

4

Background Conditions



The designation of a roadway as a State of Delaware Byway or National Scenic Byway should not impede the intended purpose of that roadway to safely and efficiently move goods and people. Therefore, as part of this Corridor Management Plan (CMP), it is important to evaluate the current/existing and future conditions of the roadway being designated as a Byway. Displaying, summarizing and analyzing existing data pertaining to roadway physical characteristics, traffic volumes, accident locations and other significant data will assist with, and provide awareness of, the various operational and physical characteristics that should be considered during designation and implementation of the Scenic Byway. This collection of data also familiarizes the reader of this CMP with the Nanticoke Heritage Byway roadway characteristics. These characteristics should be considered in corridor planning efforts and future decision-making. In addition, the data serves as a baseline for any future analysis on the impacts of Scenic Byway designation and implementation of projects.

4.1 Roadway Characteristics

The Nanticoke Heritage Byway extends approximately 35 miles in Western Sussex County. This Corridor Management Plan (CMP) has divided the Nanticoke Heritage Byway into five (5) segments, or sections to assist with the review and graphical representation of the corridor analysis. Figures 4-1 – 4-5 display maps of the corridor and each of the five segments.

- Segment 1 (8.0 miles) – From Trap Pond State Park to Town of Laurel to the west.
- Segment 2 (12.3 miles) – From Town of Laurel to Phillips Landing State Park to the west, and to the north through Town of Bethel to the Woodland Ferry.
- Segment 3 (3.0 miles) – From Chapel Branch Nature Area to City of Seaford to the east.
- Segment 4 (7.2 miles) – From City of Seaford north to Hearn's Pond and U.S. Route 13 (Sussex Highway).
- Segment 5 (9.3 miles) – From City of Seaford east to East Seaford and south to Chipman's Pond in Concord.

