US 202 | PA 179

Corridor Study

Delaware Valley
Regional Planning
Commission

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Delaware Valley Regional Planning Commission

Created in 1965, the Delaware Valley Regional Planning Commission (DVRPC) is an interstate, intercounty and intercity agency that provides continuing, comprehensive and coordinated planning to shape a vision for the future growth of the Delaware Valley region. The region includes Bucks, Chester, Delaware, and Montgomery counties, as well as the City of Philadelphia, in Pennsylvania; and Burlington, Camden, Gloucester and Mercer counties in New Jersey. DVRPC provides technical assistance and services; conducts high priority studies that respond to the requests and demands of member state and local governments; fosters cooperation among various constituents to forge a consensus on diverse regional issues; determines and meets the needs of the private sector; and practices public outreach efforts to promote two-way communication and public awareness of regional issues and the Commission.

Our logo is adapted from the official DVRPC seal, and is designed as a stylized image of the Delaware Valley. The outer ring symbolizes the region as a whole, while the diagonal bar signifies the Delaware River. The two adjoining crescents represent the Commonwealth of Pennsylvania and the State of New Jersey.

DVRPC is funded by a variety of funding sources including federal grants from the U.S. Department of Transportation's Federal Highway Administration (FHWA) and Federal Transit Administration (FTA), the Pennsylvania and New Jersey departments of transportation, as well as by DVRPC's state and local member governments. The authors, however, are solely responsible for its findings and conclusions, which may not represent the official views or policies of the funding agencies.

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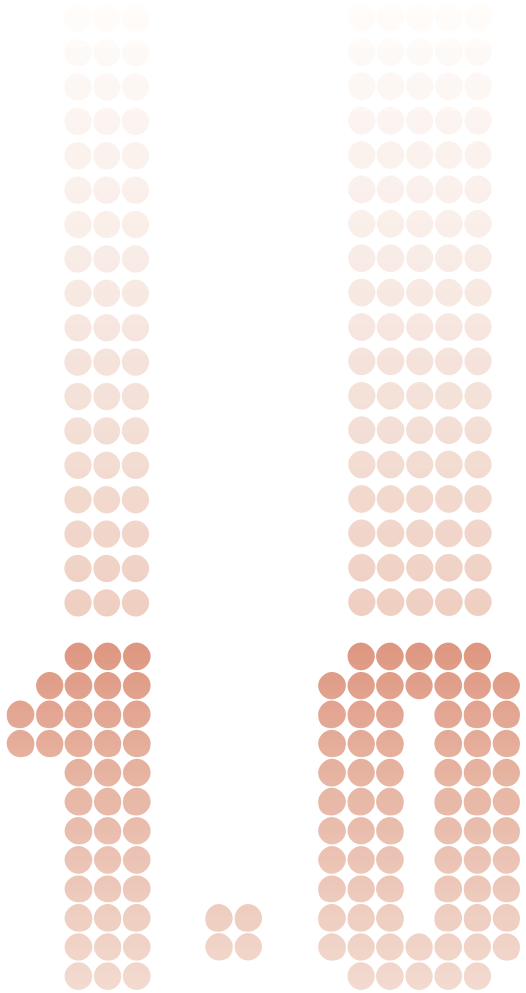

Executive Summary

The US 202/PA 179 Corridor Study was undertaken by the Delaware Valley Regional Planning Commission (DVRPC), at the request of Bucks County, to address the transportation issues within the corridor. The study area extends along US 202 and PA 179 in Bucks County from PA 413 in Buckingham Township to PA 32 in New Hope Borough. While most of the corridor is rural, there are pockets of suburban development throughout Buckingham and Solebury Townships, while New Hope is urbanized.

US 202 is primarily a two-lane principal arterial within the study area. It is a multipurpose facility that is used for local and regional traffic to and from New Jersey as well as destinations in Pennsylvania. There are congestion and traffic safety concerns in primary shopping areas during peak periods for both vehicular and pedestrian traffic.

This study documents and describes the existing conditions along the corridor and identifies alternative concepts that address existing deficiencies. Operational improvements suggested include redesigning an intersection through the construction of a roundabout in Buckingham Township and improving regulatory signage and pavement markings. In New Hope Borough, pedestrian improvements include enhanced sidewalks and crosswalks. Streetscape improvements are recommended in a design and scale that is consistent with the character of the area.

Pedestrian safety recommendations, such as improved crosswalks, sidewalks, and buffers, are identified for areas in the vicinity of schools, shopping centers, and other areas with high pedestrian activity. Sidewalk and crosswalk improvements are identified at the area in and around Peddler's Village in Buckingham/Solebury townships. In New Hope Borough, crosswalk and sidewalk improvements proposed included segments of PA 179 in the vicinity of New Hope-Solebury High School and Middle School, as well as the area in the vicinity of Bridge Street.

A bicycle trail map was developed by identifying existing and proposed bicycle trails within the corridor and by showing their connectivity with other networks in surrounding communities. This map displays a continuous network of bicycle facilities for commuting and recreational use.

Ways were examined in which existing rail and bus service in the corridor could be enhanced to provide better connections to major destinations. The possibility of using shuttle buses to connect retail areas with park and rides was also explored.

An access management plan was developed for the section of US 202 in the vicinity of Logan Square in Solebury Township. Access management techniques are recommended to improve the safety and efficiency of the corridor. These included consolidation of business driveways to create joint access points, and implementation of a rear-service road to separate local traffic from high-speed through traffic.

The study also focuses on numerous environmental features, all of which are interrelated (and often overlapping), and which impact and are impacted by changes in land use and transportation.

The development of this study was consensus-based and incorporated input from the corridor communities.

Overall, this study effort includes coordination, problem identification, data collection and analysis, and development of a plan for the corridor. Throughout the process, the stakeholders provided valuable information and facilitated a process of information sharing and review.

2.0 Purpose and Need

The purpose of this study is to address the problem of roadway congestion and identify ways to improve mobility and safety within the corridor in keeping with the principles of smart growth, sustainable development, and environmental stewardship. Furthermore, this study attempts to identify ways to improve access for all modes of travel including, bicycle and pedestrian travel.

The study area extends along US 202 and PA 179 within the municipalities of Buckingham Township, Solebury Township, and New Hope Borough in Bucks County Pennsylvania ***(Map 1)***. The US 202 highway is the dominant facility in the corridor. Other parallel and intersecting streets do impact US 202 directly or indirectly. The corridor presents unique challenges and opportunities for improving mobility and maintaining the character of the area. Due to the presence of the specialty commercial centers at Peddler's Village and New Hope, peak traffic volumes on weekends are greater than on weekdays. This volume includes local traffic as well as trips originating from outside the study area municipalities.

The corridor is primarily rural with pockets of residential and commercial suburban development in close proximity to the major highways ***(Map 2)***. The eastern end of the corridor is more densely developed with an historic urban core.

The corridor municipalities are undergoing redevelopment issues, growth and development pressures, and rural and farmland preservation concerns. They are desirous of avoiding the detrimental impacts that suburban sprawl has on rural areas by creating a blueprint and action plan for smart growth that balances growth and development with preservation in this region of the county. This study attempts to meet these needs by being consistent with local and regional land use and environmental and community goals and policies.

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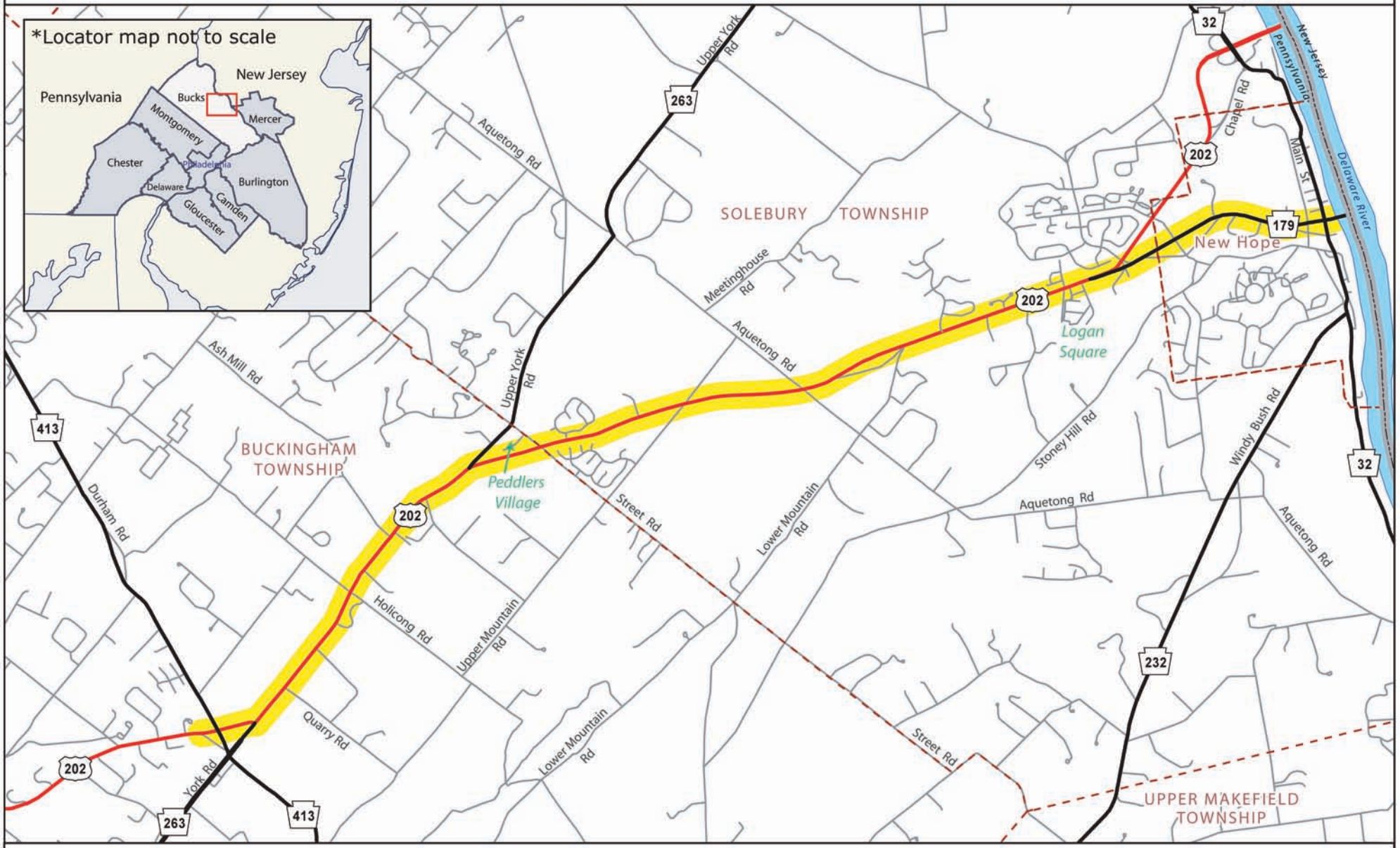
Map 1 - Study Area Overview



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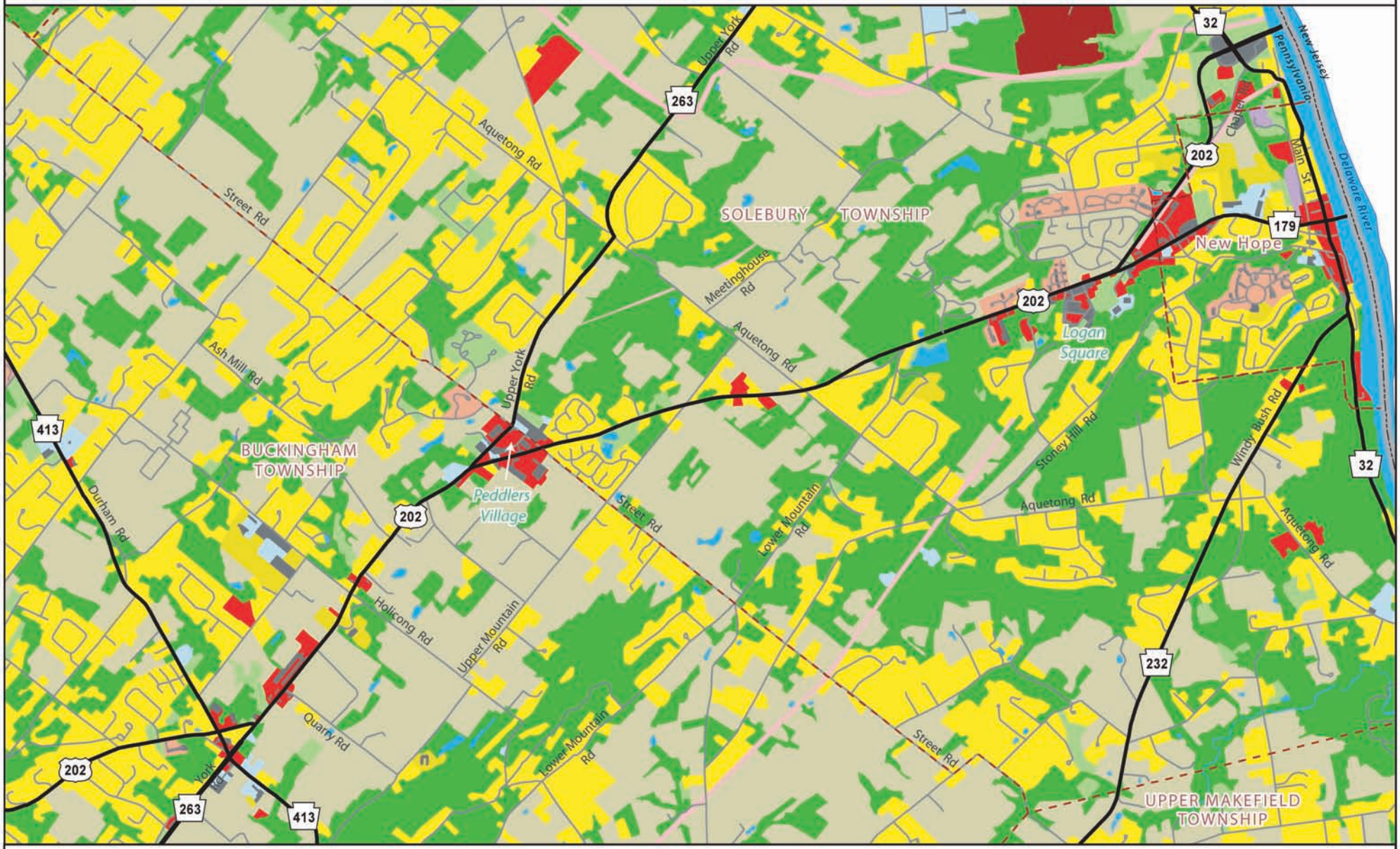
Map 2 - Corridor Land Use (2000)



3.0 Land Use

The corridor is primarily rural and suburban with low-density development scattered throughout. The rural nature of large parts of the study area is reflected by the fact that agriculture accounts for 38 percent of all uses, the largest acreage in the three combined municipalities ***(Table 1)***. Wooded acreage accounts for 27.2 percent of the land area. Together, wooded and agriculture land uses account for 65.6 percent of all land uses. Residential Single-Family Detached is the third largest acreage at 26 percent.

Development is concentrated in communities along US 202 and PA 179, which reflects these highways' historic importance in providing access to the area ***(see Map 2)***. Highest residential densities are concentrated in New Hope Borough, where more than 40 percent of the land area is devoted to residential land use, as compared with 26.5 percent in the corridor as a whole. Commercial acreage in this borough accounts for 11 percent of all land, which is higher than the corridor-wide average of 1.3 percent.

Table 1: Land Use Acreage

LAND USE	***ACREAGE***				
	New Hope	***Solebury***	***Buckingham***	***Total***	***%***
Wooded	215	5882	4472	10,569	27.2
Residential: Single-Family Detached	269	4125	5695	10,089	26.0
Agriculture	17	5757	9136	14,910	38.4
Vacant	39	455	500	994	2.6
Recreation	47	65	237	349	0.9
Parking, Transportation	2	1	0.5	4	0.0
Community Services	21	78	86	185	0.5
Commercial	84	135	293	512	1.3
Residential: Multi-family	40	81	75	196	0.5
Water	2	423	144	569	1.5
Utility	11	159	157	327	0.8
Manufacturing: Light Industrial	16	0.5	80	97	0.2
Total				***38,800***	***100.0***

Source: DVRPC, 2007

Environmental Assessment

The study area's natural resources and the ecosystem services they provide are critical to the area's sustainability, overall health, and quality of life. The preservation of these resources, future development and growth, and changes to the area's transportation infrastructure are all tightly interlinked. Understanding these resources and the important ecosystem services they provide is necessary for communities within the US 202/PA 179 corridor to develop future recommendations that are sensitive to the area's natural resources, and to ensure the greatest preservation of these resources possible. This section focuses on numerous environmental features, all of which are interrelated (and often overlapping) and which impact, and are impacted by, changes in land use and transportation. These features include geology, soils, surface and ground water, riparian buffers, woodlands, floodplains, wetlands, and slope. Within this section, the sum total of these features and the ecosystem services they provide will be referred to as Green Infrastructure. A balanced understanding of the study area's Green Infrastructure will promote better decision-making with regard to transportation issues within the US 202/PA 179 corridor.

4.1: Transportation Impacts and Environmental Constraints

Changes or alterations to US 202/PA 179 can potentially have both direct and indirect impacts to the natural resources of the project study area. Examples of direct impacts might include disturbance to land and water resources resulting from road widening efforts, intersection improvements, or the construction of new facilities. Specific negative impacts may include increases in stormwater runoff, additional sources of nonpoint source pollution, and/or fragmentation of critical natural habitat areas. Indirect impacts could include natural habitat fragmentation resulting from residential and nonresidential growth facilitated by transportation infrastructure expansion. Contrariwise, preservation of the study area's natural resources and habitats can reduce current and future transportation demands placed on the corridor, perhaps thereby negating the need for significant future transportation infrastructure upgrades or expansions. For existing transportation facilities, Best Management Practices (BMPs) can be implemented both within the road right-of-way and along adjacent lands to reduce stormwater runoff and minimize nonpoint source pollution.

4.2: Environmental Goals

Of particular importance to the study area's municipalities are a variety of environmental or ecosystem features and functions, most of which are interrelated. Primary among these are maintaining surface and groundwater quality and quantity and maintaining biodiversity by protecting Green Infrastructure. In the following paragraphs, these environmental goals will be considered from a study-area-wide perspective. As stated above, projects along US 202/ PA 179 could impact, or be impacted by, these environmental considerations in a variety of ways. This section is not designed to evaluate project-specific impacts. To evaluate direct impacts from specific projects within or adjacent to the road right-of-way, large-scale, site-specific mapping should be consulted. The maps included in this section will provide a general starting point in that regard. The following paragraphs aim to demonstrate the overall connectedness of ecosystem functions, the need to sustain these functions, and the variety of ways in which land use and transportation infrastructure impact these functions.

Protecting ground and surface water quality and quantity requires limiting impervious surfaces and stormwater runoff, utilizing on-site wastewater treatment systems, and protecting natural features, such as wetlands, floodplains, woodlands, and riparian vegetation from development. This goal can be accomplished by focusing on the larger goal of protecting Green Infrastructure, which, within the study area, includes a rich natural landscape of woodlands, meadows, hedgerows, wetlands, ponds, lakes, streams, and rivers that support thousands of species of native plants and wildlife. According to Solebury Township's Comprehensive Plan (2002), "the natural systems of plants, animals, soils, and water that make up biodiversity are nature's life-support systems, providing clean air and water, and regulating climate extremes and flooding." Protecting these systems is vital to community health and sustainability.

4.3: Water Resources and Geology

Solebury Township is completely dependent on groundwater for water supply. Protecting groundwater supplies is therefore a critical issue. ***Map 3 Ground Water- Withdrawal and Discharge Areas*** displays the distribution of ground water withdrawal and discharge areas within the study area. Groundwater resources are particularly vulnerable to disruption of recharge capabilities as a result of development, through a combination of significant water withdrawals, increases in impermeable surfaces, exportation of wastewater, and the collection and discharge of stormwater runoff into the surface water system, bypassing recharge opportunities.

The primary physical constraint with regard to groundwater quality and quantity is an area's underlying geology. The study area's geology affects its landforms and slopes, water supply, the quality and composition of soil, and, by extension, the suitability for human life. There are nine major geologic formations in the study area – Stockton Sandstone and Conglomerate; Allentown, Beekmantown, and Leithsville Dolomitic Limestone; Brunswick Shale; Diabase Intrusions; Hardyston Quartzite; and Trenton Gravel. ***Map 4: Surface Geology*** shows the location of these regional formations.

The primary factors to consider with regard to surface geology are availability of groundwater supplies, susceptibility to groundwater contamination, and development constraints. Of the formations found in the study area, the Stockton Sandstone, Stockton Conglomerate, Brunswick Shale, and Trenton Gravel provide the most reliable high-quality groundwater supplies. The Allentown, Beekmantown, and Leithsville formation consist of limestone and are easily eroded by water. These formations vary in their supply of water, and are highly susceptible to groundwater contamination. The Diabase Intrusions are metamorphic, close-grained, hard, nonporous rocks. They offer little water storage capacity and low well yields. The Hardyston Quartzite is also a hard, metamorphic rock. Fractures within this formation provide some limited water storage. The erosion-resistant Diabase and Hardyston formations create two prominent ridges – Buckingham and Solebury mountains – that run parallel and south of the US 202 corridor.

Geologic resources must be approached with an understanding of land use and resource protection implications. Their hydrologic value must be accounted for in the establishment of land uses in terms of sustaining domestic water yield potentials, maintaining base stream flows, reducing

impervious surfaces, and encouraging groundwater recharge. Their development constraints must also be factored as part of resource protection strategies, land use allocations, and regulatory recommendations.

While the Stockton formation and Brunswick Shale are a good source of potable water, caution must be taken with respect to the spacing of wells and the cumulative impacts of groundwater withdrawal. Due to hydraulic conditions, wells that are too closely spaced (i.e., less than 2,000 feet apart) may have appreciable mutual interference. At the same time, it is critical to insure adequate groundwater recharge to maintain the water table. Because the township's streams and wetlands are fed by groundwater discharges from these formations, aquifer withdrawals that exceed recharge capacities can reduce low-flow water volumes to very low levels, seriously affecting plant and animal communities dependent on these surface water resources.

Due to their porous nature, the limestone and Trenton Gravel formations have developmental constraints that require special regulatory oversight to ensure that structures are both safe and habitable. These formations are characterized by sinkholes and solution channels, and are susceptible to groundwater contamination due to the rapid rate at which groundwater moves through them. The Diabase and Hardyston formations have even more significant developmental constraints: they are poor sources of water and are not suitable for septic systems. Excavation in this rock is difficult, requiring blasting in most cases. Furthermore, the ridges and slopes that these formations comprise are much more susceptible to erosion when stripped of their natural vegetative cover.

