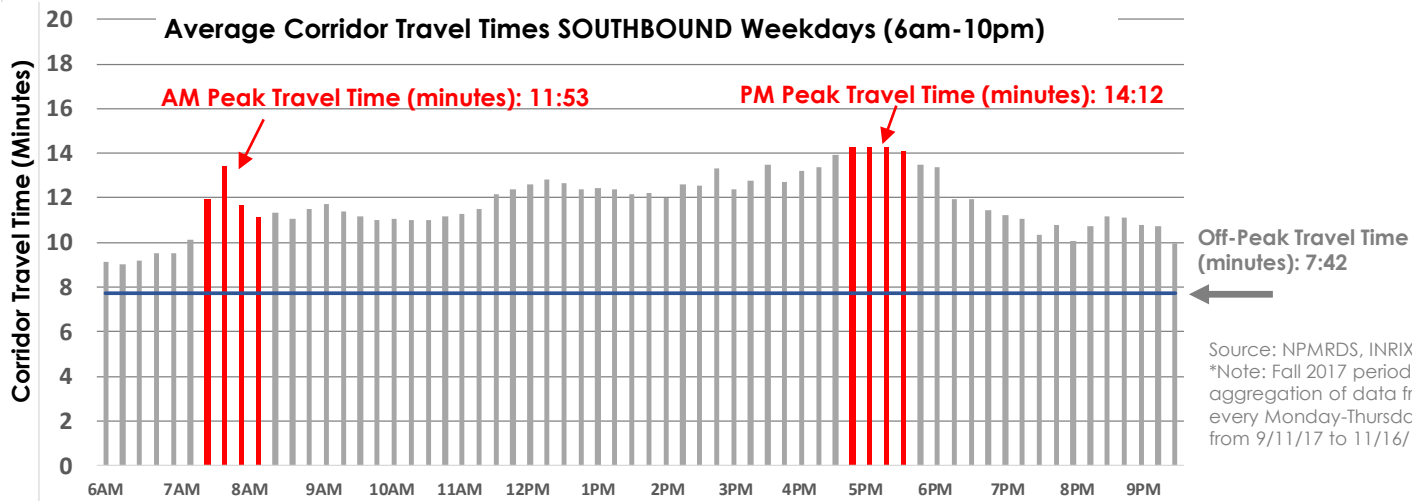
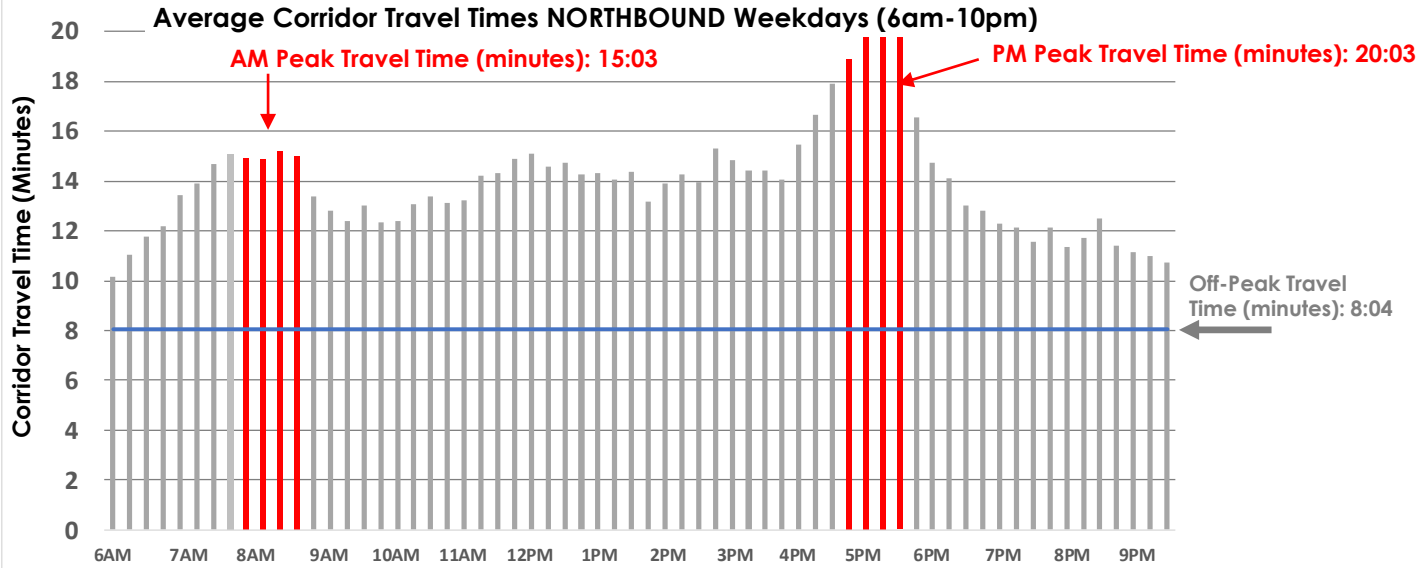
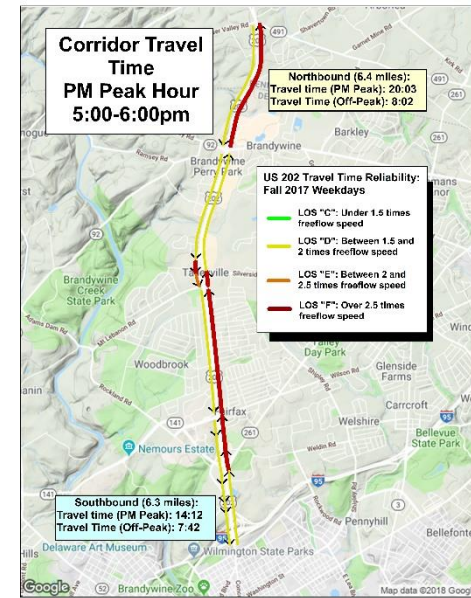
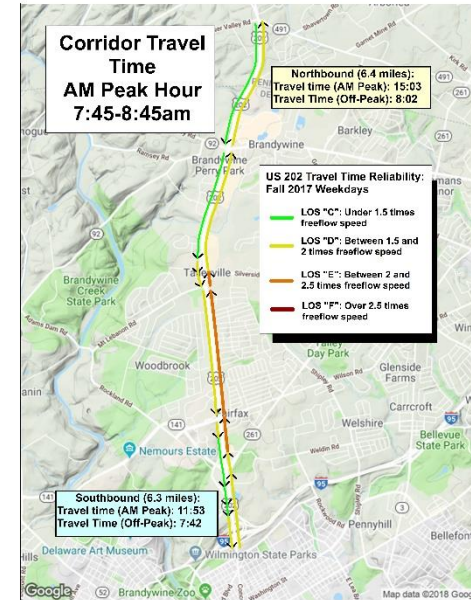


# Concord Pike – Corridor Travel Times

Based on the Fall 2017\* travel time data collected through INRIX, travel along the corridor during off peak hours (11pm-5am) it takes roughly 8 minutes to travel the 6.4 mile section from I-95 to PA 491. This time slows during the AM/PM peaks, with some time periods more than 2x the off-peak travel times. The AM peak hour is from **7:45-8:45am** and the PM peak hour is from **5-6pm**.



