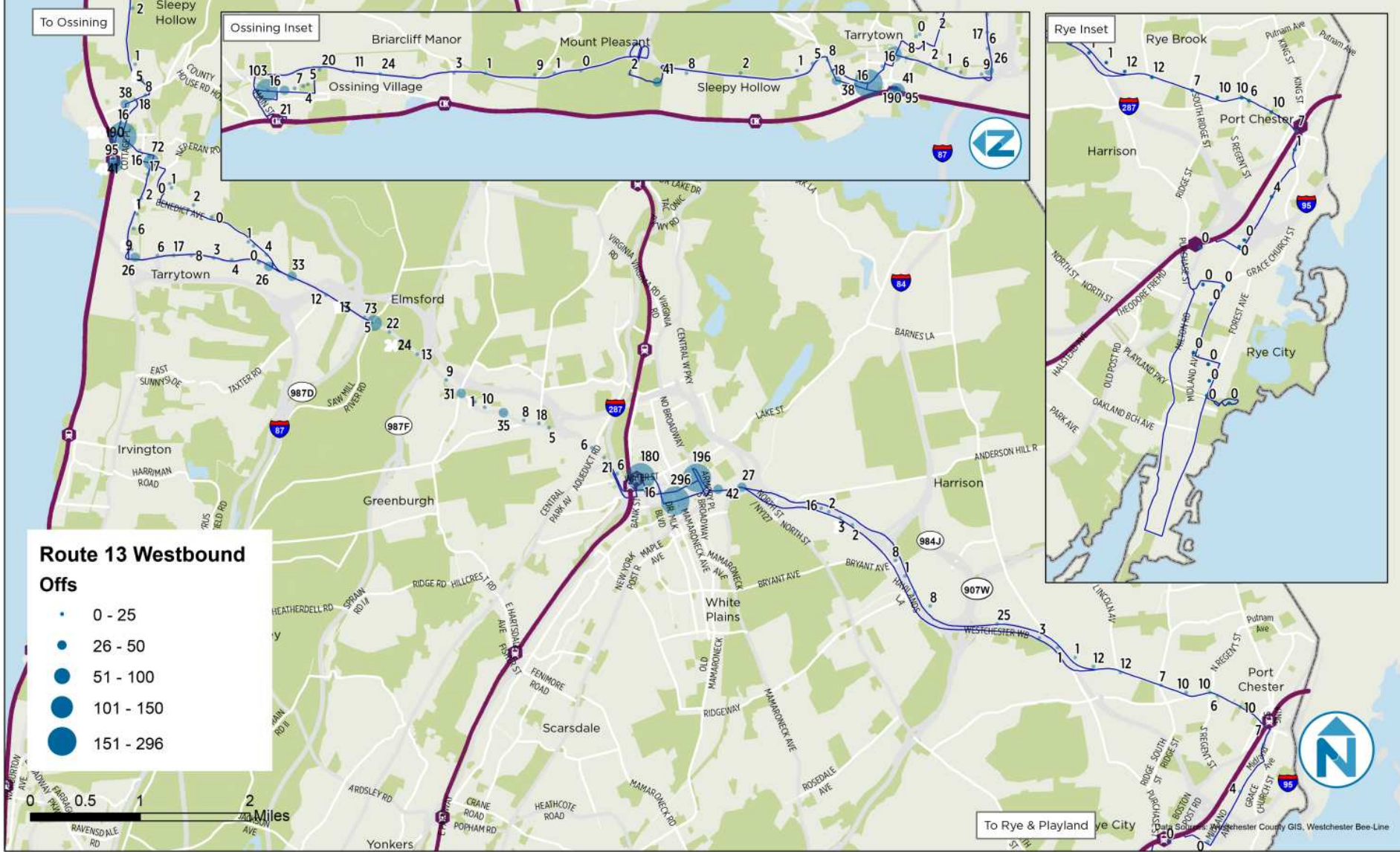
Zero Car Households



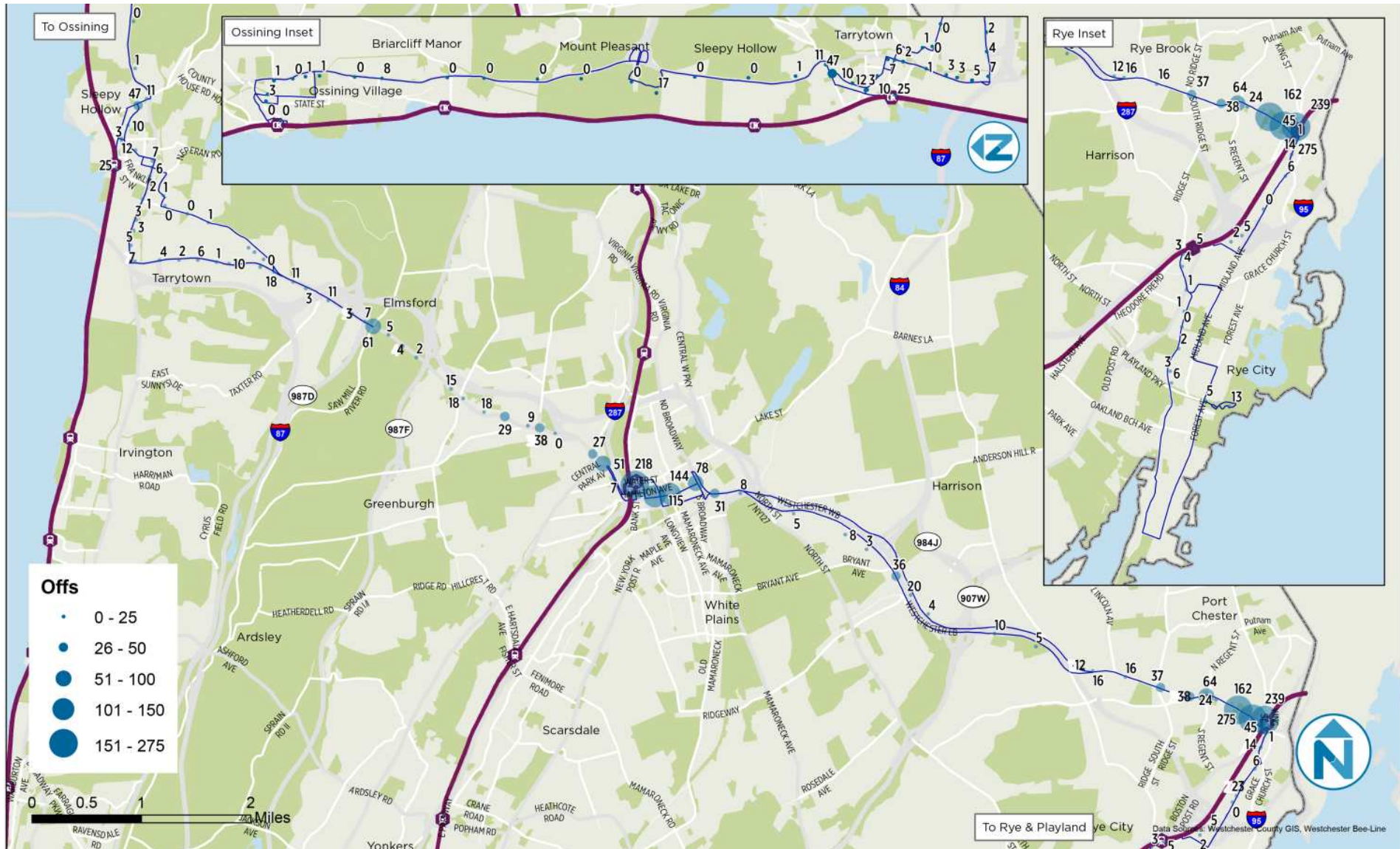
Boardings by Stop: Route 13 Westbound