4.4: Soils

Soils, which are partly the product of geology and topography, are an important factor in land use. The quality and character of soils in the study area has always been a determining factor in the location of agricultural operations. Ironically, the same qualities of soil that make it viable for agricultural production – slope, drainage, and regenerative capabilities – also make it desirable for development. These soils are also capable of supporting lush, upland forests. Soil location is a key component in planning, enabling appropriate decisions with regard to the placement of roads and buildings, suitability for septic effluent renovation, potential groundwater recharge, and decisions relative to preservation of special or unusual wildlife habitats.

Map 5: Soils, shows the location of three basic types of soils within the study area:

- Prime Agricultural Soils
- Hydric Soils
- Soils with Shallow Depth to Bedrock

4.5: Green Infrastructure

Green Infrastructure comprises the study area's rich variety of native vegetation and wildlife and the habitats on which they depend. The study area's Green Infrastructure includes a tapestry of woodlands, meadows, hedgerows, wetlands, ponds, lakes, streams, rivers, and thousands of species of native plants and wildlife. Green Infrastructure provides numerous benefits and ecosystem services to the region's communities. Protecting and maintaining Green Infrastructure is key to creating a sustainable, healthy community with a high-quality of life. The natural

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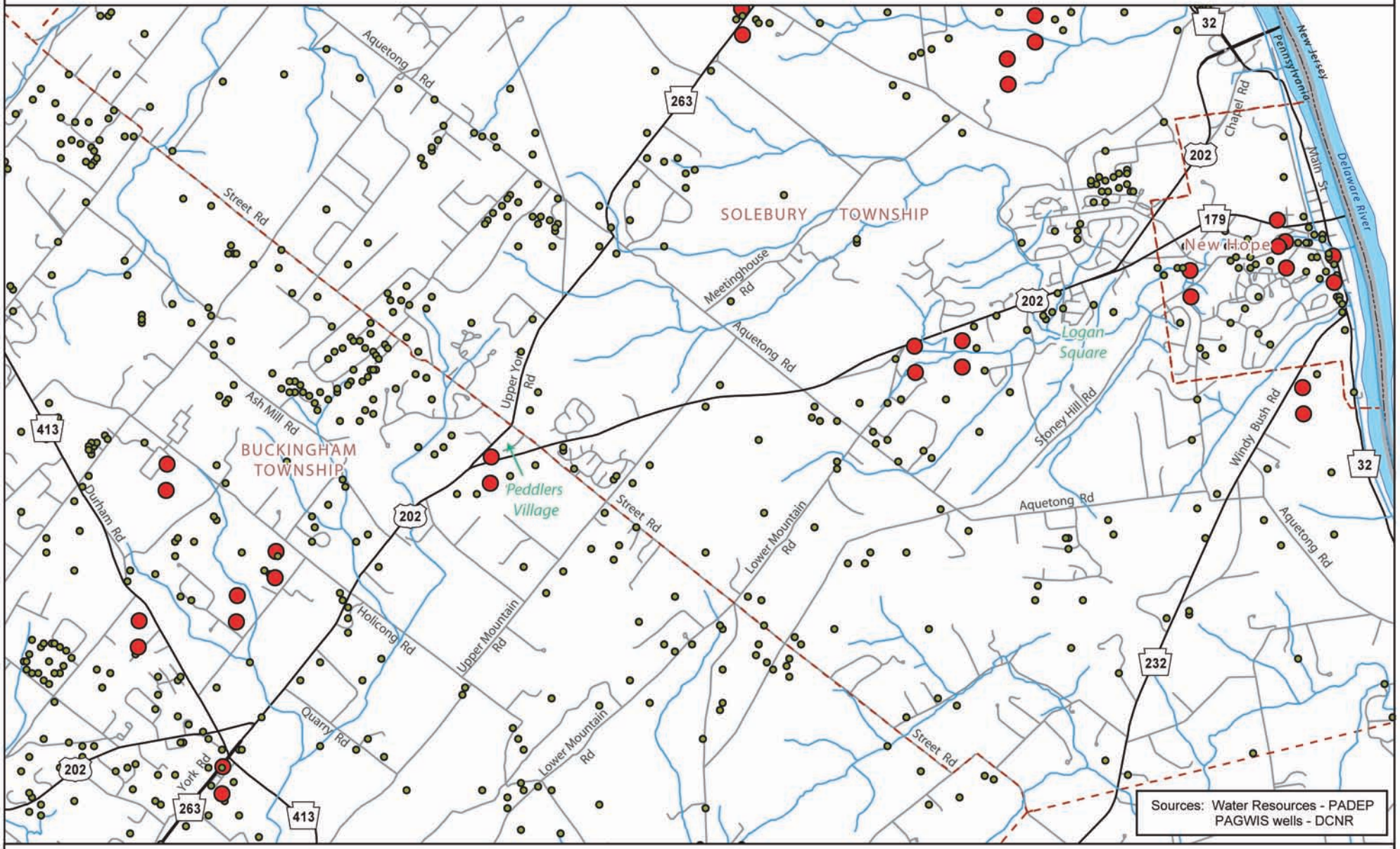
Map 3 - Ground Water - Withdrawal and Discharge Areas



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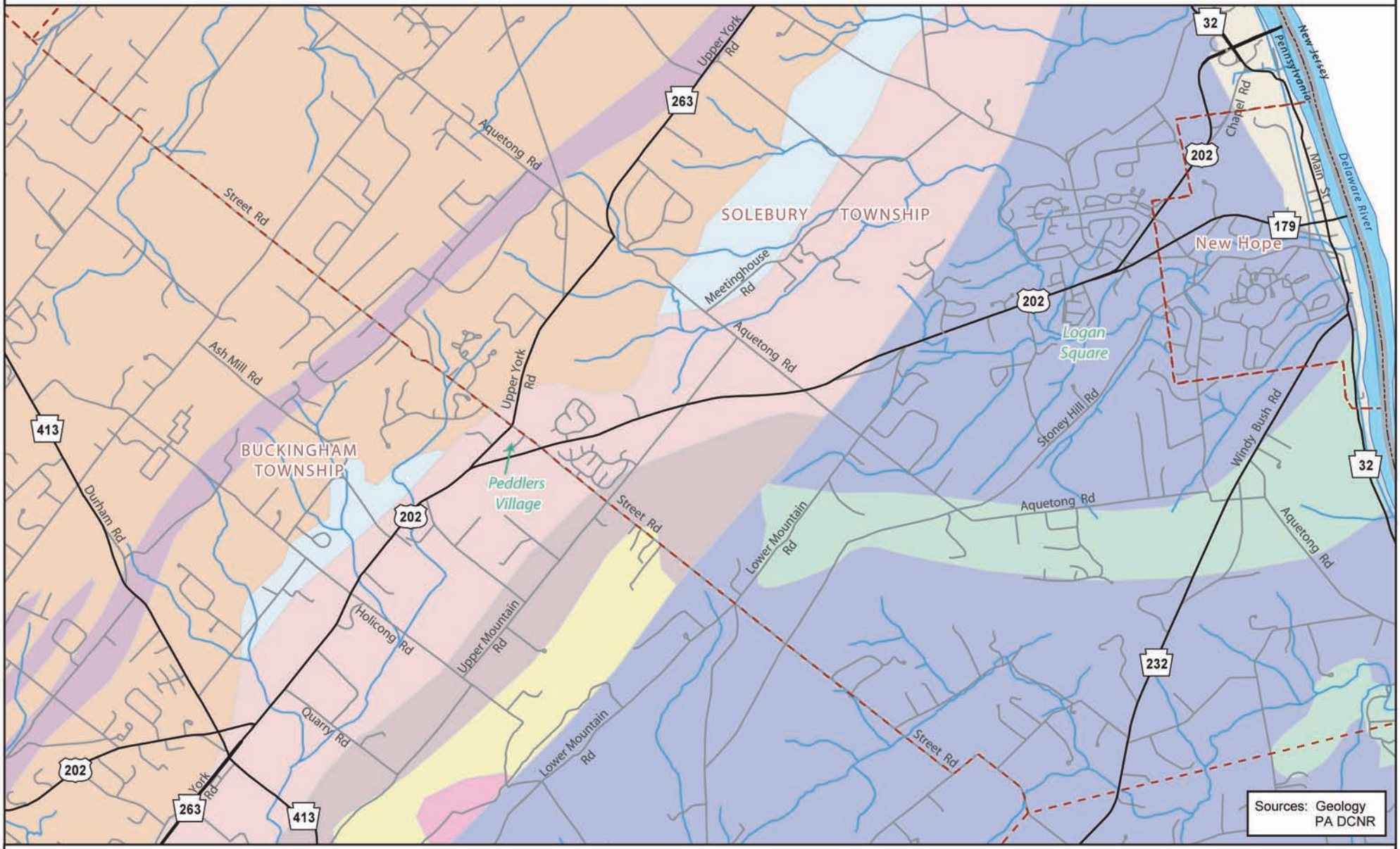
Map 4 - Surface Geology



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- Allentown Formation
- Beekmantown Group
- Brunswick Formation
- Diabase
- Felsic to Mafic Gneiss
- Hardyston Formation
- Leithsville Formation
- Stockton Formation
- Stockton Conglomerate
- Trenton Gravel
- Municipal Boundary

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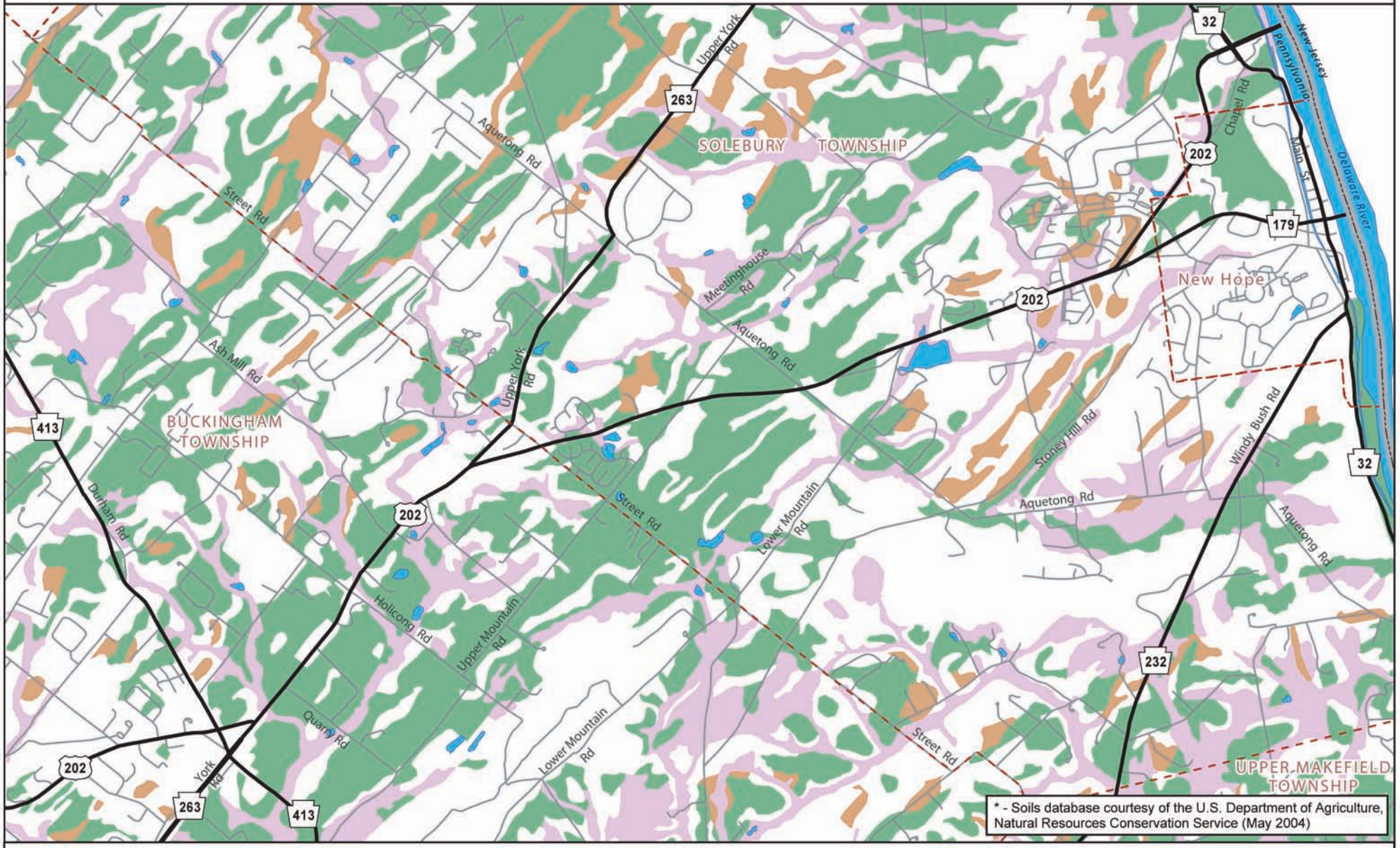
Map 5 - Soils*



components of Green Infrastructure are nature's life-support systems, providing clean air and water, maintaining viable populations of native plants and animals, and regulating climate extremes and flooding, as well as providing a wide variety of outdoor recreational opportunities.

The individual components of Green Infrastructure play a key role in maintaining the study area's water quality and quantity by allowing efficient functioning of the hydrologic cycle. Undeveloped mature wooded uplands maximize the absorption of precipitation into the water table, while tree canopy; loose, uncompacted soil; and forest floor litter control stormwater by minimizing the amount of rainfall and snowmelt lost to runoff. Wooded uplands also reduce demands placed on underground aquifers by displacing development whose water supply wells would otherwise draw down the water table. Riparian woodlands, meanwhile, are critical to protecting surface water quality. Riparian woodlands reduce stormwater runoff, remove pollutants and excess nutrients, minimize siltation and erosion, and shade surface water, thereby cooling surface water temperatures. Naturally functioning floodplains store, absorb, and cleanse excess floodwaters, and create ideal linear corridors for the movement of people and animals. Wetlands recycle nutrients, provide water storage capacity, and offer abundant food and breeding habitat to a wide variety of plants and animals.

4.6: Green Infrastructure and Water Quality and Quantity

All of these natural systems and lands combine to maintain water quality and insure adequate stream base flow. As stated above, Green Infrastructure minimizes stormwater runoff and maximizes the amount of precipitation absorbed into the ground. This process, also know as aquifer or groundwater recharge, is critical because most stream flow is comprised of groundwater. Without adequate aquifer recharge, many springs and streams – especially headwaters streams – would dry up. Wells may fail, and wetlands, also often fed by groundwater discharge, will be adversely affected. Headwaters, in particular, are highly dependent on stream based flows. Therefore, any subtraction from baseflows in these small streams proportionally has the greatest adverse impact. Headwaters are the locations of critical ecological functioning where exchange of energy from land to water occurs most directly and is most ecologically vital. Even a small decrease in stream baseflow can adversely stress the aquatic community in a headwaters stream.

This depiction of the importance of natural resource lands, or Green Infrastructure, to water quality and quantity is brief, but it serves to underscore the interconnectedness of land and water resources, and the connection of those resources to sustaining both natural and human communities. Clearly, then, protecting Green Infrastructure is key to protecting the ecosystem services natural areas provide. In terms of land use or land cover, the study area's Green Infrastructure consists of woodlands, emergent wetlands, open water, and successional lands (meadows, old fields, and thickets). These types of land cover in turn may occupy sensitive environmental areas, such as floodplains, riparian corridors, and steep slopes. The nexus of these features magnifies their value and is a primary concern for planning future growth, land management, and preservation efforts.

The study area's woodlands are depicted on ***Map 6: Woodlands***. Wetlands, floodplains, and surface water features are depicted on ***Map 7: Wetlands, Floodplains and Surface Wate***r. ***Map 8: Slopes***, depicts areas with steep slopes.

4.7: Creating Green Infrastructure

Communities within the study area are striving to maintain, preserve, and improve their Green Infrastructure while preventing destruction, fragmentation, and degradation of Green Infrastructure due to development. Green Infrastructure is most valuable when it is connected into an unbroken fabric. Therefore, fragmentation of these areas is undesirable, even when the development footprint is small relative to the total size of the affected natural area (such as when a road right-of-way bisects an otherwise contiguous forested area). In addition to protecting existing naturally-vegetated areas, communities are trying to restore and connect their Green Infrastructure by allowing some former agricultural areas to revert to woodlands through the process of natural succession, and by restoring riparian vegetation along streams.

Regionally, this vision for restoring and preserving Green Infrastructure is embodied by DVRPC's Greenspace Network. The Network consists of 100 individually-named greenspace corridors throughout the Philadelphia metropolitan region. Three greenspace corridors occupy the study area (***see Map 9: 2030 Greenspace Network***). The New Hope-Ivyland Corridor runs south of and parallel to the US 202 corridor, and encompasses Solebury and Buckingham mountains, the largest intact woodlands within the study area. The Delaware River Corridor runs along the Delaware River and Delaware Canal and intersects with the New-Hope Ivyland Corridor near Bowman's Hill. An unnamed corridor, running west of New Hope Borough to Center Bridge, connects to both of the corridors mentioned above and crosses US 202 to the west of the Logan Square shopping area, and includes Aquetong Lake. Maintaining, restoring and, linking these greenspace corridors to the fullest extent possible is a long-range priority for the region.

At the local level, both Solebury and Buckingham have well-developed visions for protecting, linking, and restoring key greenspace areas. Developed at the local scale, these plans have a finer grain than DVRPC's Greenspace Network, and they highlight additional preservation corridors and core lands. All plans, improvements, and development projects within the study area should evaluate their impacts on these resources, and consider ways in which they could contribute to ongoing preservation efforts.

4.8: Land Preservation Efforts

Although much development has taken place in Buckingham, Solebury, and New Hope during the previous three decades, the study area still possesses considerable undeveloped natural and scenic resources, including farmlands, woodlands, wetlands, and surface water features, as highlighted above. These communities have been dedicating significant resources to the preservation of natural features and agricultural lands over the past two decades. Solebury, in particular, has one of the Delaware Valley's most ambitious land preservation programs. To date, almost 5,000 acres, or 28 percent of Solebury, is protected from development either through public ownership, farmland preservation programs, or through publicly and privately funded conservation easements. The goal of the township and its citizens is to permanently protect half the lands of Solebury. While Buckingham Township has experienced more development than Solebury in recent decades, it too has extensive natural resources, numerous farms, and large tracts of undeveloped land. Of this resource, approximately 3,620 acres, or 17 percent of the township's total area, is permanently protected through preservation easements or public ownership. ***Map 10: Protected Lands*** shows the location and type of preserved lands within the study area.

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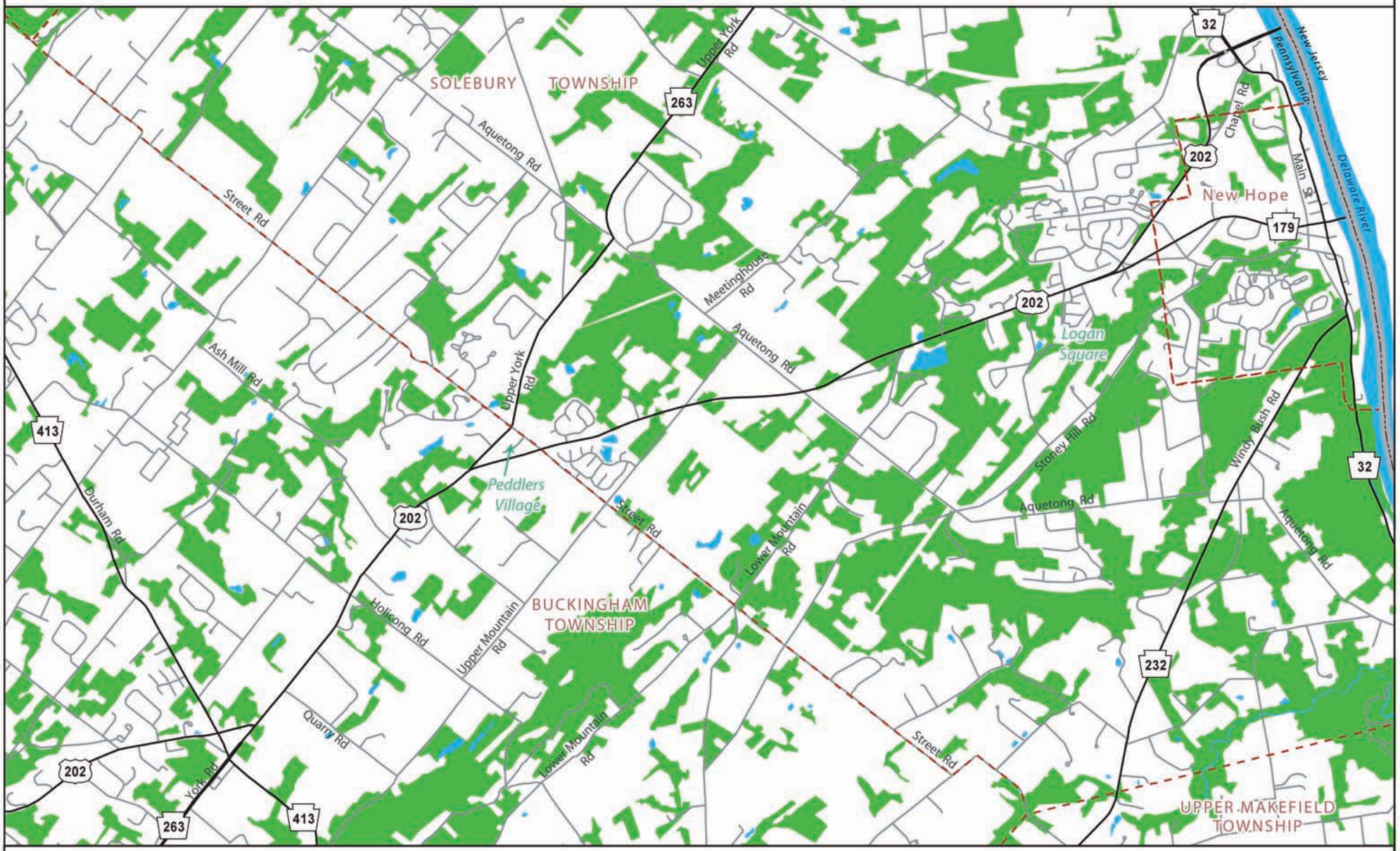
Map 6 - Woodlands