Source: NPMRDS, INRIX.  
 \*Note: Fall 2017 period is an aggregation of data from every Monday-Thursday from 9/11/17 to 11/16/17



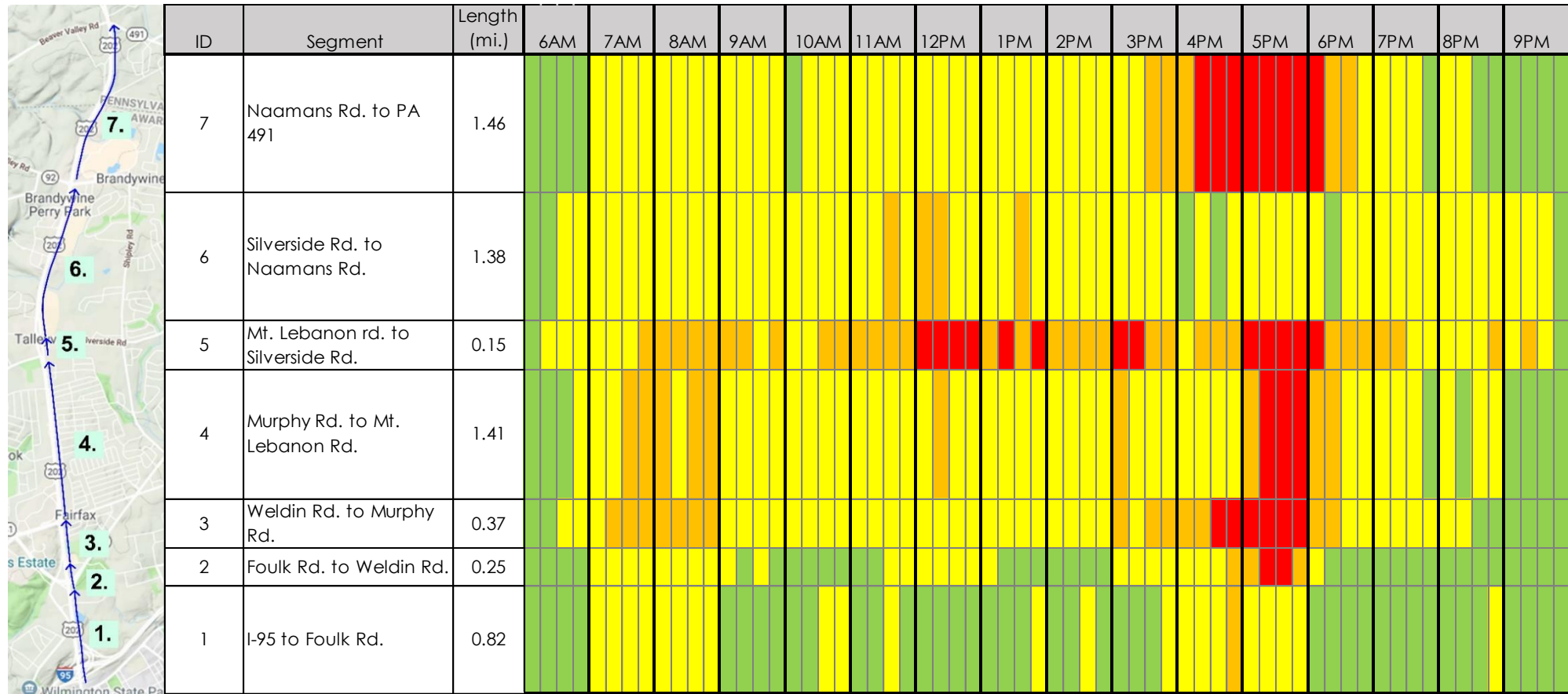
# Congestion Duration—Travel Time Reliability NORTHBOUND

Below is a breakdown of the duration that unreliable travel times exist on segments along the corridor. According to the FHWA, unreliable travel times begin when measured travel speed reaches 1.5x that of uncongested conditions\*. The chart to the right illustrates the thresholds used in this analysis. To account for variable segment lengths, the chart below has been scaled to approximate its distance in relation to the rest of the corridor. Numbers on map correspond with Segment ID numbers on chart.

## Travel Time Reliability

- Less than 1.5 times the uncongested travel time
- 1.5 to 2.0 times the uncongested travel time
- 2.0 to 2.5 times the uncongested travel time
- More than 2.5 times the uncongested travel time

Travel Time Reliability Index US 202—Northbound; I-95 to PA 491



Sources: NPMRDS, INRIX. \*Note: Fall 2017 period is an aggregation of speed data from every Monday-Thursday from 9/11/17 to 11/16/17 in 15 minute intervals. Uncongested travel speeds are average of measured speeds recorded from 11pm-5am for all of 2017, Monday-Thursday