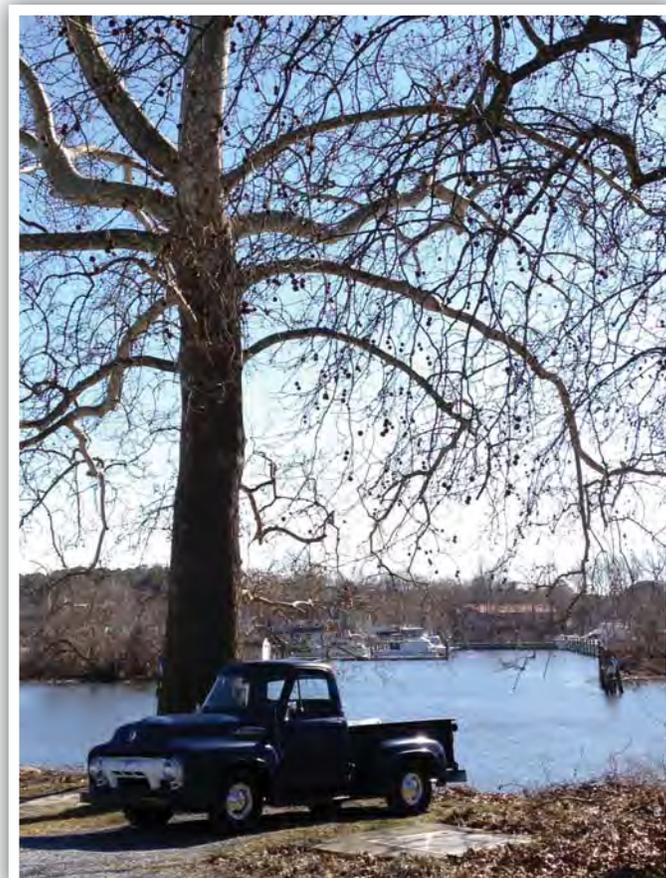


Figure 4-1: Project Study Area

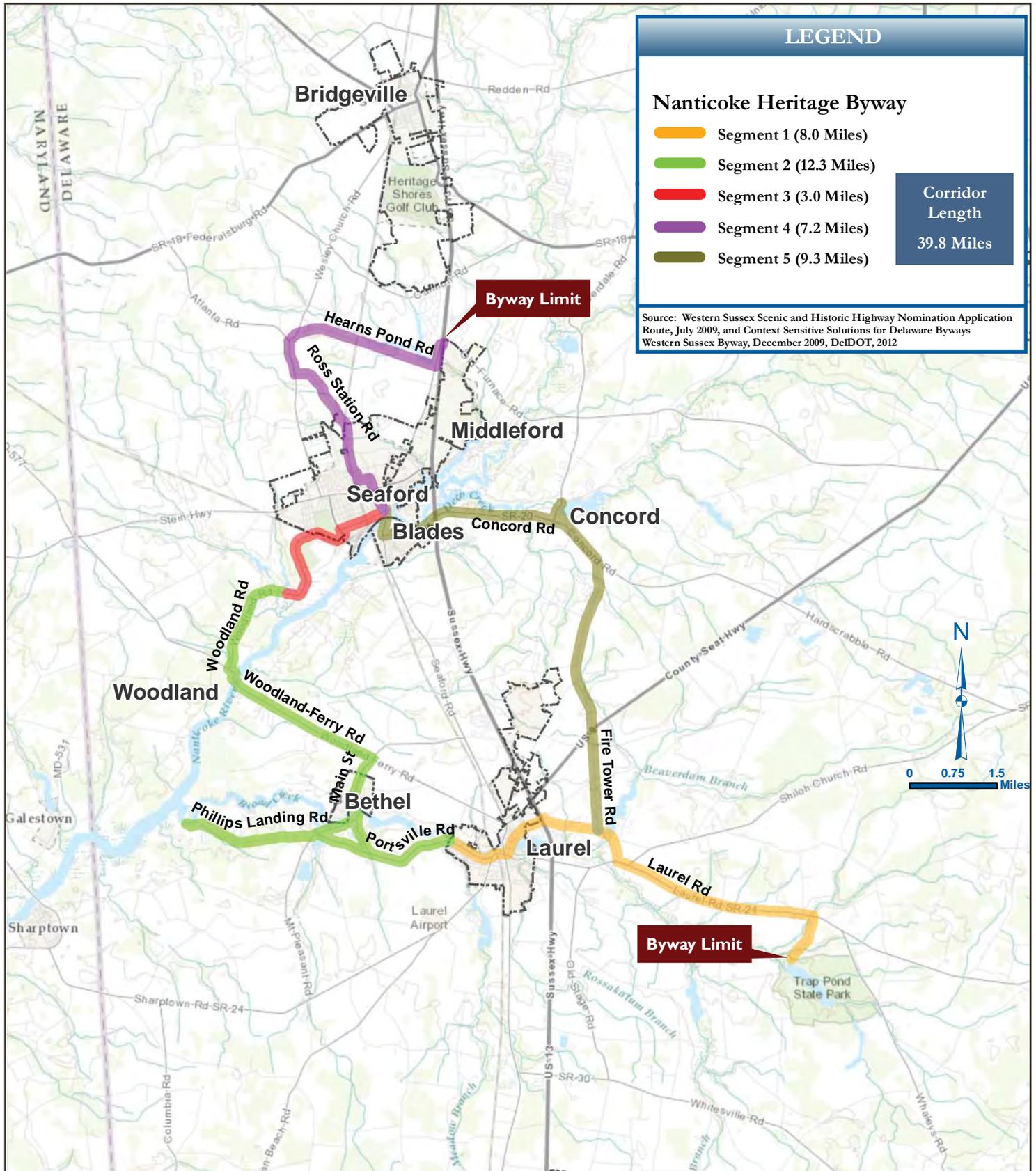


Figure 4-2: Project Study Area – Segment 1

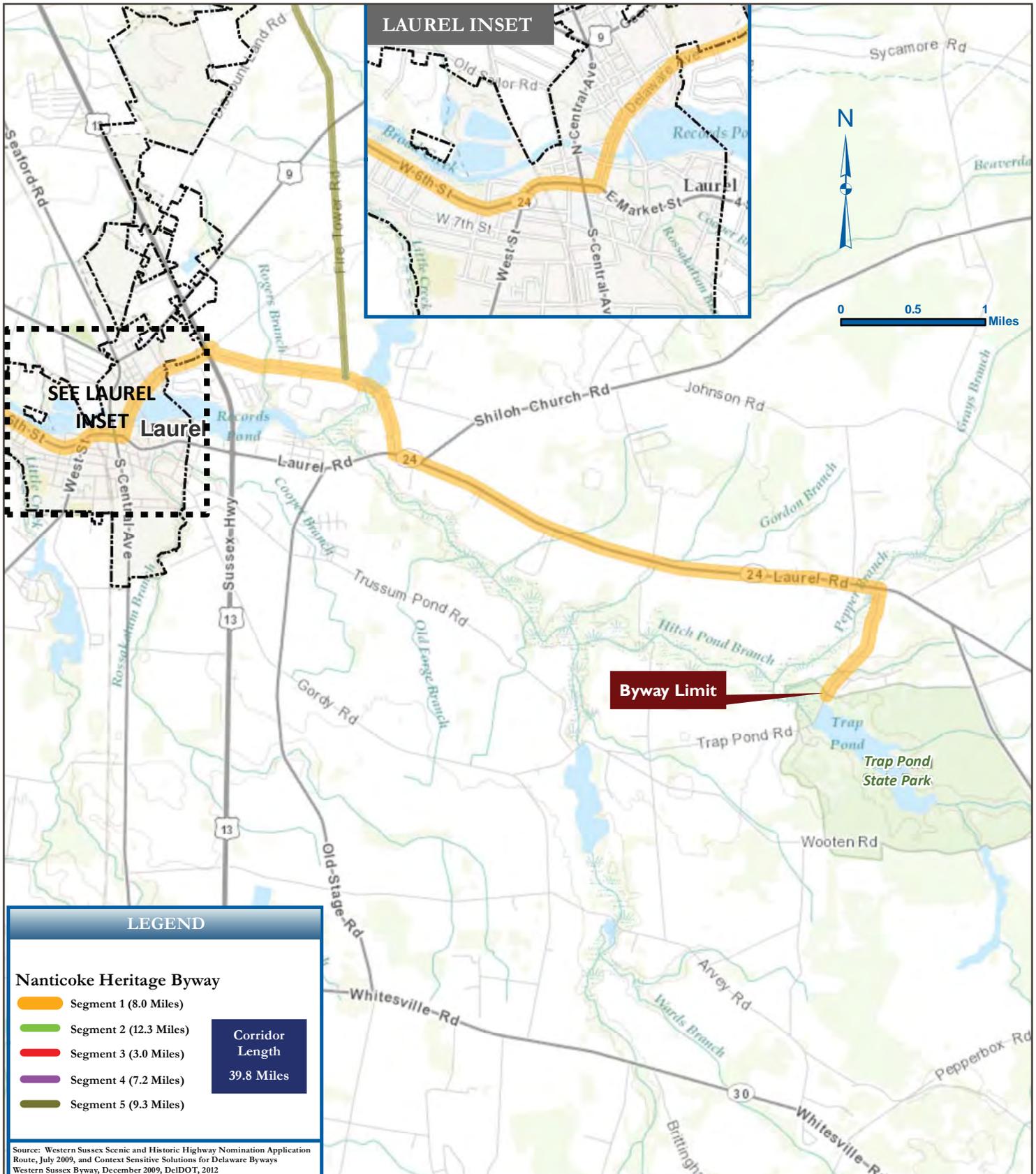


Figure 4-3: Project Study Area – Segment 2

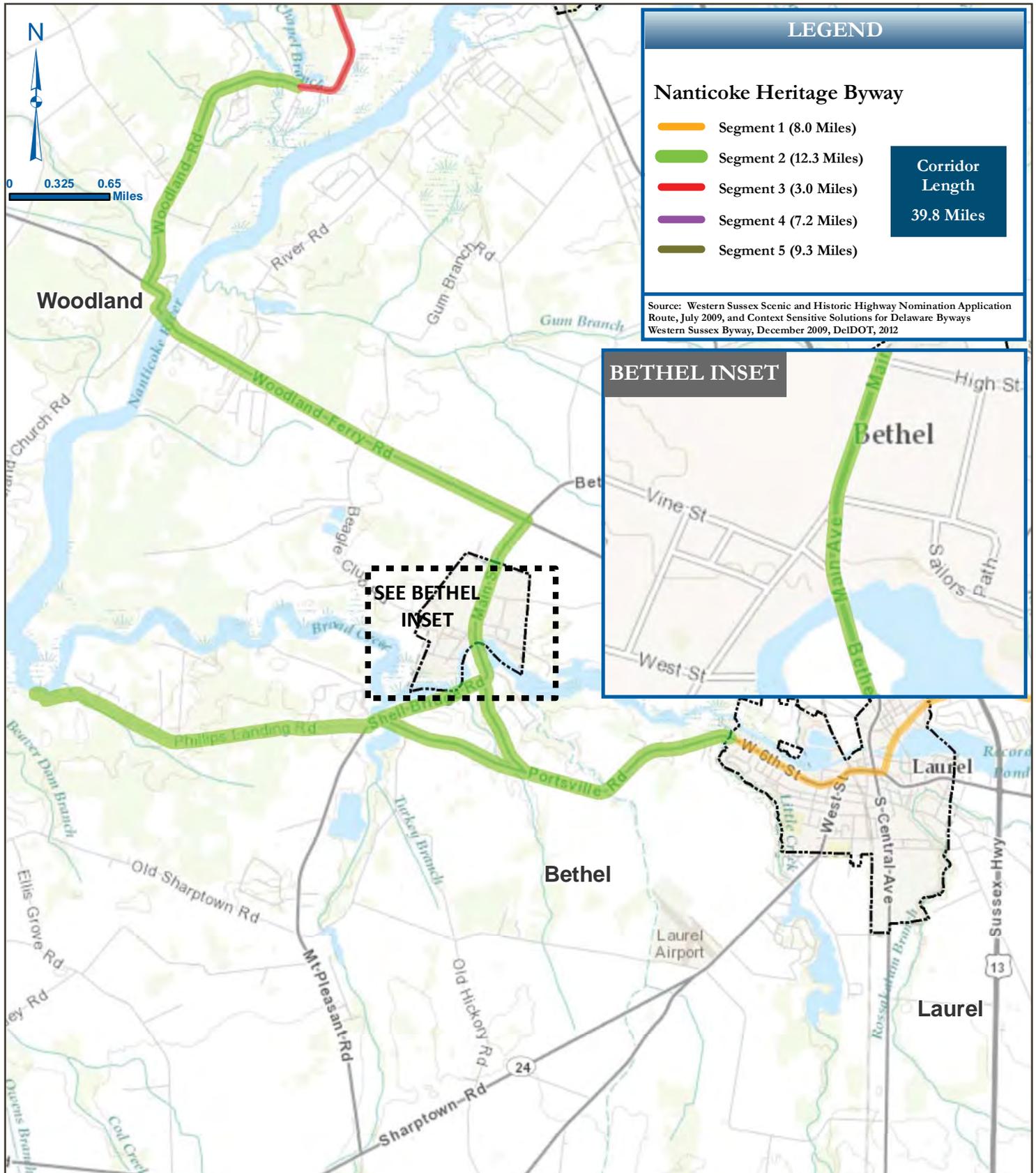


Figure 4-4: Project Study Area – Segment 3

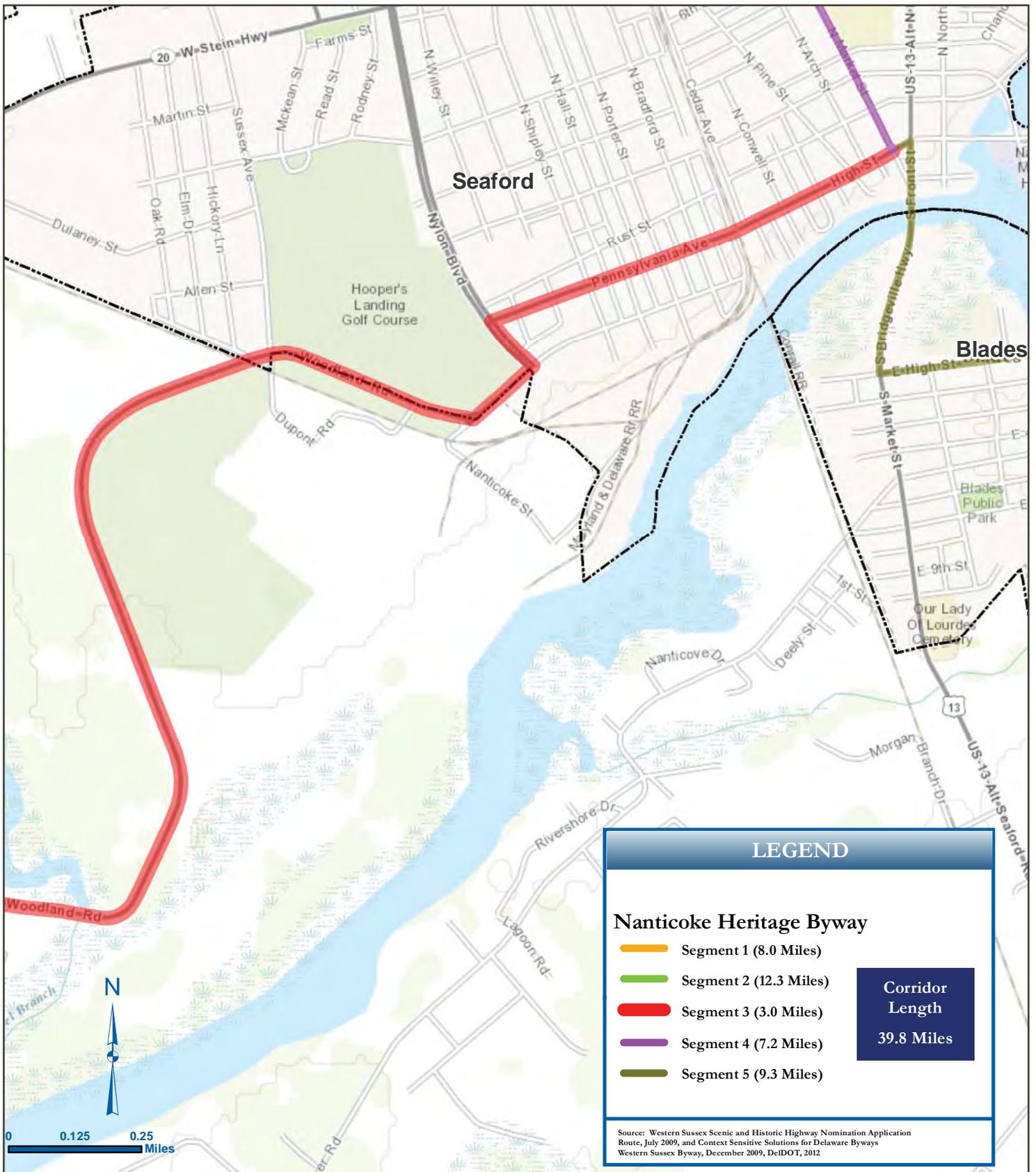


Figure 4-5: Project Study Area – Segment 4

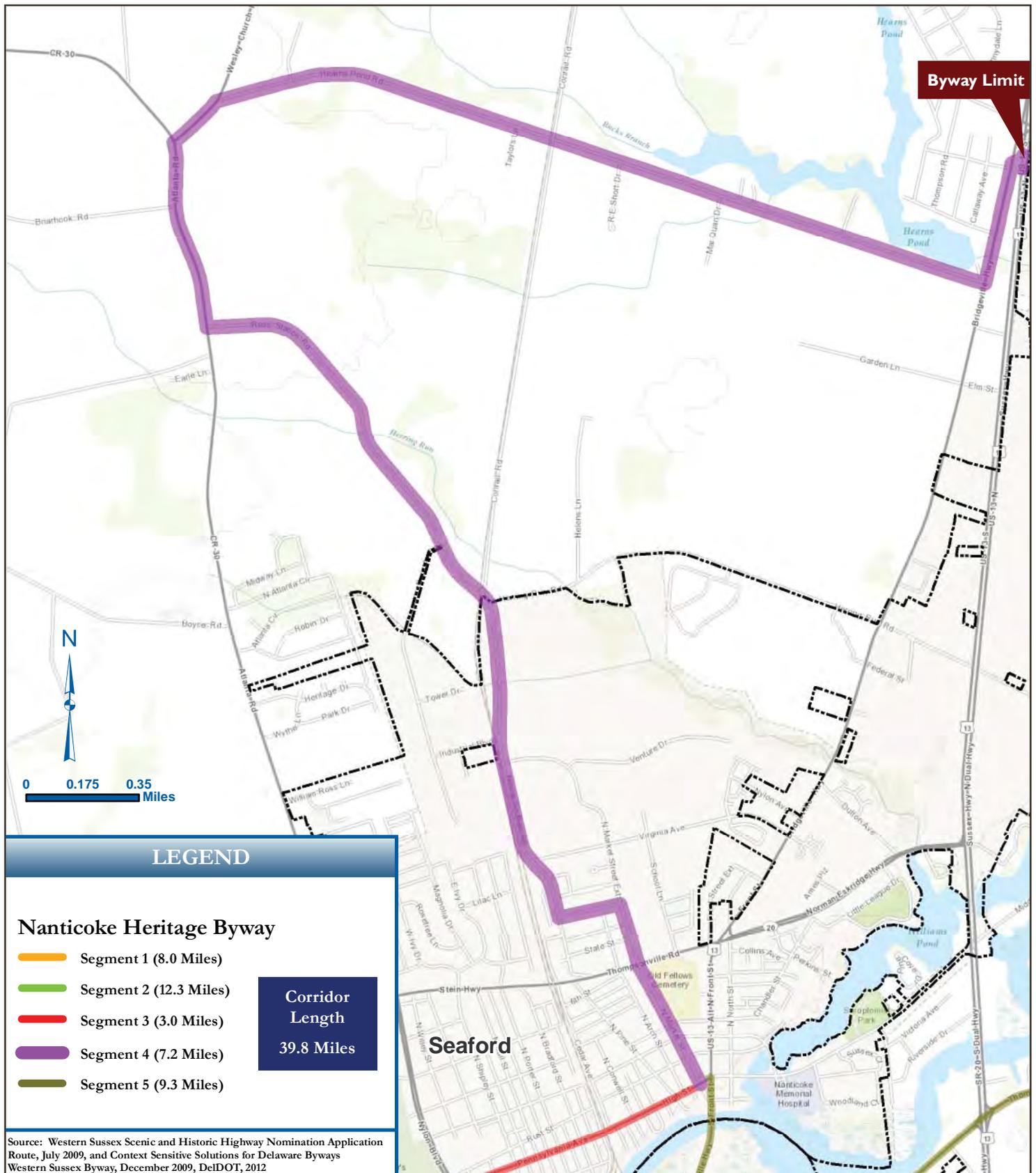
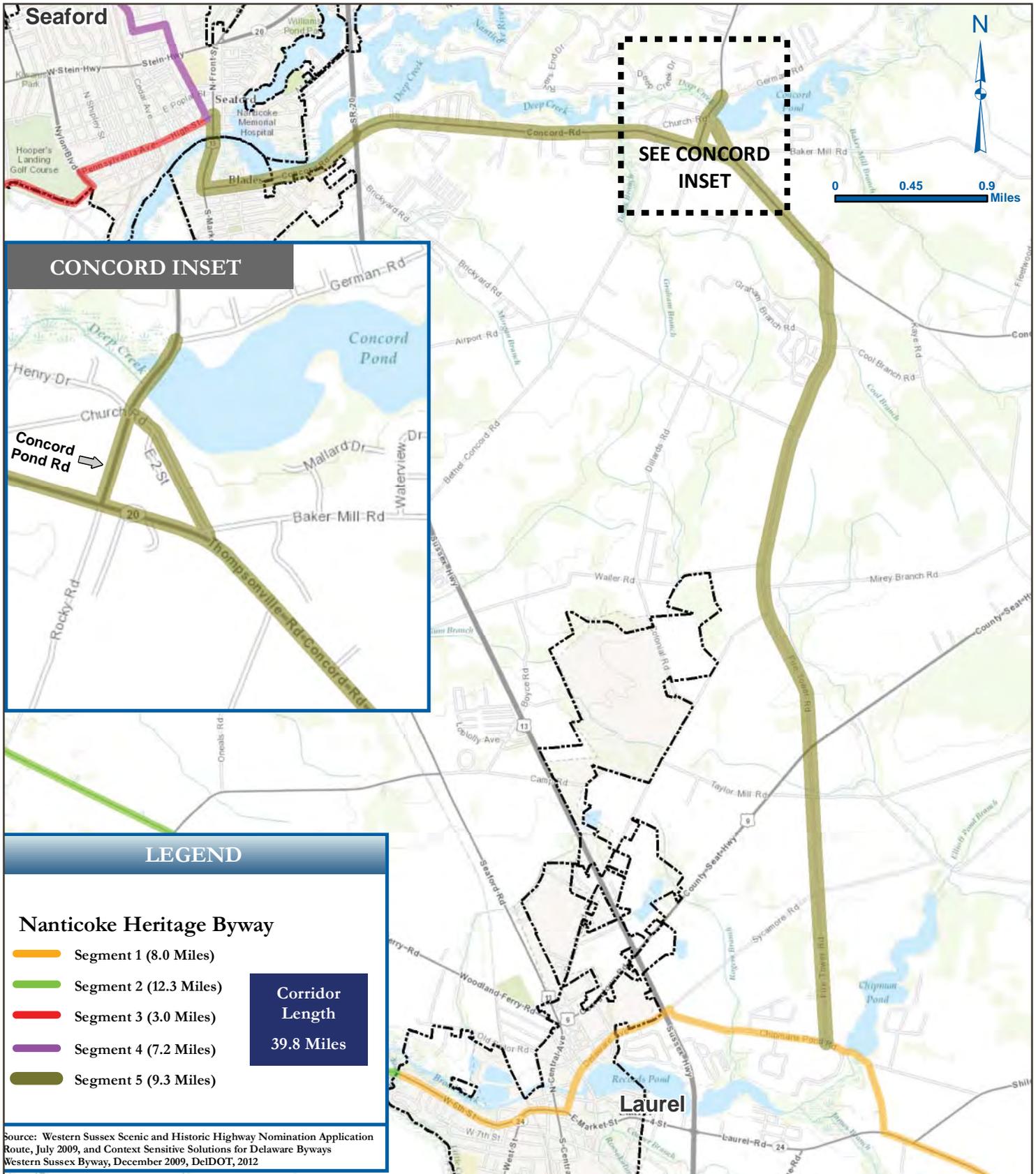


Figure 4-6: Project Study Area – Segment 5



4.1.1 General Design Characteristics

It is important to know the general design character of a corridor in an effort to appropriately portray the safety and transportation planning aspects. Figure 4-7 presents the design characteristics of the corridor. the entire byway corridor is generally two lanes, one in each direction. Medians are generally not present. Most of the corridor is rural in nature with occasional suburban and urban sections through communities such as Laurel and Seaford. Roadway width ranges from 22 feet to 50 feet as displayed in the following figures.

Figure 4-7: General Roadway Design Characteristics

Segment	Route	Total Roadway Width (Lanes and Shoulders)	Number of Driving Lanes
Segment 1	Trap Pond Road	24 feet	2
Segment 1	Delaware Route 24 (Laurel Road)	38 feet	2
Segment 1	Christ Church Road	29 feet	2
Segment 1	Chipmans Pond Road	28-32 feet	2
Segment 1	Delaware Avenue	27-36 feet	2
Segment 1	Delaware Route 24 (Market Street)	24-28 feet	2
Segment 1	Sixth Street; Townsend Street	24-34 feet	2
Segment 2	Portsville Road	32 feet	2
Segment 2	Phillips Landing Road	26 feet	2
Segment 2	Shell Bridge Road	30-34 feet	2

Segment	Route	Total Roadway Width (Lanes and Shoulders)	Number of Driving Lanes
Segment 2	Main Avenue; Main Street; Bethel Road	22-38 feet	2
Segment 2	Woodland Ferry Road	28 feet	2
Segment 2 & 3	Woodland Road	30-40 feet	2
Segment 3	Harrington Street	32-36 feet	2
Segment 3	Pennsylvania Avenue	32-40 feet	2
Segment 3	High Street	32-42 feet	2
Segment 4	Market Street	32-34 feet	2
Segment 4	Nanticoke Avenue	36-42 feet	2
Segment 4	Ross Station Road	36 feet	2
Segment 4	Atlanta Road	37 feet	2
Segment 4	Wesley Church Road	31 feet	2
Segment 4	Hearns Pond Road	28 feet	2
Segment 4	Bridgeville Highway	42 feet	2
Segment 5	U.S. Route 13 (Front Street)	30-42 feet	2
Segment 5	Delaware Route 20 (High Street)	34-37 feet	2
Segment 5	Delaware Route 20 (Concord Road)	35-50 feet	2
Segment 5	Concord Pond Road	30 feet	2
Segment 5	Fire Tower Road	30 feet	2

Figure 4-8: Roadway Width (Project Study Area)