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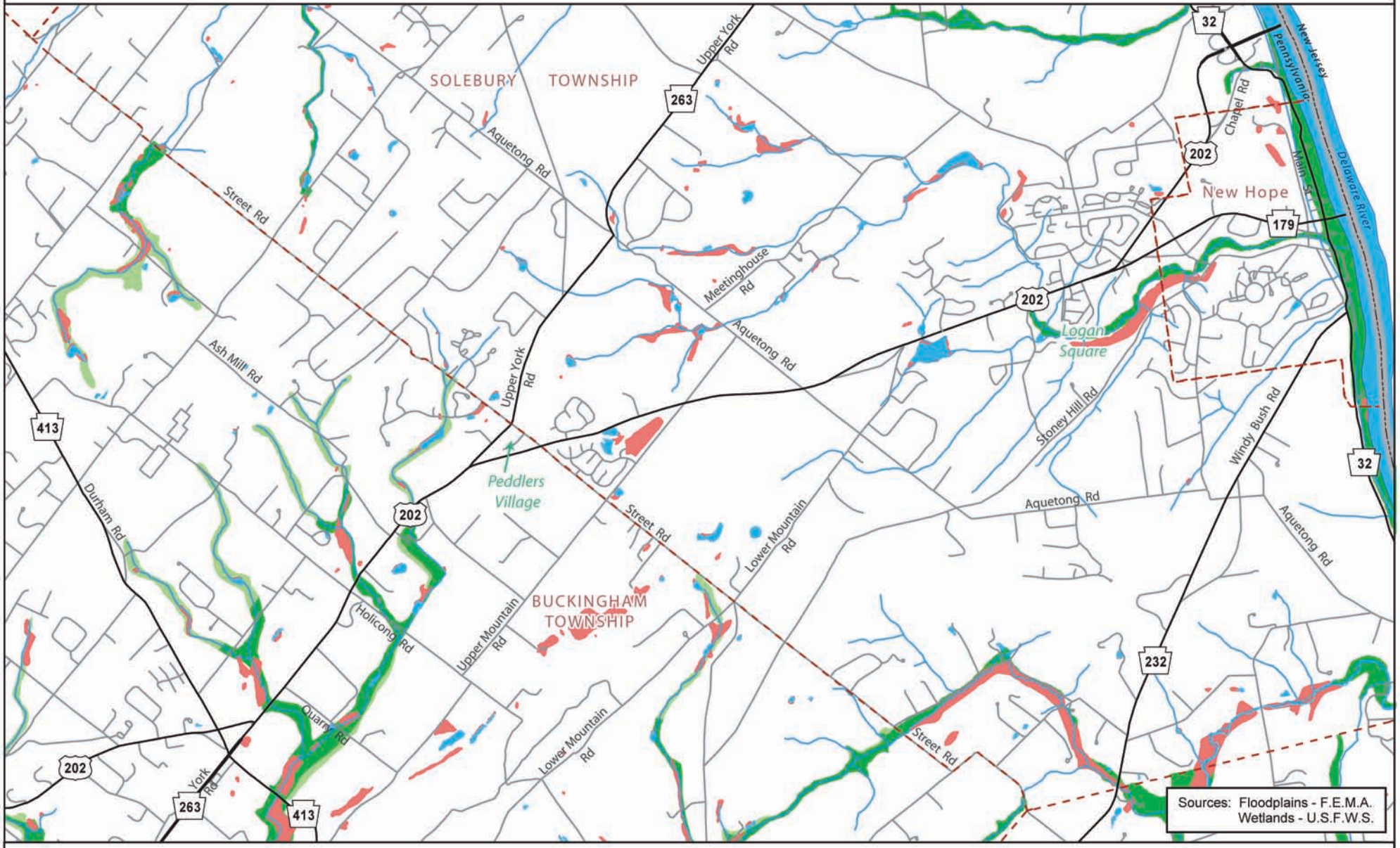
Map 7 - Wetlands, Floodplains, and Surface Water



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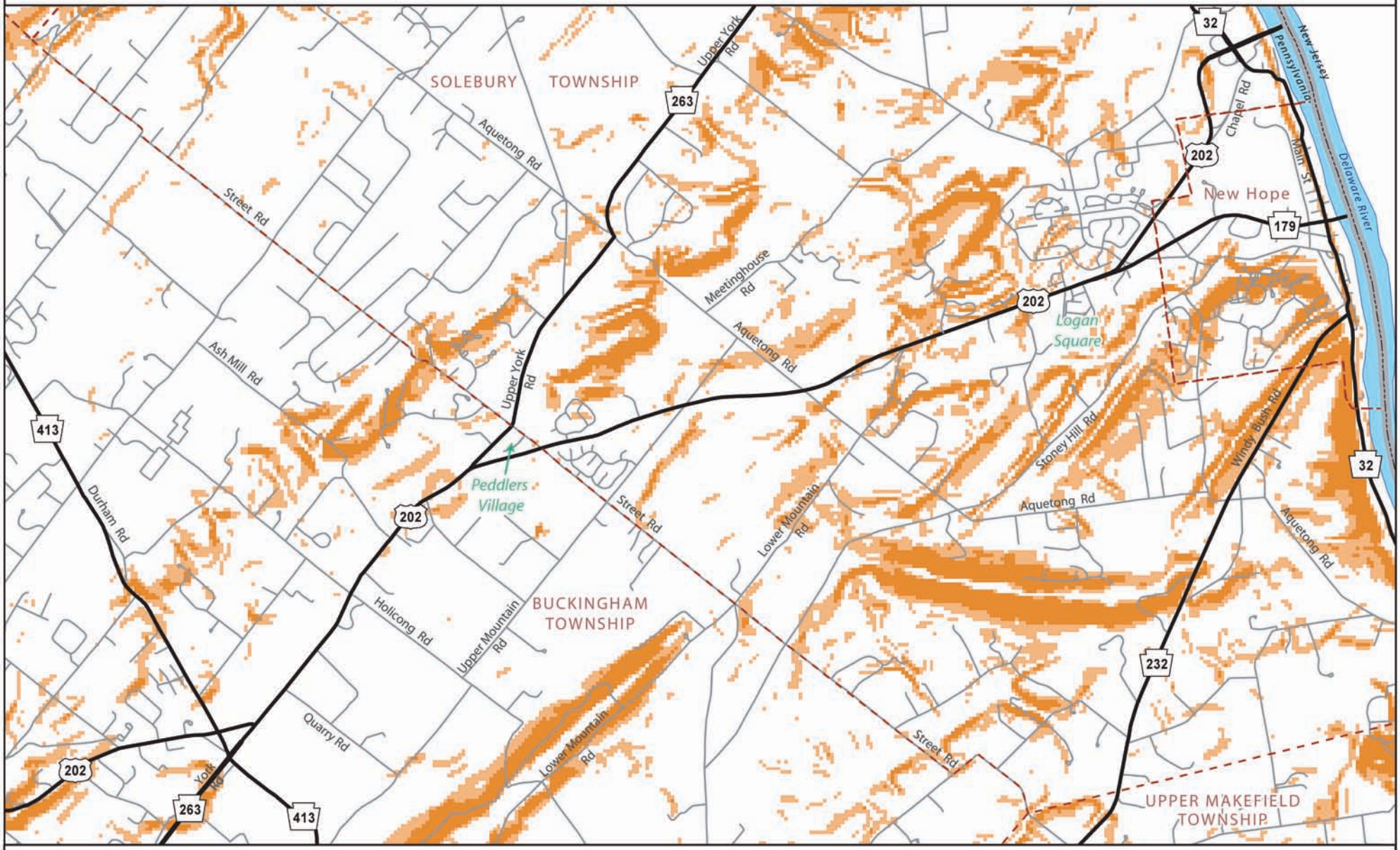
Map 8 - Slopes



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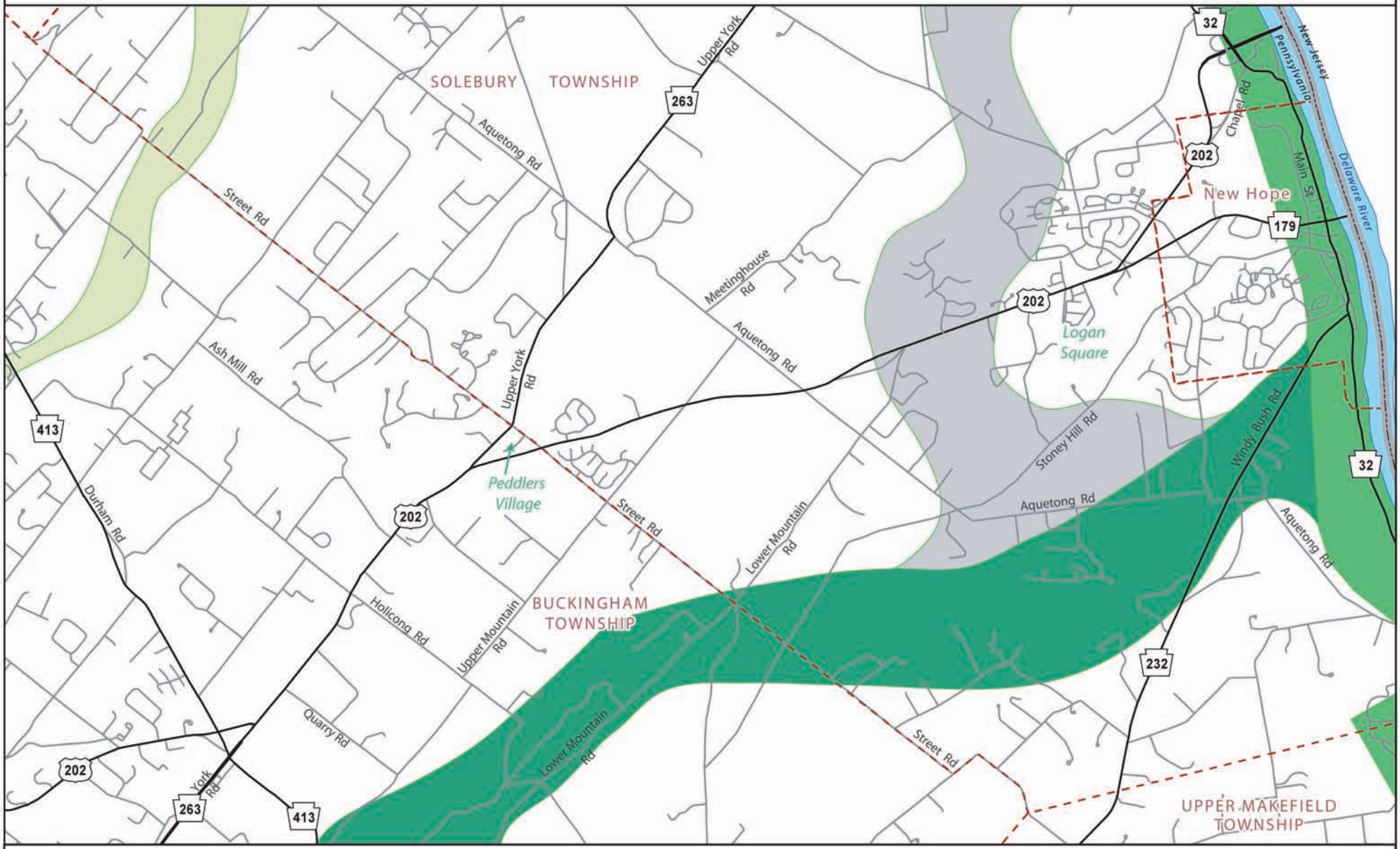
Map 9 - 2030 Greenspace Network



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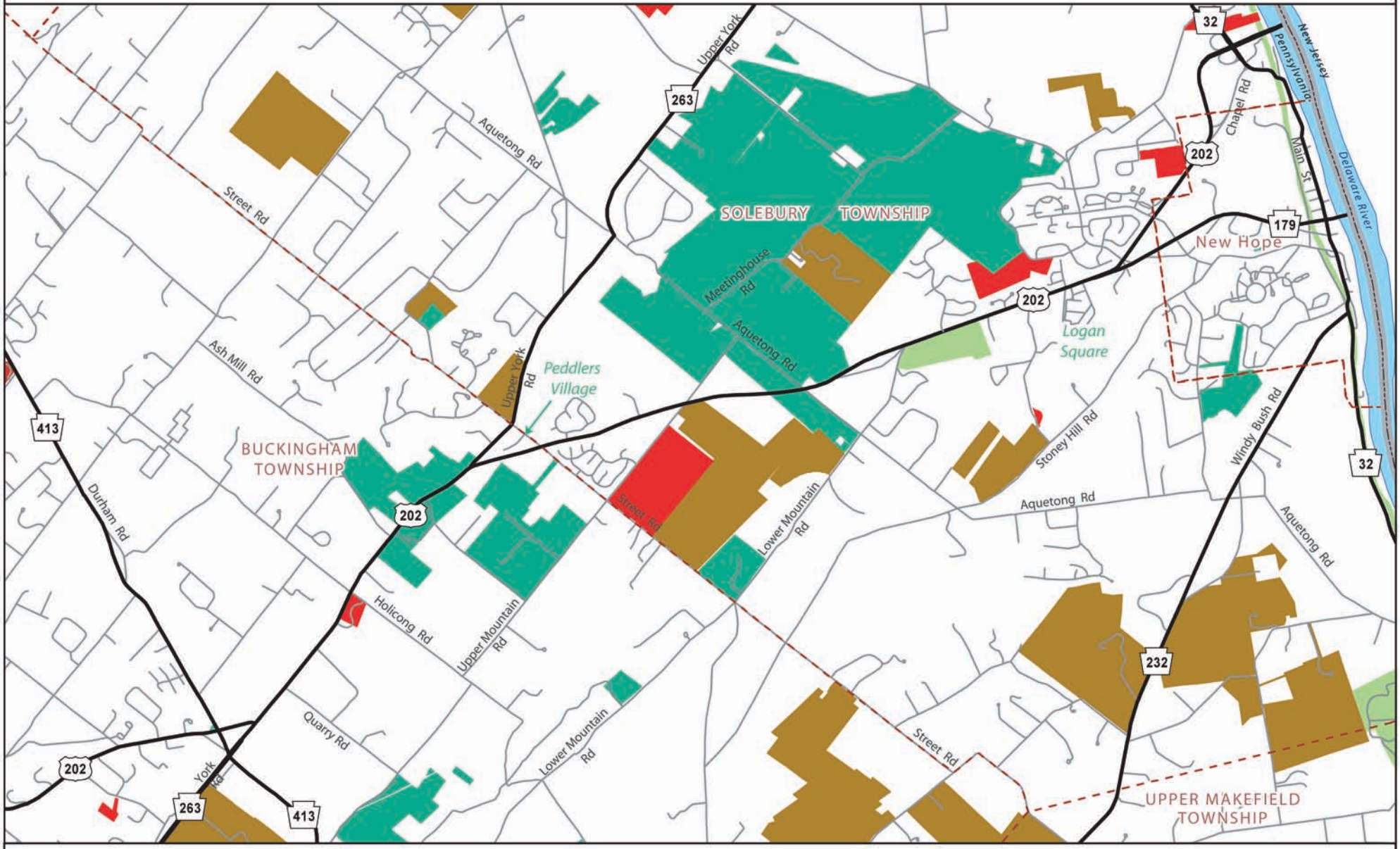
Map 10 - Protected Lands



5.0 Transportation Network

The transportation network in the study area comprises a dense roadway network of different functional classifications, ranging from principal arterials to local roads, transit networks, and bicycle and pedestrian networks. While there is weekday peak period congestion in some areas, the greatest congestion exists on weekends, especially along US 202. These arteries also convey a large volume of bicycle traffic that utilizes the on-road network to access various parks and scenic areas. Due to low population densities in the corridor, the transit network is minimal and mostly serves the east–to- west long-distance market. This lack of transit increases the opportunities to develop an innovative and creative transit service in the corridor. Pedestrian facilities and amenities are concentrated in the eastern end of the corridor in the borough of New Hope, where development is more concentrated.

5.1: Bicycle Network

Map 11: Proposed Bicycle Network was developed, identifying existing and proposed bicycle facilities. In mapping the proposed bicycle network within the study area, the goal was to provide a continuous network of bicycle facilities for commuting and recreational use. Facilities appropriate for pedestrian and bicycle travel through the corridor were identified. Routes that provide multimodal connections and that connect to regional trail facilities were specifically included in the network.

Due to the mostly rural nature of the study area, a large segment of the bicycle network is on road, or sharing the road with motor vehicles. While a safe, efficient bicycle network is best achieved by separating motorized traffic from bicycle traffic, this designation in this corridor is safe for bicyclists due to the low vehicular volume on these facilities. By utilizing shoulders within the existing cartway, as well as utility right of ways where possible, the number of conflict points are reduced.

Most of the proposed bicycle route along US 202 would be primarily along the shoulder. The American Association of State Highway and Transportation Officials' (AASHTO) Guide for the Development of Bicycle Facilities states that in rural areas, where a paved shoulder is used as a bicycle lane, a minimum of 4 feet in width of paved shoulder is needed in order to be designated as a bicycle facility. This should be of useable width and should not include the gutter pan or any area treated with rumble strips. Widths should be increased with higher bicycle usage, motor vehicle speeds above 50 miles per hour, or a higher percentage of truck and bus traffic.

Paved shoulders, whether they are designated and signed as bikeways or not, provide a great place for people to bicycle. AASHTO guidelines further state that paved shoulders should not be designated or marked as bikeways unless they meet the width guidelines noted above (4 feet, or 5 feet from a barrier or railing) and have a rideable width free from obstructions or treatments. Designating a shoulder as a bikeway may also be useful to provide guidance to cyclists following a particular route (e.g. between two trails, or other popular destinations for bicyclists).

It is proposed that appropriate signage be installed demarcating bike routes within the study area to enhance their safety and attractiveness. These are particularly appropriate for on-road facilities. The AASHTO Guide describes signed shared roadways (bike routes) as "those that have

been identified by signing as preferred bike routes." Signed shared roadways should meet certain conditions, including:

- continuity between bicycle lanes, trails, or other bicycle facilities
- marking a common route for bicyclists through a high-demand corridor
- directing cyclists to low-volume roads or those with a paved shoulder
- directing cyclists to particular destinations (e.g. park, school or commercial district)

It is recommended that shared use roadway signing should include information on distance, direction, and destination.

5.2: Pedestrian Network

A walkable environment can increase pedestrian activity and stimulate commercial activity in the area. It is a goal of this study to identify ways to make pedestrian thoroughfares safe, secure, and comfortable for all pedestrians.

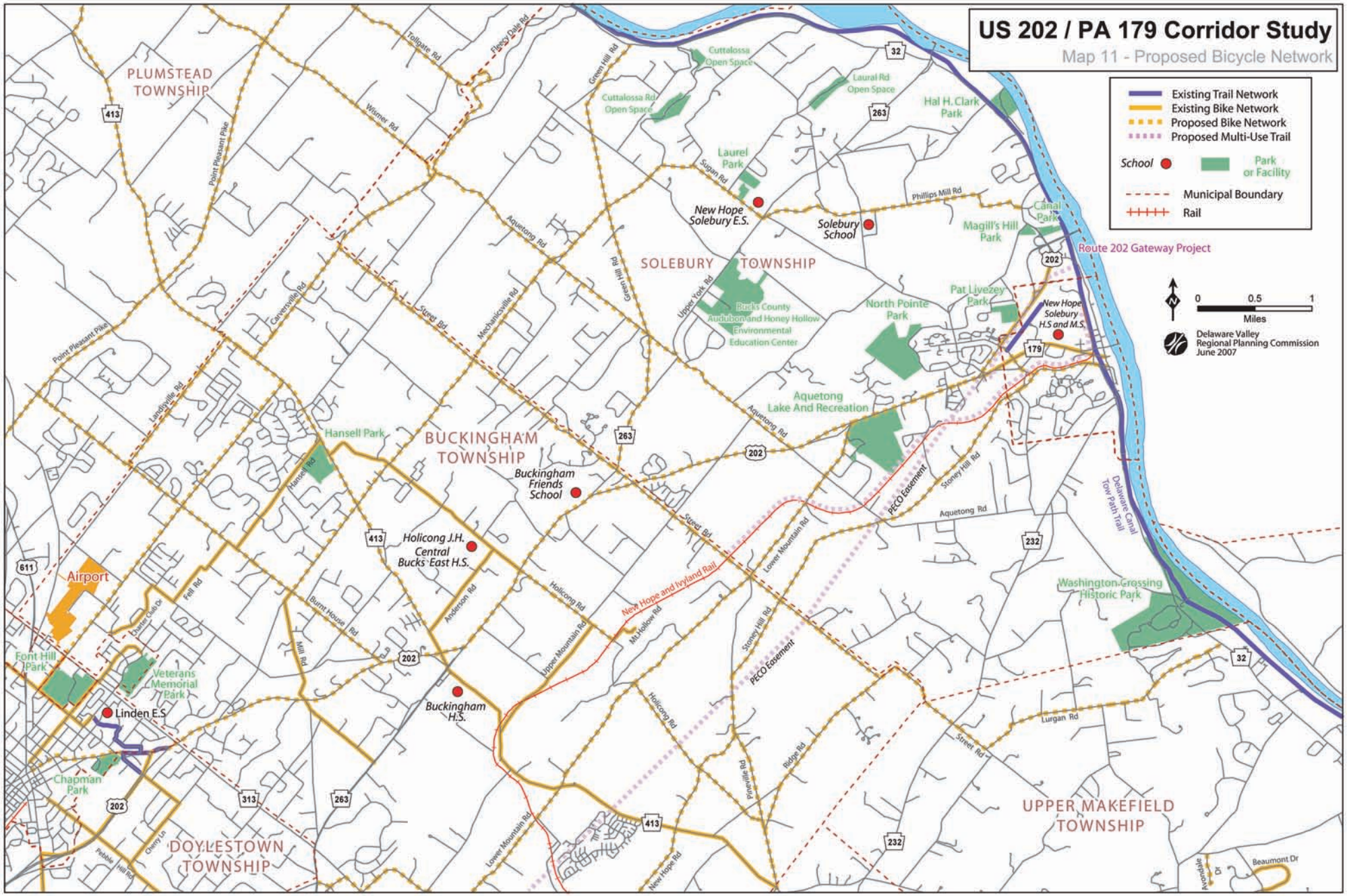
The areas of heavy pedestrian activity in the study area are along PA 179 in New Hope, and along PA 263 and Street Road at Peddler's Village. In New Hope, pedestrian traffic is heavy in the vicinity of the school and is comprised mostly of students traveling to and from the school and the recreation areas. Pedestrian traffic is also heavy along PA 179 and PA 32 in the commercial section of the borough.

Pedestrian counts taken on a Saturday in July 2006 at the approaches to the PA 179 and PA 32 intersection in New Hope Borough counted a total of 4,015 pedestrians between the hours of 5:00 p.m. and 8:45 p.m. (Carroll Engineering).

Pedestrian counts were taken at two crosswalk locations in Peddler's Village by DVRPC on a Saturday in November 2006. One location was the intersection of US 202 and Street Road and the other at the intersection of PA 263 and Street Road. 164 pedestrians were observed using the Street Road-US 202 crosswalks between the hours of 10:00 a.m. and 5:00 p.m.. The pedestrian crosswalks at the PA 263-Street Road intersection counted a total of 150 pedestrians over the same time period.