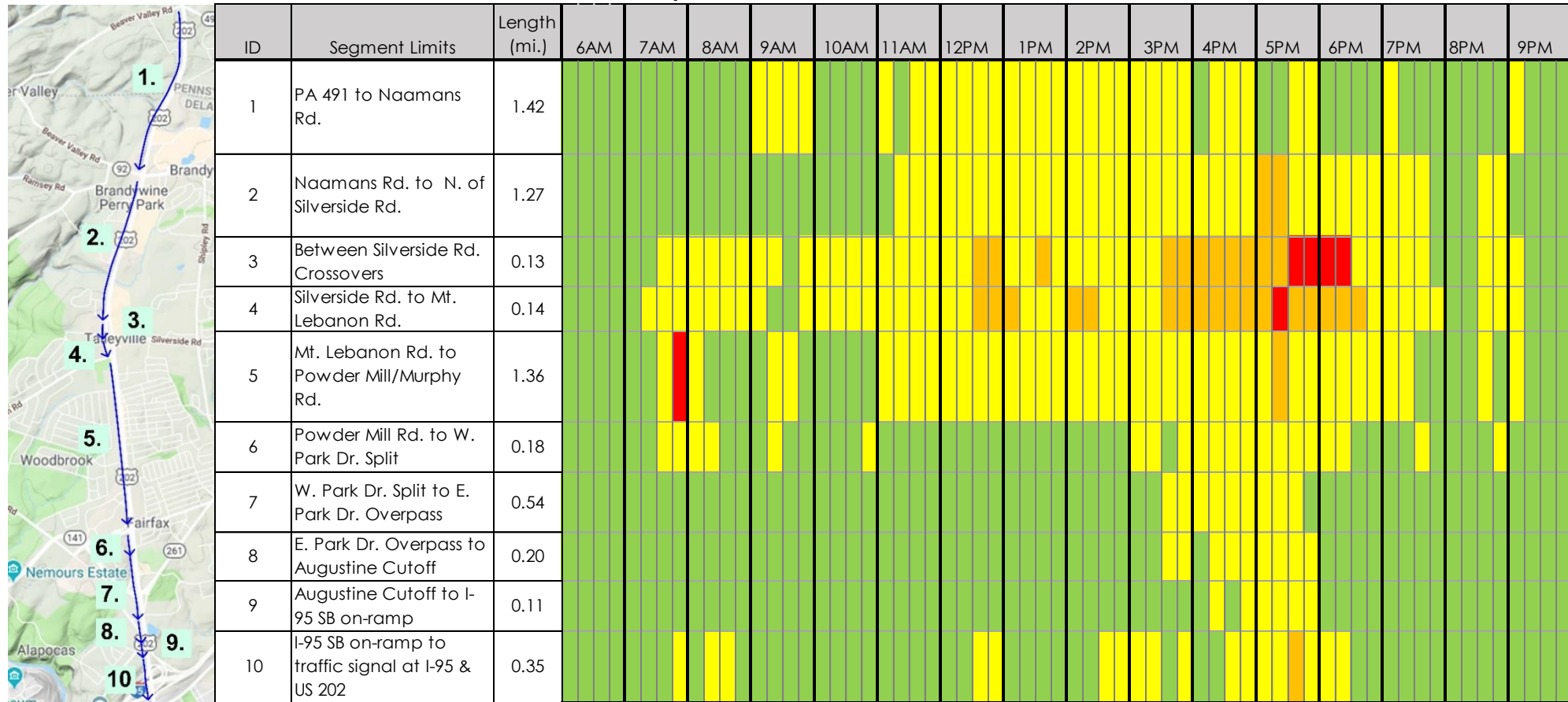
# Congestion Duration—Travel Time Reliability SOUTHBOUND

Below is a breakdown of the duration that unreliable travel times exist on segments along the corridor. According to the FHWA, unreliable travel times begin when measured travel speed reaches 1.5x that of uncongested conditions\*. The chart to the right illustrates the thresholds used in this analysis. To account for variable segment lengths, the chart below has been scaled to approximate its distance in relation to the rest of the corridor. Numbers on map correspond with Segment ID numbers on chart.

## Travel Time Reliability

- Less than 1.5 times the uncongested travel time
- 1.5 to 2.0 times the uncongested travel time
- 2.0 to 2.5 times the uncongested travel time
- More than 2.5 times the uncongested travel time

Travel Time Reliability Index US 202—Southbound; PA 491 to I-95

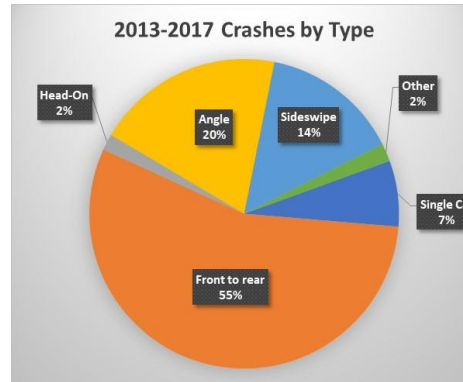


Sources: NPMRDS, INRIX. \*Note: Fall 2017 period is an aggregation of speed data from every Monday-Thursday from 9/11/17 to 11/16/17 in 15 minute intervals. Uncongested travel speeds are an average of measured speeds recorded from 11pm-5am for all of 2017, Monday-Thursday

# Crash Analysis

## 2013-2017 Crash Trends:

- A total of 1,698 crashes were reported from 2013-2017 along the corridor.
- More than half are rear-end collisions
- Crash totals have remained relatively flat over the 5 year period
- More than 90% of the crashes occur at signalized intersections
- 13% of the crashes results in injuries
- 4 crashes were fatal
- 13 involved bicycles or pedestrians