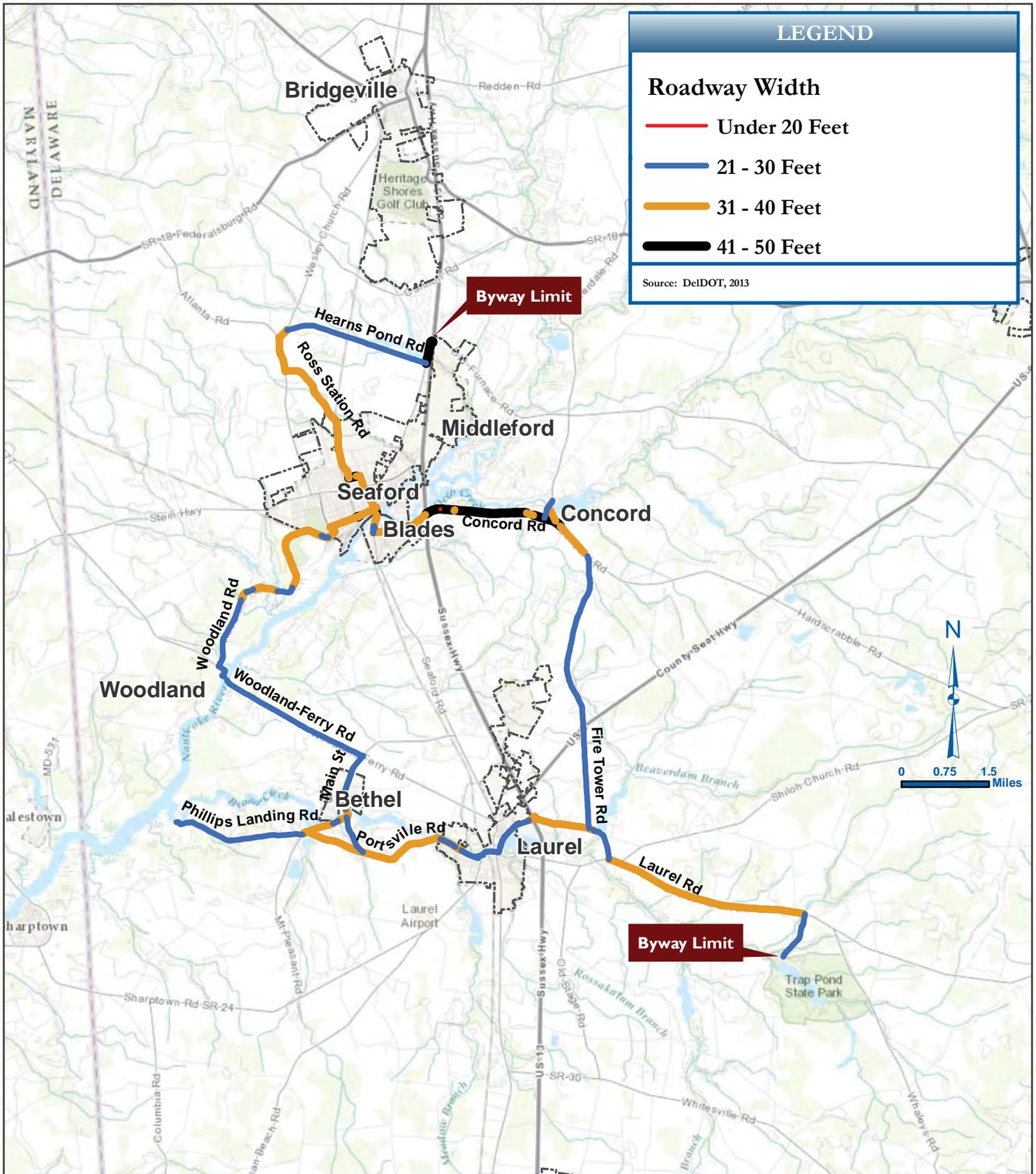


Figure 4-9: Roadway Width – Segment 1

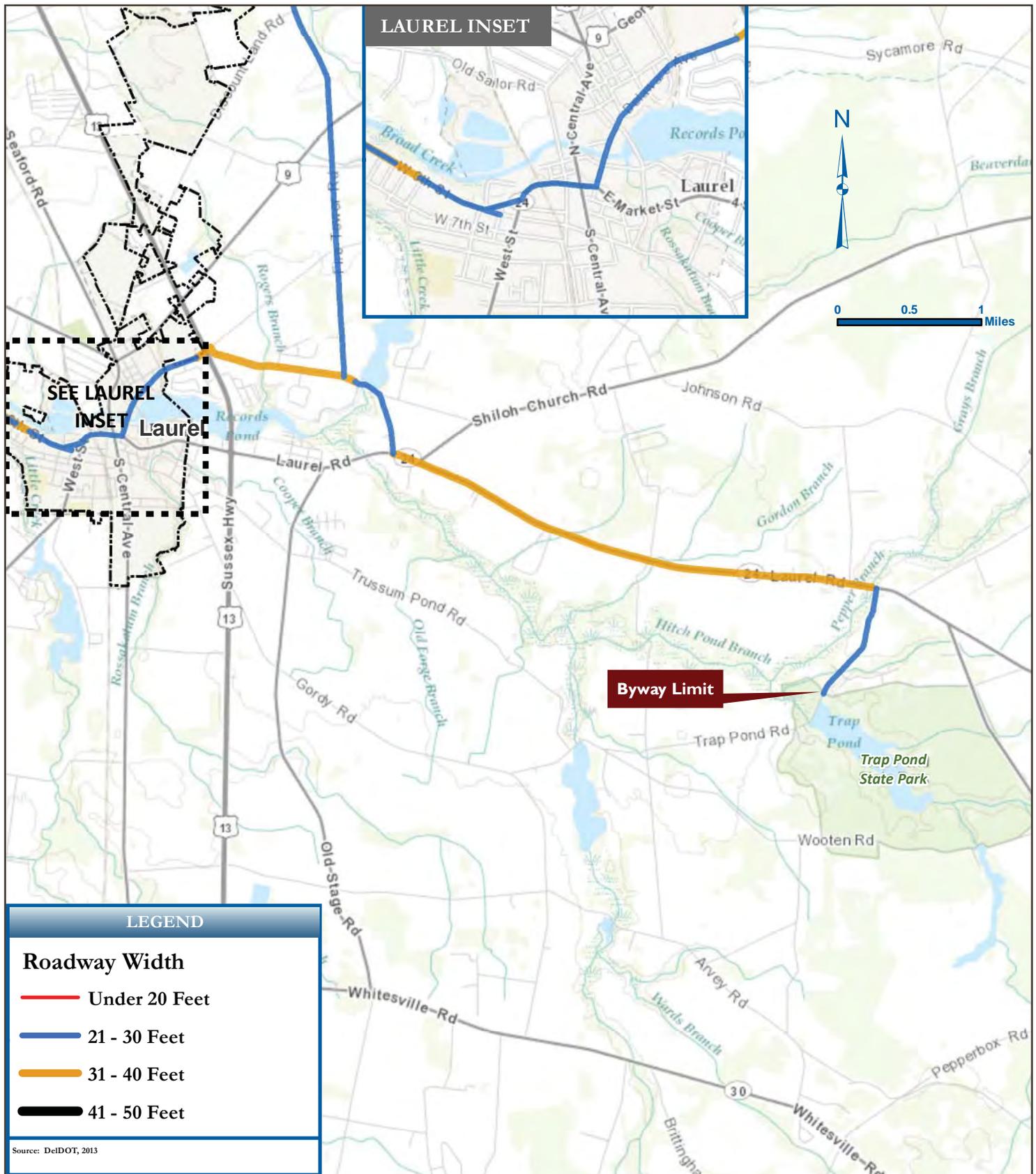


Figure 4-10: Roadway Width – Segment 2

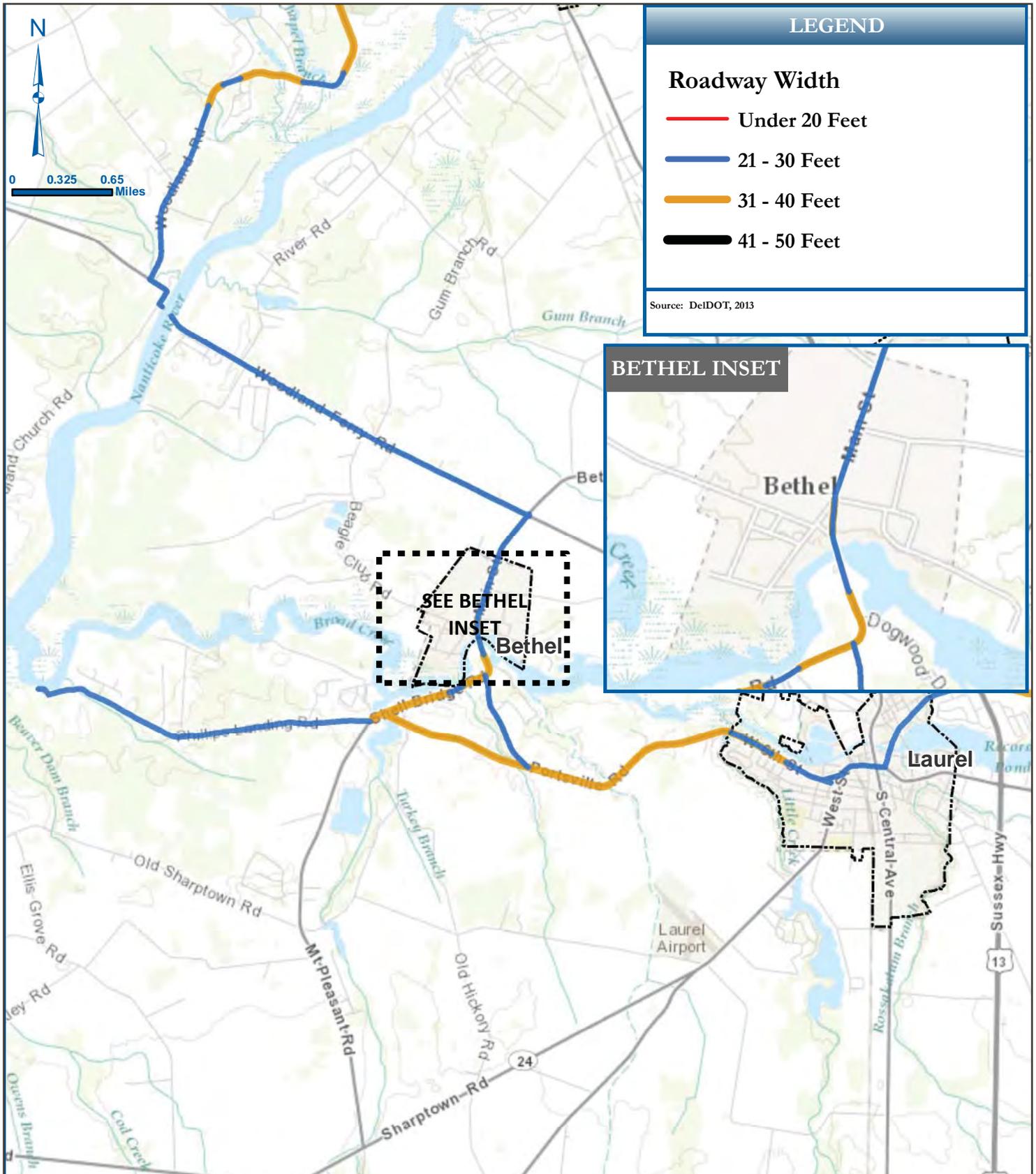


Figure 4-11: Roadway Width – Segment 3

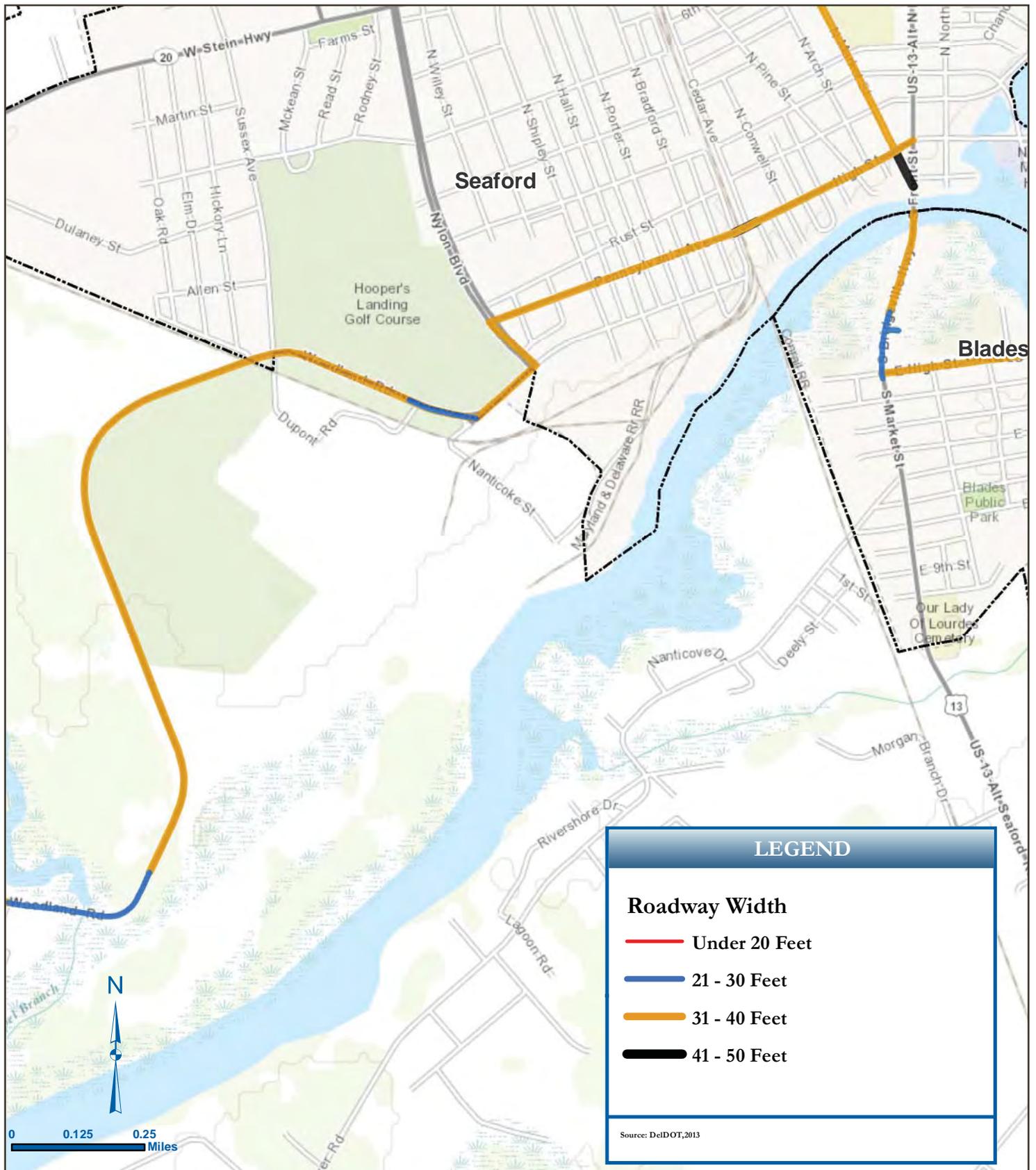


Figure 4-12: Roadway Width – Segment 4

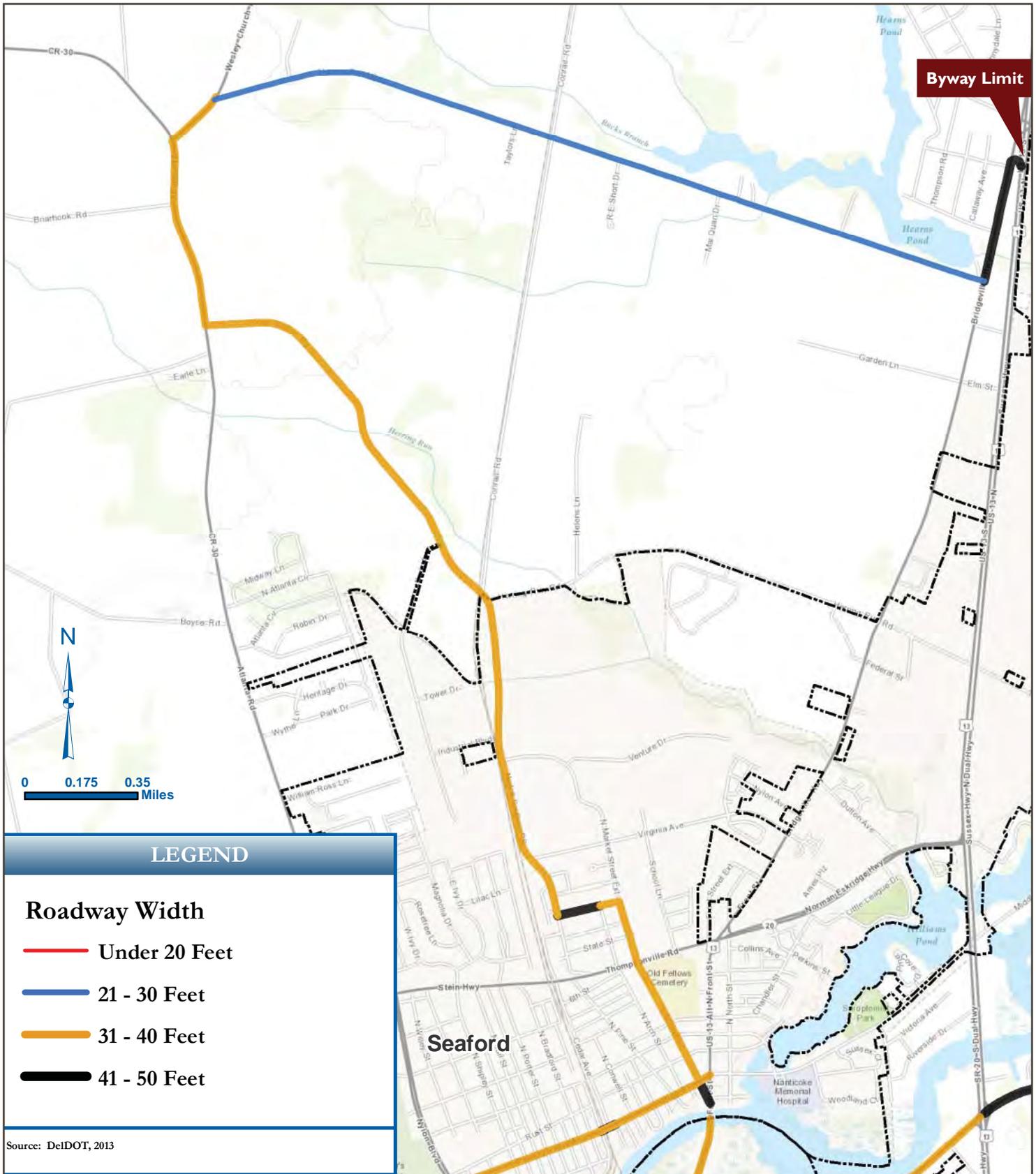
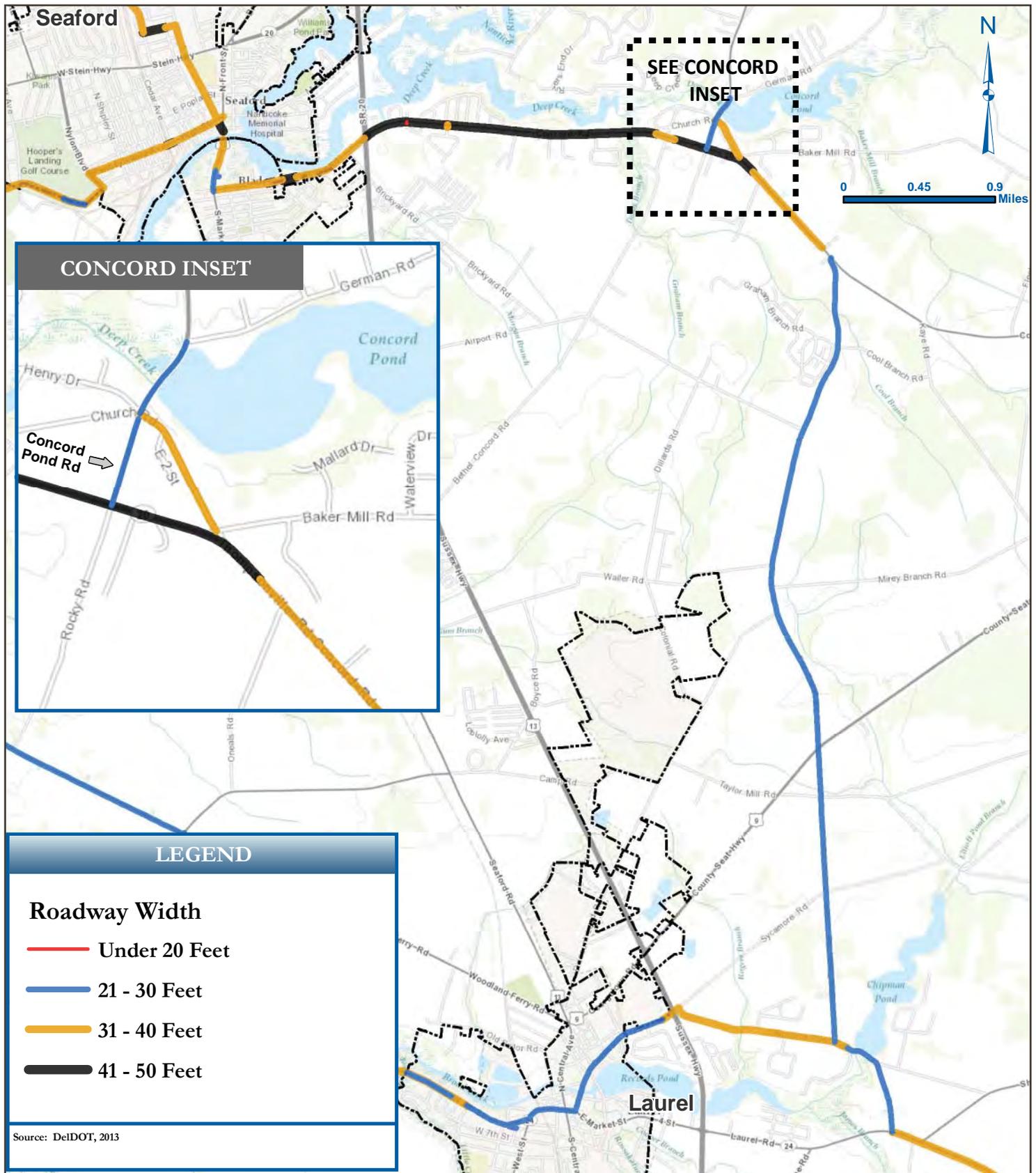


Figure 4-13: Roadway Width – Segment 5



4.1.2 Speed Limits

The speed limits along the corridor are depicted in Figure 4-14, on the following page. Within town/city limits the speed limit is generally 35 mph and 25 mph. When visitors travel along the rural sections, they will experience speeds ranging from 40 mph to 50 mph. If the statutory speed limit in a given area is determined to be too high, DelDOT performs engineering studies in the area to establish a more appropriate limit. Speed limits are enforced by the Delaware State Police and the local (city or county) police force.

The Delaware Code, Title 21, Chapter 41 lists the general speed restrictions along roadways. The following statutory speed limits are currently presented in the Delaware Code: 1) 25mph in business districts; 2) 25mph in residential districts; 3) 50mph on 2-lane roadways; and 4) 55mph on 4-lane roadways and on divided roadways. Scenic Highway designation (State or National) will have no effect on the speed limits assigned to the roadway.

4.1.3 Functional Classification

Functional Classification is the process by which streets and highways are grouped into classes according to the character of traffic service that they are intended to provide. Functional classification allows for the determination of an allowable range of design speed. Further, once a road has been classified, other road characteristics can be established, these include: land width; shoulder width; and type and width of median. There are three (3) main functional classifications: arterial, collector, and local roads. Within these classifications, there are sub-classes of arterials and collectors called major and minor. Arterial roads provide a high level of mobility and access control. Conversely, local roads are classified as such because they provide greater access to adjacent properties, but a low level on mobility. Collector roads serve as the balance between the previously mentioned functional classifications; collectors share traits of both arterial and local roads. The Nanticoke Heritage Byway is comprised of roads classified as major collector, minor collector, and local. These roads provide for medium to low levels of traffic. Functional Classification is displayed in Figure 4-15.

4.1.4 Designated Truck Routes

Delaware DOT does not have a list of designated truck routes. Truck movements are located mainly along major highways and should have minimal impact on the movement and quality of the traveler or commuter along the Nanticoke Heritage Byway corridor. One exception is Main Street through the Town of Bethel which is sometimes used as a short cut by truck traffic. The corridor's Scenic Byway designation will have no anticipated impact on the movement of truck traffic. DelDOT will coordinate with the freight and trucking industry consistently to ensure that any planned improvements related to the Scenic Byway do not adversely affect the trucking operations and travel throughout the region.

Figure 4-14: Speed Limit (Project Study Area)

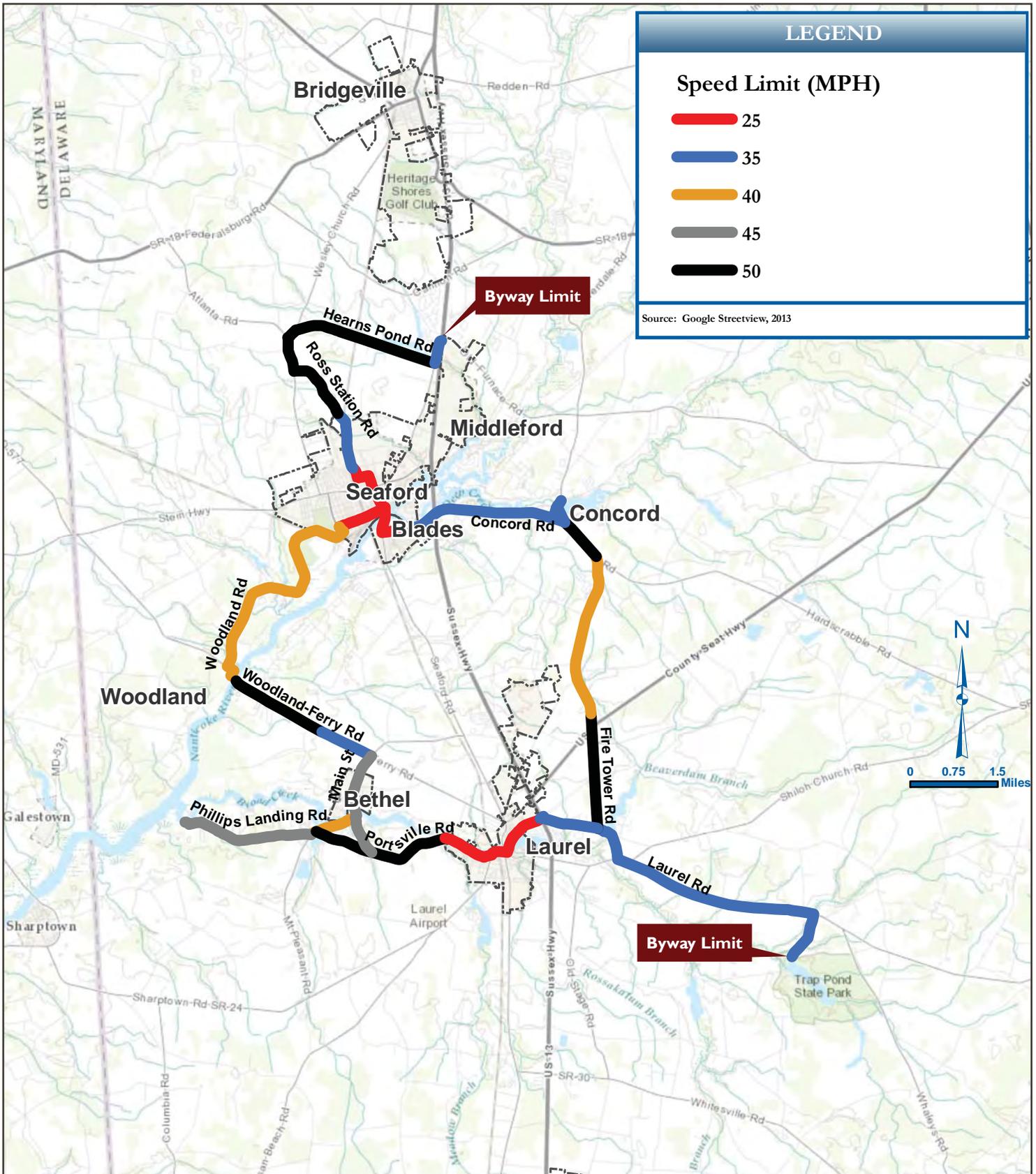
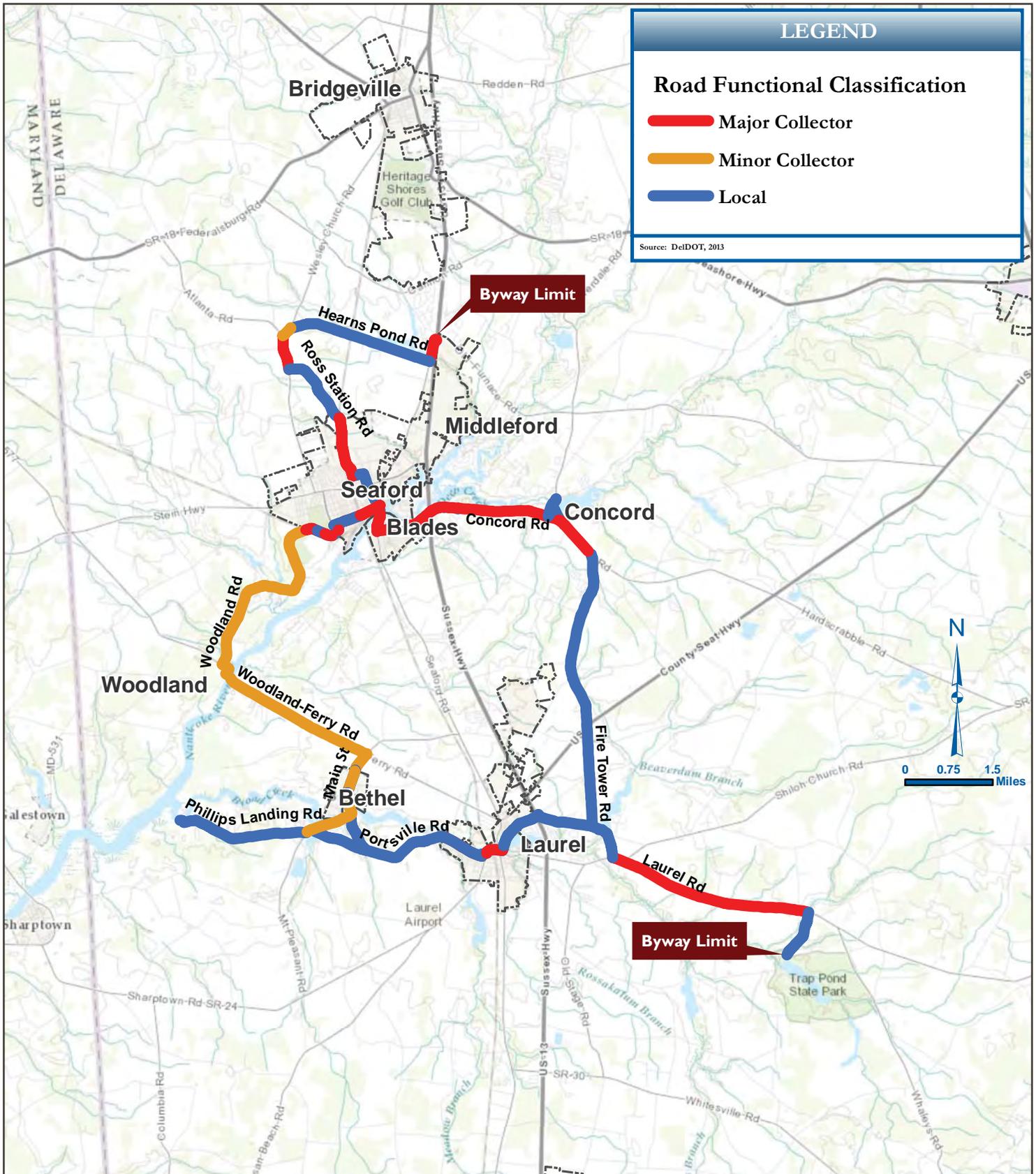


Figure 4-15: Road Functional Classification



4.1.5 Annual Average Daily Traffic (AADT)

Annual Average Daily Traffic (AADT) is the total volume of vehicular traffic on a roadway throughout the entire year divided by 365 days (Annual Volume / 365 = AADT). The AADT of a corridor or roadway provides a snapshot of how many vehicles utilize a roadway on an average daily basis. The AADT for the Nanticoke Heritage Byway is displayed on figures on the following pages.

Traffic volumes are generally low along the corridor. No segments have more than 8,000 vehicles on an average day. The segments with more than 5,000 vehicles on an average day include urban/suburban areas in Seaford and Laurel. Additional areas with more than 5,000 vehicles are along rural routes – Delaware Route 20 (Concord Road) east of Seaford and Delaware Route 24 (Laurel Road) near Trap Pond State Park.

A measure associated with traffic volume is Level of Service (LOS). While LOS analysis is not available along the corridor, the low levels of traffic likely result in a good LOS. This means that travelers likely do not experience congestion along the corridor with an exception being occasional minor congestion at the intersections of US 13 in downtown Seaford and Laurel. If there is some congestion along some roads, it is likely brief, and seasonal or event related.

The current traffic volumes along the corridor signify that the corridor can likely handle the anticipated traffic as a result of Scenic Byway designation. The anticipated increase in traffic as a result of Scenic Byway designation has not been quantified, nor is it part of this CMP to do so. However, it has been observed that Scenic Byway designation in the United States does not generally create a noticeable increase on traffic volumes.

Figures 4-16 – 4-21 display the AADT for the entire study area and each segment of the Byway.