In improving the pedestrian environment within high traffic areas of the corridor, emphasis should be placed on improving the connectivity of sidewalks and walkways, visibility of crosswalks, and pedestrian scale lighting. Based on guidelines established by the Pedestrian Bicycle Information Center, the following enhancements to the pedestrian environment within the study area are proposed:

- Sidewalks and walkways are pedestrian thoroughfares that provide pedestrians with space to travel within the public right-of-way that is separated from roadway vehicles. Sidewalks are important in high-traffic areas because they reduce pedestrian collisions with motor vehicles, creating a separation of both travel modes. Such facilities also improve mobility for pedestrians and provide access for all types of pedestrian travel, such as to and from home, work, parks, schools, shopping, and transit stops. Sidewalks in the corridor, where deficient, should be upgraded to better meet these goals, and where needed, should be constructed to provide this function.
- Marked crosswalks indicate preferred locations for pedestrian crossings and help designate rights-of-way for motorists to yield to pedestrians. Marked crosswalks are desirable at some high pedestrian volume locations to guide pedestrians along a


US 202 / PA 179 Corridor Study
Map 11 - Proposed Bicycle Network
Existing Trail Network
Existing Bike Network
Proposed Bike Network
Proposed Multi-Use Trail
School
Park or Facility
Municipal Boundary
Rail
Route 202 Gateway Project
0 0.5 1
Miles
Delaware Valley Regional Planning Commission
June 2007
PLUMSTEAD TOWNSHIP
SOLEBURY TOWNSHIP
BUCKINGHAM TOWNSHIP
DOYLESTOWN TOWNSHIP
UPPER MAKEFIELD TOWNSHIP
New Hope Solebury E.S.
Solebury School
New Hope Solebury H.S and M.S.
Buckingham Friends School
Holicong J.H.
Central Bucks East H.S.
Buckingham H.S.
Linden E.S
Cuttalossa Open Space
Cuttalossa Rd Open Space
Laural Rd Open Space
Laurel Park
Hal H. Clark Park
Canal Park
Magill's Hill Park
Pat Livezey Park
North Pointe Park
Bucks County Audubon and Honey Hollow Environmental Education Center
Aquetong Lake And Recreation
Hansell Park
Washington Crossing Historic Park
Font Hill Park
Veterans Memorial Park
Chapman Park
Airport
PECO Easement
New Hope and Ivyland Rail
Delaware Canal Tow Path Trail
Tollgate Rd
Fleecy Dale Rd
Green Hill Rd
Wismer Rd
Point Pleasant Pike
Sugan Rd
Phillips Mill Rd
Aquetong Rd
Upper York Rd
Mechanicsville Rd
Carversville Rd
Street Rd
Landisville Rd
Hansell Rd
Burnt House Rd
Mill Rd
Fell Rd
Charter Club Dr
Anderson Rd
Holicong Rd
Upper Mountain Rd
Lower Mountain Rd
Mt.Hollow Rd
Stoney Hill Rd
Ridge Rd
Williwood Rd
Lurgan Rd
New Hope Rd
Pebble Hill Rd
Cherry Ln
Beaumont Dr
Monmouth Dr
32
263
413
202
179
232
313
611

preferred walking path. In some cases they can be raised and should often be installed in conjunction with other enhancements that physically reinforce crosswalks and reduce vehicle speeds. Marked crosswalks should be present in areas of high pedestrian activity within the corridor, notably Peddler's Village and New Hope.

- Adequate lighting can enhance an environment and increase comfort and safety. Without sufficient overhead lighting, motorists may not be able to see pedestrians in time to stop. In commercial areas with nighttime pedestrian activity, streetlights and building lights can enhance the ambiance of the area and the visibility of pedestrians by motorists. Adequate lighting should be considered in high pedestrian areas of the corridor, such as Peddler's Village and New Hope.

5.2.1: Peddler's Village Traffic Circulation

Located at the nexus of US 202, PA 263, and Street Road, Peddler's Village is a major retail destination in the village of Lahaska. There are some 70 specialty shops and six restaurants, which attract a large number of shoppers to the area. Free special events and seasonal festivals draw nearly three million visitors to Peddler's Village annually. Its unique layout of specialty shops in a village-like setting contributes to high pedestrian traffic in the area. An assessment of the efficiency of traffic circulation at Peddler's Village was conducted. The assessment covers parking capacity and access from US 202 to the parking lots of Peddler's Village.

Parking Capacity

There are three parking areas at Peddler's Village: 1) interior parking within the triangle formed by US 202, Street Road, and PA 263; 2) the lot west of Street Road; and 3) two parking lots north of PA 263 – behind Wagon House Shops, and next to Buckingham Friends School. The Street Road and PA 263 parking areas are connected by Peddler's Lane and the parking lots between US 202 and PA 263. The connection promotes internal circulation.

The highest demand for parking is on weekends. Existing parking capacity is sufficient to meet demand most weekends, except during special events, such as the Apple Festival and the Strawberry Festival. On those special event weekends, provision is made for overflow parking.
On weekends, US 202 is frequently congested, but PA 263 is generally free flowing. As a result, traffic bound for Peddler's Village from US 202 exits the roadway at the earliest opportunity, westbound US 202 traffic exits at Street Road, and eastbound US 202 traffic usually exits at PA 263. As a result, the midblock Peddler's Village driveway on US 202 may be under utilized.

5.3: Intersection Analysis

Several intersections were evaluated in Solebury and Buckingham Townships to identify potential improvements to safety and overall circulation in the area.

5.3.1: US 202 at PA 263 – Upper York Road (Buckingham Township)

This intersection is west of the Peddler's Village area.

Existing Conditions

Upper York Road meets US 202 at an unsignalized, three-legged intersection just outside of the Peddler's Village area. At this location, Upper York Road converges with US 202 at an acute angle, in fact with almost the same bearing as westbound 202; this approach is stop controlled, whereas US 202 is free flow. Additionally, there is a lateral curve along US 202 at the intersection. For these geometric reasons, it is currently difficult for drivers departing Upper York Road to judge gaps in the US 202 traffic stream. It is also challenging for Upper York Road and left-turning traffic to eastbound US 202 to determine where best to queue.

Recommended Improvement:

- Extend the painted median and stop bar for Upper York Road further into the intersection. Compliment the stop bar with posted and pavement "STOP" signage. This will grant drivers a better sight angle and distance. Also, the presence of the Upper York Road median further towards the intersection would assist drivers turning left into that roadway by providing an explicit delineation of the receiving lane.

5.3.2: US 202 at Street Road (Peddler's Village)

This intersection is a gateway to Peddler's Village and experiences congestion during peak shopping periods.

Figure 1: View of Southbound Street Road Approach

Source: DVRPC 2007

Figure 2: View of Street Road Crosswalks

Adjacent to Southbound Left-Turn Lane

Source: DVRPC 2007

This is a four-leg signalized intersection with one through lane and one left-turn lane at each approach. The current signal plan does not provide for any protected left-turn movements. Consequently, through a combination of limited green time for vehicles on Street Road approaches, and a high proportion of southbound left turns, of which there is a propensity for large coach or tour buses, the left-turn lane is sometimes insufficient in providing enough storage space. Furthermore, the departure rate of these left-turning vehicles may be hindered by a lack of sight distance for potential northbound through vehicles. This complication is a result of a mild depression in the opposing leg of Street Road just as it approaches the intersection. However, the obvious solution of lengthening the left turn lane may be limited by the presence of pedestrian crosswalks just north of the intersection.

With regard to the pedestrian environment, there are pedestrian crosswalks and push button actuators across all legs of the intersection. In addition, there are crosswalks at every leg of the intersection; however, the southwest corner is missing a curb ramp as well as any sidewalk infrastructure. When crossing US 202, pedestrian actuation allows for a total of 15 seconds of green time, regardless of vehicle presence. At a standard pedestrian walking speed of 3.5 f/s, there is barely enough green time for the approximately 50 foot crosswalk. For crossing Street Road, there is 62 seconds of green time, regardless of pedestrian or vehicle actuation.

Recommended Improvements:

- Install sidewalks and curb ramps on southwest corner of intersection.
- Repaint faded crosswalks across Street Road at Peddler's Village. Consider utilizing a more visible crosswalk striping pattern, such as the "international" style.
- Revise the signal timing plan to incorporate an actuated protected left turn for vehicles on Street Road. However, this should not be done at the expense of pedestrian crossing time.

5.3.3: US 202 at Upper Mountain Road (Solebury Township)

This intersection is located to the east of Peddler's Village and is impacted by peak traffic volumes along US 202.

Existing Conditions

US 202 has one travel lane in each direction, with a partial shoulder for the portion of US 202 regarded as Lower York Road at the intersection of Upper Mountain Road. The approaches toward the intersection allow for left and right turns from Upper Mountain Road onto US 202.

Upper Mountain Road intersects US 202 at a slight angle, and US 202 has a slight uphill gradient from west to east approaching the intersection. The intersection is unsignalized, with stop-control on the Upper Mountain Road approaches.

The posted speed limit on US 202 in the vicinity of Upper Mountain Road in both directions is 45 MPH. The speed limit on Upper Mountain Road is posted at 35 MPH approaching the intersection of US 202.

The intersection of US 202 and Upper Mountain Road is an arterial connection from the local road–Upper Mountain Road. The pavement markings at the intersection are only found on US 202 and are absent from Upper Mountain Road.

Identified Problems:

1) Northbound traffic on Upper Mountain Road experiences some difficulty making left turns onto Route 202 due to high speeds of westbound vehicles. In order to make the left turn, vehicles are forced to accelerate rather quickly to avoid oncoming traffic.
2) There is a sharp turning radius on Upper Mountain Road where it meets Route 202, which is very narrow.
3) Proper directional signs on Route 202 to alert motorists of the upcoming intersection with Upper Mountain Road are lacking. These are needed as there is a downhill slope from east to west, which impedes visibility.
4) There is vegetation encroaching on the roadway that may block driver visibility.
5) The approach lanes of Upper Mountain Road are narrow, without any flaring at the intersection. As a result, vehicles turning from Upper Mountain Road onto US 202 must accelerate quickly to avoid vehicles traveling on US 202.

Recommended Improvements:

- Install advanced "Intersection Ahead" and street name signage on US 202 approaches.
- Improve lighting at the intersection.
- Improve the clear zone by removing encroaching vegetation.
- Improve the visibility of pavement markings to identify the turning lanes. This would improve traffic circulation in the area.

5.3.4: US 202 at Aquetong Road (Solebury Township)

This intersection is located in a highly-undeveloped portion of the study area.

Existing Conditions

Route 202 has one travel lane in each direction with a partial shoulder at the intersection. Aquetong Road is also a two-lane roadway at this intersection. It is signalized and all movements are permitted.

There is a signalized offset intersection where Aquetong Road intersects US 202 at an angle. There is little room in the middle of the intersection for left-turn queues. The eastbound approach of Aquetong Road is at a consistent downhill grade, which contributes to vehicles speeding in this direction. Also, the approximately six-foot shoulder on this eastbound approach enables vehicles to closely pass left-turn queues.

Traveling in the southeast direction along Aquetong Road, the left-turn sight distance is limited due to a vertical drop immediately south of the intersection. This vertical drop is a result of an uphill gradient along the northwest direction of Aquetong Road, which also reduces sight distance for vehicles on that roadway.

The speed limit on Route 202 is posted at 45 MPH in the northbound and southbound approaches to Aquetong Road. The speed limit posted for Aquetong Road is 40 MPH at the approach to Route 202. Due to high

speeds along US 202, in combination with vegetation in the clear zone on the southwest corner of the intersection, visibility for eastbound right-turning vehicles is impeded. Vehicles sometimes cross the median on Aquetong in order to complete the movement.

Recommended Improvements:

- Install advanced "Intersection Ahead" and street name signage on US 202 approaches.
- Improve lighting at the intersection.
- Improve the clear zone by removing encroaching vegetation.

5.3.5: US 202 at Lower Mountain Road and Ingham Road (Solebury Township)

This intersection is at the approximate midpoint of the study area.

Existing Conditions

At this location, Lower Mountain Road terminates at US 202, thus creating an unsignalized T-intersection; the former is stop controlled while the latter is free flow. Ingham Road merges into Lower Mountain Road just south of the intersection. Both Ingham Road and Lower Mountain Road have very narrow cartways, though there is a relatively large paved area where they merge, effectively creating a four-leg intersection. This arrangement may potentially create a confusing and unsafe scenario.

At the intersection, there is an uphill grade in both directions of US 202. Consequently, all northbound-turning vehicles must accelerate uphill in the sole travel lane. With westbound vehicles looking to make left turns onto Lower Mountain or Ingham Road, subsequent vehicles queue behind the stopped vehicle or tightly pass on the right via the four-foot wide paved shoulder.

Recommended Improvements:

- Extend the paved surface to the guardrail along westbound 202. This will provide an area of approximately 8 feet, which can be used to pass left-turning vehicles.
- Install advanced "Stop Ahead" pavement markings along both Ingham Road and Lower Mountain Road
- Improve the clear zone by removing encroaching vegetation.
- Develop a strategy to improve night-time visibility of signs, such as by adding reflectors to the adjacent guardrails.

5.3.6: US 202 at PA 179 (Solebury Township)

Currently, during peak periods, traffic backs up at this intersection. A roundabout is proposed for this location that would improve traffic circulation, flow, and safety. It is anticipated that this project will enter the design phase shortly.

5.4: Public Transit Service

Public transit service in the study area is minimal. The only scheduled bus service that serves the study corridor has long headways and is focused on the long-distance traveler (***Map 12: Transit Service***). The rail service is geared towards the excursion traveler and does not meet the need of the local residents.

5.4.1: Bus Service

Trans-Bridge Lines provides the only daily commuter bus service in the corridor. It serves a route extending from Bethlehem PA to New York City. This bus makes stops in Quakertown, Dublin, and Doylestown prior to stops in Buckingham and Solebury before continuing on to New Jersey. Destinations in New Jersey include Lambertville, Frenchtown, Flemington, Branchburg, and Newark Airport. Its final destination in New York City is at the Port Authority Bus Terminal (PABT).

The Trans-Bridge bus service provides connection to the Doylestown rail station, where riders can transfer from the SEPTA R5 regional rail line. Seven daily weekday and three daily weekend buses depart from Doylestown to PABT, with stops in Buckingham and Solebury.

The average travel time from Doylestown to Buckingham is 10 minutes, and from Doylestown to Solebury is 15 minutes. An average trip between Buckingham and PABT takes two hours. From Solebury, the average travel time to PABT is an hour and 45 minutes.

Weekday service between Buckingham, Solebury, and New York operates between 5:45 a.m. and 5:40 p.m.. During the weekend, the first New York-bound bus departs from Buckingham at 7:45 a.m., and the last bus departs at 6:40 p.m.. The return service is offered weekdays between 7:30 a.m. and 8:15 p.m. and between 10:15 a.m. and 8:30 p.m. on weekends.

Six weekday buses make stops in Buckingham, near Peddler's Village, at Street Road and Upper York Road, and at the Wawa at Durham Road and York Road. On weekends, buses make four stops per day at the two Buckingham locations. In Solebury, at Logan Square, the bus frequency is seven times per day on weekdays and three times per days on the weekends.

Additionally, Bucks County Transportation Management Association (BCTMA) intends to improve mobility throughout Bucks County by operating a number of public transit services around Doylestown, Warminster, Bristol, Newtown, and the Street Road corridor of Lower Bucks County. The BCTMA operates a bus service that connects SEPTA's Regional Rail stations with major destinations within local and neighboring townships. The closest BCTMA transit service to the study area is the Doylestown Dart.

Recommendations:

- Explore the impact of reducing bus headways in the corridor so as to provide a viable alternative to the automobile. This should be accompanied by a major marketing campaign designed to increase awareness of the bus service and increase demand.
- Improve bus amenities, such as bus stop shelters, along the route in order to improve the comfort of riders.
- We recommend further study to determine whether BCTMA service could be extended northbound to serve the US 202 / PA 179 corridor.

5.4.2: Rail Service

The closest daily rail service to the area is the SEPTA R 5 service, which terminates in Doylestown. The New Hope-Ivyland Railroad provides regular and special excursion service from New Hope CBD to Street Road

in the vicinity of Peddler's Village. Generally, 3-4 trains depart from New Hope on weekends.

Recommendations:

- Explore ways to revitalize rail service to New Hope using the New Hope and Ivyland Railroad tracks and SEPTA's R 2 line.
- Explore ways to connect the SEPTA R 5 line from Doylestown to New Hope.

5.4.3: Park and Ride

Increasing congestion during peak periods along US 202 and PA 179 requires the creation of alternative transit solutions to access retail points along the study corridor and New Hope's CBD. A shuttle service operating from designated park and ride locations is suggested to mitigate congestion and reduce the burden for parking at high-traffic retail destinations, such as New Hope's CBD. Several areas have been identified as potential park and ride locations due to existing capacity and proximity to US 202 and PA 179. The shuttle service could begin at Peddler's Village and travel east through Solebury Township before reaching points within New Hope's CBD.

In Buckingham Township, Peddler's Village has two adjoining parking lots. The first parking lot is to the west of the retail area on Upper York Road (PA 263), and the second is to the northeast of the retail area off of Street Road. Both of these locations offer abundant parking.

In Solebury Township, two locations were identified. The Logan Square retail center is a potential park and ride location due to adequate levels of parking and its proximity to New Hope. The second location is New Hope-Solebury High School. This location offers abundant parking on weekends and when school is not in session.

There are several area-wide measures that should be pursued in order to implement and sustain a viable shuttle operation that would optimize the benefits to the area. These policy measures will ensure that the right environment exists for effective shuttle operation. A mix of strategies, coordinated land use, and appropriate complementary policies should be included in the best scenario for an effective shuttle network.

Funding

This shuttle service should have a dedicated funding stream that would ensure consistency of service without heavy reliance on fare-box receipts. The government entities and merchants should form a mutually-beneficial partnership to fund the transit service.

Estimated Cost

In estimating costs for the operation of a 3-vehicle shuttle fleet, two options were considered:

Option 1

This option is with a public entity (township or county) providing direct service. This would entail both capital and operating costs.

Capital Cost

Capital cost will primarily consist of purchasing three 22-24 passenger vehicles at a cost of approximately $90,000 each. If low-floor vehicles are

desired, the unit cost will increase. Additional costs include signage, bus lane demarcation, and bus stops where necessary.

Operating Cost

Annual operating costs would include labor, vehicle maintenance, fuel, insurance, depreciation, and administration.

Option 2

This option is to have a private transit operator provide the service on a contractual basis. The cost will vary depending on the hours of operation and headways and distance. Cost in the DVRPC region based on similar shuttle service varies from $275,000 per year for 80 weekly round trips, to $549,000 for 432 weekly round trips.

Financing Options

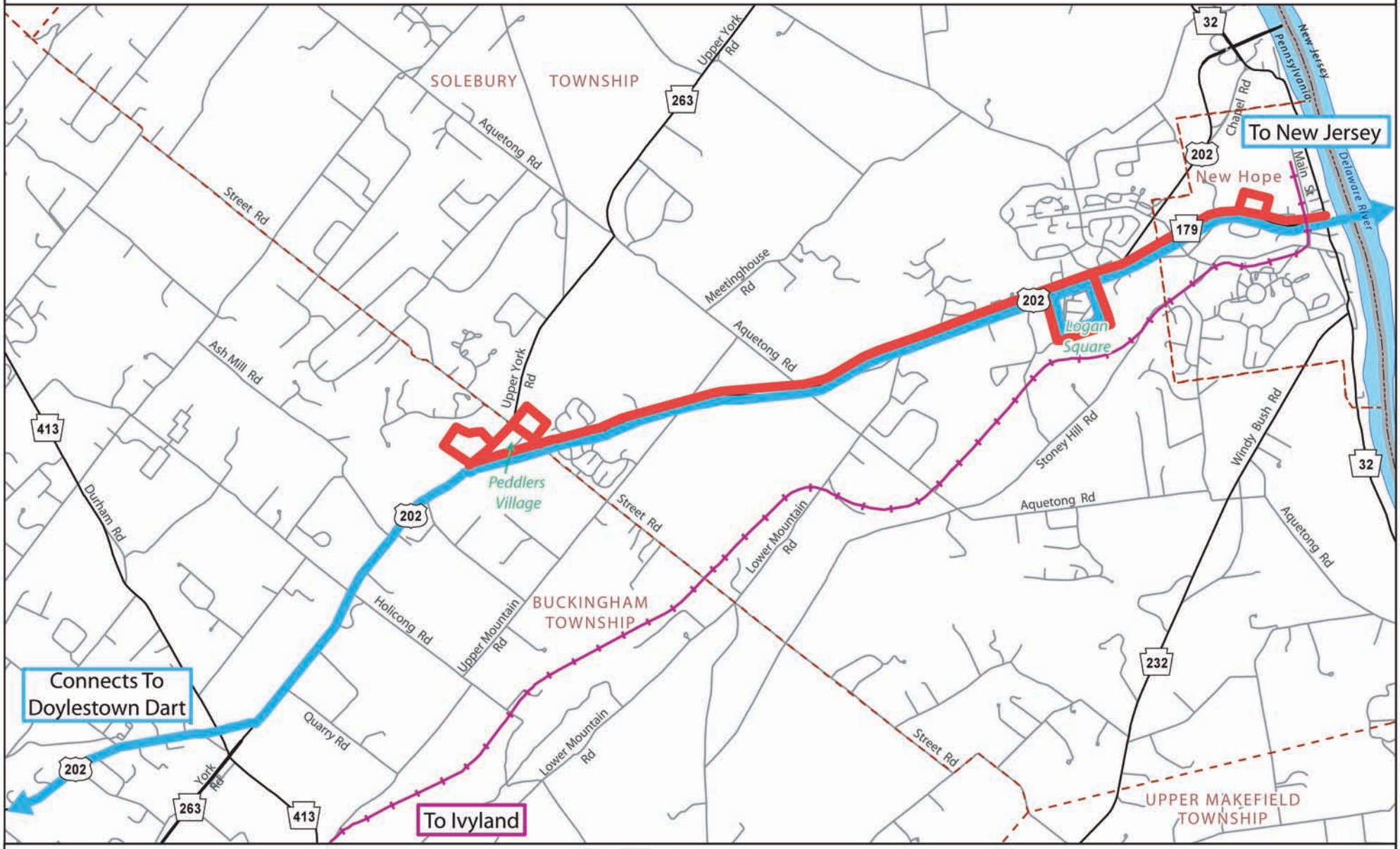
Operating and maintenance costs can be offset with revenues from retailers in the area. Retailers could be assessed a fee based on the amount of square-foot retail space they occupy. In addition, many of the recommendations proposed can be funded through various federal, state, and foundation-funded programs, which are listed in the Funding Options section of this report.