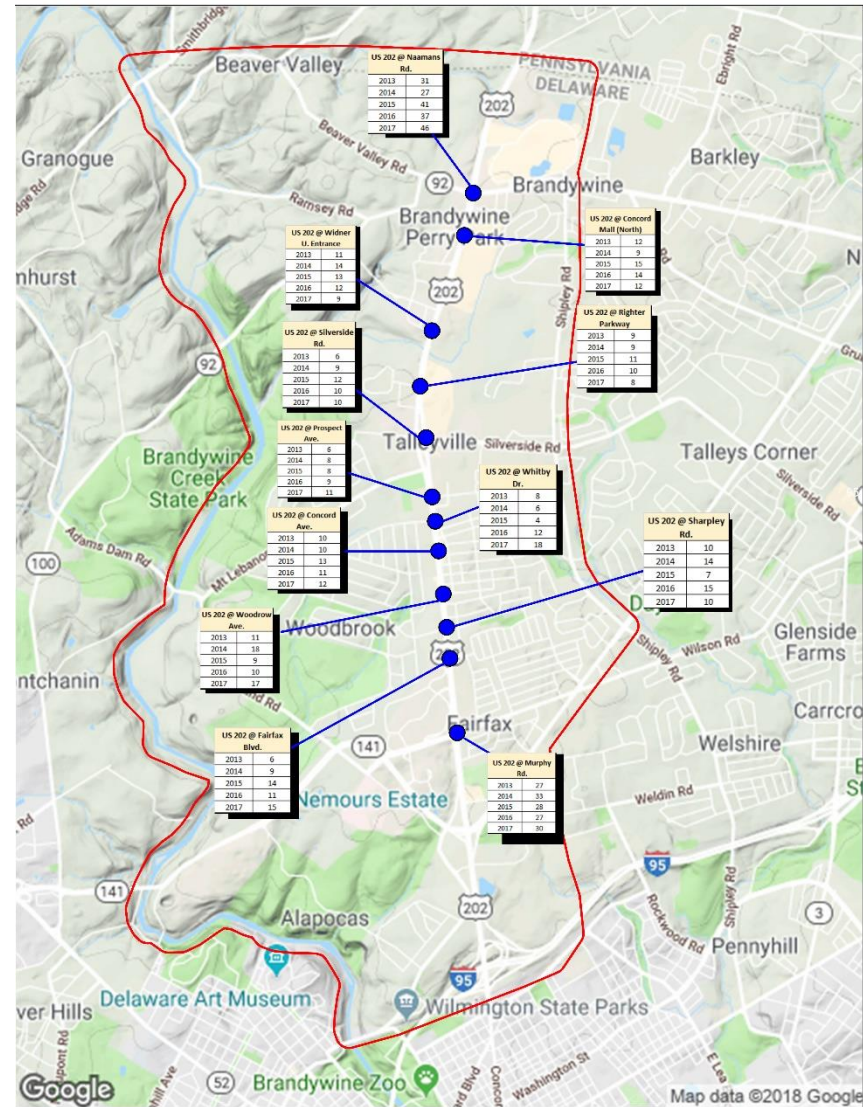


## 2013-2017 Crashes by Type (Manner of Impact)

Year	Total Crashes	Single Car	Rear-end	Head-on	Angle	Sideswipe	Other
2013	330	16	204	4	67	37	2
2014	348	30	191	7	75	39	6
2015	330	26	178	6	55	63	2
2016	340	22	180	7	66	52	13
2017	350	23	189	5	70	54	9
<b>Total</b>	<b>1,698</b>	<b>117</b>	<b>942</b>	<b>29</b>	<b>333</b>	<b>245</b>	<b>32</b>
%		<b>7%</b>	<b>55%</b>	<b>2%</b>	<b>20%</b>	<b>14%</b>	<b>2%</b>

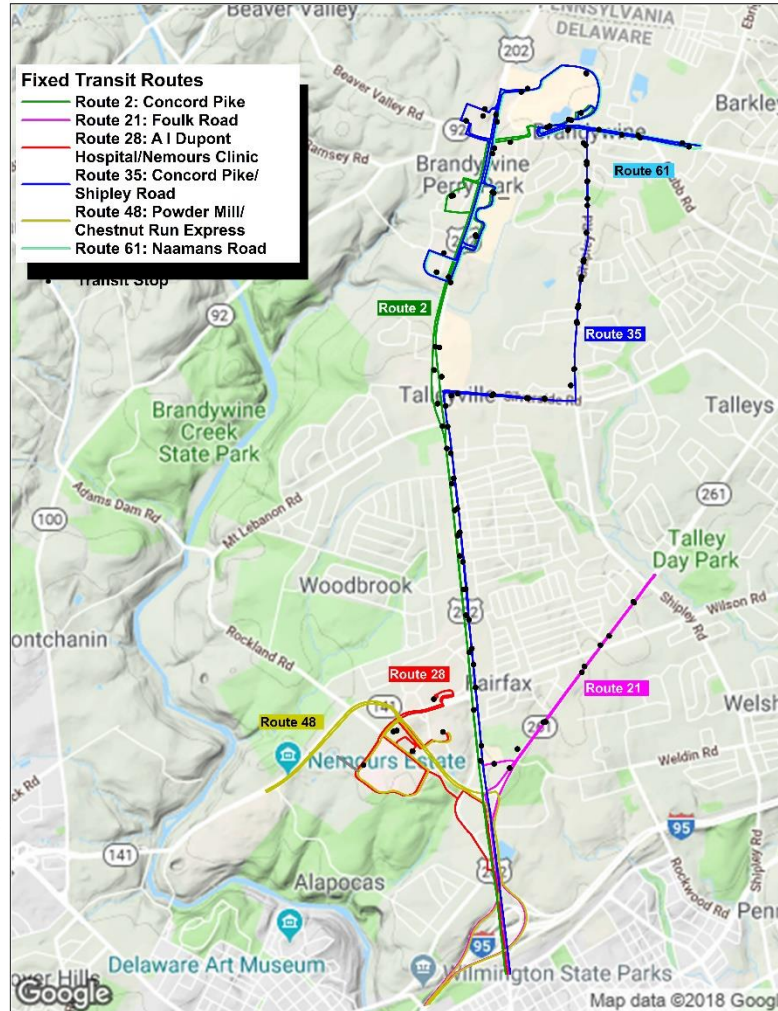
Source: Delaware State Police. Intersection data and boundaries developed by WILMAPCO