Figure 4-16: Annual Average Daily Traffic (Project Study Area)

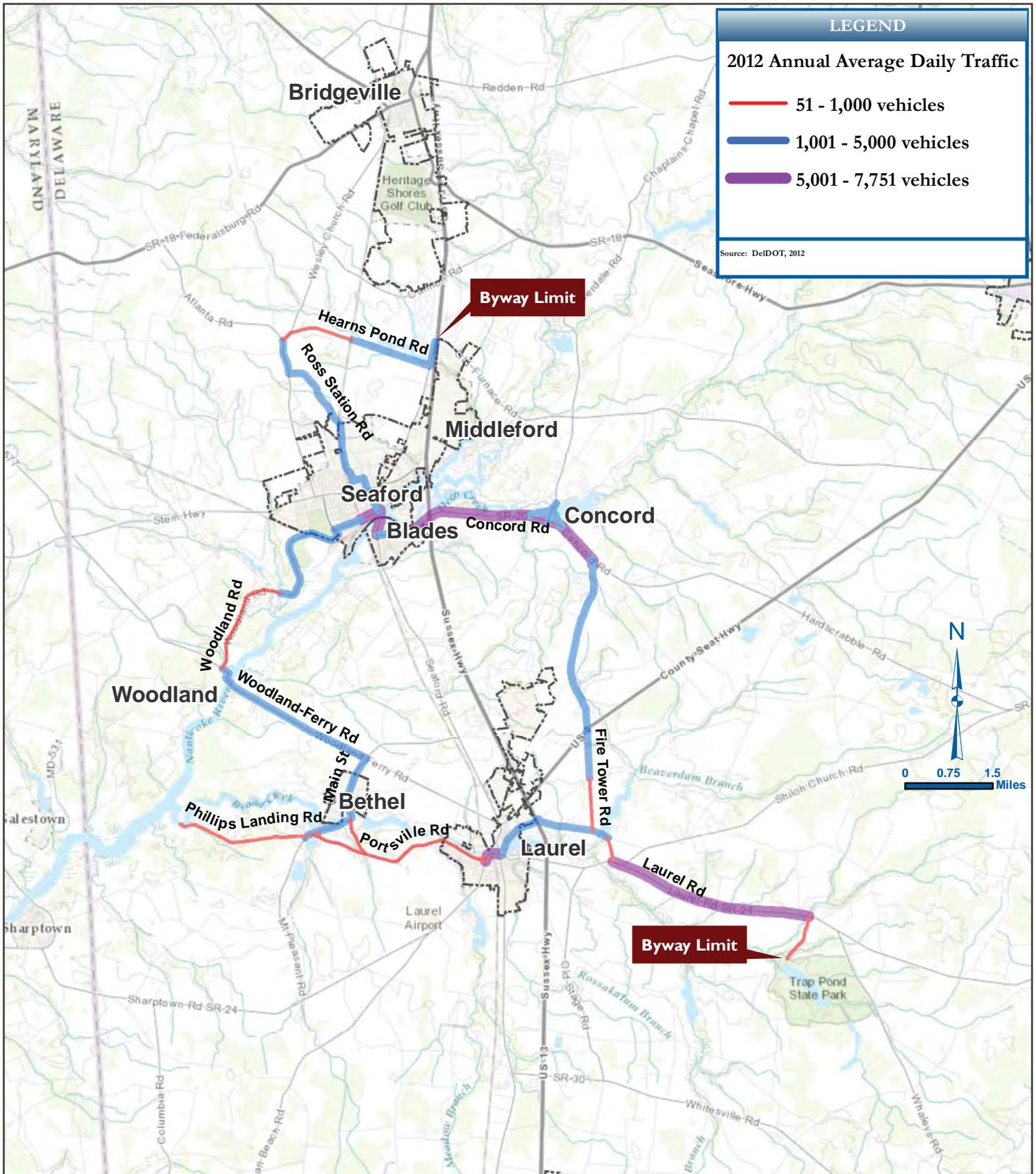


Figure 4-17: Annual Average Daily Traffic – Segment 1

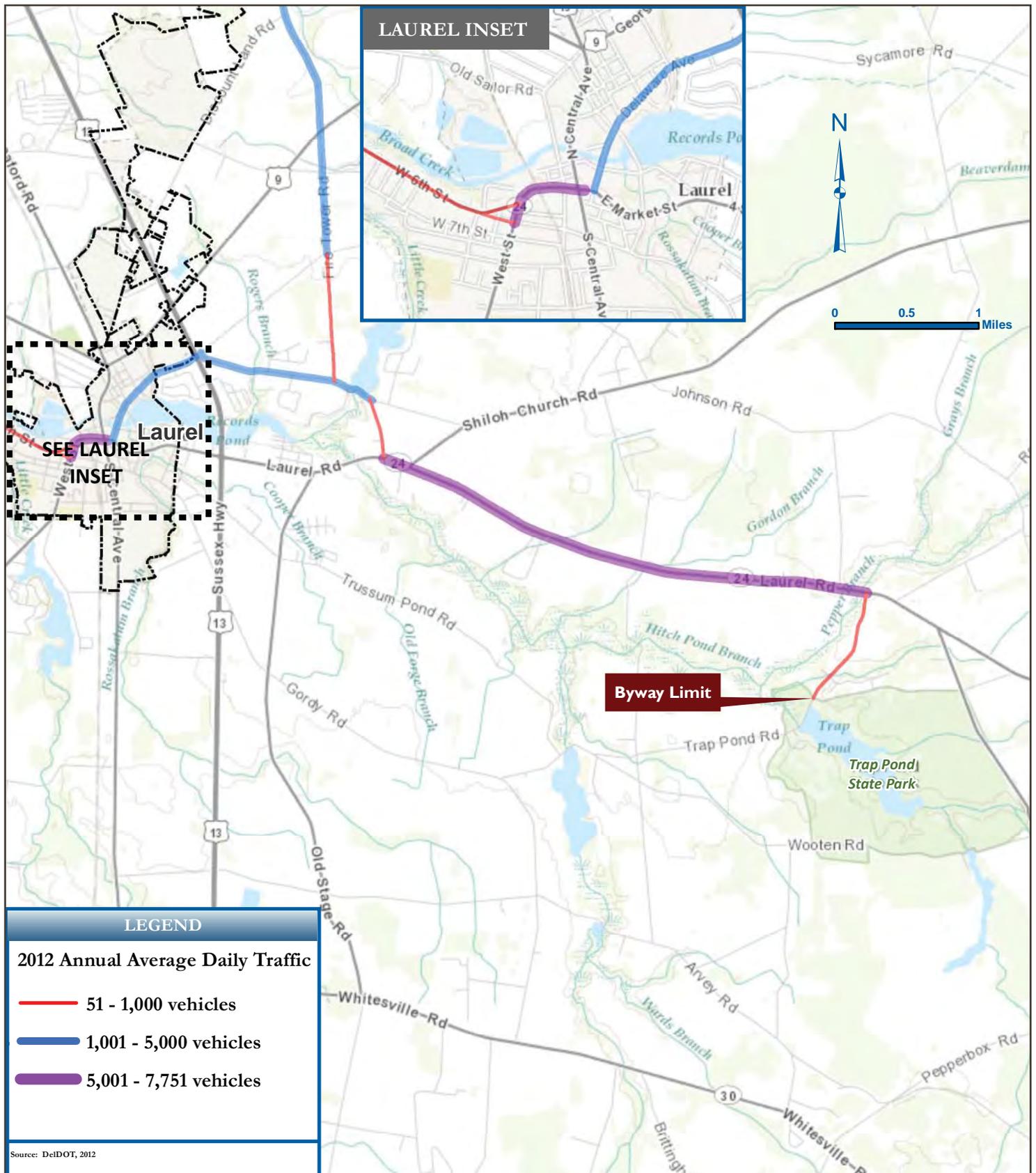


Figure 4-18: Annual Average Daily Traffic – Segment 2

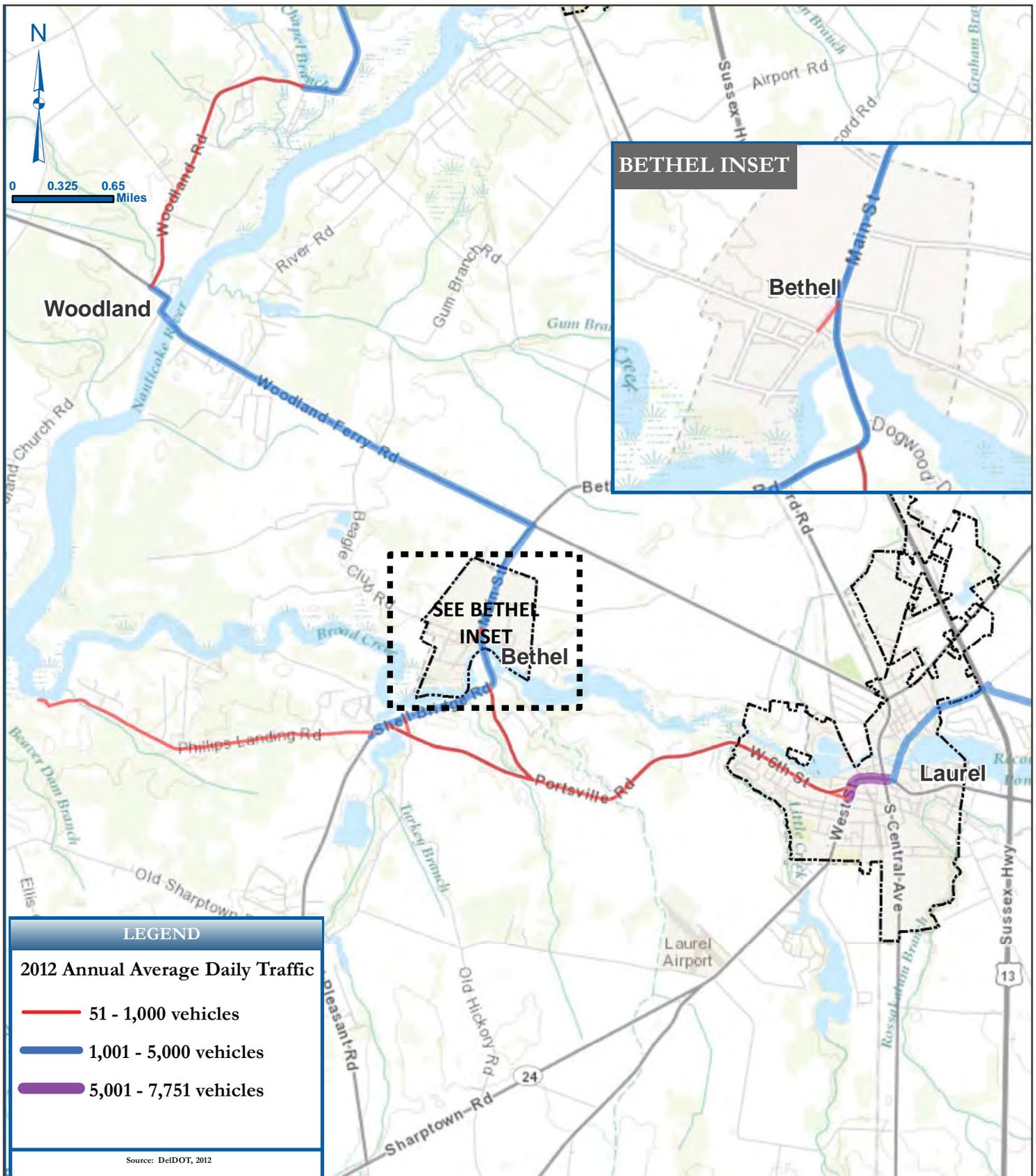


Figure 4-19: Annual Average Daily Traffic – Segment 3

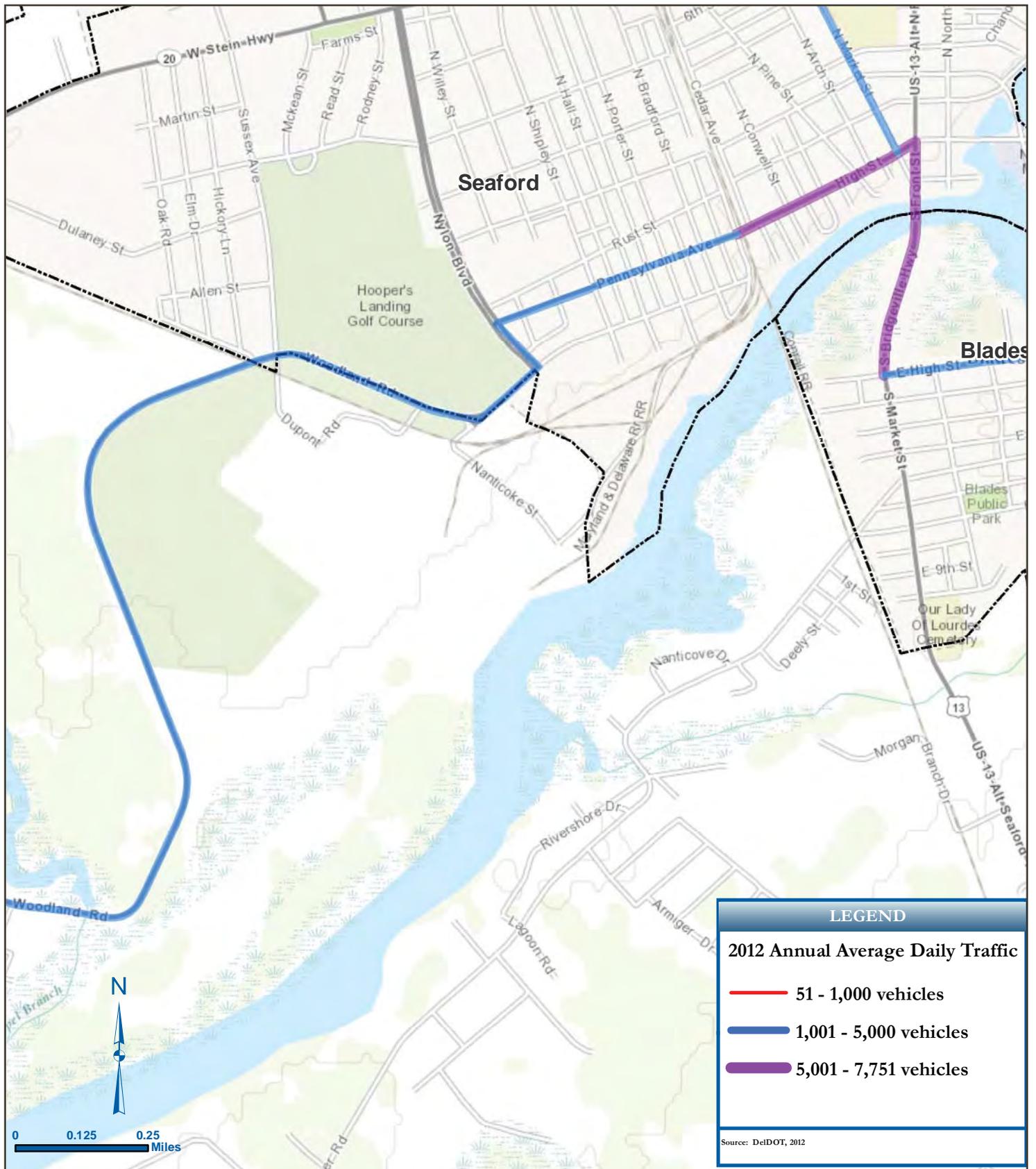


Figure 4-20: Annual Average Daily Traffic – Segment 4

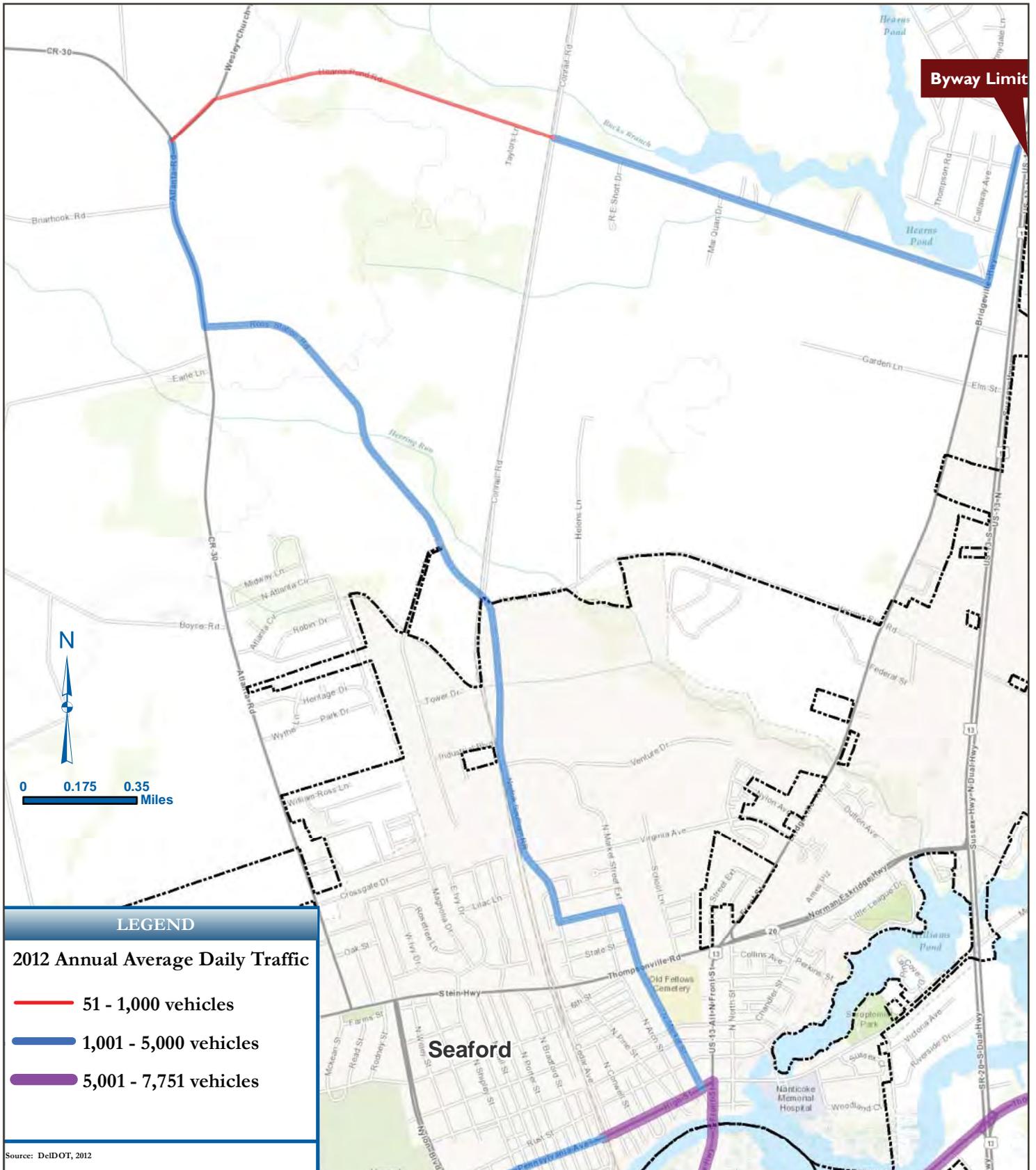
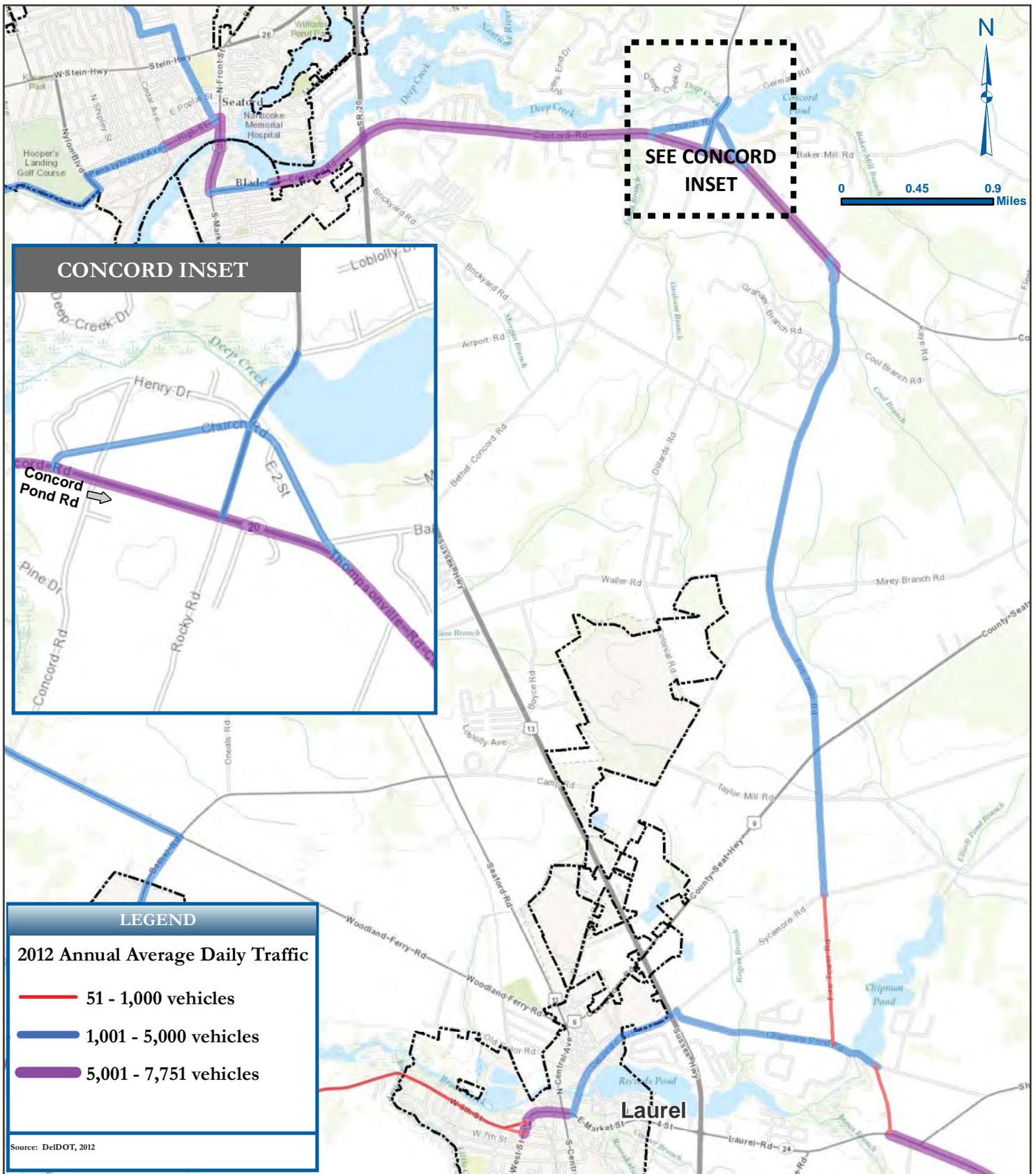


Figure 4-21: Annual Average Daily Traffic – Segment 5



4.1.6 Shoulder Type and Width

A road shoulder is a reserved area at the edge of the traveling lanes that can be used in the event of an emergency or breakdown. It acts as a buffer between the main thoroughfare and the edge of the road. The shoulder type along a roadway is very important when viewing safety and planning for future projects. Shoulders serve a number of importation functions, including: space for disabled vehicles; space for enforcement activities; space for vehicle maintenance; an area for drivers to maneuver to avoid incidents; and provide bicycle accommodation. The Nanticoke Heritage Byway has a variety of shoulder types. A review of the shoulder types along the corridor shows that a majority of the corridor has either a soil surface or an asphalt/concrete mix. Due to the possible increase in tour bus and RV traffic it is critical to have shoulders that provide enough roadway width and solid surfaces on the shoulder of the travel lanes. When the corridor enters developed areas, the shoulder type tends to transition to curb, gutter and sidewalk. This provides increased safety for cyclists and pedestrians and meets universal standards for roadway design. Based on the functional classification of the roads that comprise the Byway, the American Association of State Highway and Transportation Officials (AASHTO) recommend a shoulder width of 2-8 feet.