Recommendations:

- Utilize the park and ride at Street Road and New Hope / Ivyland Railroad stop for transportation to New Hope and Peddler's Village.
- Utilize New Hope-Solebury High School parking lot as park and ride for visitors to New Hope CBD on nights and weekends.
- Develop a shuttle service that would serve the commercial areas along Main Street and Bridge Street, as well as the park and ride lot.
- Utilize Logan Square shopping center as a park and ride for commuters and shoppers to New Hope. This park and ride would be served by a future shuttle service, connecting this area to New Hope and/or Peddler's Village.

US 202 / PA 179 Corridor Study

Map 12 - Transit Service



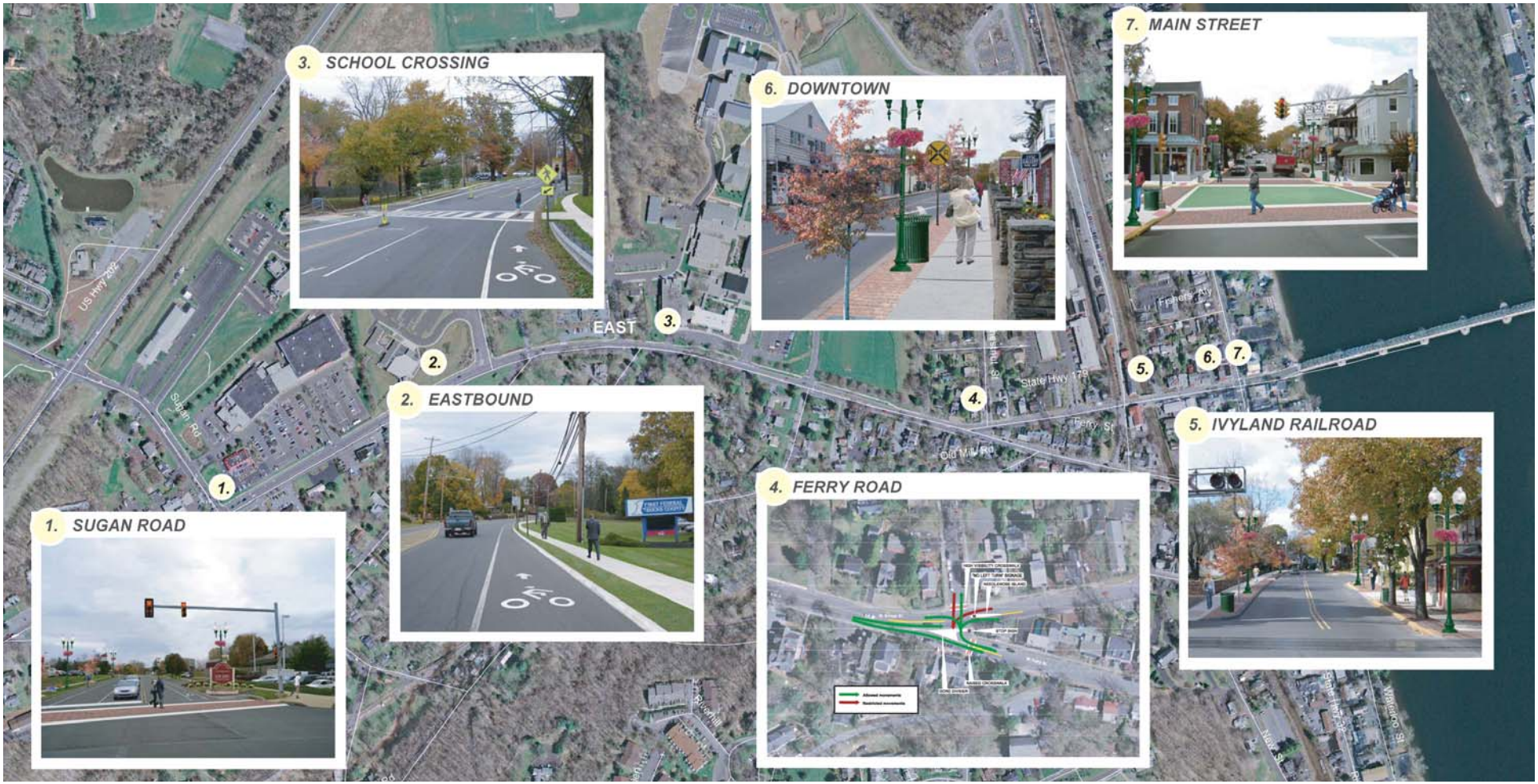
6.0

New Hope Borough Pedestrian and Streetscape Improvements

6.1: Overview

New Hope Borough's comprehensive plan identifies the need for "improvements such as wider, continuous sidewalks in good repair, signalized or monitored crosswalks, pedestrian ways, and improved lighting and directional signage" in areas within the CBD. For areas of the borough outside the CBD, it recognizes the need to "separate pedestrian and vehicular traffic and connect residential areas with community facilities and services." The following analysis attempts to identify locations where these ideals can be applied to achieve the desired results. Figure 3 displays the spatial distribution of these locations.

Figure 3: New Hope Improvements



Source: DVRPC 2007

6.2: Gateway at Sugan Road and PA 179 (Figs 4-5)

This is the gateway to New Hope for motorists traveling eastbound from US 202. In the vicinity of the gateway, the land use is primarily commercial with multiple curb cuts. The total cartway width at this location is approximately 54 feet. The two westbound lanes together are 25 feet in width. The eastbound receiving lane is approximately 12 feet wide, and there is a 17-foot wide shoulder. The posted speed limit is 35 MPH.

Recommended Improvements:

- Add a bike lane in both directions as part of an overall comprehensive bike network.
- Construct a crosswalk and pedestrian ramps to the sidewalks using a corridor-wide consistent design.
- Enhance the streetscape by burying the overhead utilities, installing distinctive street lighting, and planting appropriate vegetation.
- Install a gateway monument with bold signage at the intersection to signal the "Gateway to New Hope."

6.3 PA 179: Sugan Road to Old York Road (Figs 6-7)

This highway segment has one travel lane in each direction of travel. The shoulder along the eastbound travel lane tapers from a width of nine feet to approximately five feet at Old York Road. Additionally, there is not a shoulder on the westbound side. Currently, there is no sidewalk or curb along this eastbound segment of West Bridge Street. The posted speed limit is 35 MPH.

Figure 4: Gateway at Sugan Road and PA 179 - Before

Source: DVRPC 2007

Figure 5: Gateway at Sugan Road and PA 179 - After

Source: DVRPC 2007

Recommended Improvements:

- Construct a sidewalk and buffer in the eastbound direction.
- Continue the proposed bike lanes from Sugan Road through this segment.

6.4: PA 179: Old York Road to Kiltie Drive (Figs 8-9)

This intersection is in the vicinity of New Hope-Solebury High School and Middle School. At the western approach to the schools is a bend along West Bridge Street, which reduces sight distance and visibility for both pedestrians and motorists. In addition, the roadway at the school is at the crest of a slight hill, which further reduces sight distances for all road users. In this area, there is a travel lane in each direction, as well as a center two-way left-turn lane (TWLTL). The width of the westbound travel lane is approximately 13 feet, the eastbound lane measures approximately 11 feet, and the TWLTL is an additional 12 feet. There are currently no sidewalks along the eastbound side of West Bridge Street. The posted speed limit lowers to 25 MPH; it is 15 MPH when children are present.

Recommended Improvements:

- Upgrade pedestrian crosswalks to improve visibility and safety.
- Relocate the crosswalk at the western end of Kiltie Drive to the opposite side of the intersection. This will help improve its visibility from both travel directions of West Bridge Street.
- Install in-street pedestrian crossing signs (State Law: Yield to Pedestrians in the Crosswalk) at approaches to the crosswalks in front of the schools. They would serve the purpose of

Figure 6: PA 179 Sugan Road to Old York Road - Before

Source: DVRPC 2007

Figure 7: PA 179: Sugan Road to Old York Road - After

Source: DVRPC 2007

reminding motorists of the right of way at these crosswalks and encouraging them to be more alert.

- Install in-pavement lighting to improve the crosswalk's visibility to oncoming motorists. These are small fixtures embedded in the pavement along both sides of the crosswalk that flash an amber-colored light. They are activated only when a pedestrian is crossing.
- Construct sidewalks adjacent to the eastbound travel lane in order to provide a continuous sidewalk network along both sides of Route 179.
- Construct a bike lane that could be utilized for access to the schools and serve as a link to connect Route 179 to the recreation area behind the school.

6.5: PA 179: Kiltie Drive to Ferry Street (figs 10-11)

The land use in this area is primarily single family residential. It serves as a transition zone to the commercial area. The posted speed limit in this area is 25 MPH.

Recommended Improvements:

- Construct sidewalks along the eastbound side of the roadway. These would increase the connectivity of the schools to residential and commercial areas. This would require a roadway realignment.
- Bury overhead utilities in order to increase the streetscape aesthetic and increase room for pedestrians.
- Introduce appropriate streetscape elements, such as pedestrian-

Figure 8: PA 179: Old York Road to Kiltie Drive - Before

Source: DVRPC 2007

Figure 9: PA 179: Old York Road to Kiltie Drive - After

Source: DVRPC 2007

scale street lamps, brick buffers and trash receptacles.

- Introduce pavement markings and striping at the intersection of Ferry Street and West Bridge Street in order to simplify, and thus improve, the safety of traffic traveling through this intersection.
- Enhance the crosswalks in the area of the West Ferry Street intersection. Specifically, raise the crosswalk that connects West Bridge Street with the New Hope and Solebury Library, while applying a texture and color treatment to the Chestnut Street crosswalk.

6.6: PA 179: Union Square Drive to Main Street (figs 12-13)

This section represents the start of the commercial area of New Hope. There is a gradual transition from residential to retail establishments on both sides of the road. The westbound travel lane is approximately 13 feet wide, with an inadequate three-foot wide sidewalk. The eastbound travel lane is approximately 12 feet wide, and all on-street parking is exclusive to this direction of travel. There are a total of ten parking spots, one of which is reserved for "Handicapped" parking; each parking bay is approximately seven feet wide. The sidewalk along the eastbound side of West Bridge Street varies in width, from six to nine feet, depending upon the setback of the buildings. Finally, the posted speed limit is 25 MPH.

Recommended Improvements:

- Introduce streetscape improvements, such as benches, trees and lamps, all in a design and scale that is consistent with the area.

Figure 10: PA 179: Kiltie Drive to Ferry Street - Before

Source: DVRPC 2007

Figure 11: PA 179: Kiltie Drive to Ferry Street - After

Source: DVRPC 2007

- Expand sidewalks in the area in order to accommodate heavy pedestrian traffic, especially on weekends. This can be accomplished within the current available right of way as follows:
  - The section of PA 179 in the vicinity of the Delaware Canal has a public right-of-way approximately 44 feet wide. By removing the ten on-street parking spots and converting this area into a travel lane, it will be possible to have two 11-foot wide travel lanes, as well as 11-foot wide sidewalks.
  - The section of PA 179 in the vicinity of Main Street (PA 32) has a right of way approximately 44 feet wide. It has two eastbound travel lanes and one westbound travel lane. One of the eastbound lanes is for left turns only. This lane is approximately nine feet in width, while the eastbound through/right lane is approximately 11 feet wide. The eastbound sidewalk is approximately seven feet wide. The westbound sidewalk is approximately 13 feet wide, while the westbound sidewalk is approximately 3.5 feet wide. It is recommended that the eastbound configuration remains as is, the westbound through lane be reduced to a width of ten feet, and the westbound sidewalk be increased to a width of approximately seven feet.

Figure 12: PA 179: Union Square Drive to Main Street - Before

Source: DVRPC 2007

Figure 13: PA 179: Union Square Drive to Main Street - After

Source: DVRPC 2007

6.7: Bridge Street Gateway (figs 14-15)

Westbound entry into the New Hope CBD from New Jersey is gained through the intersection of Bridge Street and Main Street (PA 32). At this gateway, each approach leg has two departure lanes; one through-and-right, and one left turn. On the eastbound approach, both the left-turn lane and the through-and-right lane are ten feet wide. The receiving lane for this same approach leg has a width of 13 feet. Travel through this gateway is the most direct approach to New Hope from Lambertville, New Jersey via the Delaware River Joint Toll Bridge Commission's (DRJTBC) "Free Bridge." Lastly, the posted speed limit here is 25 MPH.

Recommended Improvements:

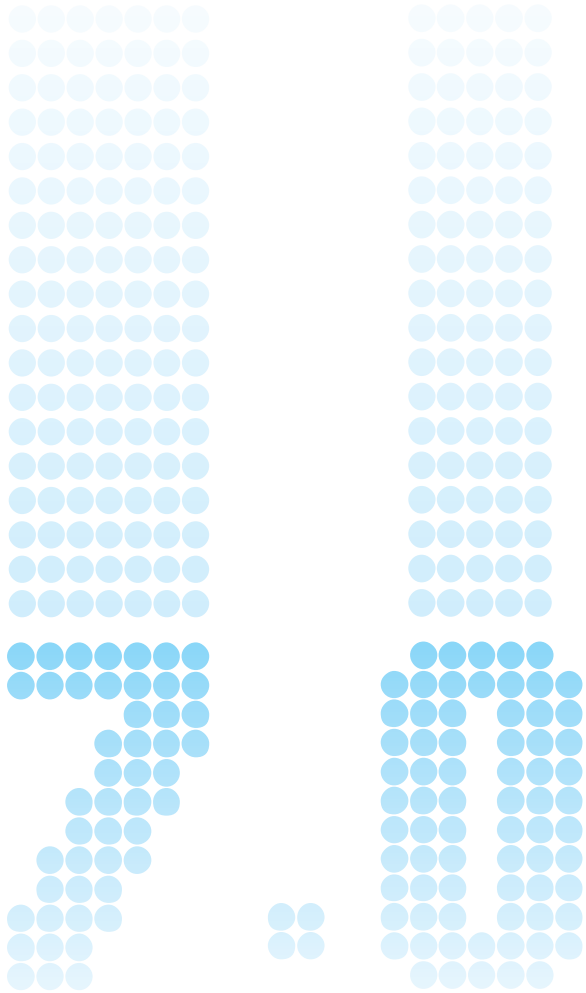
- Relocate regulatory and directional traffic signs from ground posts onto traffic signal mast arms. This will help improve traffic flow and reduce signage clutter.
- Improve the streetscape at approaches to the commercial core of the corridor. The burying of overhead utilities will provide room for surface improvements. Such improvements can be defined by distinctive street furniture, lighting, landscaping, and kiosks. The historical character of the area should be visually reflected, and consequently represented by these streetscape improvements.
- Mark the crosswalks clearly to alert motorists of pedestrian activity and to inform pedestrians of the designated crossing areas.
- Improve the pedestrians' safety, visibility, and comfort by making the crosswalks well lighted. ●

Figure 14: Bridge Street Gateway - Before

Source: DVRPC 2007

Figure 15: Bridge Street Gateway - After

Source: DVRPC 2007



Access Management

7.1: Overview

With fewer new roadways being built, the need for effective management of the current transportation network is even more pronounced. Access management is one of many strategies that a municipality can use to improve the function of its roadways. The methods employed in access management seek to optimize and maintain the existing transportation system while preparing for its future growth. Access management is a relatively low-cost strategy to increase public safety, extend the life of major roadways, reduce congestion, and support alternative transportation modes.

Access management entails the careful planning of the location, design, and operations of driveways, median openings, interchanges, and street connections. Its purpose is to provide access to land development in a manner that preserves the safety and efficiency of the transportation system while promoting orderly development. Roadway safety and efficiency decrease as conflicts between the provision of property access and vehicular movement increase. The addition of intersections or driveways intensifies this situation by creating more conflict points and, frequently, more accidents. Access control can serve to decrease total travel time by increasing average travel speed and lessening delay. Access control can also increase highway capacity and fuel efficiency.

Benefits of Access Management:

1) Motorists face fewer conflict points, which makes driving simpler and safer. Drivers also experience fewer traffic delays.
2) Cyclists and pedestrians also experience increased safety because of fewer conflict points and a more predictable motorist travel pattern.
3) Business owners benefit from stable property values and a predictable and consistent development environment due to the well-managed roadway. The more efficient roadway system also captures a broader market base.
4) Communities receive a safer and more attractive roadway corridor with less need for road widening, which may cause displacement of businesses or homes.

Without the use of access management techniques to control the flow of traffic on a roadway, more drastic measures, such as roadway widening, may be needed to reduce congestion. Yet the continuous cycle of widening roadways to manage traffic frequently results in unsightly commercial strip development, degraded scenic landscapes and community character, and an unstable business environment. Often these overburdened arterials cause a spillover of cut-through traffic in residential neighborhoods, exacerbating the initial problem.

The Transportation Research Board identifies ten main principles of access management that help municipalities arrive at the goal of a safe and efficient roadway corridor.

The ten TRB principles, along with brief definitions, follow:

1) Provide a Specialized Roadway System: It is important to design and manage roadways according to the primary functions that they are expected to serve.
2) Limit Direct Access to Major Roadways: Roadways that carry higher volumes of regional traffic function most highly with controlled access. Frequent and direct property access is more compatible with the function of local and collector roadways.

3) Promote Intersection Hierarchy: An efficient transportation network provides appropriate transitions from one classification of roadways to another. Extending this concept to other roadways results in a series of intersection types.

4) Locate Signals to Favor Through Movements: Long, uniform signal spacing on major roadways enhances the ability to coordinate signals and ensure continuous movement of traffic at the desired speed.

5) Preserve the Functional Area of Intersections and Interchanges: Access connections too close to intersections or interchange ramps can cause serious traffic conflicts that result in congestion or crashes.

6) Limit the Number of Conflict Points: Simplifying the driving task contributes to improved traffic operations and fewer collisions. A less complex environment is accomplished by limiting the number and type of conflicts between vehicles, pedestrians, and bicyclists.

7) Separate Conflict Areas: Separating conflict areas helps to simplify the driving task and contributes to improved traffic operations and safety. The necessary spacing between conflict areas increases as travel speed increases to provide drivers adequate perception and reaction time.

8) Removing Turning Vehicles from Through Traffic Lanes: Turning lanes allow drivers to decelerate gradually out of the through lane and wait in a protected area for an opportunity to complete a turn.

9) Use Nontraversable Medians to Manage Left-Turn Movements: Medians can be used to channel turning movements to controlled locations.

10) Provide a Supporting Street and Circulation System: Interconnected street and circulation systems support alternative modes of transportation and provide supplementary routes for bicyclists, pedestrians, and drivers.
(Source: TRB <www.accessmanagement.gov>)

Retrofit Strategies for Developed Areas

Retrofitting access is a long-term commitment that takes continuous effort. However, with access management strategies in place, each opportunity that arises can be taken advantage of to improve the community landscape and provide safe and efficient travel within the transportation network.

General Recommendations:

- Work with property owners to obtain permission for driveway closures, consolidation, or relocation during roadway projects, sidewalk maintenance or additions
- Purchase strategically located vacant or abandoned properties and resell them with access restrictions
- Place planter boxes along unnecessarily wide access points to help define the driveway break
- Require access consolidation where adjacent parcels come under common ownership
- Redesign internal road and parking systems
- Eliminate closely spaced or offset intersections

7.2: Access Management along US 202

Current Conditions

US 202, in the vicinity of the Logan Square Shopping Center in Solebury Township, serves a dual purpose as a regional throughway and a local commercial corridor. Much of the north side of the roadway is zoned as residential, while the south side is primarily governed by the zoning of a Traditional Neighborhood Commercial District (TNC), formerly "Highway Commercial." On the north side, access to US 202 is provided predominantly at major intersections. From the primary access point, an extensive internal street network allows residents to travel in many directions throughout the neighborhood. This consolidated access, located primarily at signalized intersections, is sufficient for providing safe and efficient access for residents while limiting potential conflict points along US 202.

On the other hand, the highway commercial zone on the south side of US 202 exhibits far more points of direct access from the major throughway and very few instances of driveway consolidation supported by an internal street network. The area recently rezoned as TNC is characterized by individual driveways for each business, which results in a high frequency of potential conflict points. There are no deceleration lanes along the corridor; however, in most locations the road shoulder is large enough to accommodate turning vehicles.

Considering the presence of a small amount of vacant and undeveloped properties along this segment of US 202, it is very possible that the corridor will experience an increase in development within this portion of US 202. This influx of developed properties may require increases in roadway capacity and further transportation investments. However, the application of relatively inexpensive access management techniques along US 202 can help to increase the efficiency and safety of the roadway and minimize any necessary future improvements.

Solebury Township is already taking action to improve the compatibility of their zoning ordinance and the expectation of development of the currently vacant properties. The Township has amended the Highway Commercial zoning on the south side of Route 202. The new Traditional Neighborhood Commercial District (TNC) is "designed to enhance the rural and historic context of the community." The ordinance provides opportunities for development in the form of a mix of commercial and office uses and also allows single properties that combine a dwelling and a business use. Specific objectives of the new ordinance focus on protecting, conserving, and enhancing Solebury's natural resources while also promoting diverse, sustainable, and well-integrated development. Many of the techniques used in access management, such as sharing driveways and parking areas and providing multimodal access to properties, coincide with the goals of this new ordinance. Additionally, the access management recommendations below are designed to contribute to an appropriate streetscape along US 202, as defined by this revised ordinance.

Recommendations:

After discussions with local officials and multiple field visits to the US 202 corridor, several access management techniques were recommended to improve the safety and efficiency within the case study area. These recommendations are shown in ***Figure 16***, with accompanying photo

simulations to further characterize some of the suggested improvements. Alterations to Solebury Township's Traditional Neighborhood Commercial District (TNC) to incorporate access management principles and provide a foundation for the recommended physical treatments are also shown in this report.

- ***Implement a Rear Service Road***

  This is the primary recommendation. Several other access management techniques are suggested to support and encourage the use of the service road. While these techniques could also be implemented without this primary recommendation, their impact would be greatly lessened.

  In the case of US 202, a service road is preferred over a frontage road, as this configuration is often less costly and easier to retrofit in developed areas. The suggested service road, shown highlighted in yellow in ***Figure 16***, presents the most significant change for the Route 202 corridor. While the exact alignment of this roadway would need to be negotiated with property owners, with added consideration for utilities and natural features, the alignment suggested in Figure 16 was chosen due to several factors.

  Considering that many of the commercial parcels along the corridor can only be accessed directly from US 202, significant levels of local traffic are forced onto the highway. By creating an adjacent roadway network, local traffic can be funneled off of the major roadway and onto less-congested, slower-speed streets.

  Like most service roads, this proposed roadway would extend behind many of the commercial properties that currently front US 202. The suggested extent spans the length of US 202 between the Eagle Diner and the Fountainhead property. The roadway would be designed with an emphasis on accessibility rather than mobility and would serve as the primary access point for businesses along US 202. By encouraging direct access from the service road rather than US 202, small, individual parcels can be developed with frontage along US 202 without compromising the roadway's safety and efficiency.