## Intersection Related Crash Trends 2013-2017



# Existing Transit Facilities

Transit Routes Within US 202 Study Area

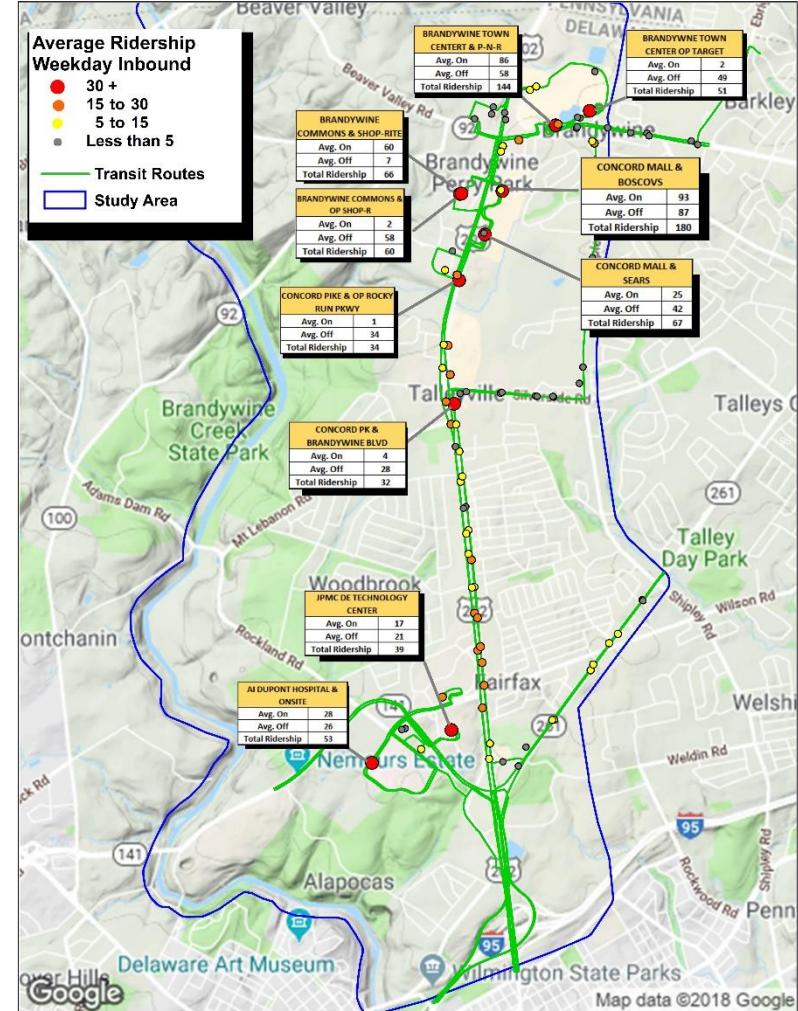


• Currently the corridor is served by six transit routes. Routes 2 and 35 are the most popular. They also cover nearly the entire corridor

• Ridership data provided by DART, sampling ridership data from May 2018 of Weekday Inbound riders

• Ridership is classified as the total number of riders who board and depart the bus at each stop

Transit Stop Usage Within US 202 Study Area



Source: Delaware Transit Corporation

# Non-Motorized Facilities

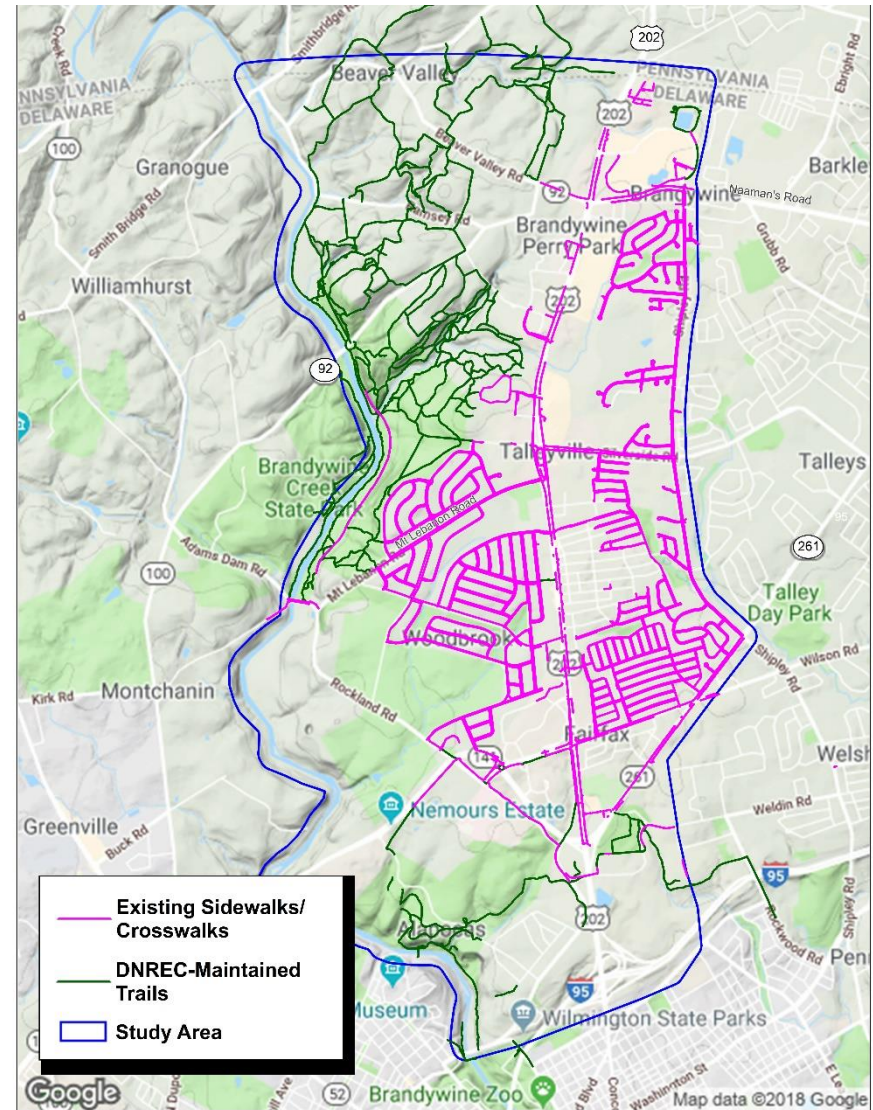
- Existing sidewalks/crosswalk data interpreted from 2012 aerial photo reviews collected all existing sidewalks, crosswalks and visible footpaths



- DNREC Trails: Delaware has approximately 506 miles of public trails and multi-use pathways.

The State operates and maintains almost two-thirds (312 miles) of the existing trails and pathways network, with nearly half of the state's portion located in Delaware's State Parks.

Non-Motorized Facilities: Existing Bike/Ped Network



# DeIDOT Level of Traffic Stress (LTS) Analysis

The Delaware Department of Transportation (DeIDOT) consulted with renowned Civil Engineering Professor Furth (Northeastern University) to help implement a tool called “[Level of Traffic Stress \(LTS\) Analysis](#)” to help plan effective, safe, and well connected bikeway networks in Delaware. DeIDOT has conducted LTS analysis on roadways, streets, and pathways throughout the state. A series of maps have been produced by DeIDOT, and will be available online, to help communities visualize the disconnectedness of segments within Delaware’s bicycling network and plan for future infrastructure improvements.