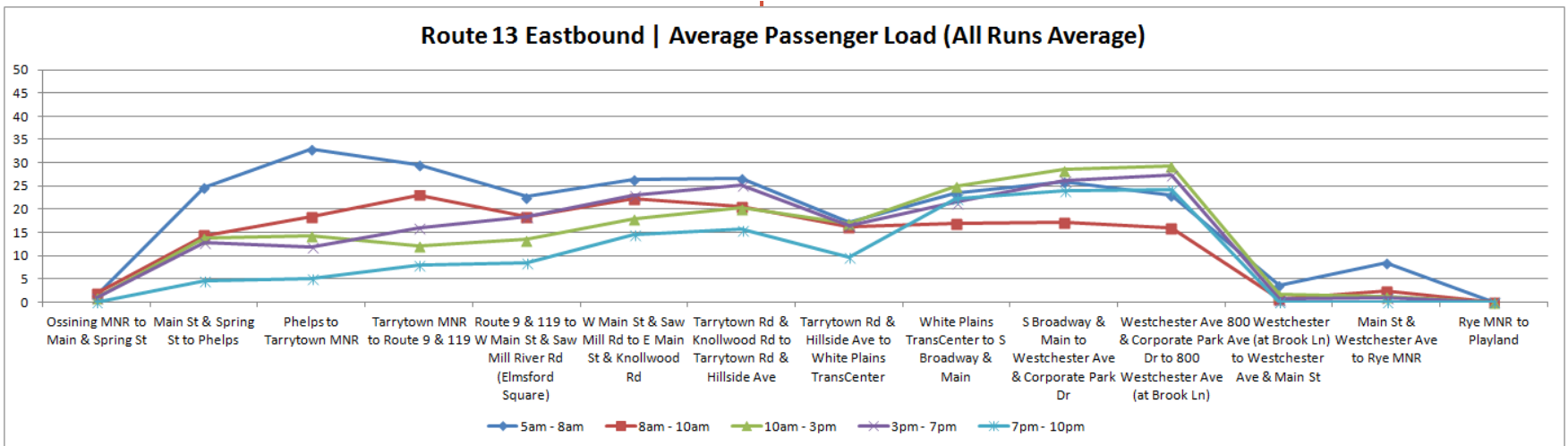
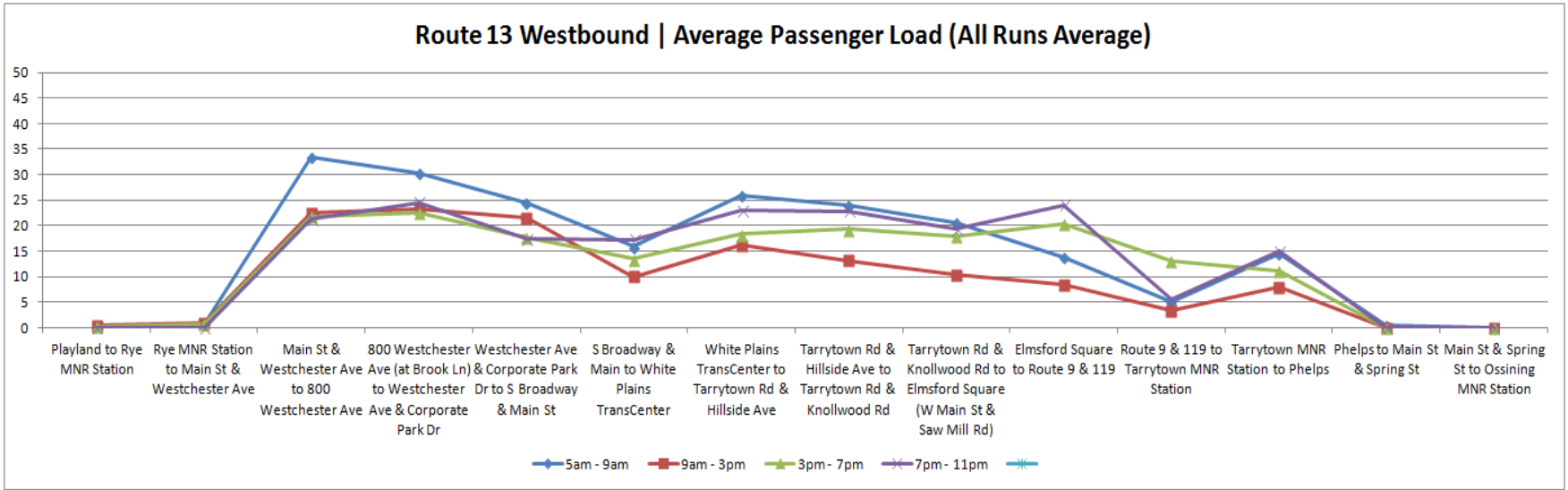
Alightings by Stop: Route 13 Westbound