- ***Consolidate Access on US 202***

  One of the simplest ways to improve efficiency and safety along US 202 is to consolidate business driveways to create joint access points. This access management technique is used in many corridors as a stand-alone strategy. However, the impact of this technique, as well as the acceptance by business owners of the resultant limited direct access, is much greater when paired with the addition of a service road. The consolidation of access will decrease the number of potential conflict points along US 202, and it may contribute to improved safety along this portion of the corridor. The joint driveways also increase efficiency of the roadway by limiting the frequency of turning vehicles.

  Along the US 202 corridor, five access points are recommended for closure. These points are highlighted with red "X"'s in ***Figure 16***. Traveling east on the corridor, two of the suggested

closures are the current location of the New Hope Country Flea Market, and one of two access points for the Eagle Diner. While the Flea Market and the Eagle Diner will lose direct access from US 202, with improved internal circulation they will still be conveniently served by access points at Giuseppe's Pizza and the second Eagle Diner access point. The third access point recommended for closure is the signalized intersection at Logan Square. The closure of this access point is a necessary step toward the subsequent recommendation to realign this driveway with existing Shire Drive. This recommendation will be discussed in more detail later in the report. Since this access is being replaced with an adjacent access point, the closure will not negatively impact the shopping center. Two additional driveways East of Logan Street are recommended for closure: one serving the future Dunkin Donuts site and the second providing access to a currently vacant restaurant. Both affected properties border a side street with direct access to the proposed parallel street network. This arrangement affords both properties convenient and efficient access without impeding traffic on US 202. Also, the topography of these hilltop parcels creates limited sight distance for drivers entering US 202 from these properties.

- ***Realign Offset Intersection***

  As noted earlier, this study recommends closing the current access to Logan Square in favor of a primary access point aligned with Shire Drive. Considering that there is already a traffic signal at Shire Drive, the proposed realignment of the intersection will not adversely impact traffic signal spacing along US 202. The current offset intersection produces a five-leg intersection with several conflict points and requires numerous traffic signal phases to accomplish all turning movements. By realigning the access points into a standard four-leg intersection, the number of conflict points is reduced. Additionally, with improved signal timing, several movements can be accomplished simultaneously, thus improving the efficiency of this intersection.

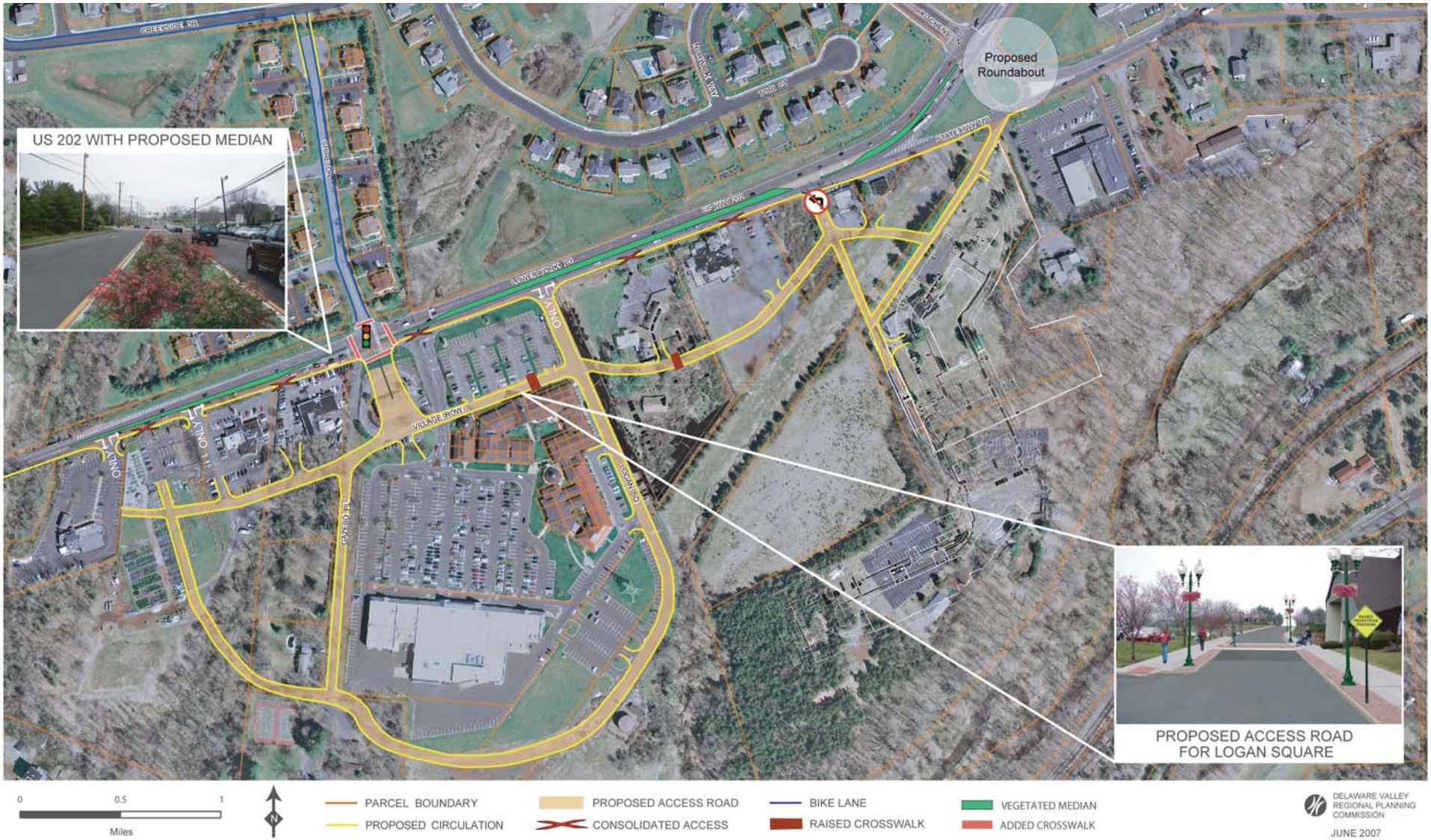
  Realigning the Logan Square access point into a traditional four-leg intersection also provides benefits for pedestrian safety. In the current design, pedestrians must cover a considerable distance while crossing five access points during a variety of traffic signal phases. The proposed realignment reduces the number of conflict points between motorists and pedestrians and also shortens the distance between each access point.

  Due to the access realignment, internal circulation within the Logan Square shopping center will be slightly adjusted, as shown in **Figure 16**. The circulation proposed provides a direct traffic pattern from the entry point of the shopping center to the primary parking area. The primary access design also allows for clear and direct turning movements to arrive at other portions of Logan Square, as well as to adjacent parcels.

- ***Control Turning Movements***

  In addition to the consolidation of driveways, this study suggests permitting only right-in / right-out movements from US 202 to

Figure 16: Access Management Recomendations



most access points. This recommendation is consistent for this corridor, as the designation of access points to only right-in / right-out traffic is already being encouraged by businesses along US 202. Due to the control offered by the traffic signal at the Shire Drive and Logan Square Shopping Center, all movements would continue to be permitted at this intersection. In addition, westbound traffic would be permitted to make a left turn onto the street adjacent to the Fountainhead property, using the current unsignalized left turn lane. Due to the lack of a traffic signal and the steep geography, left turns would not be permitted onto US 202 from this access driveway. Presently, a roundabout is proposed at the US 202 / PA 179 roadway split. The design of the service road and its access points may require minor changes in the eastern portion of the study area. Although PennDOT does not maintain firm requirements on the spacing of access points and roundabout approaches, Kansas, a state progressive in roundabout design, upholds a minimum spacing of approximately 200 feet, dependent upon volumes and design. With this criterion in mind, the access adjacent to the Fountainhead would still be viable, as it is over 500 feet from the proposed roundabout location. Conversely, the easternmost access point for the Fountainhead directly abuts the proposed roundabout site and will need to be reassessed at the time of the roundabout's final design. Ideally, one approach of the proposed roundabout would directly contribute to the parallel street network proposed in this study.

To effectively enforce right-in / right-out access along much of the corridor, this study suggests the implementation of a vegetated median extending the length of the study corridor. Shown in ***Figure 16***, and also as a photo simulation in ***Figure 18 (Figure 17 shows the before view)***, the proposed planted median could be accommodated by the current pavement width. The median also visually tightens the travel lanes, which may cause motorists to drive with a higher level of caution. Finally, the planted median will beautify the corridor and create a unique sense of place for this portion of US 202.

- ***Create a Parallel Network***

It is important to link the new roadway to the current street network. The proposed service road relies heavily on intersections with Gazebo Place and other existing internal circulation roads of commercial properties. By adding perpendicular streets into the network, drivers have a number of options to access parcels, ensuring that the service road itself is not quickly overburdened by congestion.

In the suggested alignment, eastbound travelers can enter the parallel road network in several locations, including minor access driveways, local streets, or at the signalized intersection at Shire Drive. Westbound travelers have fewer, yet considerable, options. These travelers are limited to making a left turn into the street network at the convergence of US 202 and PA 179 or at the signalized intersection at Shire Drive. More options may become available with the future construction of a roundabout at the US 202 / PA 179 split.

One danger of a service road is that it will become a preferred cut through for drivers to advance along the parallel major roadway. To diminish this likelihood, increase safety, and retain the preferred character of a local street, traffic control devices, such as stop signs, should be located at the busiest intersections along the service road. The calm nature of the service road can also be retained by including curves in the roadway design. Figure 16 suggests concentrating the curved portion of the roadway in the eastern portion of the study area. This area also has a challenging natural topography of several hills and descents that may be safer to traverse in meandering curves rather than in a series of steep hillcrests.

- ***Increase Roadway Frontage***

  In several cases, the proposed alignment of the service road does not follow parcel lines, but rather travels though a parcel, splitting it into two smaller lots. While this is not the ideal situation for many communities, in this case, the placement of this roadway supports Solebury Township's desire to develop and maintain a traditional neighborhood commercial atmosphere. Property owners still have many options for successfully and profitably developing their parcels. Parcels on both sides of the service road could be developed with small-scale businesses and commercial properties, thus laying the ground work for a local business district parallel to the major thoroughfare of US 202.

Figure 17: Access Management Photo Simulation - Before

Source: DVRPC 2007

Figure 18 - Access Management Photo Simulation - After

Source: DVRPC 2007

The service road alignment shown on ***Figure 16*** aims to extend Village Row, currently a minor element of Logan Square's internal circulation, in both directions, ultimately stretching from the westernmost driveway at the Eagle Diner to the Fountainhead property. As previously mentioned, the alignment of the service road is negotiable based on participation of property owners, proposed site plans, topography, and protection of natural features. However, the benefit of extending Village Row is the significant contribution that the alignment would make toward developing a traditional neighborhood character along US 202 in Solebury Township. Village Row is already lined with several shops, offices, and other commercial uses that could create a base for the development of this area into a more traditional, walkable downtown. Additionally, larger parcels to the east could be bisected by a continuation of Village Row, resulting in several smaller parcels with roadway frontage. A photo simulation of Village Row, facing east toward the proposed Dunkin Donuts property, is shown in ***Figure 19 and Figure 20***.

- ***Safely Accommodate Alternate Transportation Mode***s
  Considering that the implementation of the service road would result in higher speed through traffic on US 202, the addition of sidewalks and bicycle lanes along the roadway may not be safe for users. Instead, this study suggests relying primarily on the service road and parallel street network to provide safe access for alternative modes of transportation.

  The right of way available for the proposed roadway may not be sufficient for the designation of bike lanes. However, for a roadway

Figure 19: Access Management Photo Simulation - Before

Source: DVRPC 2007

Figure 20: Access Management Photo Simulation - After

Source: DVRPC 2007

with the expected traffic volume, speed, and behavior of the service road, a less formal approach, such as the posting of “Share the Road” signs, would be sufficient. While bicycle usage would be encouraged throughout the entire parallel network, additional accommodations would not be made on US 202. ***Figure 16*** also shows a formal bicycle lane on the north side of US 202, beginning at Shire Drive and continuing through a proposed connection of residential roadways Shire Drive and Creekside Drive.

Another cornerstone of a vibrant traditional downtown commercial area is walkability. This study recommends accommodating pedestrian activity in this portion of the US 202 corridor by outfitting the entire parallel street network with sidewalks and clearly defined crossings at access points. Continuing these sidewalks into the housing development on the North side of US 202 may also encourage local residents to forgo vehicle travel in favor of walking to the commercial establishments in the TNC. The addition of sidewalks may also encourage patrons who do drive to the area to park their vehicles once and navigate between stores and attractions on foot. The inclusion of basic pedestrian amenities, such as sidewalks, pedestrian lighting, and even shade trees, would have the added benefit of creating a more pleasant landscape and defined sense of place in this area.

The provision of safe locations for pedestrians to cross both the service road and US 202 is paramount. As shown in ***Figure 20***, raised, textured crosswalks are suggested for two locations along the service road: one at the main entrance to the Logan Square shops, and another further east at the future site of Dunkin Donuts. These crosswalks would allow pedestrians to safely cross between parking areas and commercial uses. To limit conflicts with high speed through traffic, only one pedestrian crossing is suggested along US 202. This crossing, shown in ***Figure 16 and Figure 18***, would be located at the proposed realigned signalized intersection at Shire Drive. It is recommended that this crossing be outfitted with textured materials and lighting to increase its visibility and safety. Pedestrian accommodations, such as push buttons and signal heads, are also recommended to increase convenience and safety at this location.

Finally, when designing a service road, it is important to consider the needs of transit. Despite the current minimal transit activity in the corridor, future development and settlement patterns may result in increased transit provision. Providing safe pockets of space that could be used in the future for transit stops can eliminate the need for costly retrofits later.

- ***Alter Township Ordinance(s) to Support Access Management***
  In addition to the physical access management plan shown in ***Figure 16*** and explained above, this study suggests alterations to the Solebury Township zoning ordinance as well. These additional ordinances will provide the legal support for the changes shown in the physical access management plan. The access management ordinance language referenced in ***Table 2*** (next page) is taken from the PennDOT Model Access Management Ordinance Handbook.
  In several instances, changes could be made to the new TNC zoning ordinance or to Solebury Township’s Subdivision and Land Development Ordinance (SLDO), depending on the preference of Township officials.

7.3: Access Management Plan Conclusion

The physical access management plan presented for the US 202 corridor in Solebury Township is a flexible document. The plan suggested is based on current conditions, as well as the community vision presented in the TNC zoning ordinance. With the anticipated addition of a roundabout at the split between US 202 and PA 179, minor alterations to this plan may be necessary. Considering that the township does not have sole jurisdiction over the US 202 roadway, the realization of this plan will require coordination with PennDOT and neighboring municipalities. As mentioned earlier, Solebury Township can still provide significant input on the future of this corridor by adopting access management ordinances to ensure that developments are designed in accordance with local expectations.

While the plan presented focuses on a particular portion of US 202, the recommended concepts could be applicable in many other areas of the corridor, including those in other municipalities. The plan could also be adjusted to accommodate a variety of business needs, pending development plans, environmentally-sensitive areas, local preference etc.

7.4: Further Guidance

For additional information regarding access management, refer to:

- Pennsylvania Department of Transportation. 2005. Access Management: Model Ordinances for Pennsylvania Municipalities Handbook.
- Access Management TRB Committee ADA70. http://www.accessmanagement.gov

Table 2: Access Management Ordinance Recommendations

Ordinance	*Purpose*	*Solebury Ordinance Change*
Number of Driveways Tier I (A.1)	Regulates the number and location of driveways for each parcel	Add driveway spacing requirements to Section 1003 as letter B, or to SLDO
Corner Clearance Tier I (A.2)	Ensures that access driveways are not spaced too close to one another or to intersections with minor streets	Add driveway spacing requirements to Section 1003 as letter B, or to SLDO
Joint and Cross Access Tier I (A.5)	Requires joint driveways where desired driveway spacing is not possible. Also puts forth requirements for property owners of joint driveways	Add to Section 1004.B.1
Driveway Spacing Tier II (B.1)	Regulates the spacing of access driveways and their alignment with other driveways and minor streets	Add driveway spacing requirements to Section 1003 as letter B or to SLDO
Frontage / Service Road Tier III (A.2)	Explains the purpose of a service road and requires abutting developments to gain access from the service road.	Add to Section 1004 as letter F
Non traversable Medians Tier III (A.3)	Regulates presence and design of medians, median breaks, and median ingress/egress lanes.	Add to Section 1004 as letter G

Source: DVRPC, 2007

Buckingham Township Transportation Improvements

8.1: Overview

The western end of the study corridor is situated in Buckingham Village. This area of Buckingham Township is circumscribed by three major roadways: US 202, PA 263, and PA 413. These three roads act jointly as a single network. However, the two intersections of US 202 with PA 263, and PA 263 with PA 413, have been identified as the most problematic. Thus, at this edge of the corridor, the study area deviates slightly from US 202 and extends onto PA 263/York Road for about a quarter-mile in order to incorporate these two intersections.

8.2: Intersection of US 202 and PA 263

This three-legged intersection is located where PA 263 merges onto US 202. At most three-legged intersections, the primary roadway receives the free-flow designation. At this location, the northeast-bound PA 263 approach onto US 202 is granted the free-flow movement. This operational hierarchy is reflected in the "York Road" street name designation for both the 263 and southwest-bound US 202 approaches. There are single-lane approaches on all legs, with channelized right turns for both the eastbound US 202 and southwest-bound US 202 legs. The existing geometry does not allow for northeast bound PA 263 vehicles to make left turns onto US 202. Overall, this configuration has contributed towards a congested traffic flow.

As a result, the project team has conducted an initial crash analysis for the intersection and its vicinity, as well as a level-of-service (LOS) analysis of its current and future operations.

Crash Analysis

Crashes in the vicinity of the intersection for the years 2003-2005 are shown on ***Map 13***. There were 15 crashes on PA 263 and four crashes on US 202. Most of the crashes on PA 263 occurred opposite the eastbound US 202 approach, where traffic turns onto York Road. Of these 11 crashes, six were "angle" crashes and five were "rear-end" crashes. During two field views, it was observed that eastbound US 202 vehicles had difficulty finding a suitable gap in the York Road traffic stream. Consequently, some vehicles entered the PA 263 traffic stream at less than optimal times, forcing motorists on 263 to stop suddenly. Such aggressive driver behavior contributes to the extreme delays at the eastbound US 202 intersection approach.

In addition, vehicles traveling northeast-bound on York Road may not be able to recognize the presence of the eastbound US 202 approach vehicles due to inadequate sight distance and a lack of advanced signage. As a result, approach speeds may be higher than they would be otherwise

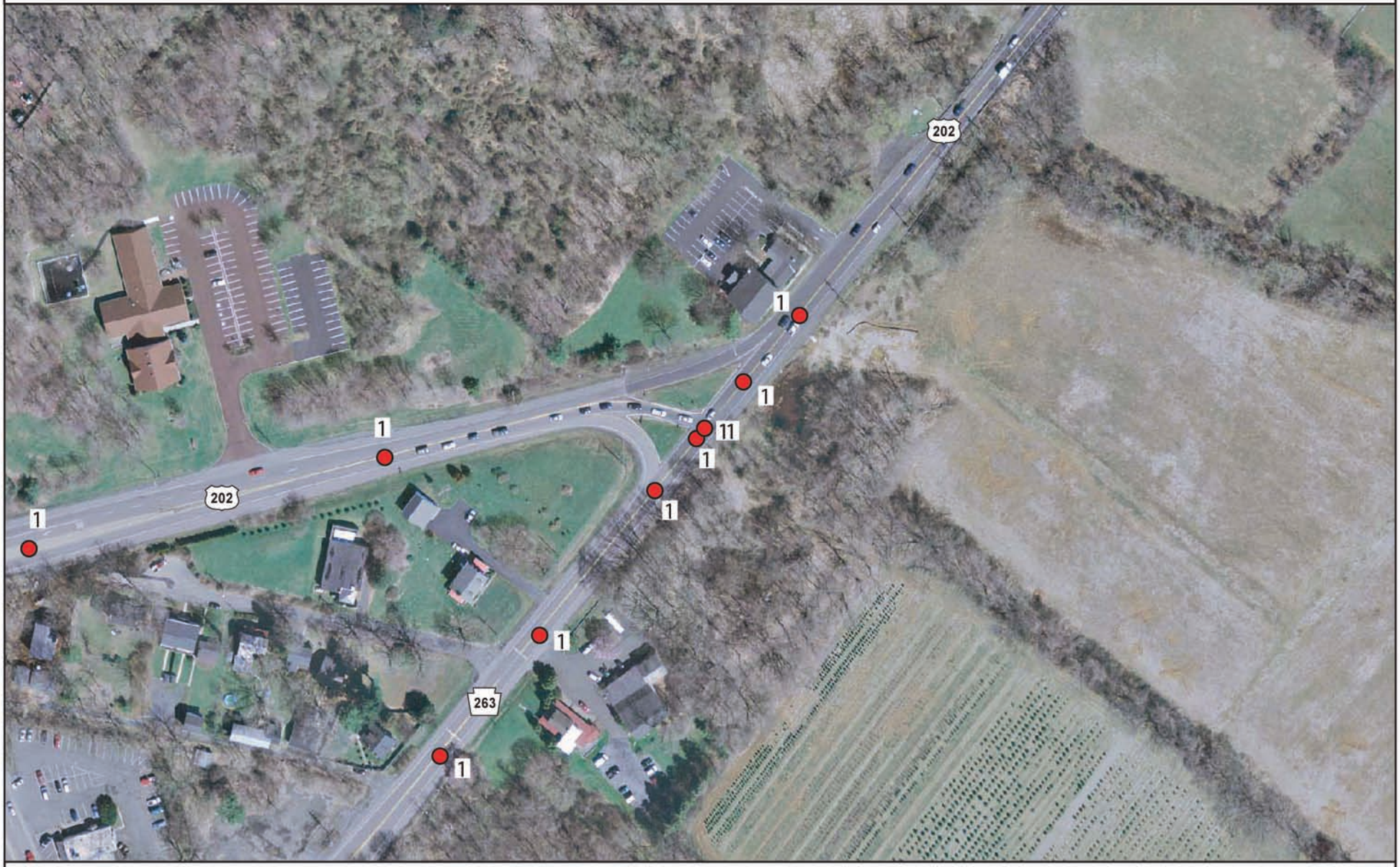
Consequently, the delays at the eastbound US 202 approach and the high speeds on York Road, in combination with aggressive driving behavior, are likely to have been responsible for a majority of the crashes at the intersection.

Level of Service Analysis

Due to the three-legged configuration, the intersection has two channelized right-turn lanes and free flow along York Road. There is in effect only one "controlled" movement: that of the left turn from eastbound US 202 onto York Road. This is a stop sign-controlled movement.