## Level of Traffic Stress Definitions:

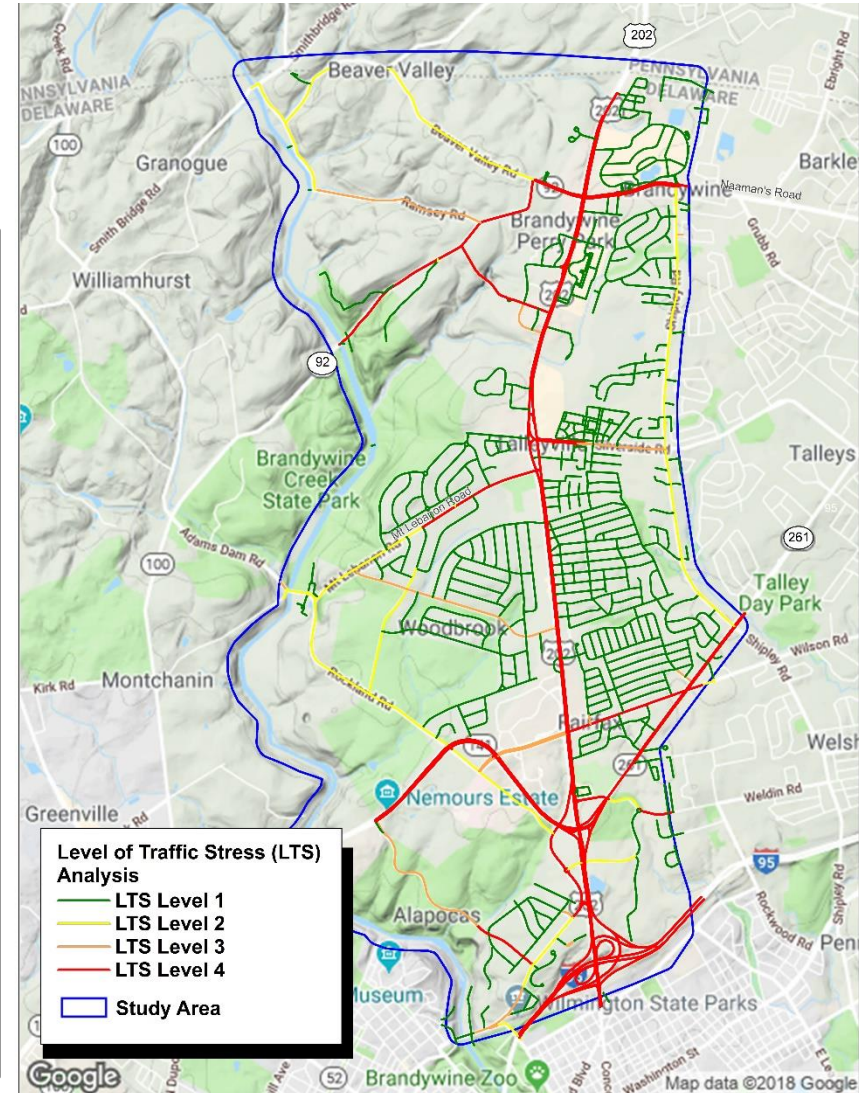
**LTS 1:** Presenting little traffic stress and demanding little attention from cyclists, and attractive enough for a relaxing bike ride. Suitable for almost all cyclists, including children trained to safely cross intersections. On links, cyclists are either physically separated from traffic, or are in an exclusive bicycling zone next to a slow traffic stream with no more than one lane per direction, or are on a shared road where they interact with only occasional motor vehicles (as opposed to a stream of traffic) with a low speed differential. Where cyclists ride alongside a parking lane, they have ample operating space outside the zone into which car doors are opened. Intersections are easy to approach and cross.

**LTS 2:** Presenting little traffic stress and therefore suitable to most adult cyclists but demanding more attention than might be expected from children. On links, cyclists are either physically separated from traffic, or are in an exclusive bicycling zone next to a well-confined traffic stream with adequate clearance from a parking lane, or are on a shared road where they interact with only occasional motor vehicles (as opposed to a stream of traffic) with a low speed differential. Where a bike lane lies between a through lane and a rightturn lane, it is configured to give cyclists unambiguous priority where cars cross the bike lane and to keep car speed in the right-turn lane comparable to bicycling speeds. Crossings are not difficult for most adults.

**LTS 3:** More traffic stress than LTS 2, yet markedly less than the stress of integrating with multilane traffic, and therefore welcome to many people currently riding bikes in American cities. Offering cyclists either an exclusive riding zone (lane) next to moderate-speed traffic or shared lanes on streets that are not multilane and have moderately low speed. Crossings may be longer or across higher-speed roads than allowed by LTS 2, but are still considered acceptably safe to most adult pedestrians.

**LTS 4:** A level of stress beyond LTS3.

## Non-Motorized Facilities: Level of Traffic Stress(LTS)



# Economic Development/Employment

- Concord Pike area contains about 24,303 jobs (by place of work) in 2015
- Contains 8.3% of New Castle County total employment in 2015 (293,450)

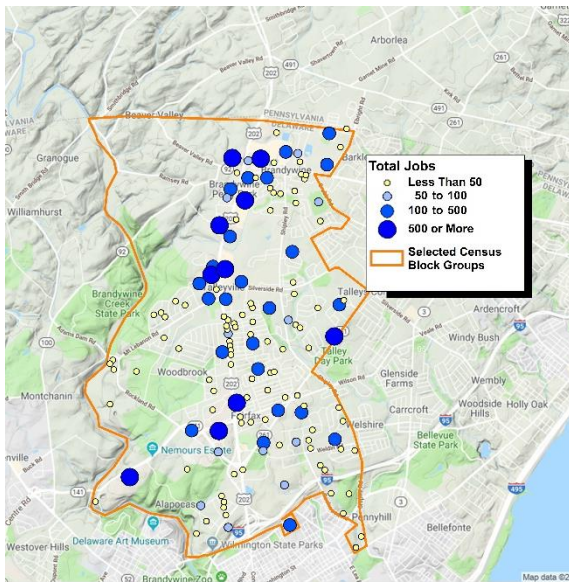
## Age of Workers within Corridor

Jobs by Worker Age	Count	Share
Age 29 or younger	5,716	23.5%
Age 30 to 54	13,153	54.1%
Age 55 or older	5,434	22.4%