Alightings by Stop: Route 13 Eastbound

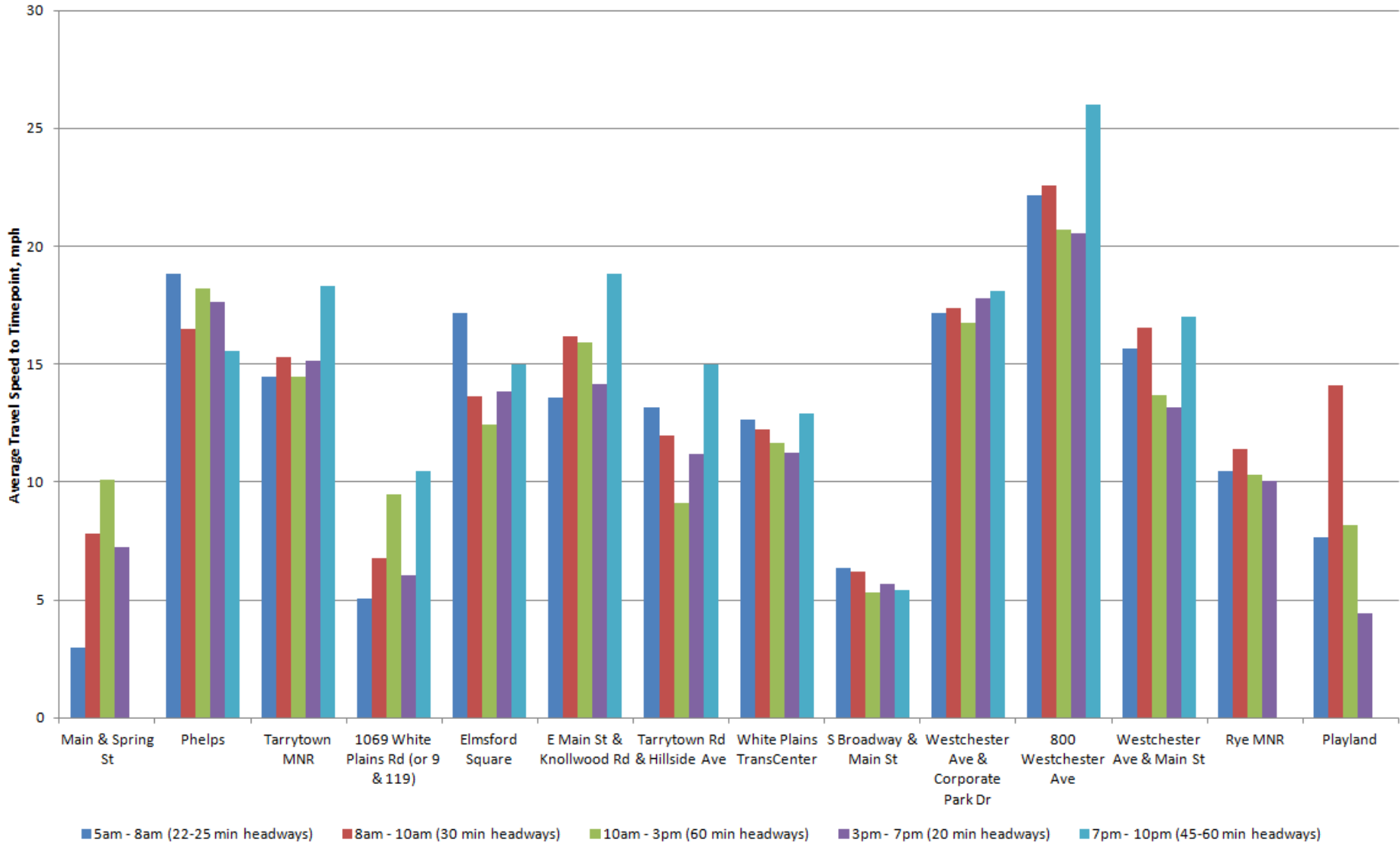


Route 13 Onboard Passenger Load

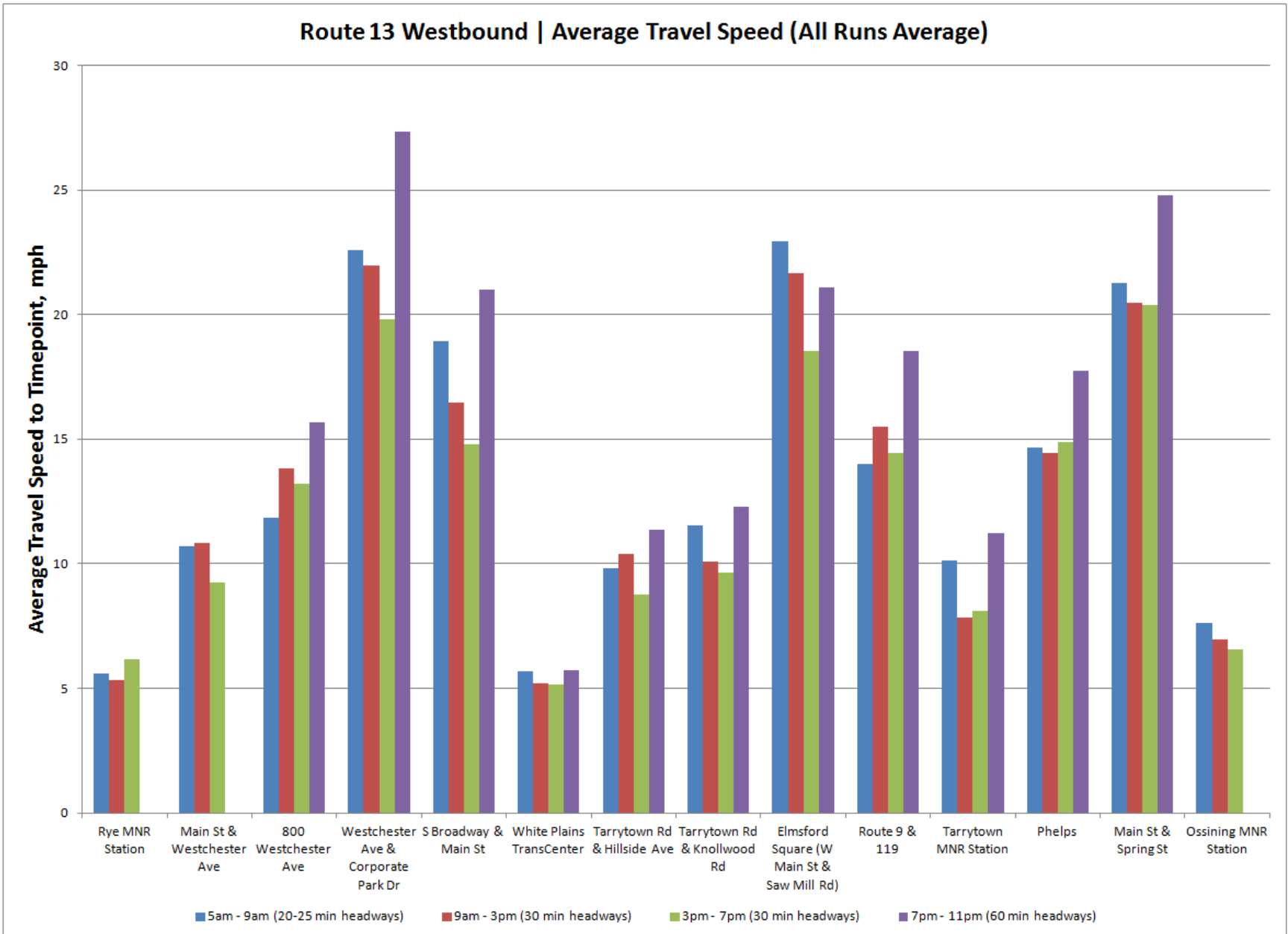


Route 13 Eastbound Average Travel Speed

Route 13 Eastbound | Average Travel Speed (All Runs Average)