US 202 Corridor Study

Map 13 - PennDOT 2003 - 2005 Crash Locations



0 0.5 1
Miles

N

1 Crash Location (with number of crashes)

Delaware Valley
Regional Planning Commission
June 2007

All of the alternative scenarios, including the existing conditions, were evaluated via Synchro traffic analysis software. One of the primary inputs for the software is peak hour traffic volumes. As a result, DVRPC conducted manual turning movement counts on a Saturday in November 2006. The complete count data is available in ***Appendix I***. Manual counts were taken from 10:00 a.m. to 5:00 p.m. at this location, and simultaneously to the immediate southwest at the intersection of Durham Road (PA 413) and York Road. The collective peak hour was found to be from noon to 1:00 p.m. The turning movement diagram is shown in ***Figure 21***.

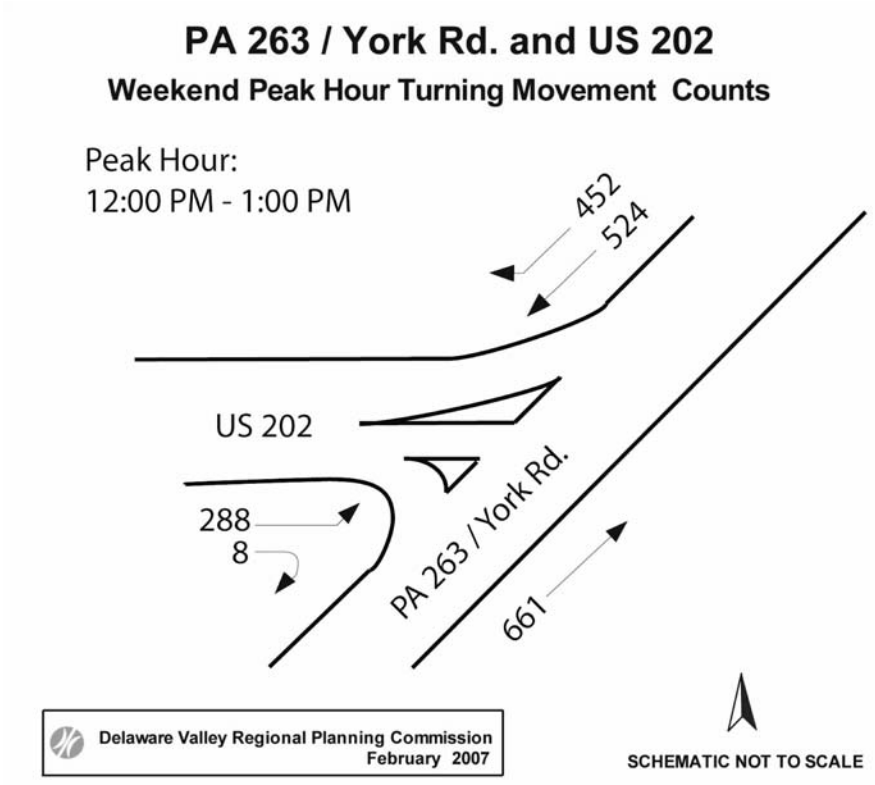
Utilizing Synchro traffic analysis software, this movement was calculated to have a LOS of "F" for existing weekend peak travel volumes, with a calculated average delay of over seven minutes per vehicle. Besides the clear downsides from excessive traffic delay, congestion only contributes towards more aggressive and unsafe driver behavior. Thus, there is a documented need to reduce vehicular delay and upgrade the LOS. Consequently, two potential alternatives were analyzed: a traditional signal and a modern roundabout.

Signalized Alternative Analysis

An analysis was performed to examine the effectiveness of installing a traffic signal at the intersection. For the analysis, consideration was taken for vehicle detection and actuation. Consequently, the potential signal was evaluated as semiactuated; the left-turning vehicles from eastbound US 202 would need to be present for them to receive a green light; otherwise, vehicles along York Road would continuously have the right of way.

Using Synchro software and given existing Saturday peak-hour turning volumes, the intersection overall was calculated to perform at a LOS of "B," with an average delay of approximately 13 seconds per vehicle. The eastbound US 202 left-turning movement onto York Road would improve from a LOS of "F" to that of a "C." Furthermore, the calculated average delay for this movement would be drastically reduced from over seven minutes to approximately 30 seconds. However, this improvement is only

Figure 21: Weekend Peak Hour Turning Movement Diagram

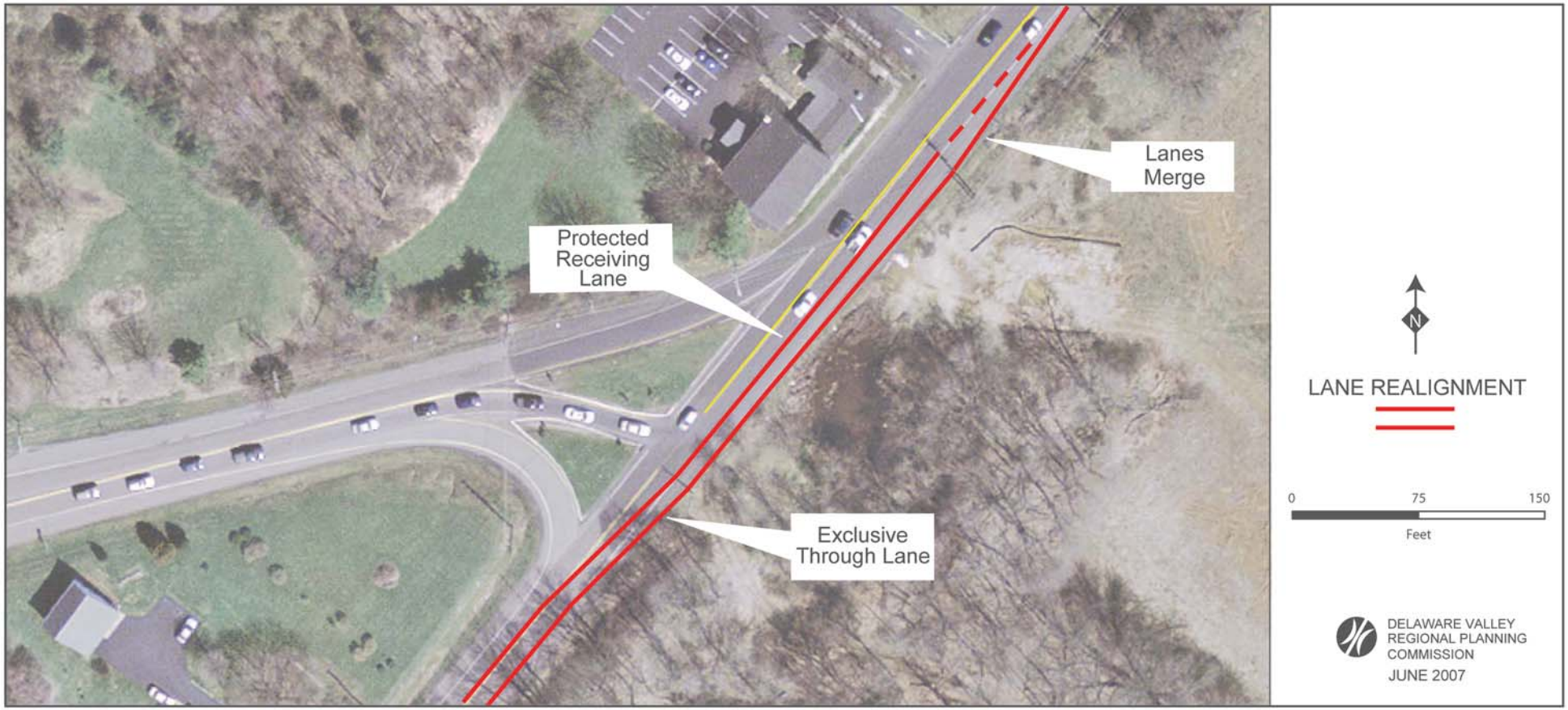


possible by introducing a delay onto the York Road through vehicles. On average, these vehicles would endure between 12 and 17 seconds of delay, whereas before they traveled without delay.

"Florida T" Analysis

An analysis was conducted to evaluate the performance of the intersection as a "continuous flow t-intersection," also known as a "Florida T" ***(Figure 22)***. In such a scenario, the southwest-bound US 202 and northeast-bound York Road approaches retain their unobstructed free flow. However, the eastbound US 202 approach, though still stop controlled, may complete a left turn onto York Road into an exclusive receiving lane without any potential conflict. This is possible by the addition of an exclusive through lane for northeast-bound York Road vehicles. The two exclusive travel lanes later merge downstream of the intersection.

Figure 22: Florida "T" Intersection

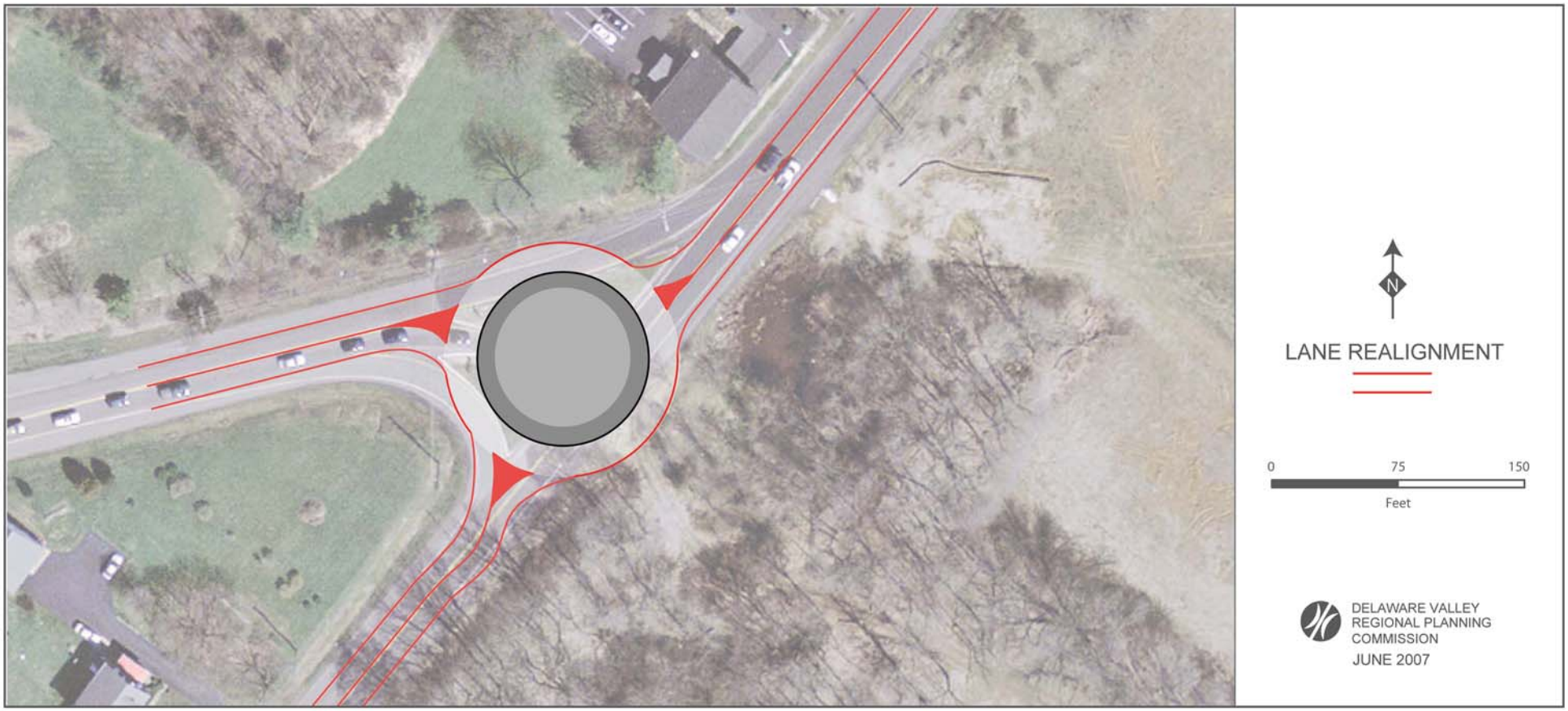


This alternative was analyzed using Synchro software for the weekend peak hour. Overall, the performance of the intersection is tolerable, with a LOS of “D” and an average delay of 31 seconds per vehicle. The problematic eastbound US 202 movement is anticipated to reduce its delay from roughly seven minutes to approximately three minutes, though it retains its LOS of “F”

Roundabout Analysis

A planning-level assessment was performed to assess the suitability and effectiveness of a modern roundabout for the intersection ***(Figure 23)***. State and federal publications were utilized throughout the assessment: specifically, PennDOT’s Guide to Roundabouts and FHWA’s Roundabouts: An Informational Guide.

Figure 23: Roundabout



First, a roundabout's primary design element, the number of circulating lanes, must be ascertained. To accomplish this, two methods of evaluation were performed. The first method utilized "Maximum Daily Service Volume" graphs from FHWA's publication; this data was tabulated and provided in PennDOT's Guide to Roundabouts and is shown in ***Table 3***. In order to determine the number of circulating travel lanes, the principal input for this table is a 24-hour vehicle count, the average annual daily travel (AADT). Such a count was collected by DVRPC in October 2006, which documents an AADT of 21,236 vehicles. According to the table, after two approximations regarding minor-street proportion and left-turn percentage, the maximum AADT that a single-lane three-legged roundabout may accommodate is approximately 15,940 vehicles. This leaves a balance of over 5,000 vehicles. However, FHWA clearly states that a procedure based upon AADT is "offered as a simple, conservative method for estimating roundabout lane requirements." Furthermore, if the AADT exceeds the suggested thresholds, "a single-lane or double-lane roundabout may still function quite well, but a closer look at the actual turning movement volumes during the design hour is required."

Table 3: Roundabout Maximum Daily Service Volumes

Four-leg Roundabout

Category	Proportion of Traffic on Minor Street	Left Turn Percentage	Maximum AADT
Single-lane	33%	0%	22,500
		20%	21,250
		40%	20,000
Single-lane	50%	0%	26,250
		20%	25,000
		40%	23,750
Double-lane	33%	0%	43,750
		20%	41,250
		40%	40,000
Double-lane	50%	0%	51,250
		20%	48,750
		40%	46,875

*For three-leg roundabouts, use 75% of the maximum AADT volumes shown above.

Source: PennDOT, 2001.

An analysis based upon actual turning movement volumes seeks to establish individual entry volume-to-capacity (v/c) ratios. According to both PennDOT and FHWA recommendations, this ratio should not exceed 0.85 for each respective approach lane. The methodology to ascertain the v/c ratio is also based upon peak hour intersection turning movements. Assuming a single circulating lane along with single-lane approaches, the southwest-bound US 202, eastbound US 202, and northeast-bound 263 approaches experience v/c ratios of 0.81, 0.32, and 0.63, respectively: all below the maximum threshold of 0.85. Furthermore, if a channelized right-turn lane similar to the current southbound slip lane is instituted into the roundabout design, the v/c ratio of this approach would decline to 0.43. These calculations are available in ***Table 4***.

For a single-lane roundabout design without a channelized right-turn lane, the largest amount of delay is experienced by the heavy southbound US 202 approach, with a calculated 15 seconds of delay; with the channelized right-turn lane, that delay declines to 5 seconds. These and the other alternative scenario LOSs and delay results are shown in Table 5 on the follow page.

Comparison and Recommendation of Alternatives

The 3-legged intersection of US 202 and PA 263/York Road is currently operating at a LOS of "F," with a crash profile that reflects those high levels of delay. Fortunately, all of the potential alternatives provide a reduction in overall delay with a corresponding improvement in overall Level-of-Service. However, each of the alternatives carries with it a set of strengths and weaknesses.

For instance, the "Florida T" alternative would maintain unconstrained vehicular flow along York Road, but it would require the widening of York Road in both the northeast-bound approach and departure lanes, which may require right-of-way acquisition. In addition, such an intersection

Table 4: Preliminary Roundabout Analysis, V/C Ratios per Approach

	Northbound 263	*Eastbound 202*	*Southbound 202*	*Southbound 202 with a Right-turn Slip Lane*
v = Flow rate for movement, veh/h	661	296	976	524
Qc = Circulating Volume, veh/h	288	524	0	0
c = Capacity of movement, veh/h c = Min{(1,212-0.5477 * Qc), (1,800-Qc)}	1,054	925	1,212	1,212
volume/capacity ratio	0.63	0.32	0.81	0.43

Source: DVRPC, 2007

Table 5: Level of Service under Different Scenarios

Scenario	Direction of Travel	Weekend Peak Hour LOS with Average Delay / Vehicle	
Existing Conditions		LOS	Delay (sec)
	US 202 Eastbound	F	451
	US 202 Southbound	A	0
	PA 263 Northbound	A	0
	Intersection	F	69
"Florida T"		LOS	Delay (sec)
	US 202 Eastbound	F	201
	US 202 Southbound	A	0
	PA 263 Northbound	A	0
	Intersection	D	31
Semiactuated Signal		LOS	Delay (sec)
	US 202 Eastbound	C	30
	US 202 Southbound	A	6
	PA 263 Northbound	B	14
	Intersection	B	13
Single-Lane Roundabout		LOS	Delay (sec)
	US 202 Eastbound	A	6
	US 202 Southbound	B	15
	PA 263 Northbound	A	9
	Intersection	B	11
Single-Lane Roundabout with a WB Channelized Right Turn		LOS	Delay (sec)
	US 202 Eastbound	A	6
	US 202 Southbound	A	5
	PA 263 Northbound	A	9
	Intersection	A	7

Source: DVRPC, 2007

configuration may be unfamiliar with area motorists, causing it to suffer shortcomings in initial operations and public opinion.

With regard to the signalized alternative, delay is placed upon the previously free-flowing York Road vehicles. In addition, it would require the installation, and subsequently incur costs of infrastructure, such as electricity wiring, mast arms, signal heads, and vehicle detection hardware. However, the signal may be implemented relatively soon with little inconvenience to area motorists.

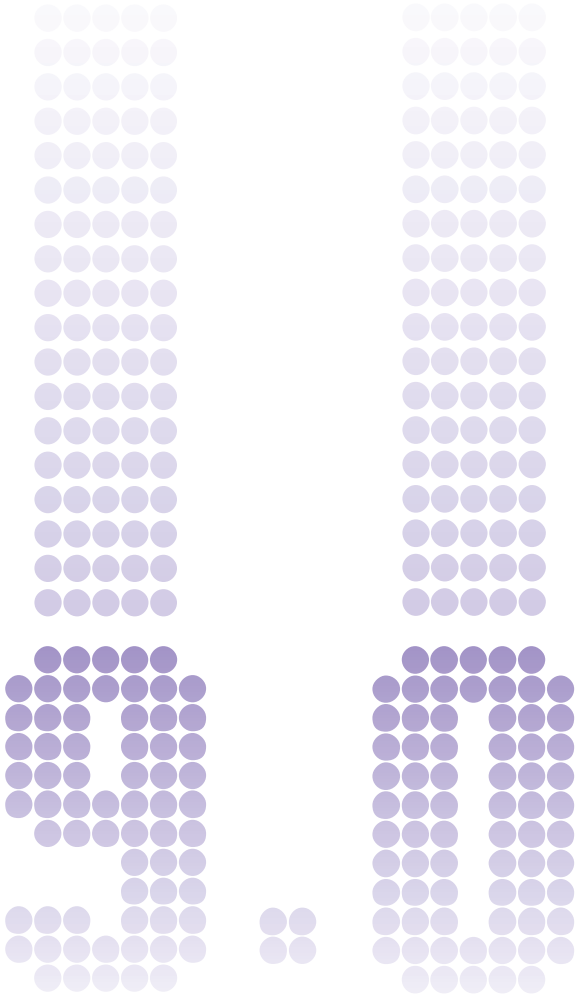
The roundabout alternative would also introduce delay upon the York Road vehicles. In addition, this option may also require right-of-way acquisition, primarily to accommodate the central island and the circulating roadway. And again, there may be initial public opposition to the roundabout due to the introduction of a relatively unorthodox intersection layout. Fortunately, such resistance may be minimized by the planned construction of several roundabouts in surrounding communities. Furthermore, the roundabout may also provide the safest scenario. Due to design-induced lower approach and intersection speeds, in combination with a reduction in conflict points, roundabouts have been proven to be safer than traditional intersection controls. It will also provide superior off-peak service, as it would eliminate any red-light delay during such periods. Lastly, the potential for landscaping of the central island may provide aesthetic qualities that would be more suitable for the rural character of the location and the corridor as a whole.

Consequently, due to the drastic improvement in service, the documented reduction in the frequency and severity of crashes, and the anticipated implementation of roundabouts throughout neighboring municipalities, this report recommends a roundabout as the preferred long-term alternative.

8.3: Intersection of PA 263 and PA 413

Currently, at the intersection of PA 263 and PA 413, there are four legs, each with two travel and two departure lanes. A Wawa convenience market is located at the northern corner of the intersection; it is accessible along both PA 263 and PA 413. At the eastern corner, with minimal setback from the roadway, is Bogart's Tavern, a historical structure dating back to the Revolutionary War.

There is a proposed augmenting of the intersection of PA 413 and PA 263. In-pavement vehicle loop-detectors are to be installed for all four approaches. The signal plan will be converted from a fixed-timing plan into a fully-actuated eight-phase plan. And though there are no plans for road widening, a few lane assignments will be changed. This construction is scheduled to begin in the summer of 2007. ●



Plan Implementation

The Improvements Implementation Matrix can be used as a dynamic long-range tool for the systematic selection of projects to create a significantly improved transportation system within the study area. This document can serve as a punch list for the government agencies with a stake in the implementation of improvements. Detailed funding options are available in ***Appendix II***.

Characteristics

In choosing which projects should advance first, stakeholders can be guided by the information presented in ***Table 6*** (starting on next page). Each improvement scenario identified is evaluated in terms of project priority, cost range, and project benefits.

Priority

Priorities are estimated in terms of three categories: high, moderate and low. Priorities are assigned based on the perception of the extent of the problems they present drivers, with safety being most important, but congestion (or time delay) and mobility also being considered.

Cost Range

Costs are also assigned to categories of high, moderate, and low. High-cost projects usually involve a major commitment from one or more funding sources, lengthy public involvement, and several years lead time in programming the required funds. They are typically large-scale, complex, or multiphased improvements and can entail the construction of new facilities. In general, a project in this category is estimated to cost between $5 and $35 million; however, some major projects have been known to cost in the hundreds of millions of dollars. An improvement estimated to have a moderate cost could involve a major reconstruction of an intersection, construction of a short connector road, or a widening of an existing road. In general, a project in this category is estimated to cost between $2 and $5 million. Low-cost projects can often be fast tracked with maintenance or pool funding. They are often operational type improvements at isolated locations and typically cost less than $2 million. These cost ranges are generalized estimates and could be significantly changed for a specific location due to environmental, right-of-way, or other factors uncovered during detailed design of the improvement.