When examining shoulder widths, the corridor is found to generally have widths of that range from 10-16 feet. However, there are some areas along the corridor where the shoulder width is 2-feet or less, which is not accommodating to bicyclists, tractors and farm equipment (for allowing vehicles to pass), RVs, tour buses and pedestrians. Bicycle and pedestrian safety and improvements are discussed in other sections of this Corridor Management Plan.

4.1.7 Seasonal Traffic Patterns

The Nanticoke Heritage Byway and the State of Delaware in general, experience peak travel seasons in May through October. As the following table shows, the average temperatures and precipitation during this time of year are moderate and ideal for travel activities.

Figure 4-22: Annual Weather Averages for the Corridor

	Avg. High	Avg. Low	Mean	Avg. Precipitation
Jan	44°	27°	35°	3.4 in
Feb	45°	27°	36°	3.2 in
Mar	54°	34°	44°	4.0 in
Apr	65°	43°	54°	3.5 in
May	75°	53°	64°	3.8 in
Jun	83°	62°	72°	3.5 in
Jul	83°	67°	77°	4.6 in
Aug	85°	65°	75°	5.1 in
Sep	79°	59°	69°	3.7 in
Oct	68°	48°	58°	3.0 in
Nov	57°	38°	47°	3.3 in
Dec	46°	29°	37°	3.3 in

(Source: www.weatherbase.com)

4.1.8 Bridges

Bridges are important to assess as part of the Background Conditions section as these vital pieces of infrastructure are not only significant for travelling along the corridor, but they can also be used for scenic views, hobbyists, and are sometimes used as key landmarks along the corridor. For visitors engaging in these types of activities on or around bridges, safety should be a priority and parking can be difficult in some locations. Bridge locations are displayed in Figure 4-24.

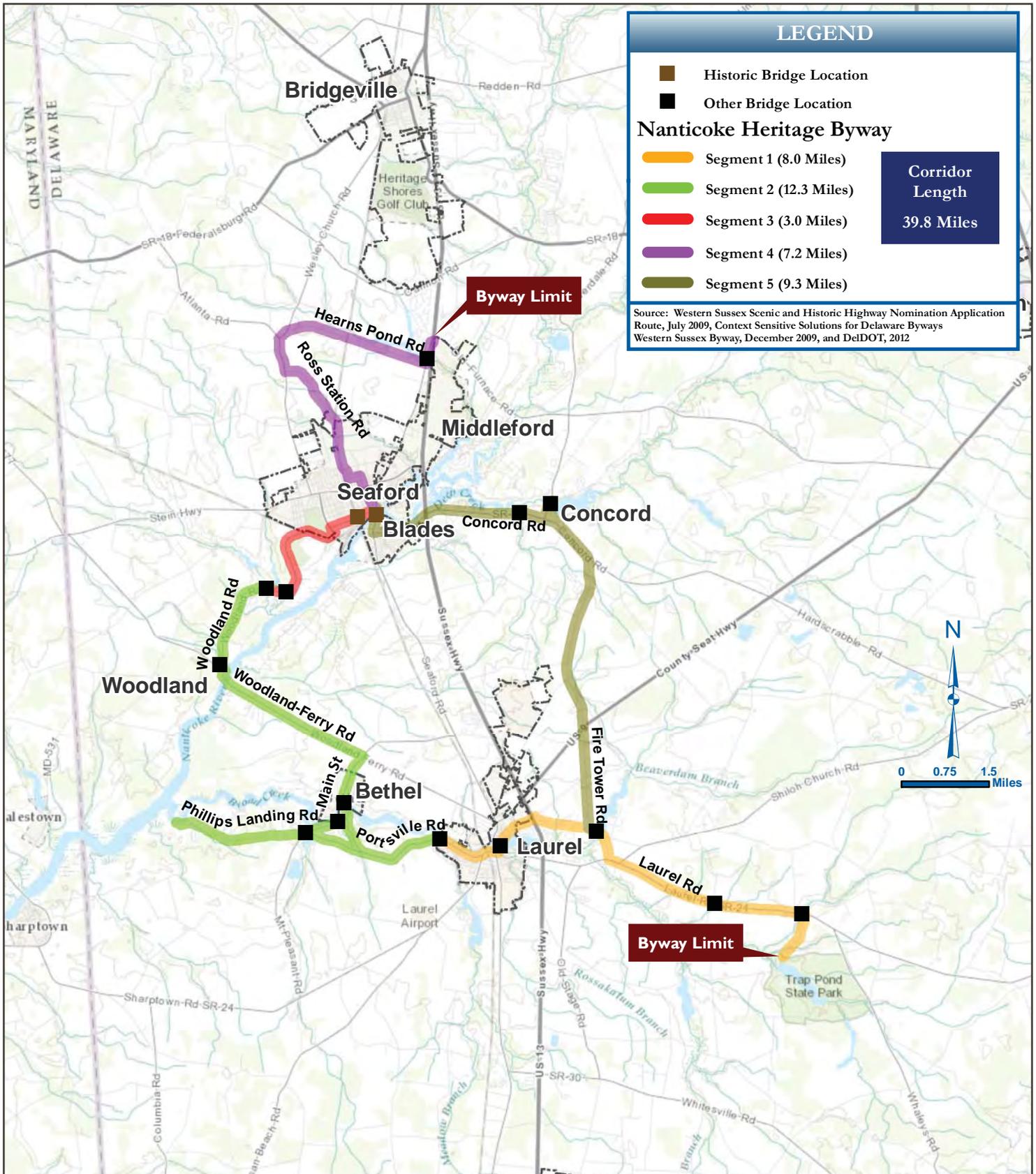
There are three bridges that are eligible for the National Register of Historic Places as displayed in the Figure 4-23.

Figure 4-23: Potential Historic Bridges along the Nanticoke Heritage Byway

Bridge Name	Location	Type	Year Built
Nanticoke River and Front Street Bridge #3-151	Seaford	Steel	1926
Norfolk Southern RR and High Street Bridge #3-258	Seaford	Continuous Concrete	1941
Clear Brook and Bridgeville Highway Bridge #3-202	North of Seaford	Concrete	1919
Poplar Street Bridge over Broad Creek	Laurel	Steel	1886 (moved to current location in 1946)
Railroad Bridge over Broad Creek	Laurel	Steel	Late 19th Century
Central Avenue Bridge over Broad Creek	Laurel	Steel	1923

(Source: DelDOT)

Figure 4-24: Bridge Locations (Project Study Area)



4.1.9 Intrinsic Resource Accessibility

Table 4.1.9 assesses the accessibility of the Nanticoke Heritage Byway's intrinsic resources. The accessibility rating, provided for each resource, measures the ease in which Byway travelers may approach, reach, and/or enter their destination. Accessibility Rating is measured on a scale of 1 – 5; 1 being not easily accessible and 5 being the most accessible.

Intrinsic Resource ID	Resource Name	Accessibility Rating
Bethel		
16	Bethel Heritage Museum	3
12	Bethel Historic District	4
15	Bethel Memorial Park	4
14	Bethel Store	4
11	Phillips Landing State Park & Captain John Smith Memorial	5
13	Sailor's Bethel Methodist Church and Graveyard	4
Laurel		
4	Chipman's Mill	5
9	Christ United Methodist Church	5
10	DuPont Factory Workers Homes-Built 1885	2
7	Historic Laurel	5
6	Laurel Heritage Museum	3
3	Old Christ Church	4
2	Ross Point School	-
5	Spring Garden	4
8	St. Philip's Protestant Episcopal Church	5
1	Trap Pond State Park	5
Seaford		
29	Cannon-Maston House	3
26	Edgar and Rachel Ross House	5
25	First National Bank of Seaford	5
21	Former DuPont Factory	2
31	Harriet Tubman Marker	4
30	Hearn and Rawlins Mill	4
24	Historic Seaford	5
28	Ross Mansion and Plantation	5
23	Seaford Museum	5
22	Seaford Train Station Complex	3
27	St. Luke's Protestant Episcopal Church	5
Woodland		
19	Cannon Hall	5
18	Woodland Ferry	3
20	Woodland Methodist Church and Cemetery	4
17	Woodland Park	3
Concord		
33	Concord Pond Dam	2
32	Pine Grove Furnace Site	2

4.2 Existing Land Use

Land use along the Nanticoke Heritage Byway is mostly agriculture, open space, and residential (see figures on the following pages). Commercial areas exist in Laurel and Seaford along the route. Industrial uses also exist in limited amounts in Laurel and Seaford, as well as in limited places elsewhere along the corridor.

In general, the largely rural, low density land uses create a picturesque corridor that provides a beautiful landscape for travelers to experience.

The land uses found along the corridor do not create any impacts on the Scenic Highway, and vice-versa. These land uses will complement each other, and it is not anticipated that any significant changes in future land use will occur along the corridor. In addition, it is not anticipated that the Nanticoke Heritage Byway will cause any significant changes to the land uses found throughout the corridor and the region. The land uses provide adequate opportunity for the implementation goals of this CMP.

4.2.1 Protected and Preserved Lands

The Delaware Department of Natural Resources and Environmental Control (DNREC) own and protect several lands along the corridor (Figures 4-31 – 4-36).

In 1990 the Delaware Land Protection Act established an Open Space Program. The Open Space Program oversees the protection of over 57,000 acres of State Resource Areas. These areas are permanently protected through the buying of various state lands including parks, fish and wildlife areas, forests, nature preserves and cultural sites. Many State Resource Areas are not protected through acquisition – the intent has not been to purchase all State Resource Areas. Rather, the purpose of the program is to guide state acquisition of open space from willing sellers and to be incorporated by counties in their land use plans.

The high number of protected and preserved agricultural and natural resources along the corridor ensures that visitors will experience the pristine rural landscape for years to come.

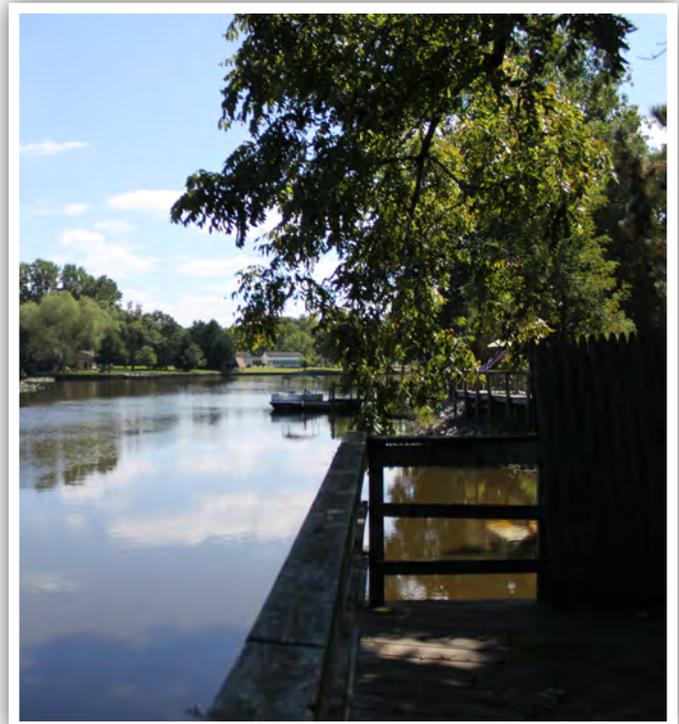
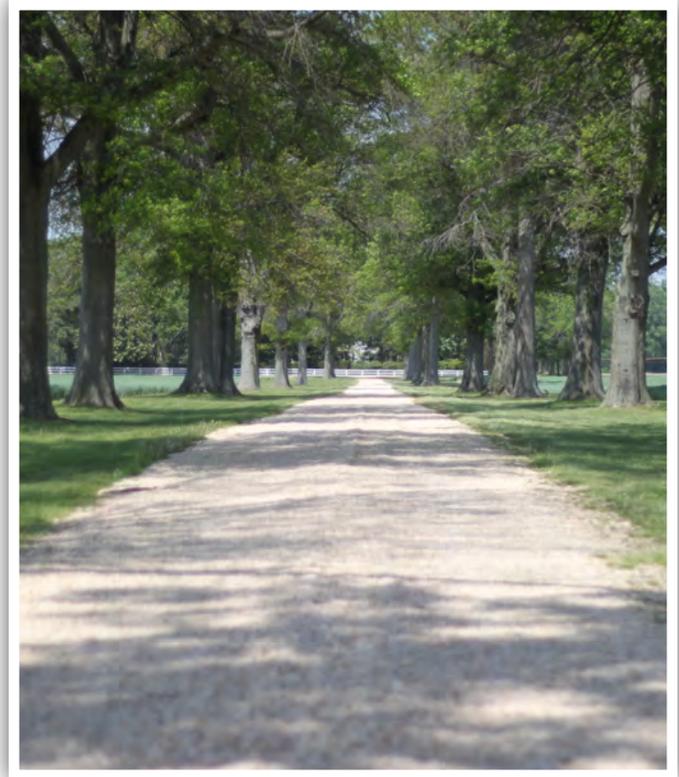


Figure 4-25: Existing Land Use (Project Study Area)