Route 13 Westbound Average Travel Speed



Rider Origin/Destination Survey



- Conducted on Route 13 in October 2015 with on-board surveyors in English, Spanish
- Collected 645 rider responses
- All trips represented, both eastbound and westbound

Route 13 Eastbound: Surveyed To/From Patterns

		Destinations						
Origins		Ossining Includes: Ossining, Croton-On-Hudson, Briarcliff Manor	Tarrytown Includes: Sleepy Hollow, Tarrytown, Greenburgh	White Plains Includes: White Plains, Elmsford, Hartsdale, Purchase, Harrison, Valhalla	Port Chester Includes: Port Chester, Rye Brook	Rye Includes: Rye	Other Includes: Bronx, Manhattan, Scarsdale, Newburgh, Yonkers, Bedford Hills, Eastchester, Mount Vernon, New Rochelle, Stamford/CT, and Thornwood	Origin Subtotal
	Ossining Includes: Ossining, Croton-On-Hudson, Briarcliff Manor	2.4%	3.2%	3.6%	3.2%	0.8%	2.4%	15.6%
	Tarrytown Includes: Sleepy Hollow, Tarrytown, Greenburgh	0.0%	5.6%	27.2%	3.6%	0.0%	6.0%	42.4%
	White Plains Includes: White Plains, Elmsford, Hartsdale, Purchase, Harrison, Valhalla	0.0%	0.0%	8.0%	21.2%	3.6%	2.0%	34.8%
	Port Chester Includes: Port Chester, Rye Brook	0.0%	0.0%	0.0%	3.2%	1.6%	0.0%	4.8%
	Rye Includes: Rye	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Other Includes: Bronx, Manhattan, Scarsdale, Yonkers,, Mount Vernon, New Rochelle	0.4%	0.0%	0.0%	1.2%	0.8%	0.0%	2.4%
	Destination Subtotal	2.8%	8.8%	38.8%	32.4%	6.8%	10.4%	

Route 13 Westbound: Surveyed To/From Patterns

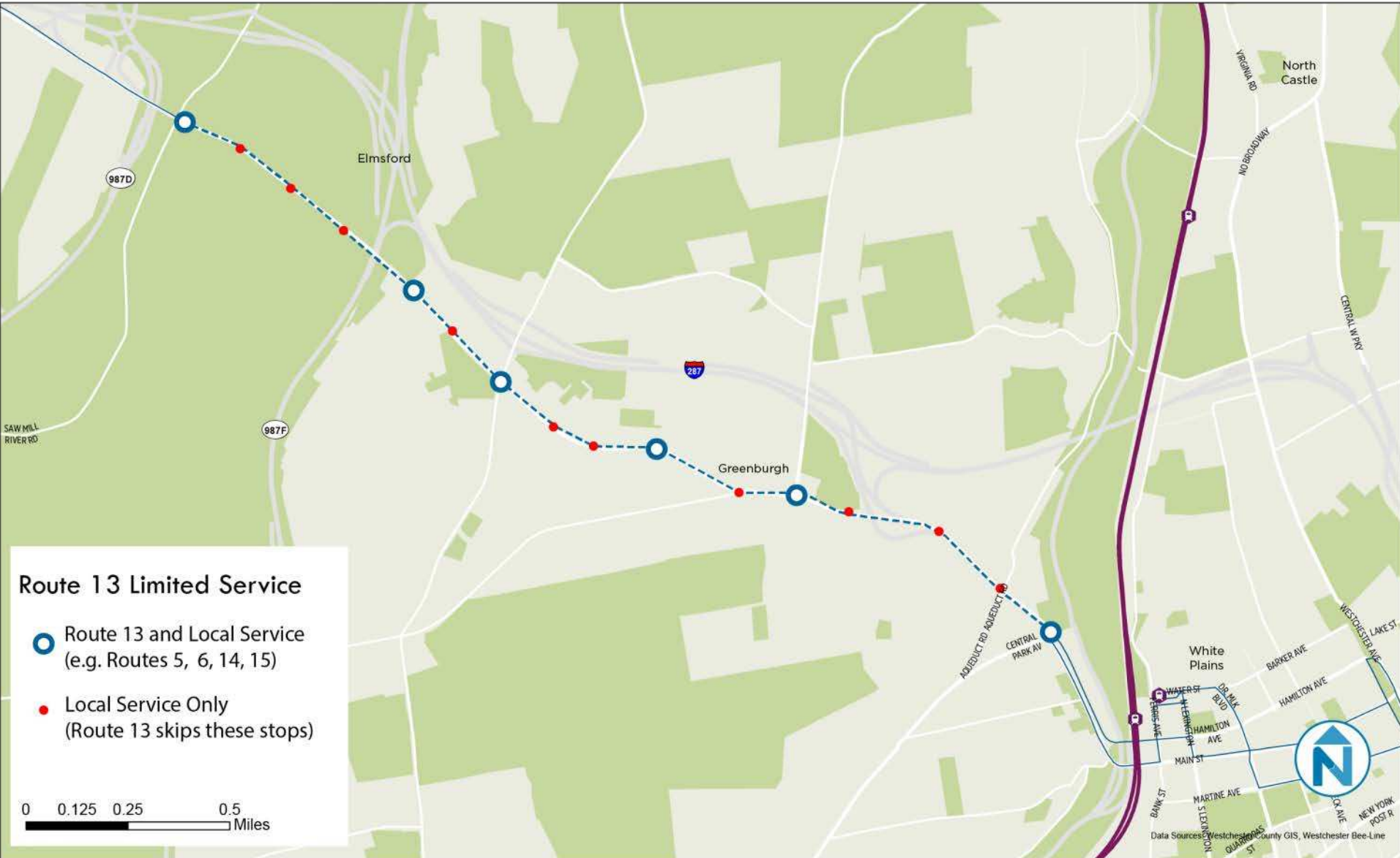
		Destinations						
Origins		Ossining Includes: Ossining, Briarcliff Manor	Tarrytown Includes: Sleepy Hollow, Tarrytown, Greenburgh	White Plains Includes: White Plains, Elmsford, Hartsdale, Purchase, Harrison/West Harrison, Valhalla	Port Chester Includes: Port Chester, Rye Brook	Rye Includes: Rye, Mamaroneck	Other Includes: Bronx,Scarsdale, Yonkers, Hawthorne, Larchmont, and Mount Vernon	Origin Subtotal
	Ossining Includes: Ossining	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%
	Tarrytown Includes: Sleepy Hollow, Tarrytown, Greenburgh	0.4%	3.8%	0.0%	0.0%	0.0%	0.4%	4.7%
	White Plains Includes: White Plains, Elmsford, Hartsdale, Purchase, Harrison, Valhalla	0.9%	21.8%	15.0%	0.0%	0.0%	3.8%	41.5%
	Port Chester Includes: Port Chester	2.1%	3.4%	30.3%	1.7%	0.0%	3.4%	41.0%
	Rye Includes: Rye	0.0%	1.7%	4.3%	0.9%	0.0%	0.0%	6.8%
	Other Includes: Bronx, Yonkers, Stamford/CT, Mount Vernon, New Rochelle	0.4%	2.6%	0.0%	0.0%	0.0%	0.9%	3.8%
	Destination Subtotal	6.0%	33.3%	49.6%	2.6%	0.0%	8.5%	