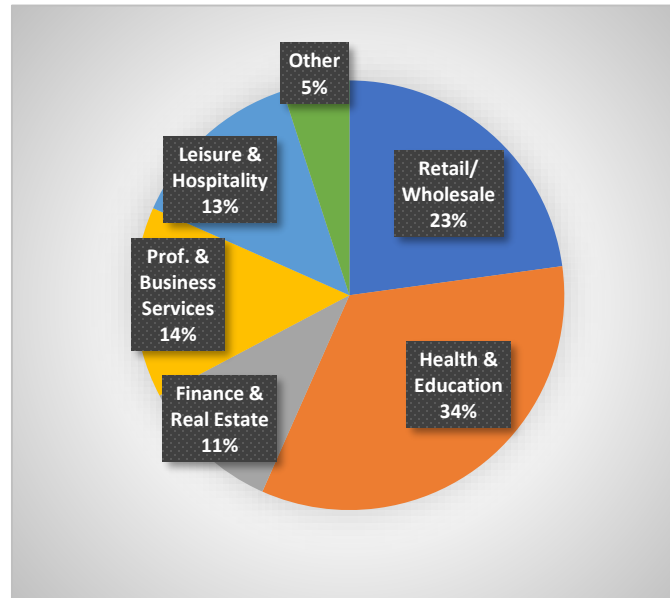
## Wages of Workers within Corridor

Jobs by Earnings	Count	Share
\$1,250 per month or less	6,820	28.1%
\$1,251 to \$3,333 per month	6,134	25.2%
More than \$3,333 per month	11,349	46.7%

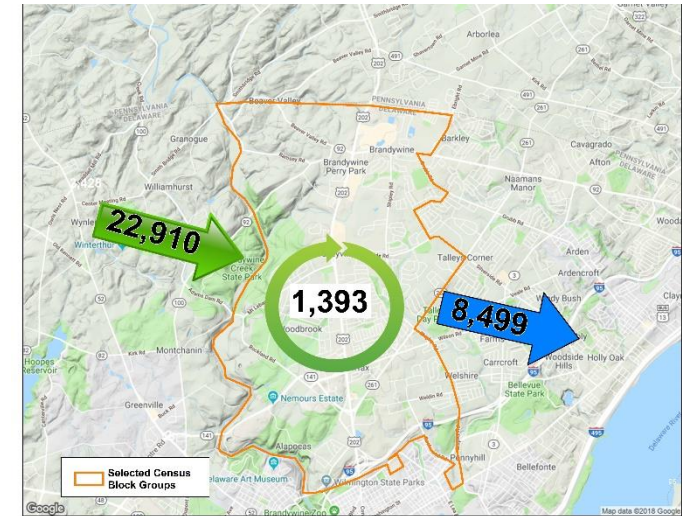
## Employment Locations—2015



## Total Employment by Job Type—2015



## Total Worker Inflow/Outflow—2015



• Of the 24,303 jobs in the selected area around US 202, 22,910 (94%) of the workers come from OUTSIDE of the selected area (shown in orange on the map)

• 1,393, or 5% of the jobs are filled by those living WITHIN the selected area

• 8,499 of the residents that live within the selected area work OUTSIDE the corridor

Source: US Census Longitudinal Employer-Household Dynamics



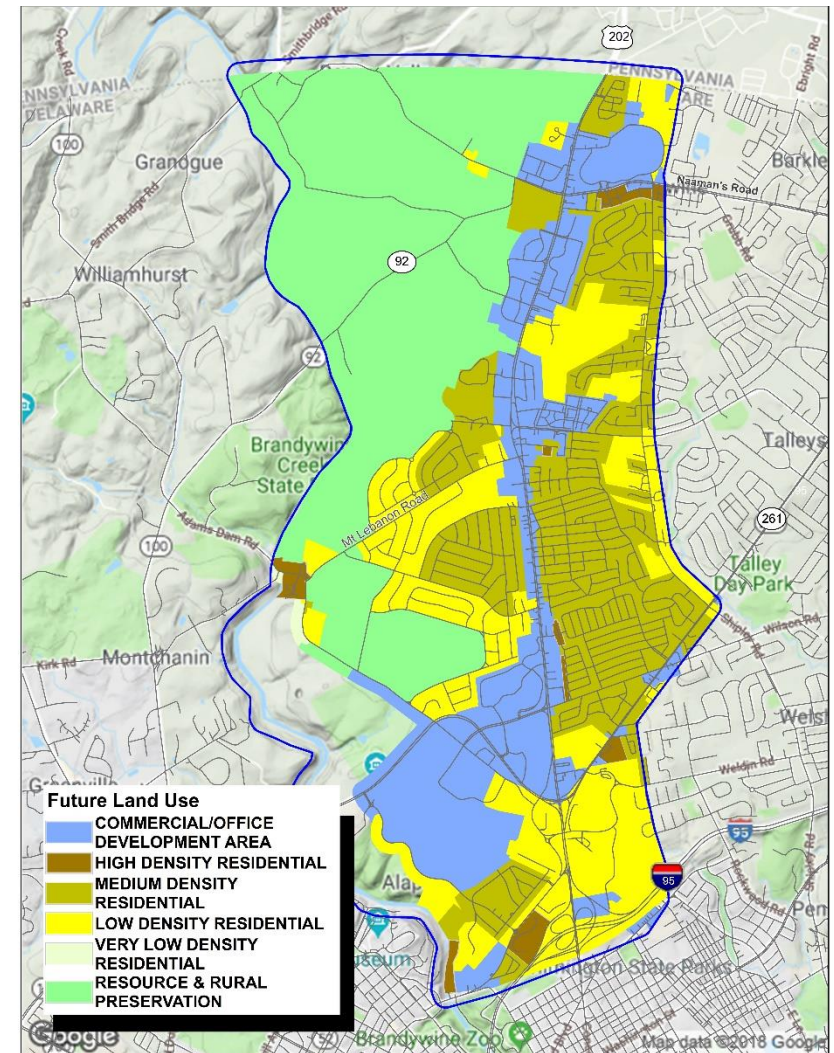
# New Castle County Comprehensive Plan Future Land Use Categories

- The New Castle County 2012 Comprehensive Plan Update identifies eight different categories of future land use (see table below).
- In the study area, most of the land area is planned to remain as Low Density Residential, Medium Density Residential, or Resource and Rural Preservation Areas.
- The focus of potential land use changes in the study area is the areas designated as Commercial / Office / Industrial Development Areas