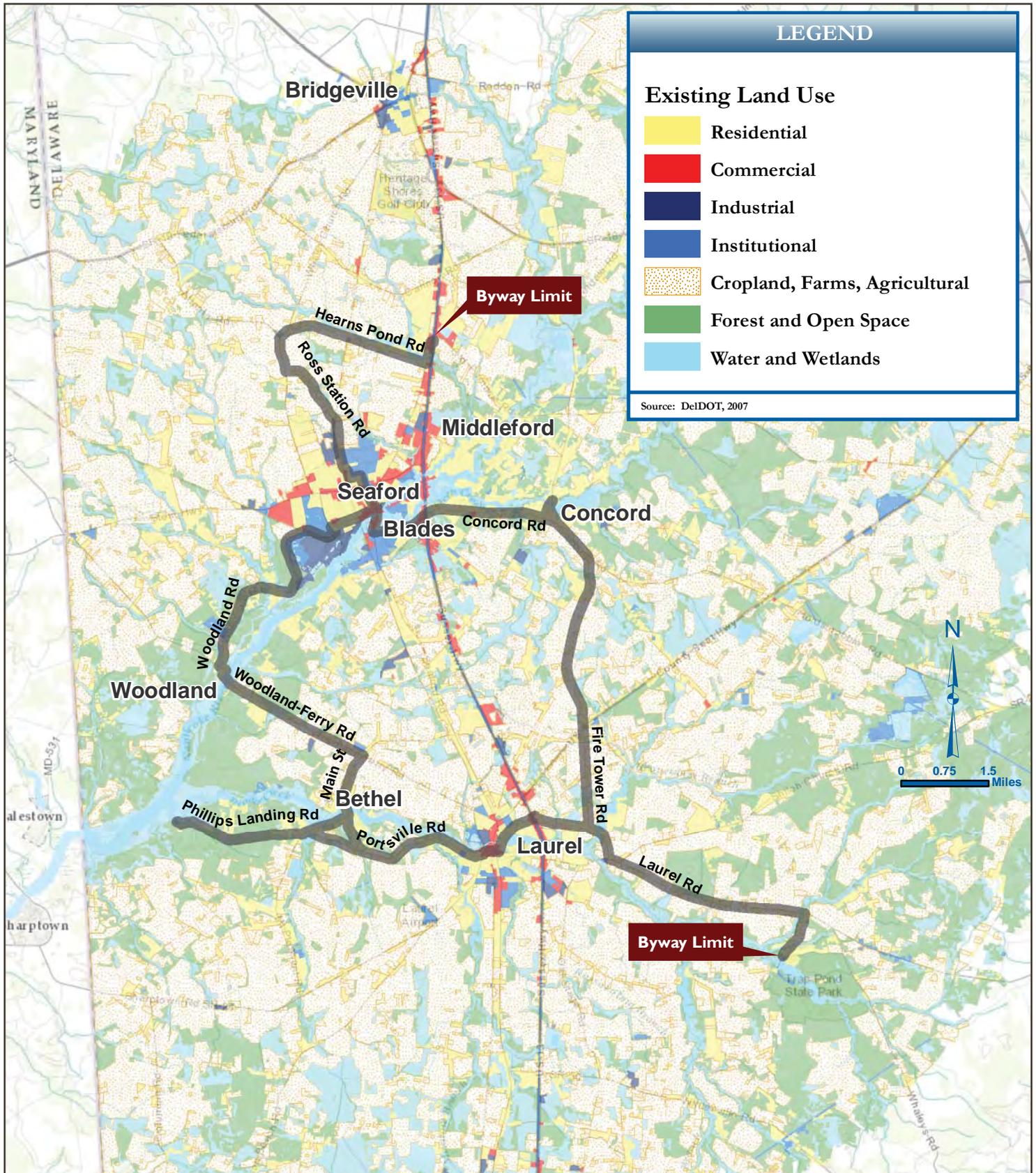


Figure 4-26: Existing Land Use Segment – 1

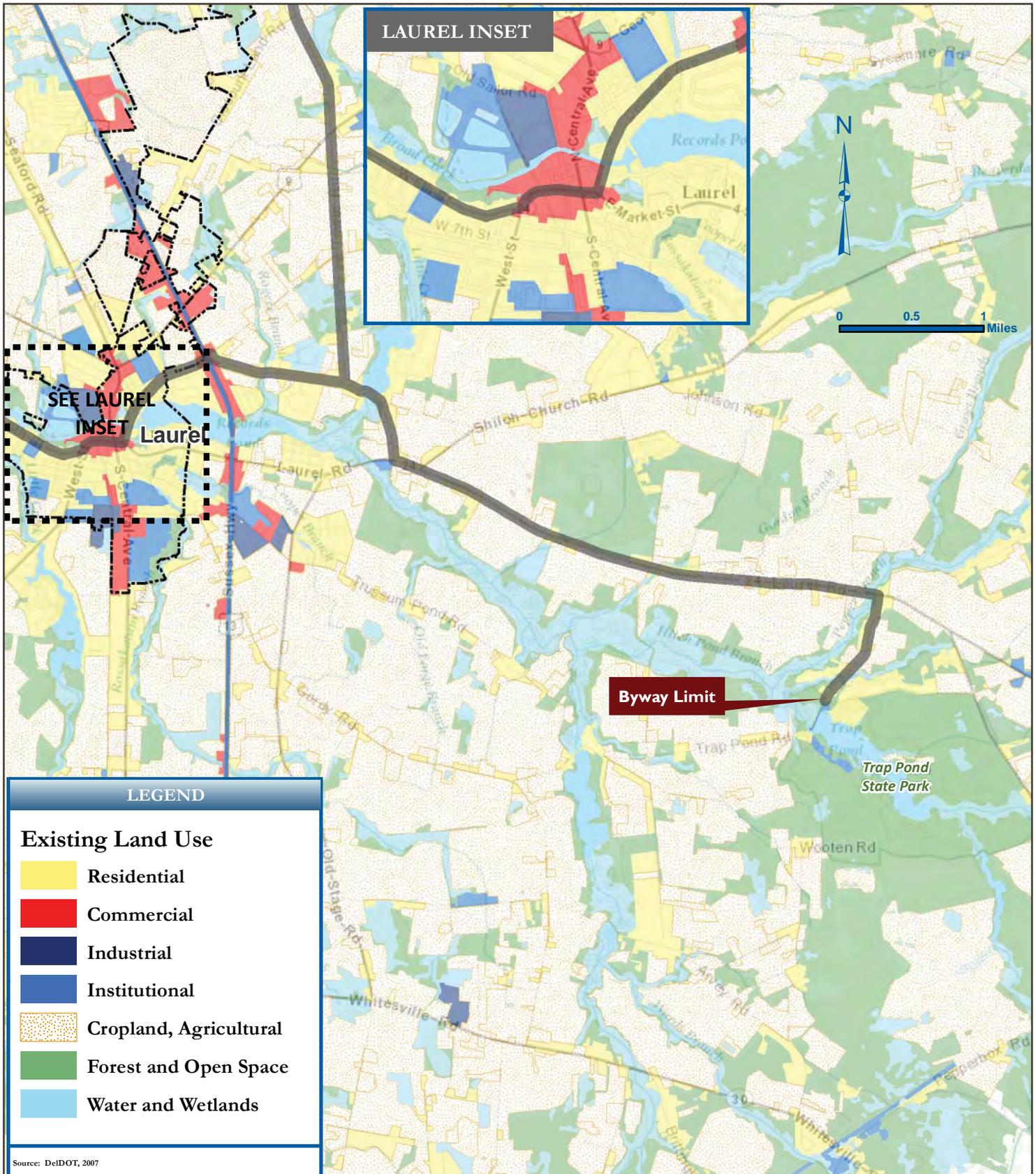


Figure 4-27: Existing Land Use Segment – 2

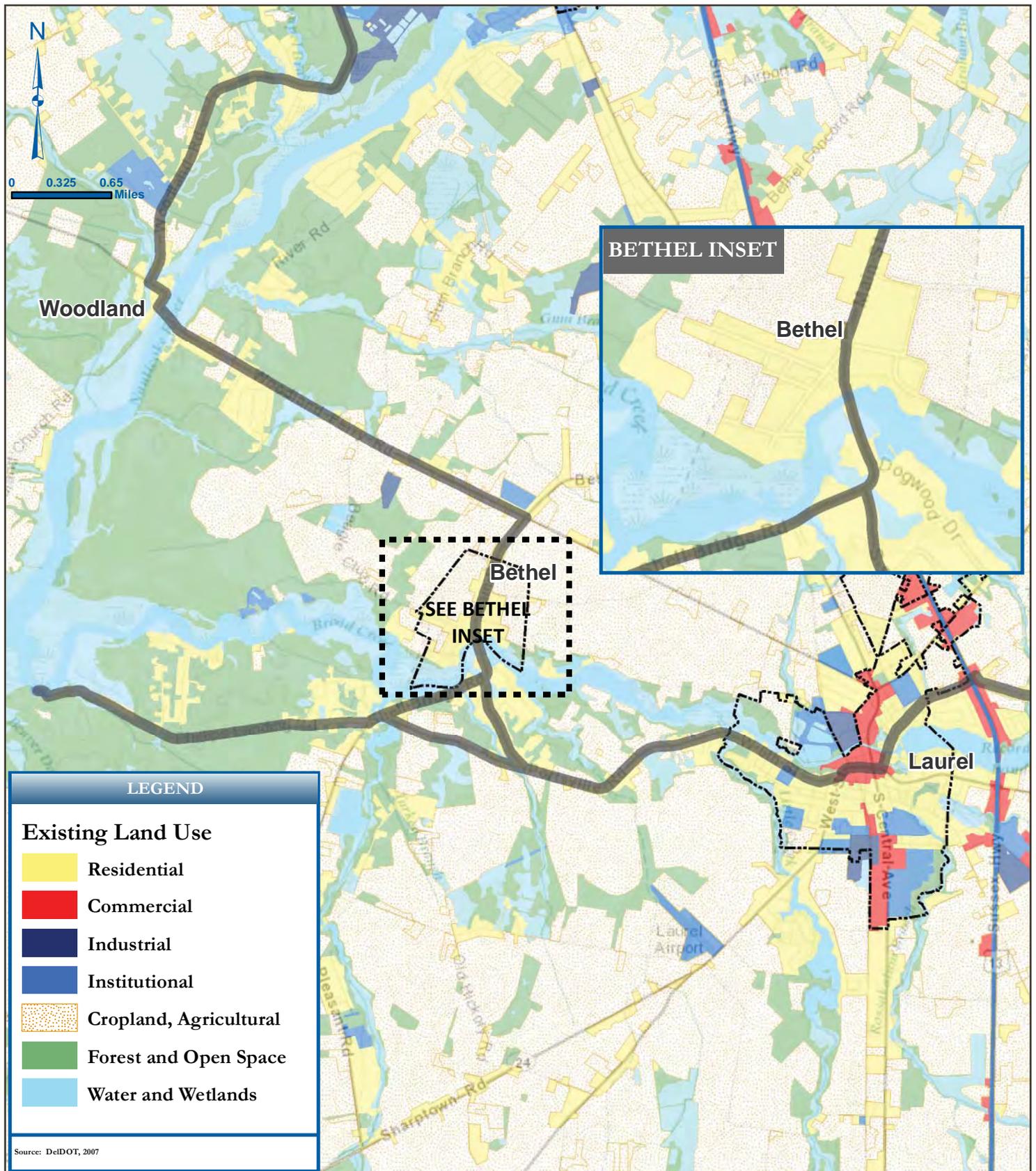


Figure 4-28: Existing Land Use Segment – 3

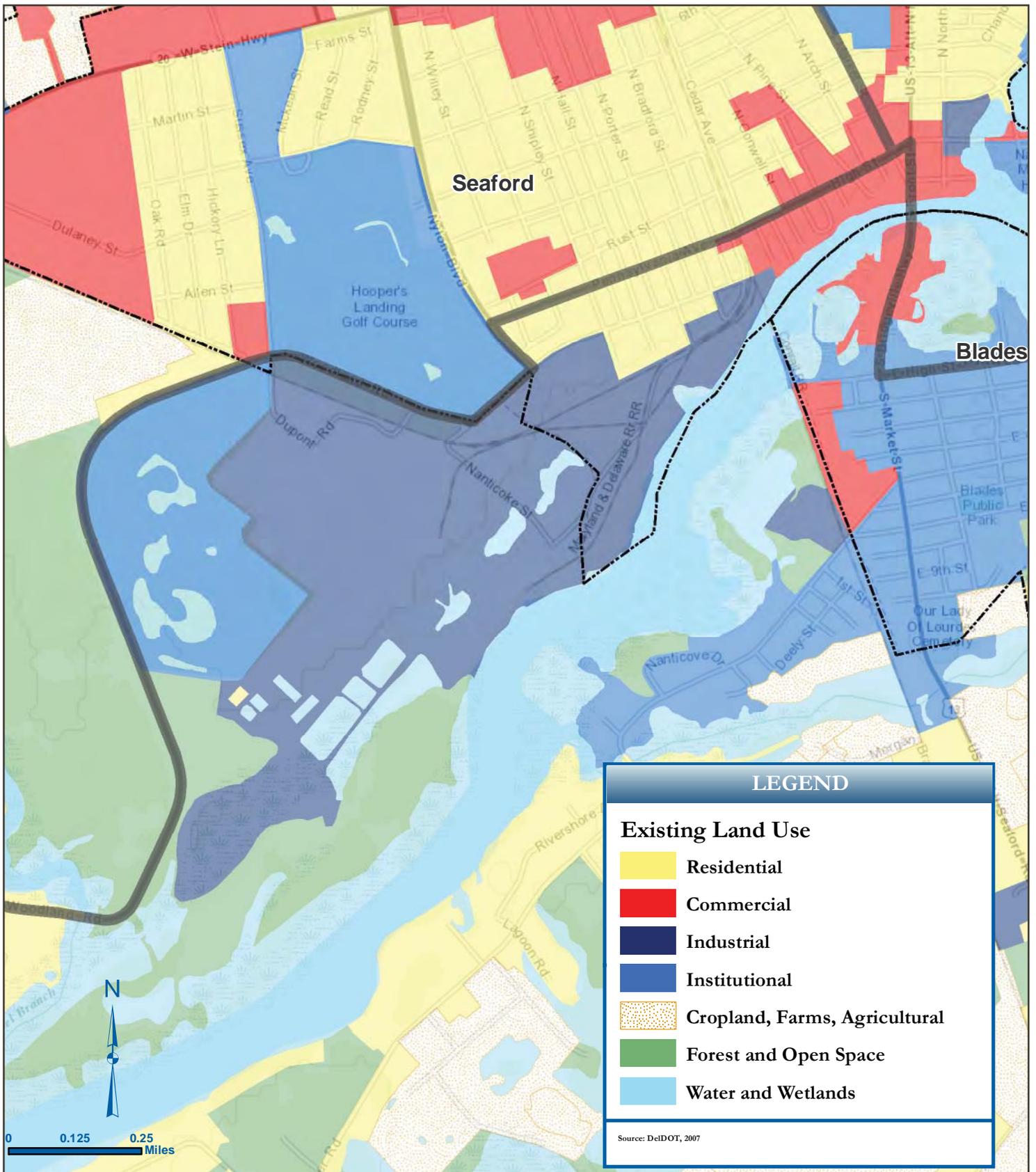


Figure 4-29: Existing Land Use Segment – 4

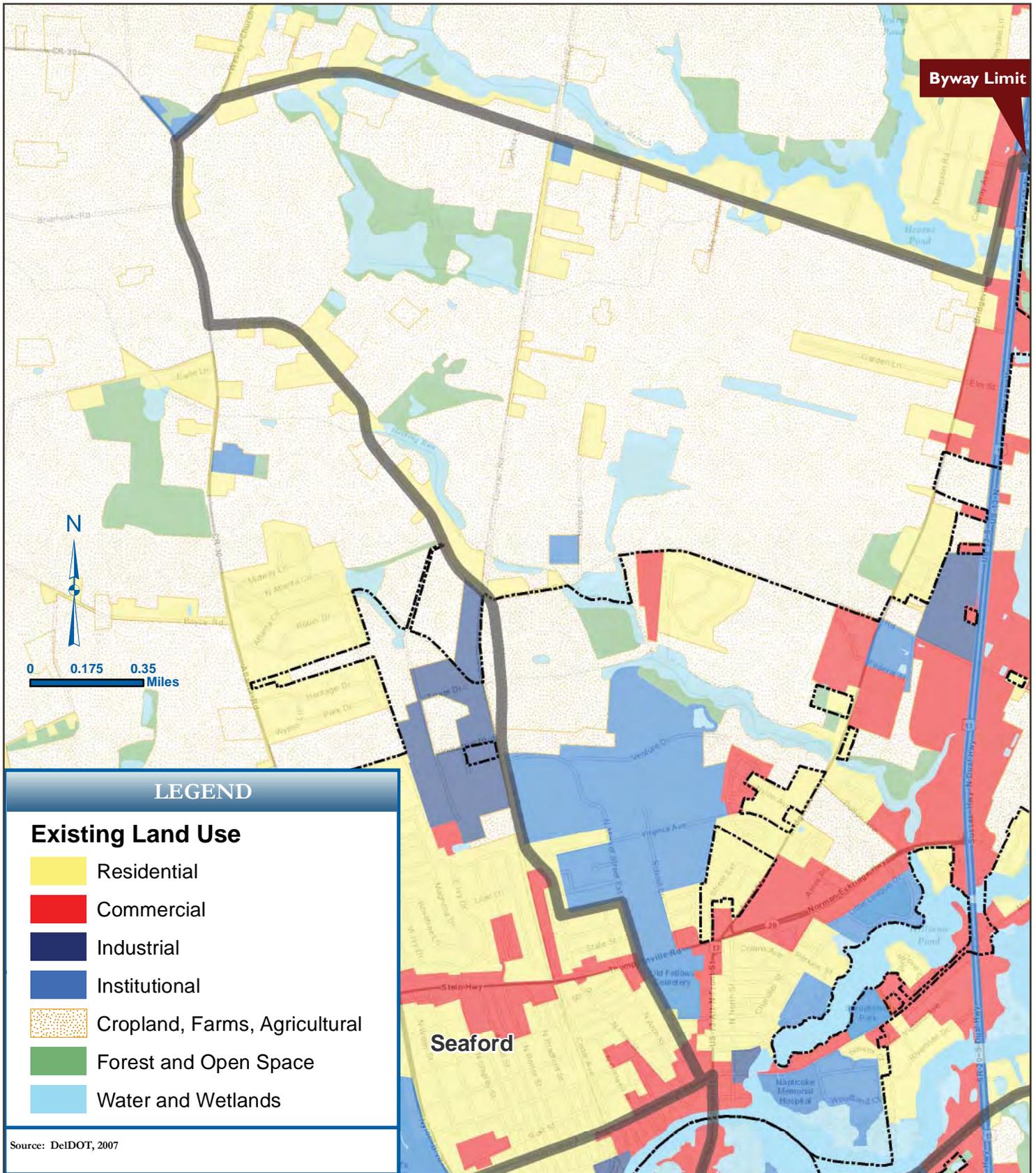


Figure 4-30: Existing Land Use Segment – 5

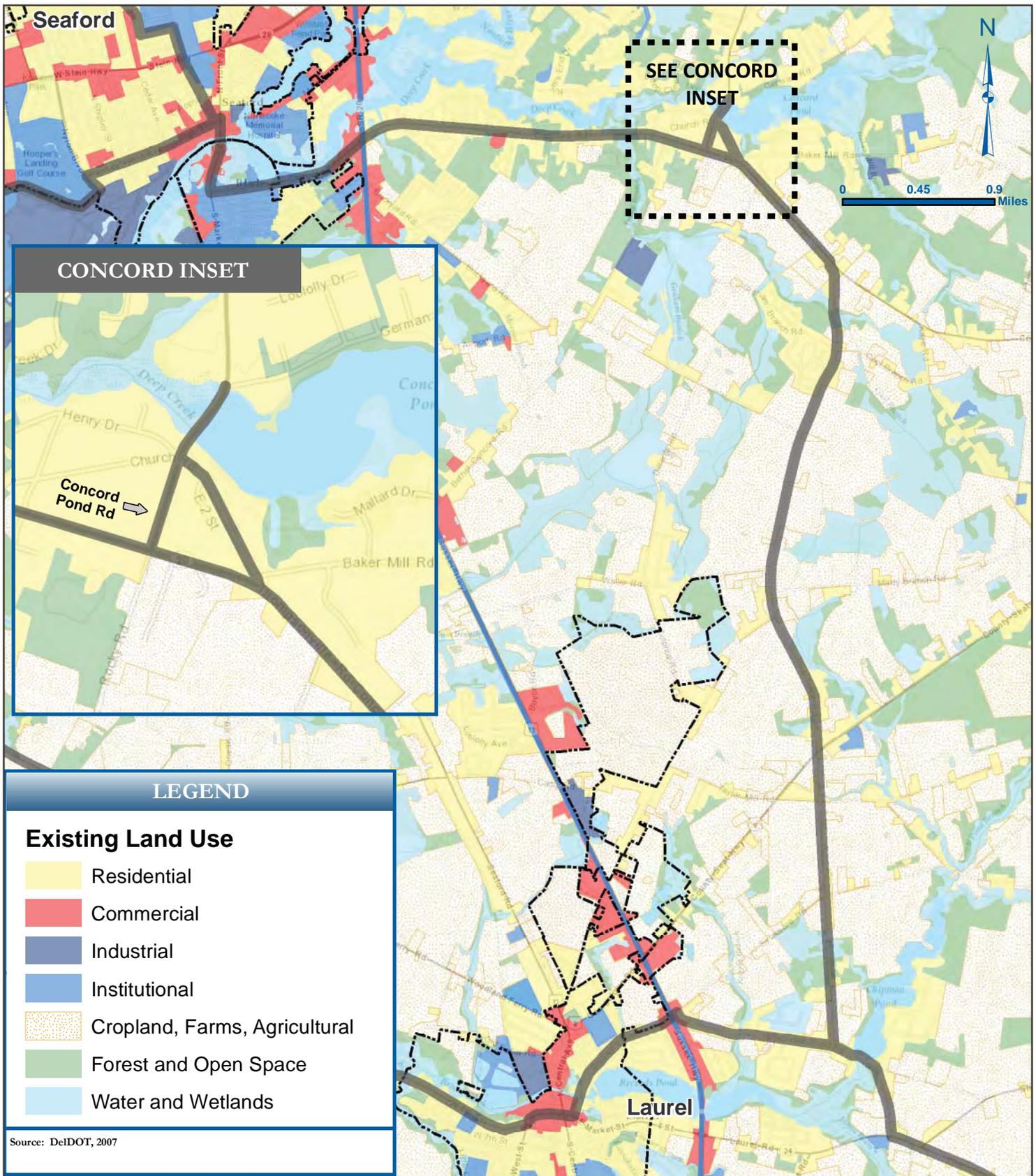


Figure 4-31: Protected Lands and Preservation (Project Study Area)