Route 13 Both Directions: Surveyed To/From Patterns

	Ossining Includes: Ossining, Croton-On-Hudson, Briarcliff Manor	Tarrytown Includes: Sleepy Hollow, Tarrytown, Greenburgh	White Plains Includes: White Plains, Elmsford, Hartsdale, Purchase, Harrison/West Harrison, Valhalla	Port Chester Includes: Port Chester, Rye Brook	Rye Includes: Rye, Mamaroneck	Other Includes: Bronx, Manhattan, Scarsdale, Newburgh, Yonkers, Bedford Hills, Eastchester, Mount Vernon, New Rochelle, Stamford/CT, Hawthorne, Larchmonth, and Thornwood	Origin Subtotal
Ossining Includes: Ossining, Croton-On-Hudson, Briarcliff Manor	2.3%	1.5%	1.9%	1.7%	0.4%	1.3%	9%
Tarrytown Includes: Sleepy Hollow, Tarrytown, Greenburgh	0.2%	4.9%	14.4%	1.9%	0.0%	3.4%	25%
White Plains Includes: White Plains, Elmsford, Hartsdale, Purchase, Harrison, Valhalla	0.4%	9.5%	11.7%	11.2%	1.9%	3.0%	38%
Port Chester Includes: Port Chester, Rye Brook	1.1%	1.5%	14.6%	2.5%	0.8%	1.7%	22%
Rye Includes: Rye	0.0%	0.8%	1.9%	0.2%	0.0%	0.0%	3%
Other Includes: Bronx, Manhattan, Scarsdale, Yonkers, Mount Vernon, New Rochelle, Stamford/CT	0.4%	1.3%	0.0%	0.6%	0.4%	0.4%	3%
Destination Subtotal	4%	19%	44%	18%	4%	10%	100%