Future Land Use Category	Types of Development Allowed	Study Area Examples
High Density Residential	Multifamily development with attached dwelling units typically in multi-story	Rockland Mill properties, Stratford Apartments
Medium Density Residential	Townhouse and garden style apartments, single-family detached homes on smaller lots	Devonshire, Sharpley Section I
Low Density Residential	Single-family detached homes on larger lots	Brandywine Hunt, Woodbrook Section 3
Resource and Rural Protection	Estate housing	Chateau Country
Commercial/ Office/ Industrial Development Areas	Redevelopment of existing properties to allow commercial development (potentially to include some retail and industrial); residential may be allowed depending on specific zoning district requirements.	Astra Zeneca, Brandywine Town Center, Concord Mall

Source: New Castle County Land Use

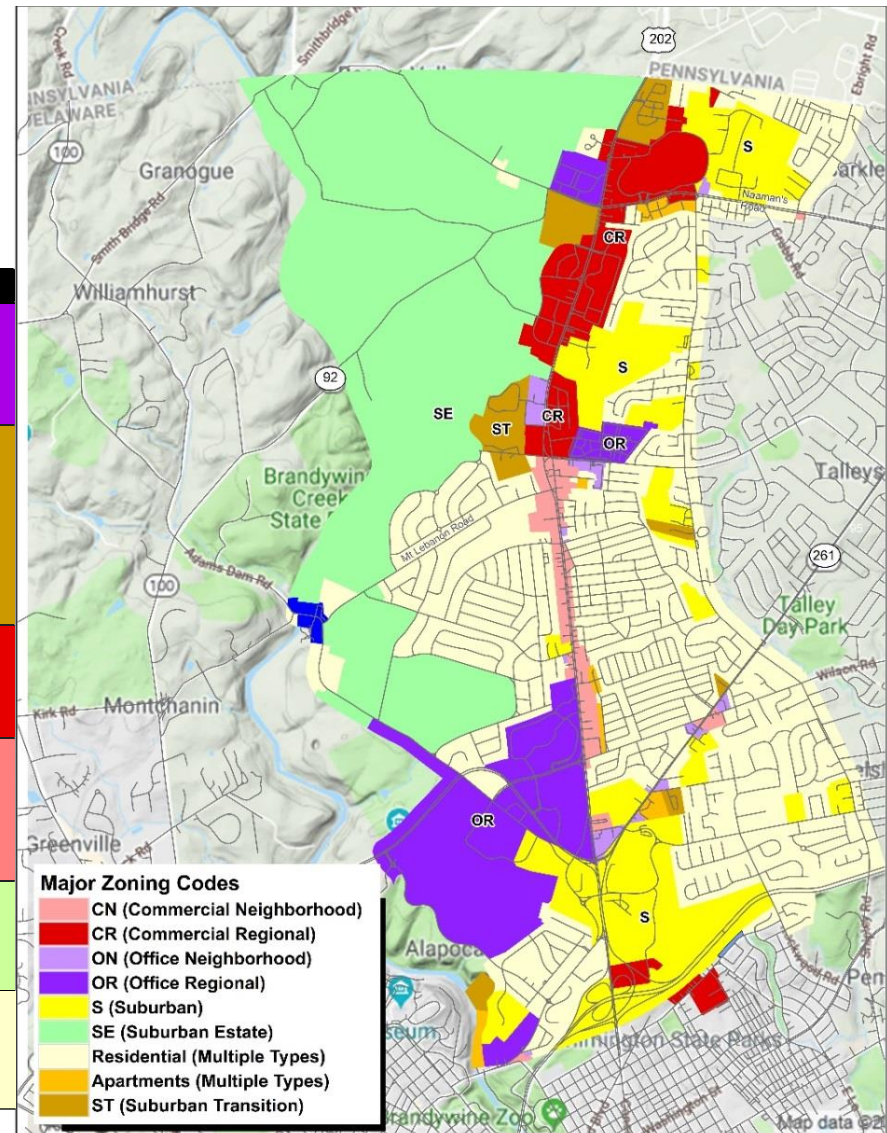
Future Land Use Categories



# New Castle County Zoning

The New Castle County Unified Development Code (UDC) includes a variety of zoning districts that determine the type and amount of development that can be built within each zoning district. As shown in the map and table below, there are several districts that apply to these portions of the study area.

Zoning Districts	Types of development allowed	Study area examples
Office Regional (OR)	Regional employment centers; primarily office and supporting uses; interior roadways and transit stops	A. I. duPont Institute, Experimental Station, Astra/Zeneca, J P Morgan Chase sites,
Suburban Transition (ST)	provides for high quality, moderately high density development with a full range of residential uses and limited non-residential uses. Design requirements are intended to reflect a suburban transition character while encouraging pedestrian linkages in addition to automobile access.	Village of Brandywine, Village of Rocky Run
Commercial Regional (CR)	Community and regional commercial services, may include residential; interior roadways and transit stops	Brandywine Town Center, Concord Mall
Commercial Neighborhood (CN)	Commercial uses designed to serve adjacent neighborhoods with design features compatible with those neighborhoods and smaller parcels limiting strip development potential	Concord Gallery Shopping Center, Fairfax Shopping Center
Suburban Estate (SE)	The intention of this zoning district is to preserve a character long-established in Northern New Castle County for single-family homes on large lots.	DuPont Country Club (Northside), First State National Park
Neighborhood Conservation (NC)	These districts protect the residential character of existing neighborhoods or planned subdivisions that were or are being developed under previous zoning regulations.	Fairfax, McDaniel Crest, Sharpley



# Study Area Approved/Pending Development

## Land Development Activity along Concord Pike

Map Key	Site	Non Residential S.F.	Housing Units	Notes
1	Wilmington University	200,000	0	Recorded/Under Construction; Three proposed buildings totaling 200,000 SF
2	Brandywine Country Club	12,200	532	Exploratory Phase; Rezone 110.02 acres from S to ST and develop site as an Open Space Planned subdivision, 360 apartments and 172 single family attached and detached units
3	Concord Plaza	460,594	341	Recorded/Under Construction: mixed-use development consisting of 460,594 square feet retail and office and 341 apartments
4	Columbia Place		149	Recorded; redevelopment with 149 age-restricted dwelling units
5	Brandywine YMCA	20,000		Recorded/Under Construction; 20,000 s.f. building addition
6	3701 Concord Pike			Record Plan Phase
7	2300 Concord Pike	7,700		Exploratory Phase; Construct a 7,700 s.f. retail center
8	Harbor Chase			Recorded/Under Construction; 120 bed assisted living facility
<b>TOTAL</b>		<b>700,494</b>	<b>1,022</b>	

Source: New Castle County Land Use

## Land Development Project Locations