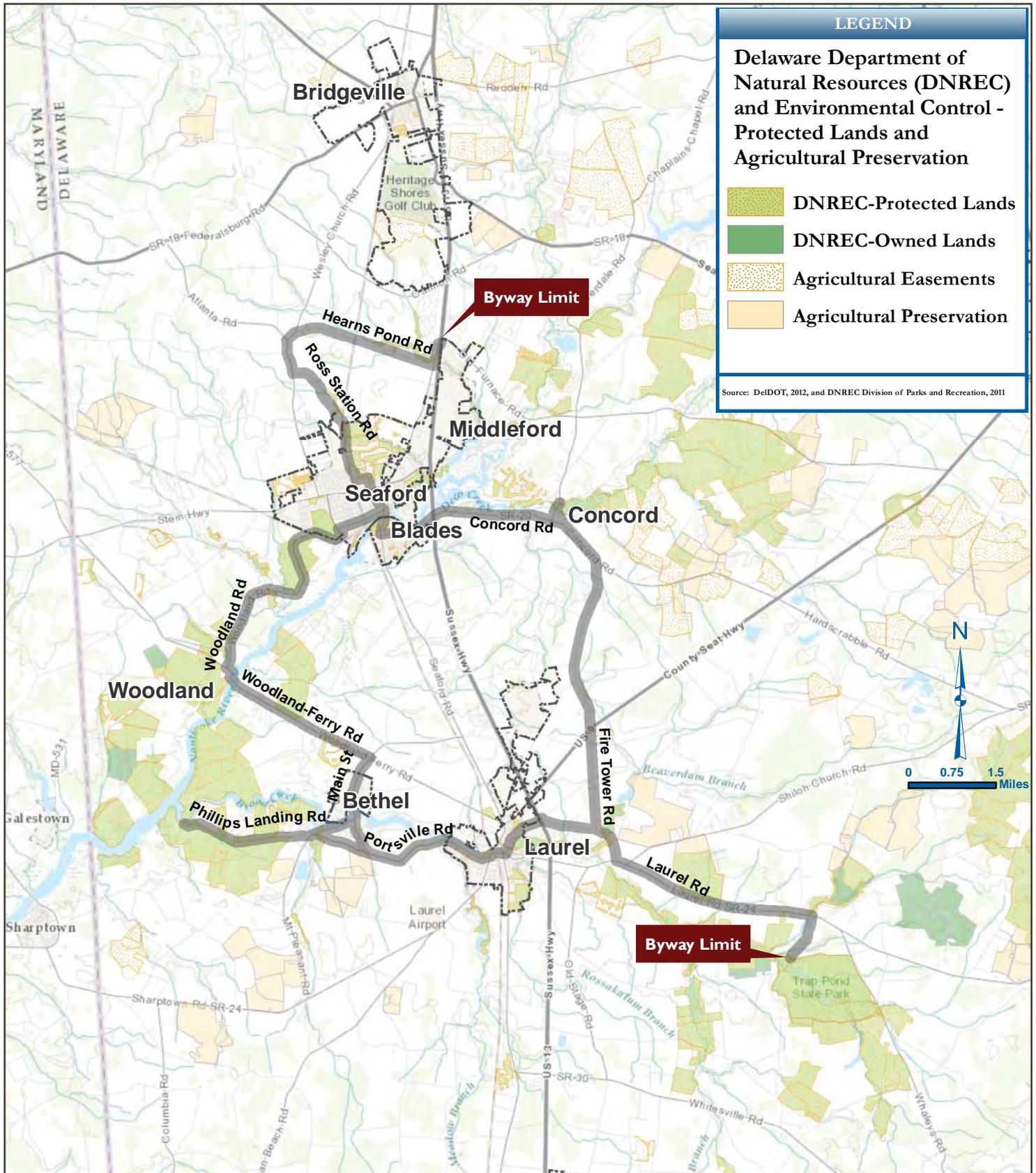


Figure 4-32: Protected Lands and Preservation Segment 1

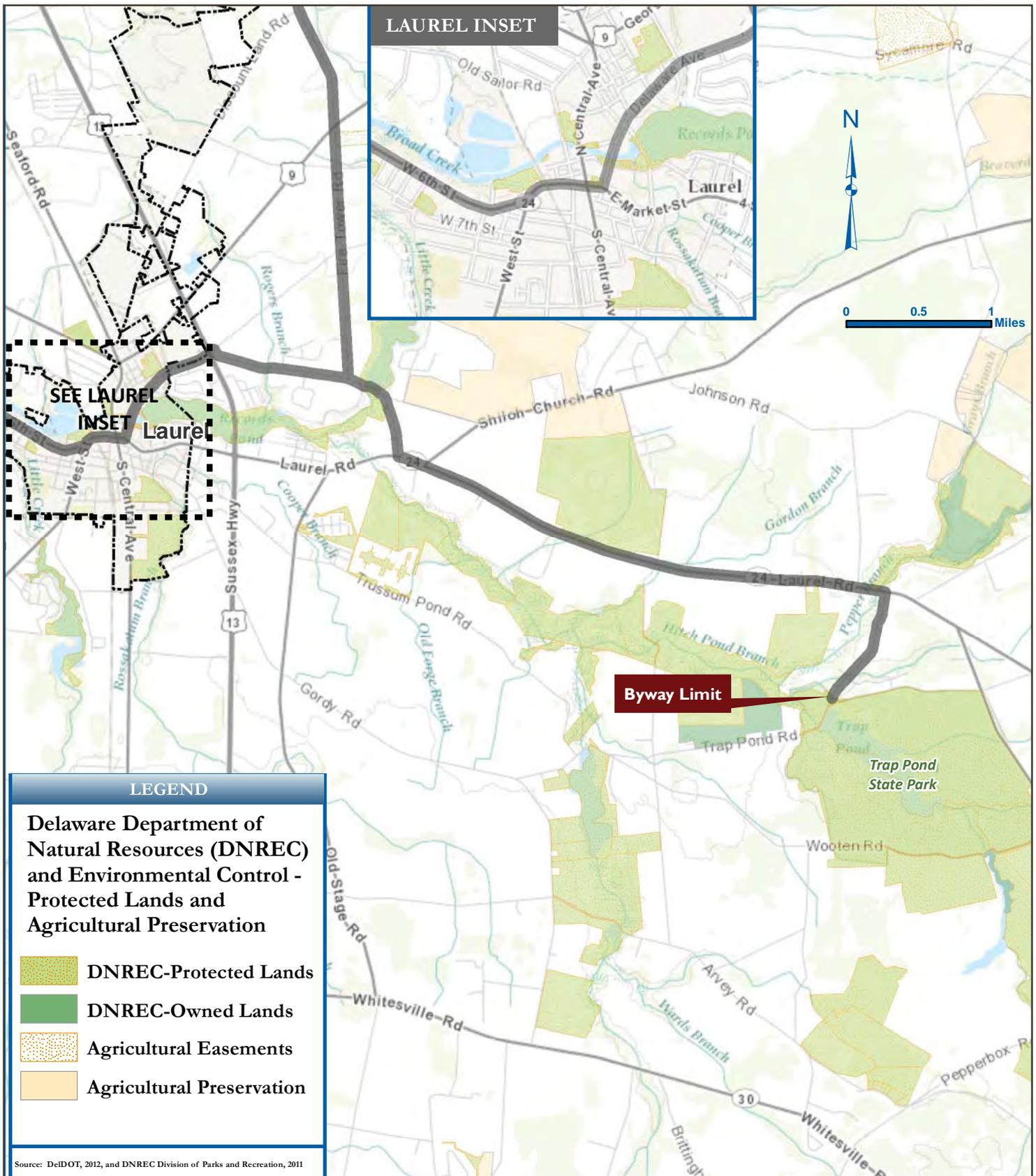


Figure 4-33: Protected Lands and Preservation Segment 2

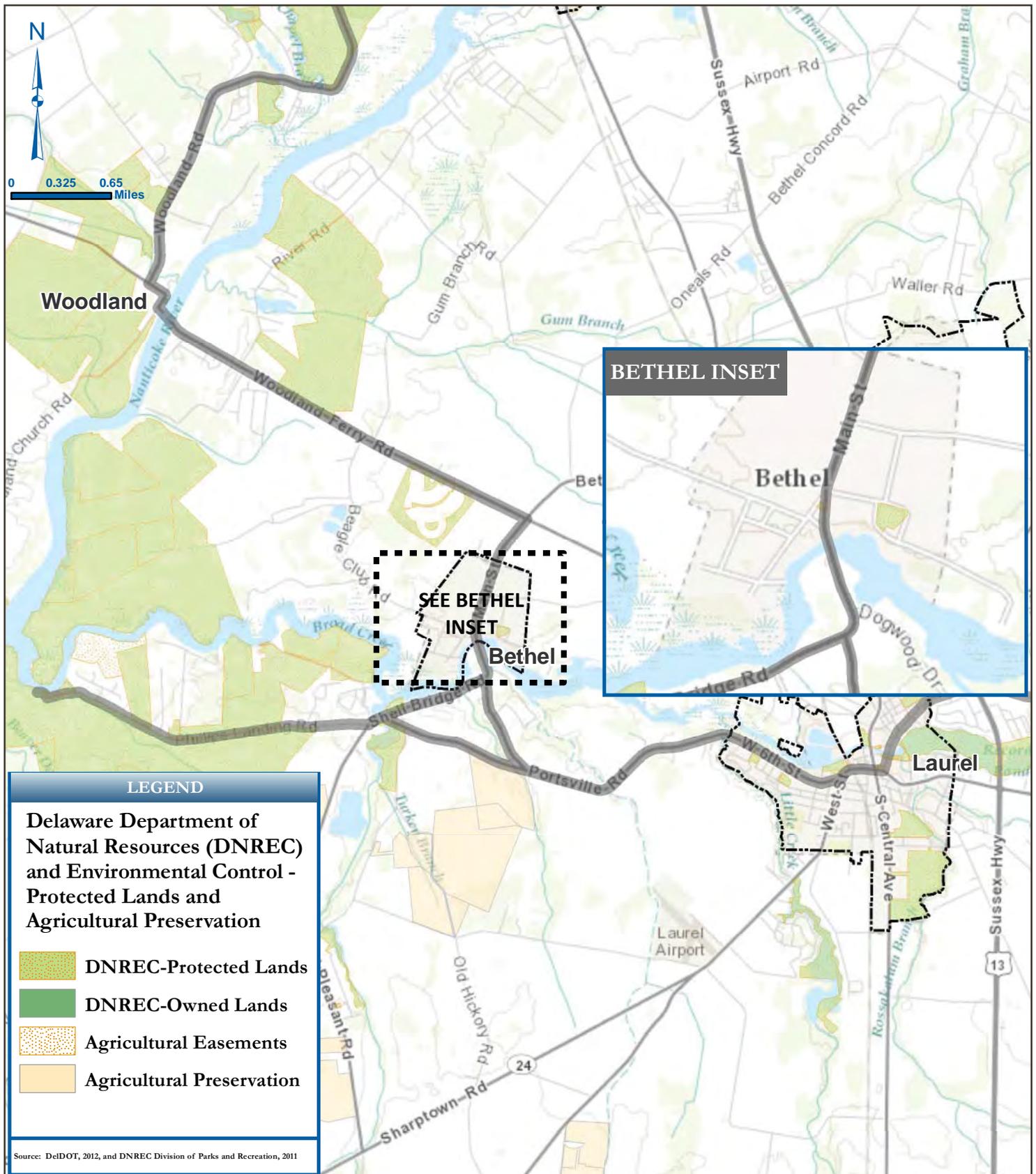


Figure 4-34: Protected Lands and Preservation Segment 3

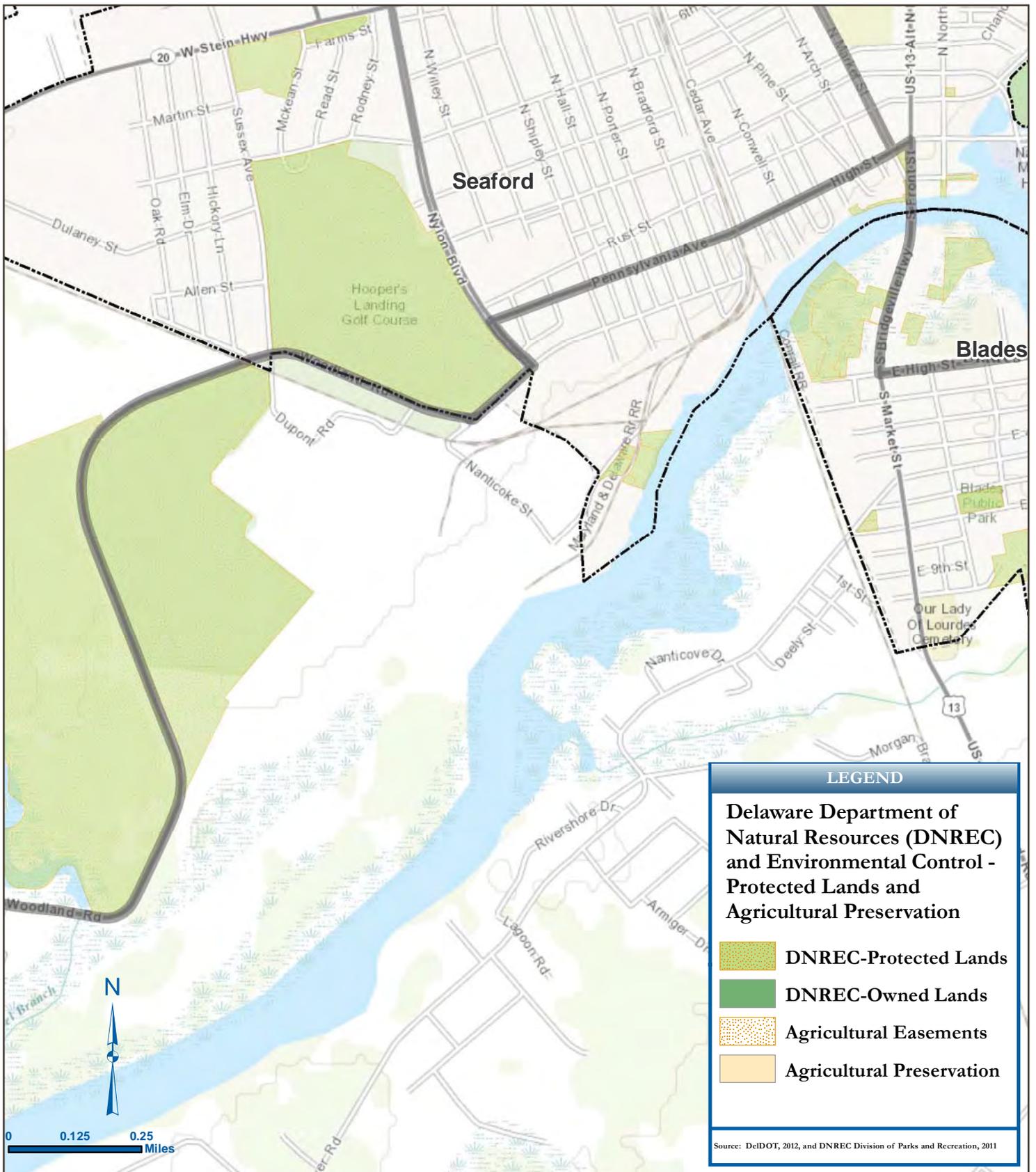


Figure 4-35: Protected Lands and Preservation Segment 4

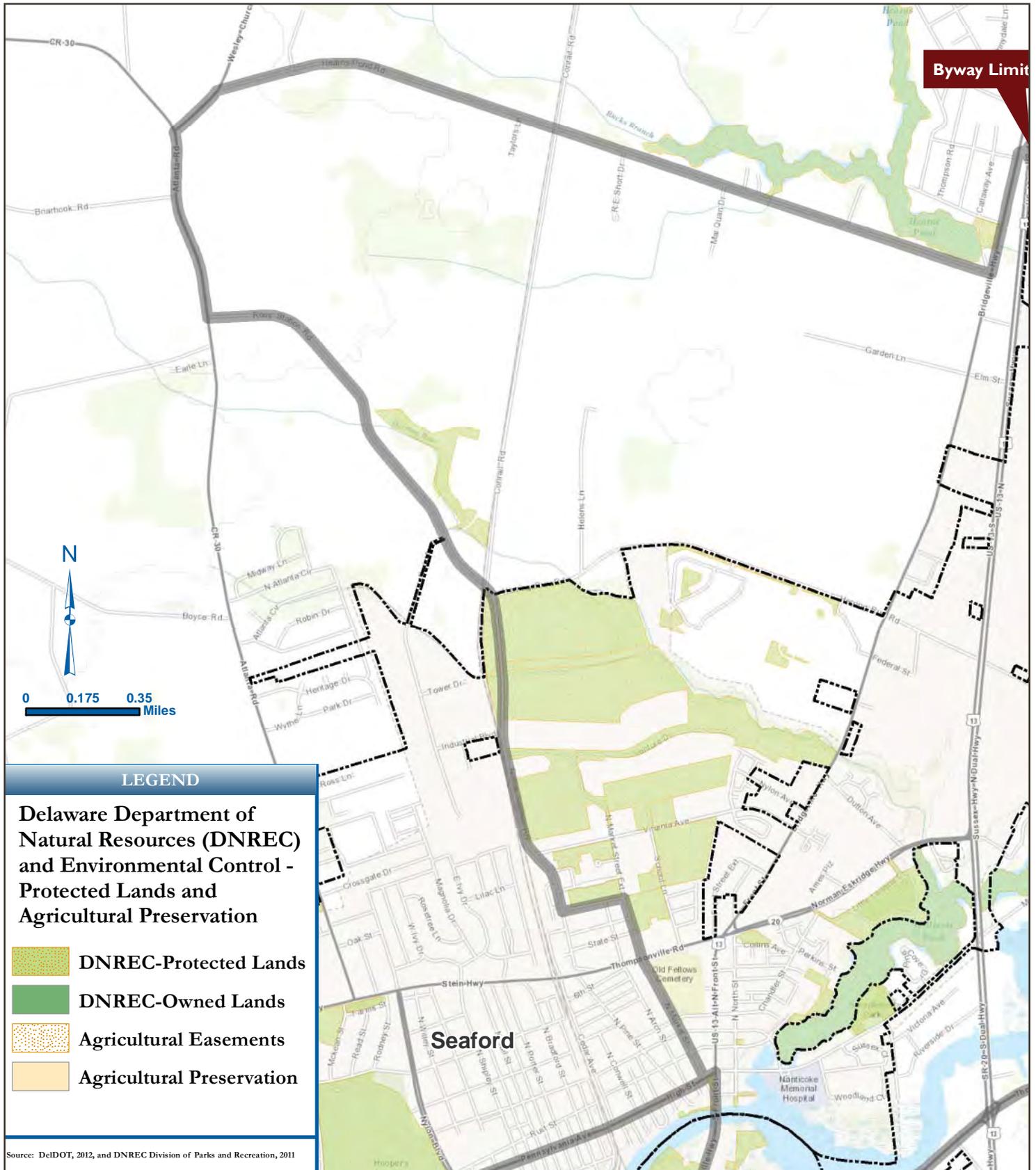
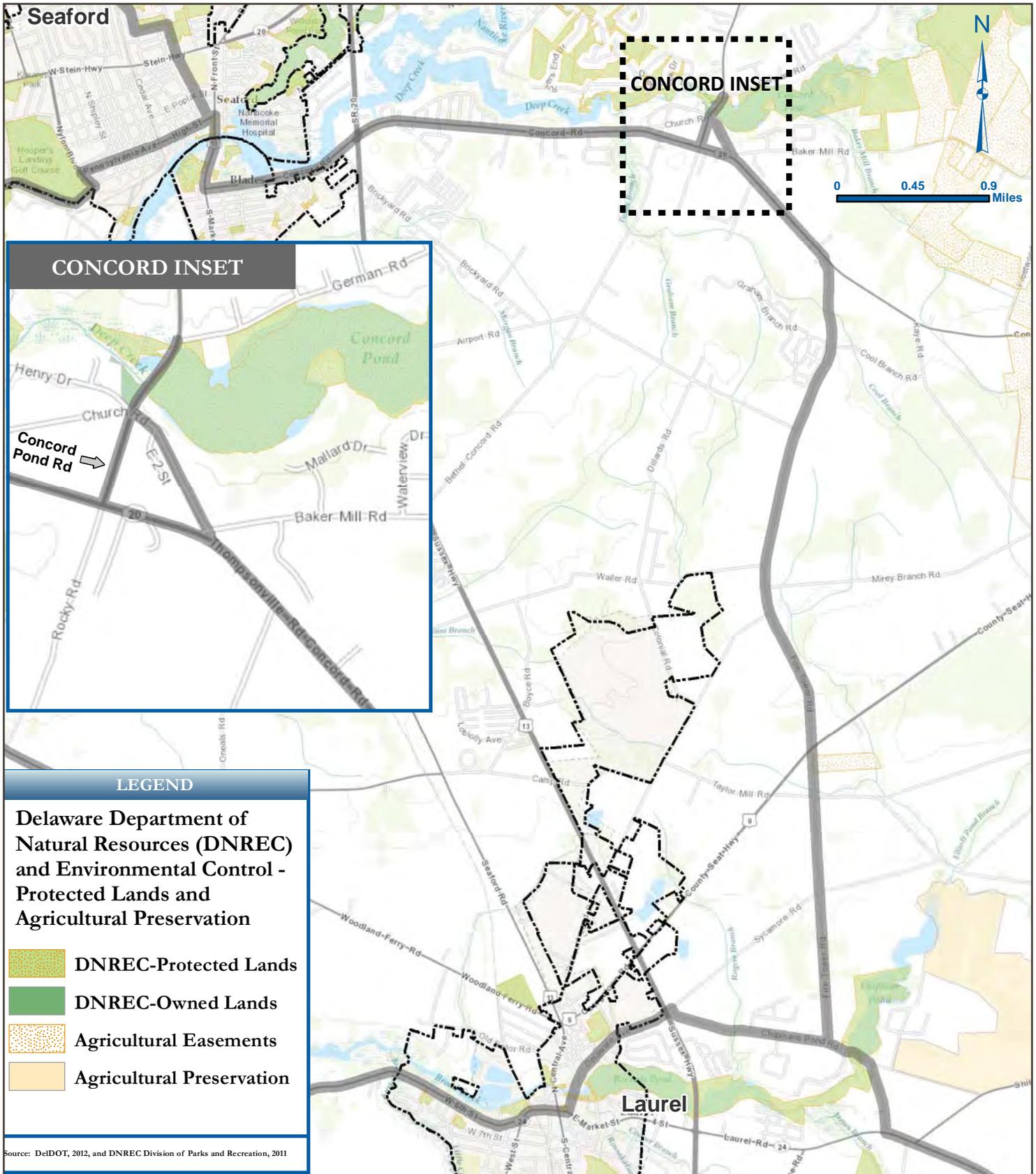


Figure 4-36: Protected Lands and Preservation Segment 5



4.3 Existing Signage

The signs that will be addressed in this section are those that are located directly along the corridor right-of-way and are regulatory (speed limit, passing lane, stop, etc.) and advertising (billboards) in nature. This section will not discuss wayfinding (guide/directional signs) or interpretive signage as these sign-types are discussed in the wayfinding and Interpretation Plan (WIP) chapter.

NATIONAL SCENIC BYWAY CMP POINT #10

Documentation of compliance with all existing local, state, and federal laws about the control of outdoor advertising.

4.3.1 Traffic Control Devices

Traffic control devices describe a range of signs that are used to indicate or reinforce traffic laws, regulations or requirements which apply either at all times or at specified times or places upon a street or highway, the disregard of which may constitute a violation, or signs in general that regulate public behavior in places open to the public (FHWA, 2011). These regulatory signs are designed and installed by local, state, and federal government entities and the Nanticoke Heritage Byway CMP and its associated stakeholder groups will not interfere with, or attempt to alter, any regulatory signage along the corridor unless necessary and approved by the proper regulatory entities.

This CMP is not intended to conduct a signage inventory or assess all regulatory signage along the corridor. The level of assessment found in a CMP is generally a summary of the signage from a traveler's perspective and to note any obvious revisions or modifications to existing regulatory signage found along the corridor.

In summary, the regulatory signage found along the Nanticoke Heritage Byway is adequate and efficient. There are areas along the corridor that appear to have "sign clutter" or an inefficient or unintended clustering of signs that may create confusion or difficulty by the travelling public. These areas are infrequent and do not create a significant difficulty to the traveler. It is

recommended that the Nanticoke Heritage Byway Steering Committee undertake a signage inventory in the future to better assess enhancement opportunities for signage along the corridor.

4.3.2 Outdoor Advertising

Outdoor advertising, as stated by National Scenic Byways criteria {23 U.S.C. 131(s)}, prohibits the erection of new billboards along a State or Nationally Designated Scenic Byway/Highway not in conformance with 23 U.S.C. 131(c), which addresses outdoor advertising (see Appendix B). The specific U.S. Code is as follows:

As provided at 23 U.S.C. 131(s), if a State has a State scenic byway program, the State may not allow the erection of new signs not in conformance with 23 U.S.C. 131(c) along any highway on the Interstate System or Federal-aid primary system which before, on, or after December 18, 1991, has been designated as a scenic byway under the State's scenic byway program. This prohibition would also apply to Interstate System and Federal-aid primary system highways that are designated scenic byways under the National Scenic Byways Program and All-American Roads Program, whether or not they are designated as State scenic byways. (Source: National Scenic Byways Guide, September 2005)

The Delaware Outdoor Advertising code (Title 17, Chapter 11) describes the specific factors associated to advertising along scenic highways designated within the state. In accordance with federal statutes, the code states that any existing signs will not be changed if a highway is designated as scenic, but no new signs may be erected after designation. The specific Delaware Code states: "It is, consequently, the intention of this chapter, among other things, to provide a statutory basis for regulation of outdoor advertising consistent with the public policy relating to areas adjacent to federal-aid interstate and primary systems declared by the Congress of the United States in Title 23, United States Code."

4.3.2 Outdoor Advertising

The Delaware Historical Markers Program is operated by the Delaware Public Archives, as part of its mandate. Historical markers are usually placed at important, historically significant locations and sites across the state. These markers offer historical facts, stories and interpretation regarding the sites.

Figure 4-37 lists all of the historical markers located along and within close vicinity to the Nanticoke Heritage Byway. The corridor has a large variety of historical markers and there are more sites that may have the potential or need for historical markers in the future. For more information, one can contact the Delaware Public Archives.

Figure 4-37: Historical Markers Located Along the Nanticoke Heritage Byway Corridor



Historic Resource / Site	General Marker Location
Old Christ Church	Christ Church Road & Chipmans Pond Road
Nathaniel Mitchell	Christ Church Road & Chipmans Pond Road
Centenary United Methodist Church	Market Street & Poplar Street in Laurel
Portsville United Methodist Church	Portsville Road & Shell Bridge Road
Bethel Shipyard	Main Avenue in Bethel
Sailor's Bethel Methodist Church	Main Avenue in Bethel
Woodland Ferry	Woodland Ferry Road & Nanticoke River
Cannon's Ferry	Woodland Ferry Road & Nanticoke River
Old Seaford Post Office	Seaford
Mt. Olivet United Methodist Church	Seaford
Seaford Fire Department	Seaford
St. John's United Methodist Church	Seaford
Governor William H. H. Ross	Seaford
St. Luke's Episcopal Church	Seaford
Forty & Eight Boxcar	Seaford
Governor Ross Mansion	Seaford
Blades United Methodist Church	Market Street & 4th Street in Blades
Pilot Town	Concord Road & Church Road
Concord United Methodist Church	Concord Road & Church Road

4.4 Corridor Safety

The safety of the travelling public is a key concern of the National Scenic Byways Program, the State of Delaware and the Nanticoke Heritage Byway. Overall, the corridor is relatively safe for travel by all transportation modes (car, truck, tour bus, RV, bicycle, etc.). There may be sections or areas along the corridor that have improvement opportunities; however, this chapter (Background Conditions) is not charged to assess these opportunities. The intent of this chapter is to confirm and document the above-mentioned data; other safety associated responsibilities rest with other entities. The Byway travels along roadways maintained by DelDOT, therefore safety standards will be adhered to and access provided to motorized, two-wheel, large, and similar vehicles.

NATIONAL SCENIC BYWAY CMP POINT #7

A general review of the road's safety record to locate hazards and poor design, and identify possible corrections.

4.4.1 Lighting

In general, the street lighting along the corridor is adequate and has not, and should not, present any concerns or safety issues. The rural sections of the corridor have reduced or no artificial lighting and these sections of the corridor will require safe driving techniques such as high-beam or fog lamp use. In addition, the lighting (as reviewed during field collection) at intrinsic resources is also adequate and allows visitors to experience a safe and secure location/resource. There were no lighting concerns noted when conducting on-site field reviews.

4.4.2 Weather Related Conditions

Weather related safety concerns may be an issue along the corridor during the winter months of November to February. Delaware usually has mild winter weather and has an efficient and readily available road maintenance (plowing, etc.) crew to address snowfall and/or roadway icing.