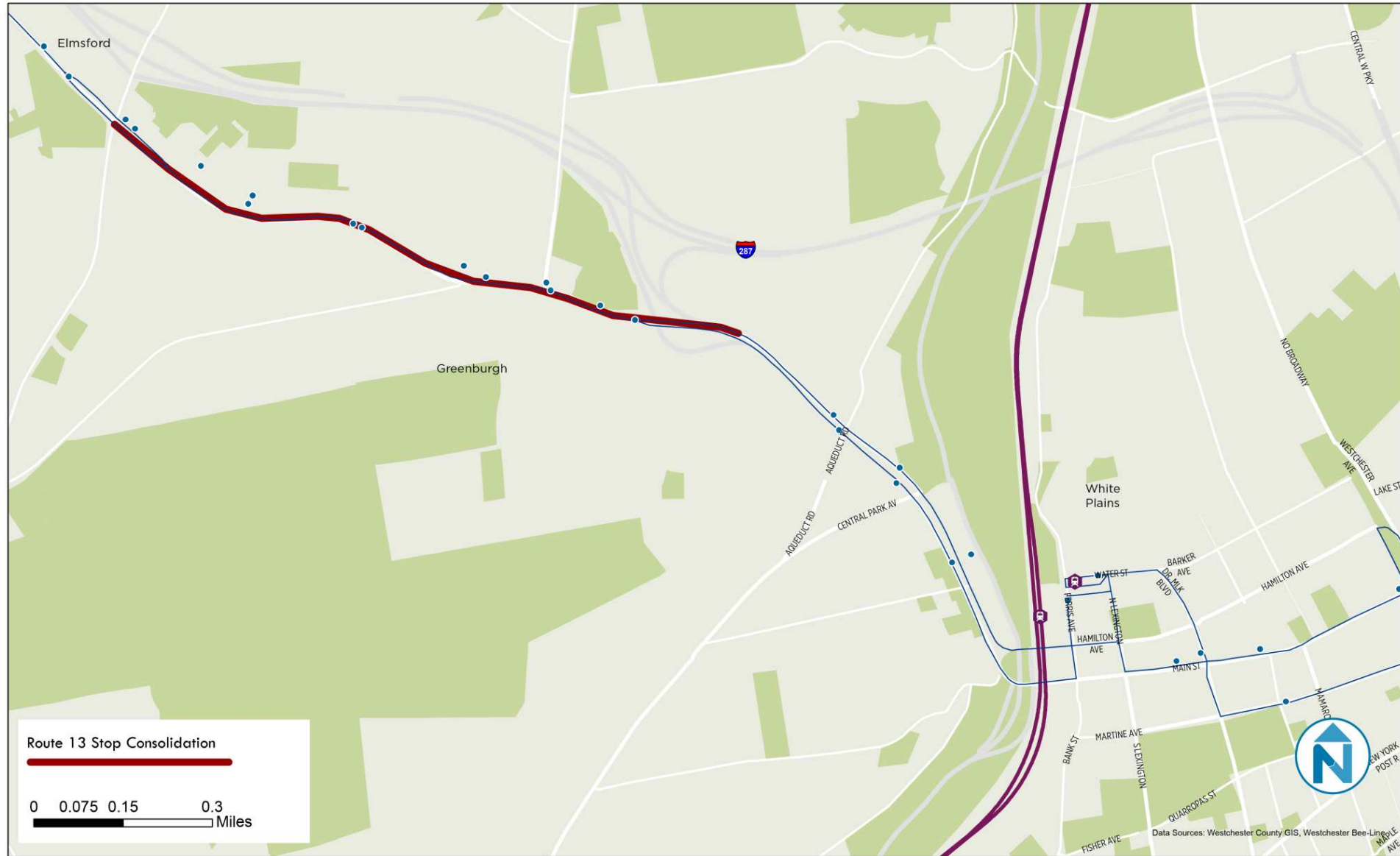
TYPICAL STRATEGIES TO IMPROVE ROUTES

Limited Service



Example: Greenburgh

Stop Consolidation



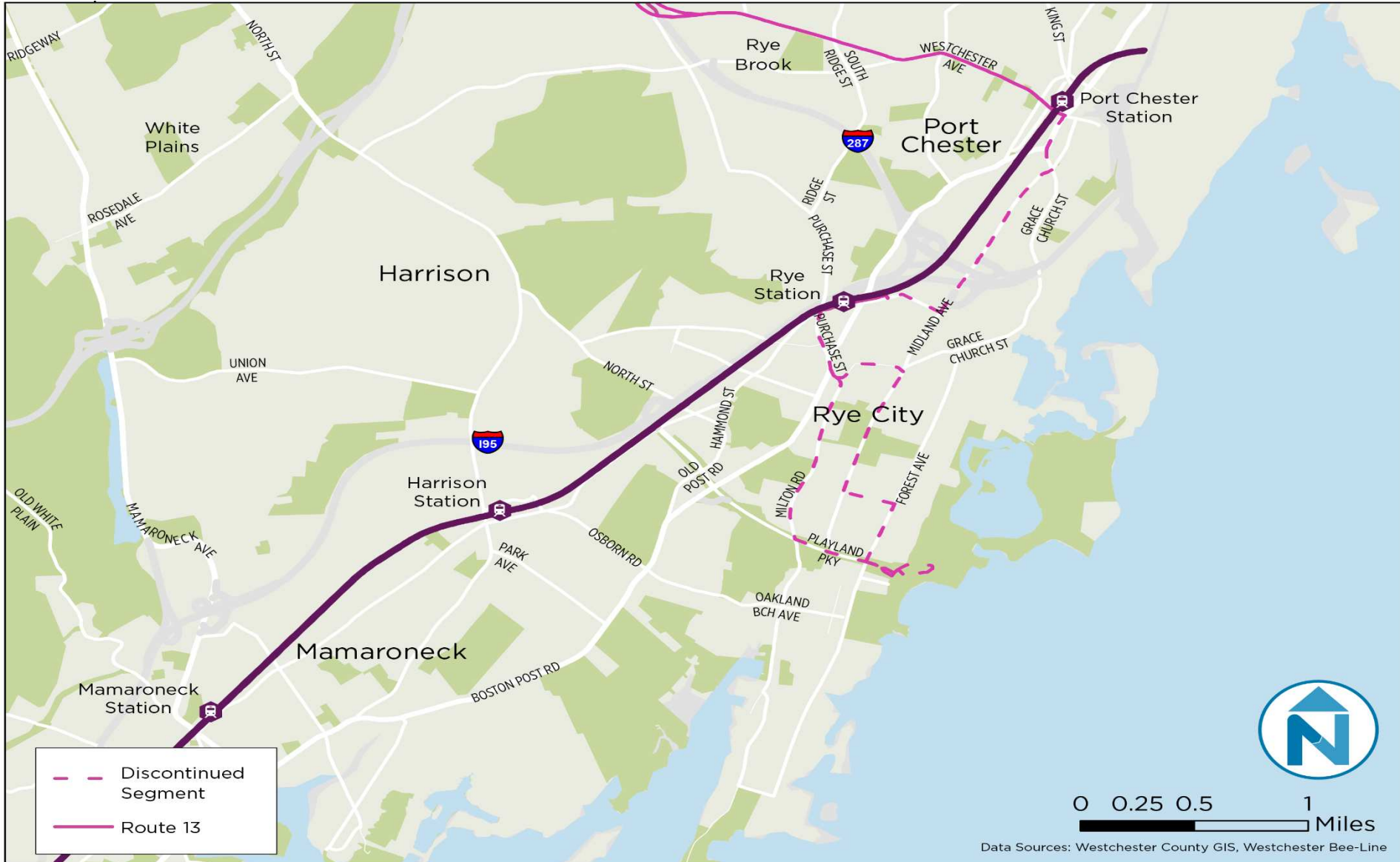
Example: Greenburgh-White Plains

Express



Example: Platinum Mile

Shorten Route



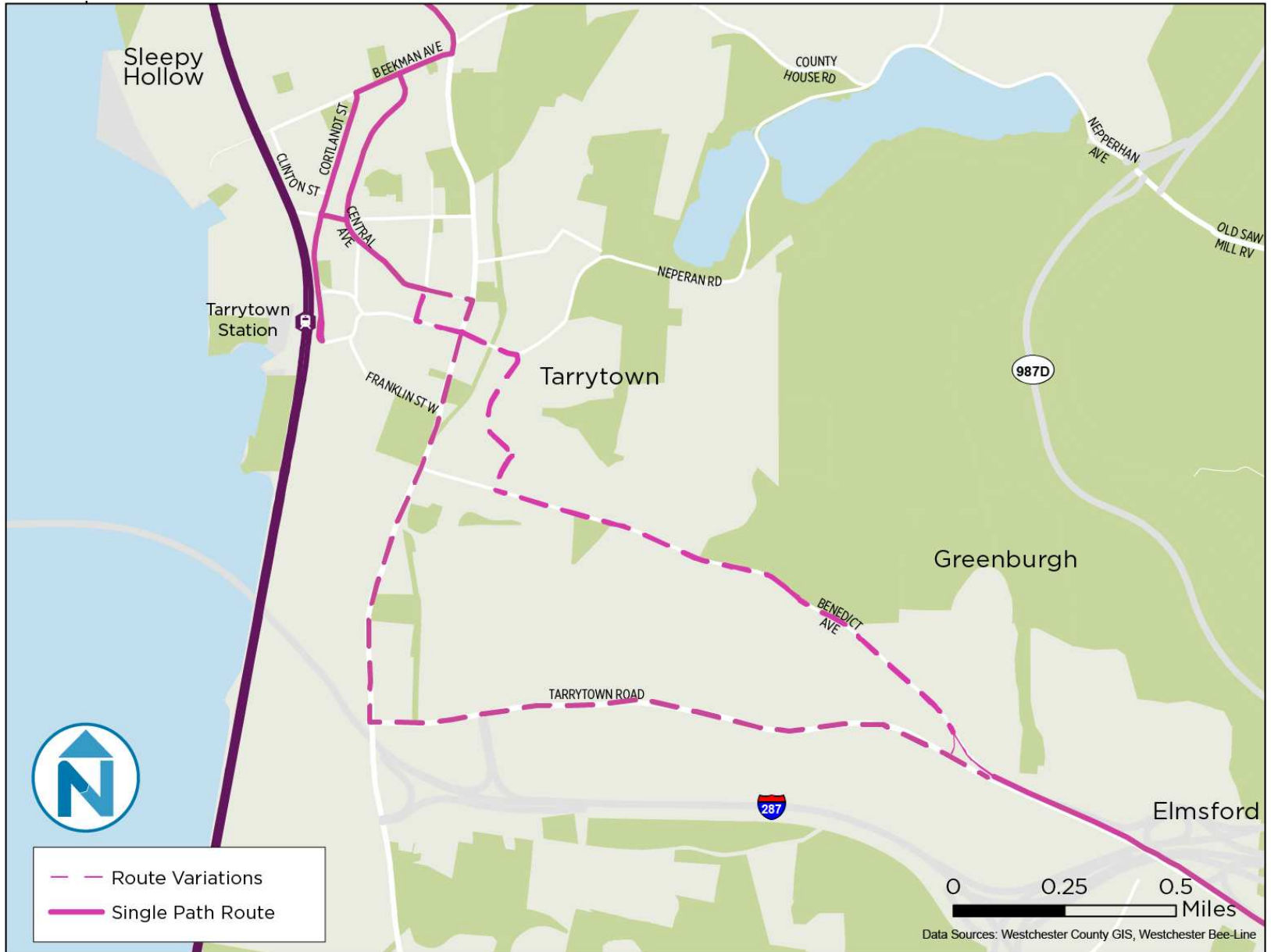
Example: Rye/Playland

Streamline



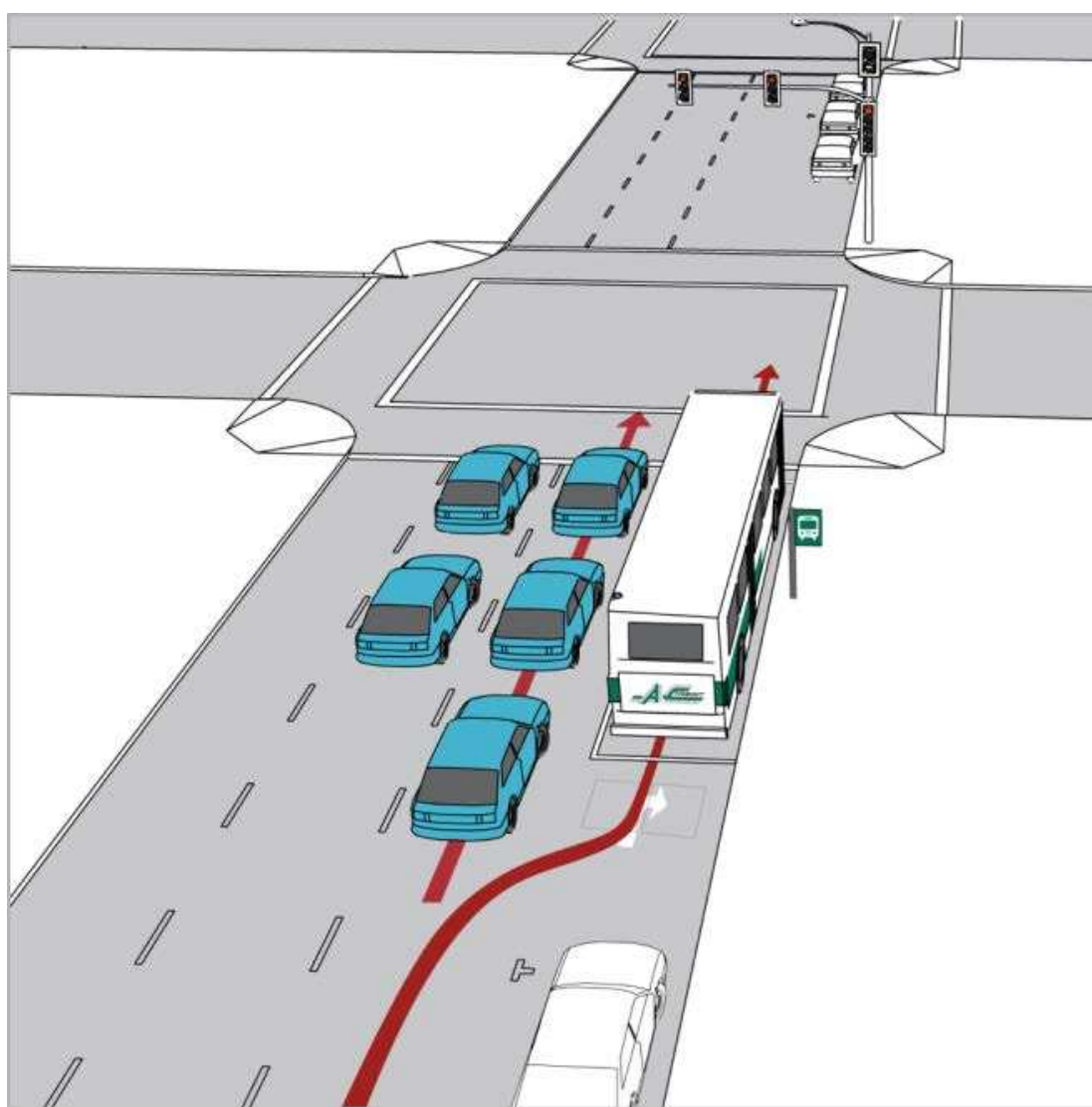
Example: White Plains

Reduce Variations



Example: Benedict Avenue

Queue Jump Lanes



- Buses can achieve faster travel times through queue jump lanes.
- Queue jump lanes are generally built with bus-only traffic signals allowing buses to cross intersections ahead of general traffic.
- Some queue jump lanes are bus-only, while others permit right-turning vehicles.

Queue Jump (Example: 9 & 119)

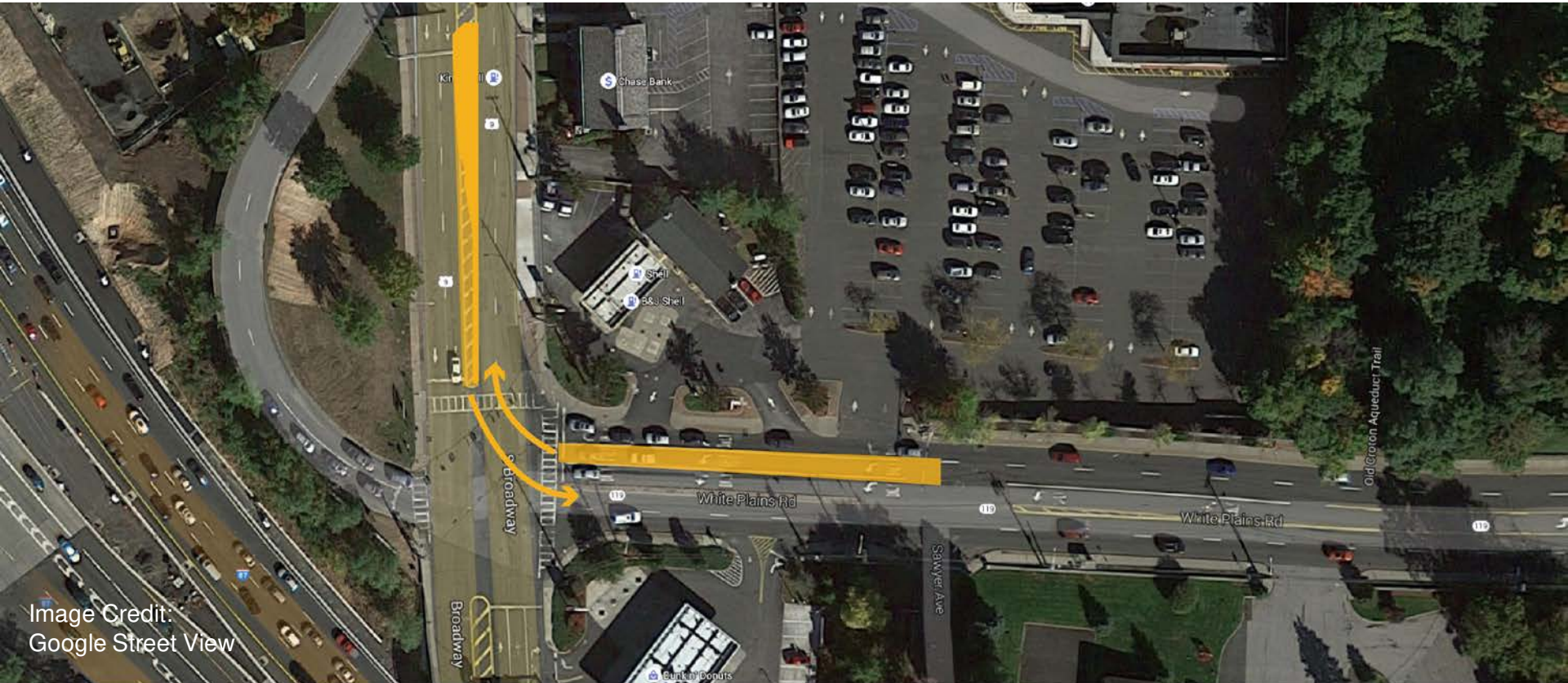


Image Credit:
Google Street View

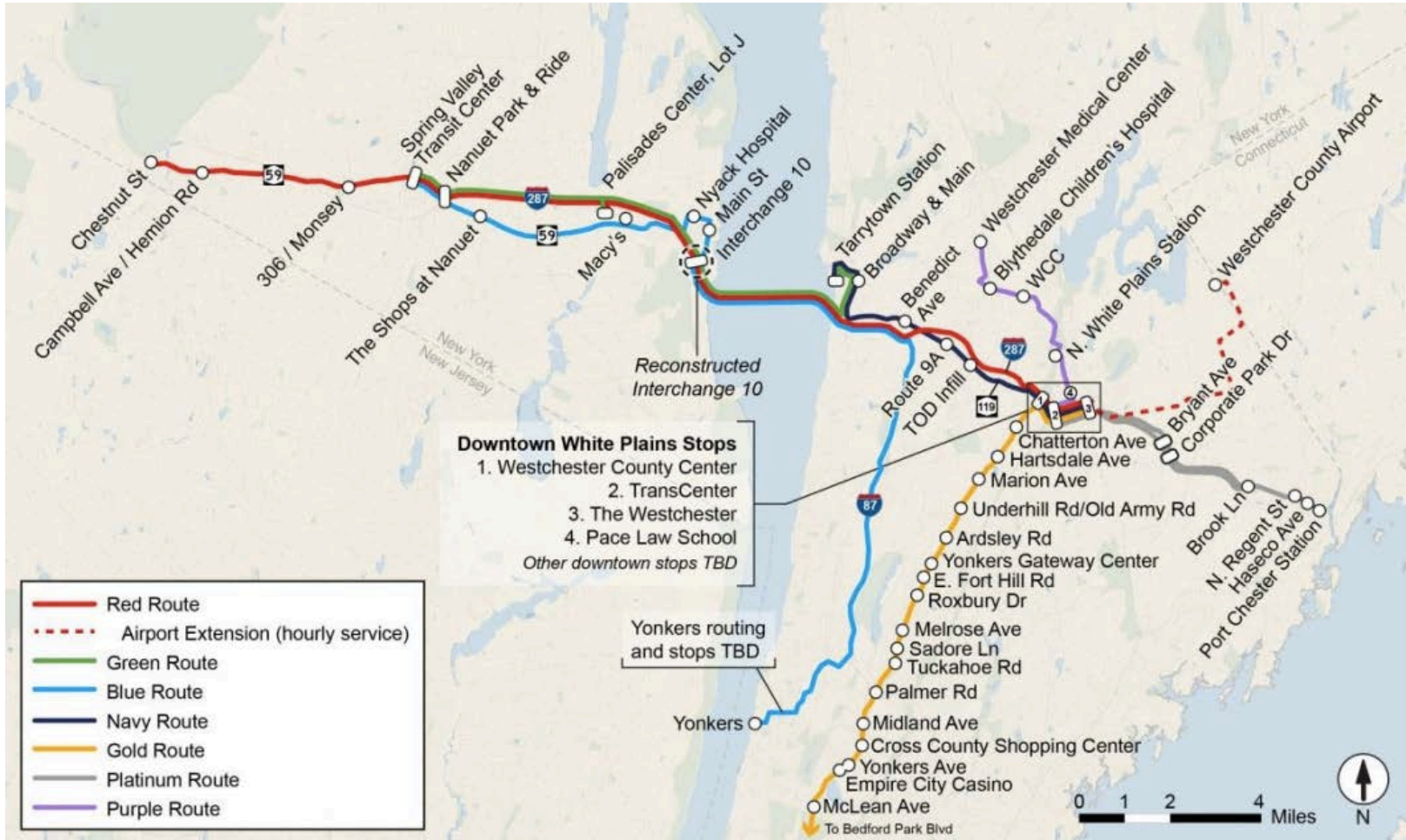
Queue Jump (Example: Harrison)



Image Credit:
Google Street View

RELATION TO OTHER STUDIES

I-287 Tappan Zee Studies



DISCUSSION



This presentation has been prepared by the Westchester County
Department of Transportation

For further information, please visit
<http://transportation.westchestergov.com/planning-division>
or contact Craig Lader, Principal Planner at (914) 813-7759