4.4.3 Crash Data Analysis

Assessing crash data along the Nanticoke Heritage

Byway corridor provides for an understanding of the overall safety of the corridor. Crashes are broken up into three (3) different categories and displayed in the following pages for all crashes, bicycle-related crashes, and pedestrian-related crashes. Data is assessed for the years 2010-2013.

The data shows that between January 2010 and July 2013 (the most recent data available), there were 803 total crashes along the corridor. The number of crashes is consistent each year and the crashes occur across the entire corridor.

- 2010 – 224 crashes
- 2011 – 233 crashes
- 2012 – 224 crashes
- 2013 (7 months) – 122 crashes

During this 3.5 year time period, there were three (3) crash fatalities. These are displayed on the map and have occurred in Blades, Concord, and to the north of the corridor near Hearn's Pond. Overall, it appears that for vehicular drivers, the corridor is safe given the low traffic volumes and low rate of crashes.

Bicycle crashes occur primarily along rural sections of the corridor. There were six (6) bicycle-related crashes in 2010-2013 and zero (0) fatalities. Much of the corridor has shoulders for cyclists adjacent to travel lanes. While there may be low numbers of cyclists along the corridor, those who do choose to ride must do so near potentially high speed traffic. Vehicles may not be expecting to see cyclists along the corridor even though all users are allowed to use the roadways.

Pedestrian crashes occur primarily in populated areas of Seaford, Blades, and Laurel, but they also occur along rural sections of roadway. There were eleven (11) pedestrian crashes in 2010-2013, including one which was fatal. Some portions of urban segments of the corridor have sidewalks, but the majority of the corridor does not have sidewalks.

The Steering Committee and other vested interests will also continue to monitor bicycle and pedestrian related crashes within cities and along the corridor to see if safety in these areas can be improved upon. It is the opinion of this CMP that the NHB corridor is safe and navigable, due especially to low traffic volumes.

Figure 4-38: 2010 – 2013 Crash Data (Project Study Area)

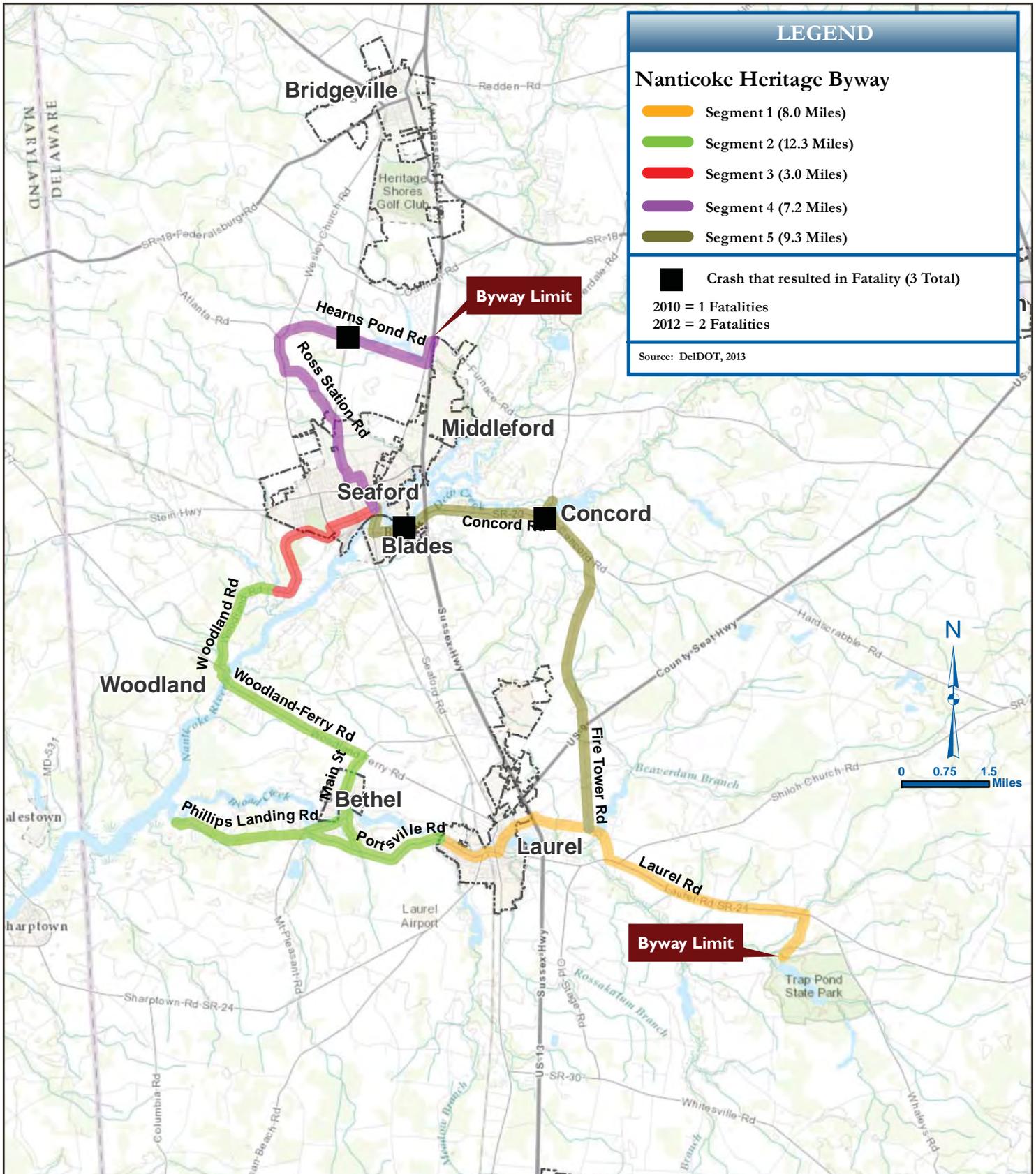


Figure 4-39: 2010 – 2013 Bicycle Related Crash Data (Project Study Area)

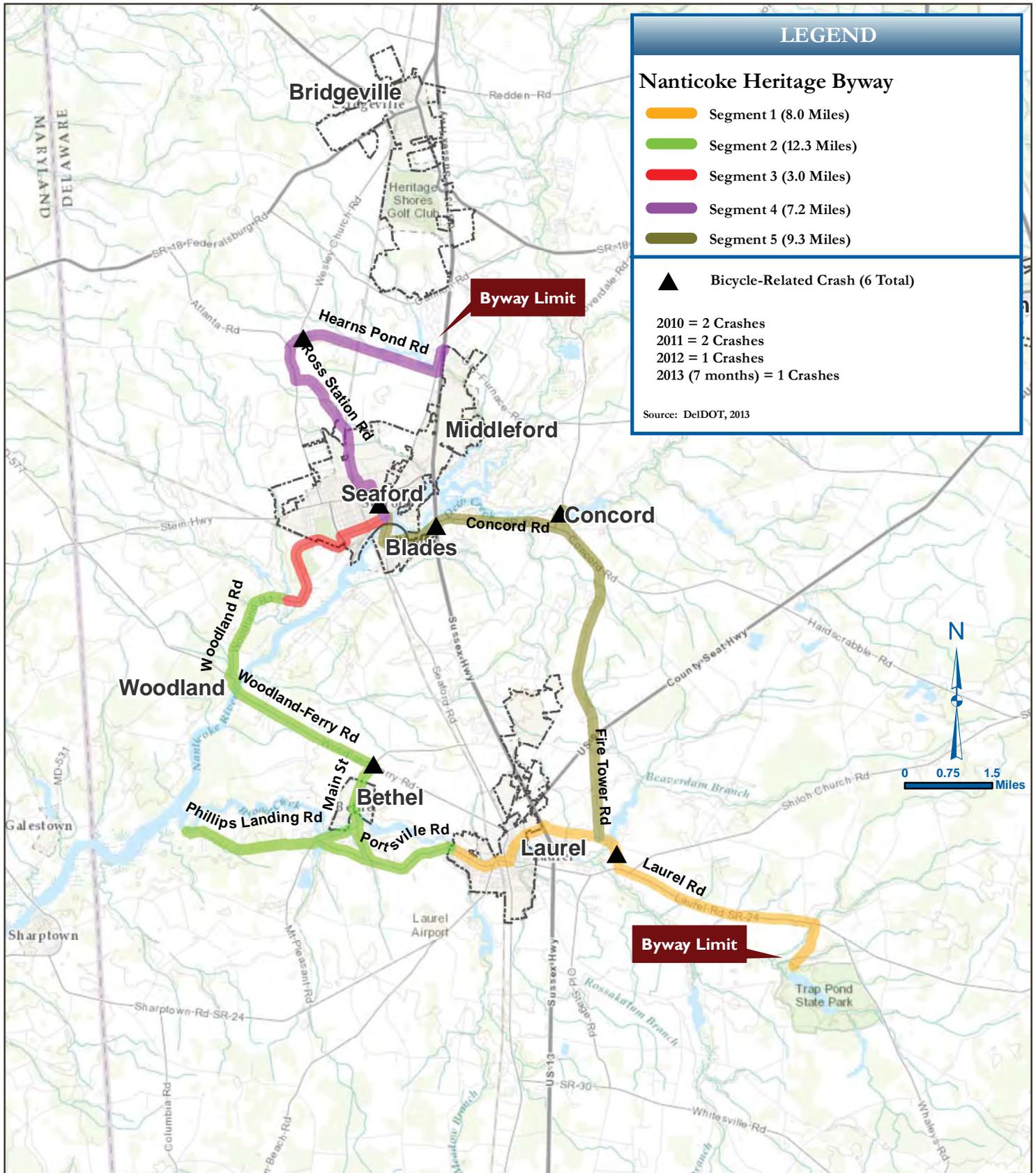
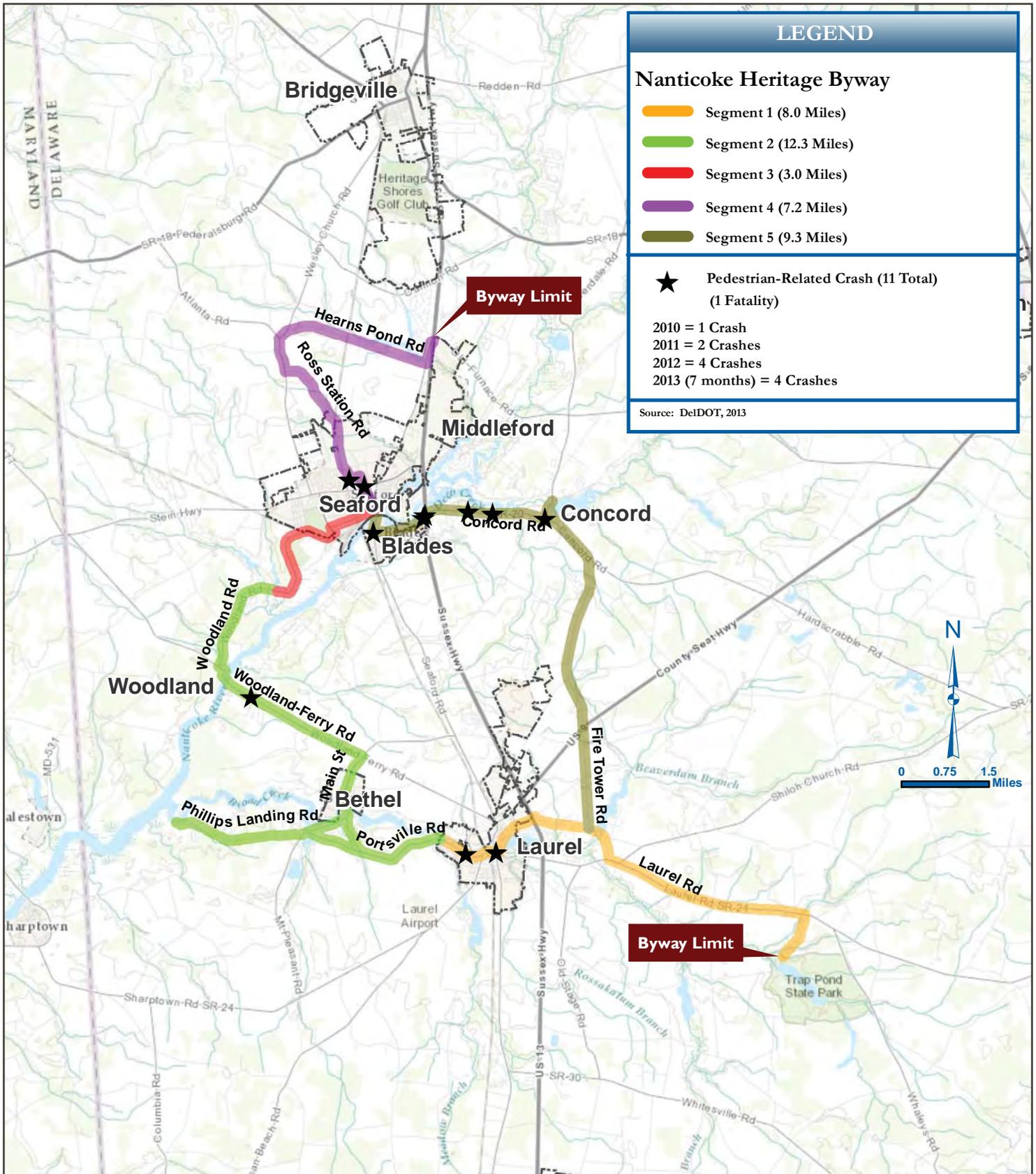


Figure 4-40: 2010 – 2013 Pedestrian Related Crash Data (Project Study Area)



4.5 Transportation Planning and Proposed Roadway Modifications/ Plans

This section will provide an assessment of the transportation planning activities that may have an effect on the Nanticoke Heritage Byway corridor. DelDOT maintains a five (5) year Capital Transportation Program (CTP) that identifies planned and potential improvements. There are currently two (2) CTP's in use by DelDOT, for Fiscal Year's 2014-2019 and 2015-2020.

There were two (2) roadway projects along the corridor located in the 2014-2019 CTP as shown below. The 2015-2020 CTP shows no new projects planned in the corridor. However, the Local Roads section of the 2015-2020 CTP does request projects in Laurel, Blades and Seaford.

The planned project in Seaford should have a positive impact on safety and traffic flow in that portion of the Nanticoke Heritage Byway corridor. The statewide development of recreational trails and facilities has the potential to significantly benefit the recreational offerings along the Nanticoke Heritage Byway corridor.

In addition to the projects mentioned above, speed/traffic-calming projects are currently being proposed for Bethel, specifically on Main Street. One specific proposal for speed control is called the "speed kidney." This is a traffic-calming device that consists of a raised and curved area placed at the center of any lane. Drivers may choose to approach this device with

Figure 4-41: Planned Roadway Projects, FY2014-2019 CTP

Route	Description	Fund-Scheduling Information
U.S. 13 at Rd 535 and Concord Road	In Seaford, intersection improvements will reduce congestion and increase safety	Construction planned FY14-15 - \$10M
Statewide	Recreational Trails Program develops and maintains recreational trails statewide	Construction planned FY14-17 - \$10M

(Source: DelDOT FY2014-2019 CTP)

a curved path which slows speed while avoiding the disadvantages of other traffic-calming devices, such as emergency response delay, vehicle damage, and vertical discomfort. This concept is being discussed with FHWA as an experimental project as it would be the first of its kind in North America.

**NATIONAL SCENIC BYWAY
CMP POINT #13**

Any proposals for modifying the roadway, including an evaluation about design standards and how proposed changes may affect the Byway's intrinsic qualities.

4.6 Multi-Modal Options

The Nanticoke Heritage Byway corridor offers a variety of multi-modal options for the traveler. Multi-modal refers to various modes of transportation such as walking, cycling, automobile, public transit and others. Most of the corridor is best accessed by automobile due to its rural nature and limited alternative transportation options.

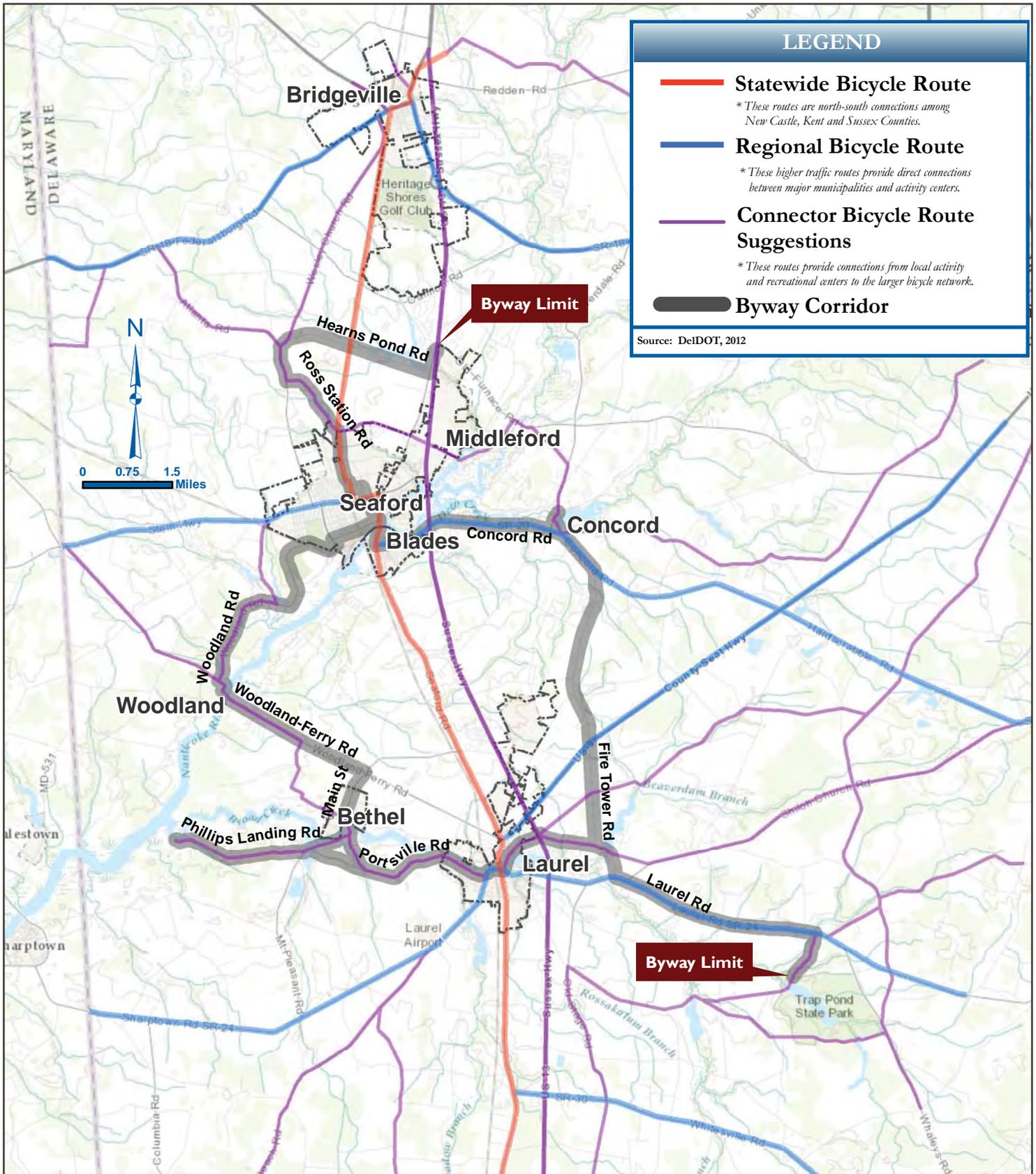
**NATIONAL SCENIC BYWAY
CMP POINT #8**

A plan to accommodate commercial traffic while ensuring the safety of sightseers in smaller vehicles, as well as bicyclists, joggers, and pedestrians.

4.6.1 Bicycle and Pedestrian

The following figure highlights the bicycle facilities in the region. Development of the bicycle facilities in the corridor can be an attraction for recreational visitors. This will provide potential economic development opportunities by allowing the Nanticoke Heritage Byway corridor and its communities to harness these users and this potential market. Bicycle use may not be safe along the entire corridor due to shoulder widths, lack of bike lanes, and other factors. A future analysis of the corridor in relation to bicycle and pedestrian safety and accessibility should be considered.

Figure 4-42: 2010 – Bicycle Routes (Study Area)



4.6.2 Public Transportation

Delaware Transit Corporation (DART) provides public transportation services for the state. An excerpt from the DART website states:

In 1994 the Delaware State Legislature created the Delaware Transit Corporation to manage and operate DART along with the Delaware Administration for Specialized Transport, Delaware Railroad Administration, and Commuter Services Administration. From this merger arose the name change to DART First State to take advantage of the well-known DART name and to recognize that this service was now a statewide operation.

Today DART First State provides transportation services statewide with over 400 buses and 57 year-round bus routes plus its eight (8) bus route Sussex County Resort Summer Service and paratransit service. Today DART First State also serves New Castle County with commuter rail service to and from Philadelphia. DART First State brought forth by business, community and governmental visionaries over the last 13 decades, looks to the future to provide Delawareans with the highest quality of transportation in the next century.

Future plans include the upgrading of all bus stops and passenger shelters, providing even more new hybrid electric buses to its fleet, continuing efforts to go greener and protect our environment while cutting operating costs and maintaining a safe system for riders, and increasing mobility options for all users. Also underway is a five-year business plan to greatly improve all services and recognize the potential for increased partnerships with community, business, and governmental groups and officials to respond to the state's growth and development.

Figure 4-43 displays the public transportation routes and services that are offered to travelers of the Nanticoke Heritage Byway corridor. One bus route, Route 212-Georgetown/Laurel, travels north-south and intersects with the corridor in Seaford and Laurel. This bus route has limited service with six (6) trips per day about every 2-3 hours.