Benefits

Benefits describe the kind of impact the improvement will yield, such as enhancing safety, lessening congestion, improving mobility, or encouraging economic development.

9.1: Implementation Matrix

see ***table 6***.

Table 6: Implementation Matrix

US 202/PA 179-Eastern Bucks County Transportation Improvements Implementation Matrix				
Improvement	*Location*	*Priority*	*Cost Range*	*Benefits*
Install "Bike Route" and "Share the Road" signs	Corridor wide	H	L	Safety
Extend painted median and stop bar. Install stop sign.	US 202 at PA 263	H	L	Safety Mobility
Install sidewalks and curb ramps.	US 202 at Street Rd	H	M	Safety Mobility
Repaint faded crosswalks	US 202 at Street Rd	H	L	Safety
Revise signal timing	US 202 at Street Rd	H	L	Mobility Congestion
Install "Intersection Ahead" and street name signage	US 202 at Upper Mountain Rd	H	L	Safety
Improve intersection lighting	US 202 at Upper Mountain Rd	H	L	Safety
Improve clear zone	US 202 at Upper Mountain Rd	H	L	Safety
Repaint pavement markings	US 202 at Upper Mountain Rd	H	L	Safety
Install "Intersection Ahead" and street name signage	US 202 at Aquetong Rd	H	L	Safety Mobility
Improve intersection lighting	US 202 at Aquetong Rd	H	L	Safety
Improve clear zone	US 202 at Aquetong Rd	H	L	Safety
Extend paved shoulder	US 202 at Lwr Mtn. Rd	L	L	Mobility Congestion
Install "Stop Ahead" pavement marking	US 202 at Lwr Mtn. Rd	M	L	Safety
Improve clear zone	US 202 at Lwr Mtn. Rd	H	L	Safety
Improve night-time visibility of signs	US 202 at Lwr Mtn. Rd	M	L	Safety
Explore bus service options	Corridor wide	M	M	Mobility Congestion
Explore options to connect area to SEPTA R5 or R2	Corridor wide	M	H	Mobility Congestion

Table 6: Implementation Matrix cont.

US 202/PA 179-Eastern Bucks County Transportation Improvements Implementation Matrix				
Improvement	*Location*	*Priority*	*Cost Range*	*Benefits*
Explore park-and-ride shuttle options	Corridor wide	M	M	Mobility Congestion
Add bike lane	Gateway at Sugan Rd and PA 179	M	M	Safety Mobility
Construct crosswalk and pedestrian ramps	Gateway at Sugan Rd and PA 179	H	L	Safety
Install streetscape elements	Gateway at Sugan Rd and PA 179	M	H	Development
Install gateway monument	Gateway at Sugan Rd and PA 179	L	M	Development
Construct sidewalk and buffer	PA 179: Sugan Rd to Old York Rd	H	L	Safety
Continue bike lanes	PA 179: Sugan Rd to Old York Rd	M	L	Safety Mobility
Upgrade crosswalk	PA 179: Old York Rd to Kiltie Dr	H	L	Safety
Relocate crosswalk	PA 179: Old York Rd to Kiltie Dr	H	L	Safety
Install crosswalk advisory signs	PA 179: Old York Rd to Kiltie Dr	H	L	Safety
Install in-pavement lighting	PA 179: Old York Rd to Kiltie Dr	M	M	Safety
Construct sidewalk	PA 179: Old York Rd to Kiltie Dr	H	M	Safety Mobility
Construct bike lane	PA 179: Old York Rd to Kiltie Dr	M	L	Safety Mobility
Construct sidewalk	PA 179: Kiltie Dr to Ferry St	H	M	Safety Mobility
Bury overhead utilities	PA 179: Kiltie Dr to Ferry St	M	H	Mobility Development
Install streetscape elements	PA 179: Kiltie Dr to Ferry St	M	M	Safety Development
Install pavement markings	PA 179: Kiltie Dr to Ferry St	H	L	Safety
Enhance crosswalks	PA 179: Kiltie Dr to Ferry St	M	M	Safety

Table 6: Implementation Matrix cont.

US 202/PA 179-Eastern Bucks County Transportation Improvements Implementation Matrix				
Improvement	*Location*	*Priority*	*Cost Range*	*Benefits*
Introduce streetscape improvements	PA 179: Union Square Drive to Main St	M	M	Development
Expand sidewalk	PA 179: Union Square Drive to Main St	M	H	Safety Mobility
Install signs on signal mast arms	Bridge St Gateway	M	M	Safety
Bury overhead utilities	Bridge St Gateway	M	H	Mobility Development
Introduce streetscape improvements	Bridge St Gateway	M	M	Development
Upgrade crosswalks	Bridge St Gateway	H	L	Safety
Consult property owners regarding driveway closures	Corridor wide	M	L	Mobility
Purchase strategically located land	Corridor wide	M	H	Mobility
Install planter boxes	Corridor wide	M	L	Mobility
Require access consolidation	Corridor wide	M	M	Mobility
Redesign internal road and parking systems	Corridor wide	M	H	Mobility
Eliminate closely spaced or offset intersections	Corridor wide	M	H	Mobility
Implement rear service road with bicycle lanes	Logan Square Area	M	H	Mobility Congestion
Consolidate business driveways	Logan Square Area	M	H	Mobility
Realign Shire Drive intersection	Logan Square Area	M	H	Mobility
Control turning movements	Logan Square Area	M	M	Mobility Congestion
Create parallel network	Logan Square Area	M	H	Mobility
Increase roadway frontage	Logan Square Area	L	H	Development
Alter township ordinances	Solebury Township	H	L	Mobility Congestion

Source: DVRPC, 2007

APPENDIX 1

Traffic Count Data
DELAWARE VALLEY REGIONAL PLANNING COMMISSION
OFFICE OF TRAVEL MONITORING AM INTERVAL COUNTS
COUNTY: BUCKS
MUNICIPALITY: BUCKINGHAM
INTERSECTION: North-South Street & East-West Street
STREETS: YORK RD SR 202
DATE: 11/18/06
DAY: SATURDAY
WEATHER: FAIR
FILE NUMBER: 4

				YORK RD								SR 202			
STARTING		1-NORTHBOUND				2-SOUTHBOUND				3-EASTBOUND			N-S	E-W	
TIME	L	S	R	TOTAL	L	S	R	TOTAL	L	S	R	TOTAL	TOTAL	TOTAL	TOTAL
10:00 10:15	0	78	0	78	0	108	71	179	74	0	0	74	257	74	331
10:15 10:30	0	148	0	148	0	112	90	202	80	0	4	84	350	84	434
10:30 10:45	0	172	0	172	0	125	87	212	62	0	6	68	384	68	452
10:45 11:00	0	186	0	186	0	123	98	221	65	0	6	71	407	71	478
11:00 11:15	0	171	0	171	0	118	108	226	90	0	5	95	397	95	492
11:15 11:30	0	162	0	162	0	107	110	217	68	0	1	69	379	69	448
11:30 11:45	0	177	0	177	0	130	104	234	64	0	6	70	411	70	481
11:45 12:00	0	177	0	177	0	161	96	0	68	0	3	71	177	71	248
12:00 12:15	0	156	0	156	0	118	99	217	69	0	1	70	373	70	443
12:15 12:30	0	169	0	169	0	130	89	219	74	0	2	76	388	76	464
12:30 12:45	0	166	0	166	0	141	116	257	72	0	1	73	423	73	496
12:45 1:00	0	170	0	170	0	135	148	283	73	0	4	77	453	77	530
1:00 1:15 0	0	141	0	141	0	134	121	255	80	0	0	80	396	80	476
1:15 1:30 0	0	120	0	120	0	145	114	259	78	0	1	79	379	79	458
1:30 1:45 0	0	122	0	122	0	136	89	225	77	0	4	81	347	81	428
1:45 2:00 0	0	140	0	140	0	120	109	229	70	0	2	72	369	72	441
2:00 2:15 0	0	133	0	133	0	112	114	226	69	0	4	73	359	73	432
2:15 2:30 0	0	129	0	129	0	96	109	205	72	0	1	73	334	73	407
2:30 2:45 0	0	115	0	115	0	105	106	211	76	0	6	82	326	82	408
2:45 3:00 0	0	129	0	129	0	109	93	202	70	0	1	71	331	71	402
3:00 3:15 0	0	126	0	126	0	126	111	237	78	0	4	82	363	82	445
3:15 3:30 0	0	122	0	122	0	131	119	250	75	0	2	77	372	77	449
3:30 3:45 0	0	122	0	122	0	102	81	183	89	0	0	89	305	89	394
3:45 4:00 0	0	121	0	121	0	138	110	248	71	0	1	72	369	72	441
4:00 4:15 0	0	122	0	122	0	129	109	238	73	0	0	73	360	73	433
4:15 4:30 0	0	122	0	122	0	136	113	249	64	0	1	65	371	65	436
4:30 4:45 0	0	113	0	113	0	106	105	211	77	0	1	78	324	78	402
4:45 5:00 0	0	131	0	131	0	114	111	225	61	0	3	64	356	64	420
TOTALS	0	3940	0	3940	0	3447	2930	6120	2039	0	70	2109	10060	2109	12169
P.H. am															
P.H. pm															

***NOTE: 14 HEAVY TRUCKS ON YORK RD*
8 HEAVY TRUCKS ON SR 202

Source: DVRPC 2007

Funding Options

Many of the recommendations proposed can be funded through various federal, state, and foundation-funded programs. Potential sources of funding are listed below:

General Funding Sources

Certified Local Governments Grant Program (CLG)
Eligibility: Limited to Certified Local Governments
Purpose: Promotes and protects historic properties and planning for historic districts
Terms: Grants up to 60% of project costs
Deadline: Annually
Contact: Pennsylvania Bureau of Historic Preservation
Phone: 717-787-0771
Website: www.artsnet.org

Community Development Block Grant (CDBG)
Eligibility: Pennsylvania local governments, nonprofits, and for-profit developers
Purpose: Offers grants and technical assistance for federal designated municipalities for any type of community development
Terms: 70% of each grant must be used for activities that benefit low-moderate income persons. Competitive Program - $500,000 maximum
Deadline: Quarterly
Contact: Pennsylvania Department of Community and Economic Development or County Housing Department
Phone: 866-GO-NEWPA (866-466-3972)
Website: www.newpa.com

Community Revitalization Program
Eligibility: Pennsylvania local governments, redevelopment authorities, industrial development agencies, and nonprofits
Purpose: Supports local initiatives that promote the stability of communities
Terms: Grants of $5,000-$25,000
Deadline: Three funding rounds during fiscal year. No more than one application is allowed in any one fiscal year
Contact: Pennsylvania Department of Community and Economic Development, Customer Service Center
Phone: 866-GO-NEWPA (866-466-3972)
Website: www.newpa.com

Conservation/Sound Land Use Grants
Eligibility: Pennsylvania local governments
Purpose: Encourages conservation planning and sound land use practices
Terms: Grant funding for 50% of project cost
Deadline: Varies
Contact: Pennsylvania Department of Community and Economic Development
Phone: 866-466-3972
Website: www.newpa.com

Economic Stimulus Package Technical Assistance
Eligibility: Pennsylvania local governments
Purpose: Provides for an interdisciplinary team of economic development professionals to help communities maximize their use of funding programs. Services provided include expertise on community's economic development priorities and the TIF Program.
Terms: Technical assistance based on community's needs
Deadline: Varies
Contact: Pennsylvania Governor's Center for Local Government Services
Phone: 888-223-6837.
Website: www.newpa.com

Elm Street Program
Eligibility: Pennsylvania local governments, redevelopment authorities, nonprofit economic development organizations, other nonprofits, BIDs, and neighborhood improvement districts
Purpose: Provides grants for planning, technical assistance and physical improvements to residential and mixed use areas in proximity to central business districts
Terms: Maximum $50,000 for administrative grants; Maximum $250,000 for development projects and loans.
Deadline: Varies
Contact: Pennsylvania Department of Community and Economic Development
Phone: 866-GO-NEWPA (866-466-3972)
Website: www.newpa.com

Historic Preservation Grants
Eligibility: Pennsylvania local governments, historical societies, historic preservation organizations, conservancies, educational institutions, museums, and multipurpose organizations
Purpose: Identifies, preserves, promotes, and protects the historic and archaeological resources of Pennsylvania for the public
Terms: Maximum $5,000, no match required. Over $5,001 requires a 50/50 match.
Deadline: Varies
Contact: Pennsylvania Historical and Museum Commission, Bureau for Historic Preservation
Phone: 717-201-3231
Website: www.artsnet.org

Keystone Historic Preservation Grant Program
Eligibility: Pennsylvania local governments and nonprofits
Purpose: Provides funding for preservation, restoration, and rehabilitation of historic resources listed or eligible for the National Register of Historic Places
Terms: Grants will be funded at 50%
Deadline: Varies
Contact: Keystone Historic Preservation
Phone: 800-201-3231
Website: www.artsnet.org

Keystone Innovation Zones (KIZ)
Eligibility: Zone must be geographically identified with links to institutions of higher education and include Pennsylvania governments, academic institutions, and private businesses
Purpose: Renews and focuses the state's commitment to creating new technologies and new entrepreneurs through partnership between academic institutions, the business communities, and municipal governments
Terms: Grant funds can be used for zone coordination, strategic planning, personnel costs, hiring of consultants, and administration of the zone
Deadline: Annually
Contact: Pennsylvania Department of Community and Economic Development
Phone: 866-466-3972
Website: www.newpa.com

Land Use Planning and Technical Assistance Program (LUPTAP)
Eligibility: Pennsylvania cities, boroughs, townships, counties, or multimunicipal entities
Purpose: Helps the developing and strengthening of community planning and management capabilities
Terms: 50% of total costs; $100,000 maximum per fiscal year
Deadline: Continual
Contact: Pennsylvania Department of Community and Economic Development, Southeast Regional Office
Phone: 215-560-2256
Website: www.landuseinpa.com

Local Economic Revitalization Tax Assistance (LERTA)
Eligibility: Pennsylvania local governments and school districts
Purpose: Encourages economic development in targeted areas
Terms: Tax abatements up to 100% on improvements to a property for as long as 10 years
Deadline: Continual
Contact: Pennsylvania Governor's Center for Local Government Services
Phone: 215 -560-3013
Website: www.newpa.org

Local Government Academy Multi-Municipal Planning Grants
Eligibility: Two or more Pennsylvania local governments
Purpose: Encourages the development of multimunicipal plans as authorized by the Pennsylvania Municipalities Planning Code
Terms: Grants up to $7,500
Deadline: Bi-annually
Contact: Local Government Academy
Phone: 412-422-7877
Website: www.newpa.com

Local History Grants
Eligibility: Pennsylvania local governments, institutions, community groups, heritage organizations, or school districts
Purpose: Provides funding for the research, development, and execution of public programs that present Pennsylvania history
Terms: Grants up to $5,000 with no matching funds; Grants between $5,000 and $15,000 require a 50% local match.
Deadline: Varies
Contact: Pennsylvania Historical and Museum Commission
Phone: 717-772-0921
Website: www.artsnet.org

Local Municipal Resources and Development Program (LMRDP)
Eligibility: Pennsylvania local governments and nonprofits
Purpose: Provides grants to municipalities for improving the quality of life within the community
Terms: No maximum or minimum
Deadline: Continual
Contact: Pennsylvania Department of Community and Economic Development, Customer Service Center
Phone: 800-379-7448
Website: www.newpa.com

Main Street Program
Eligibility: Pennsylvania municipalities and downtowns
Purpose: Provides funds for administrative costs associated with Main Street Manager positions and offices, physical improvements, and acquisition costs
Terms: $115,000 over a 5-year period; Downtown Reinvestment and Anchor Building components: up to $250,000 or not to exceed 30% of project costs.
Deadline: Varies
Contact: Pennsylvania Department of Community and Economic Development
Phone: 866-GO-NEWPA (866-466-3972)
Website: www.newpa.com

Preservation Fund
Eligibility: Tax-exempt nonprofits and local governments
Purpose: Preserves properties listed or eligible for the National Register for Historic Places
Terms: Low-interest loans and grants
Deadline: Varies
Contact: National Trust, Northeast Field Office
Phone: 215-848-8033
Website: www.nationaltrust.org

Rehabilitation Investment Tax Credit (RITC)
Eligibility: Pennsylvania owners of a "certified historic structure"
Purpose: Provides funds for large projects involving economic development or local rehabilitation
Terms: Tax credits for expenses; ranges from 10% to 20%
Deadline: Continual
Contact: National Park Service, Bureau of Historic Preservation
Phone: 717-787-0772
Website: www.nps.gov

Revolving Fund for Historic Property Acquisition
Eligibility: Pennsylvania government agencies, nonprofits, or community groups
Purpose: Acquires threatened historic properties
Terms: Low-interest loans up to 96 months; grants up to $50,000
Deadline: Continual
Contact: Preservation Pennsylvania
Phone: 717-234-2310
Website: www.preservationpa.org

Save America's Treasures
Eligibility: Tax-exempt nonprofits and local governments
Purpose: Creates public/private commitments that increase awareness of adaptive reuse efforts
Terms: Dollar-for-dollar matching grants. Grants available from $50,000 to $250,000
Deadline: Annually
Contact: National Park Service
Phone: 215-597-7995
Website: www.nps.gov

Section 108 Program
Eligibility: Enables Pennsylvania local governments participating in the Community Development Block Grant (CDBG) program to obtain federally-guaranteed loans
Purpose: Funds large economic development projects and undertakes revitalization activities
Terms: Vary
Deadline: Varies
Contact: Pennsylvania Governor's Center for Local Government Services
Phone: 888-223-6837
Website: www.newpa.com

Infrastructure Funding Sources

Act 537 Sewage Facilities Planning Grants
Eligibility: Pennsylvania local governments, counties, or municipal authorities
Purpose: Pays for the preparation of sewage facilities plans and revisions required by Act 537
Terms: Grants up to 50% of the project costs
Deadline: Continual
Contact: Pennsylvania Department of Environmental Protection
Phone: 717-783-2290
Website: www.dep.state.pa.us

Infrastructure Development Program (IDP)
Eligibility: Pennsylvania local governments, counties, industrial development authorities, redevelopment authorities, and local development districts
Purpose: Provides funds for specific infrastructure improvements necessary to complement eligible capital investments by private development
Terms: Requirement of private matching funds. Grant maximum of $1.25 million for public improvements. Loan maximum of $1.25 million for privately-owned improvements.

Deadline: Varies
Contact: Pennsylvania Department of Community and Economic Development, Infrastructure Development Program
Phone: 717-787-7120
Website: www.newpa.com

Pennsylvania Infrastructure Investment Authority (PennVEST)
Eligibility: Pennsylvania owner or operator (public or private) of an existing or proposed drinking water or wastewater system or a Pennsylvania municipal owner of a storm water conveyance system
Purpose: Provides funding for design, engineering, and construction costs associated with publicly- and privately-owned drinking water distribution and treatment facilities, storm water conveyance and wastewater collection, conveyance, treatment facilities, and brownfield site remediation
Terms: Funding packages up to $11 million per project for one municipality; Up to $20 million for more than one municipality; Up to $2 million for upfront (5-year loan) design and engineering; Up to 100% of the eligible project costs; Average project size is $1.5 million
Deadline: Varies
Contact: Pennsylvania Infrastructure Investment Authority (PennVEST)
Phone: 717-783-6798
Website: www.pennvest.state.pa.us

Transportation Funding Sources

Bikes Belong
Eligibility: Federal, state, regional, county, and municipal agencies, nonprofits, organizations whose mission is expressly related to bicycle advocacy
Purpose: Funds bicycle facilities and paths that encourage facility, education, and capacity building
Terms: $10,000 or less
Deadline: Quarterly
Contact: Bikes Belong Coalition
Phone: 617-734-2111
Website: www.bikesbelong.org

Community Transportation Development Fund (CTDF)
Eligibility: Nonprofit transit providers, public agencies, local and state governments, and community organizations
Purpose: Promotes better transportation options
Terms: Low-interest loans of up to $150,000 per recipient and 75% of the total project cost; there are several funding options that require a one-time service fee
Deadline: Varies
Contact: Community Transportation Association of America
Phone: 202-661-0210
Website: www.ctaa.org

Competitive Congestion Mitigation & Air Quality Program (CMAQ)
Eligibility: Public agencies, incorporated private firms, nonprofits, and local and county governments
Purpose: Provides funds for projects that contribute to the attainment of the Clean Air Act standards by reducing emissions from highway resources.
Terms: 80% of costs
Deadline: Varies
Contact: Delaware Valley Regional Planning Commission (DVRPC)
Phone: 215.592-1800
Website: www.dvrpc.org

Home Town Streets /Safe Routes to School (HTS/SRS)
Eligibility: Federal or state agencies, Pennsylvania county or local governments, school districts, and nonprofits
Purpose: Encourages the reinvestment in and redevelopment of downtowns and establishes safe walking routes for children commuting

to school
Terms: 80% of total costs
Deadline: Varies
Contact: Delaware Valley Regional Planning Commission (DVRPC)
Phone: 215-592-9215
Website: www.dvrpc.org

Liquid Fuels Tax Program
Eligibility: Pennsylvania local governments
Purpose: Provides funds for any road-related activity
Terms: Vary
Deadline: Annually
Contact: Pennsylvania Department of Transportation, District 6-0
Phone: 610-205-6539
Website: www.dot.state.pa.us

Pennsylvania Infrastructure Bank
Eligibility: Pennsylvania local governments and contractors
Purpose: Provides low-cost financing to municipalities and contractors for eligible transportation improvements
Terms: Low-interest loans from $50,000 to $3.9 million through a revolving loan fund for implementation
Deadline: Continual
Contact: Pennsylvania Department of Transportation (PennDOT)
Phone: 717-772-1772
Website: www.dot.state.pa.us

Surface Transportation Program (STP)
Eligibility: State and local governments
Purpose: Provides funding that can be used on any federal-aid highways, bridge projects, public roads, transit-capital projects, and intra-intercity bus terminals
Terms: Vary
Deadline: Varies
Contact: County Planning Transportation Department
Transit Research & Demonstration Program
Eligibility: Pennsylvania local governments, transit operators, universities, and transit organizations
Purpose: Funds innovative projects that improve the attractiveness of public transit
Terms: Grants for 80% of funding with a 20% local match
Deadline: Continual
Contact: Pennsylvania Department of Transportation, Transit Research and Demonstration Program
Phone: 717-705-1493
Website: www.dot.state.pa.us

Transportation & Community Development Initiative (TCDI)
Eligibility: Eligible municipalities
Purpose: Supports local planning projects to improve transportation and encourage redevelopment
Terms: Grants up to $100,000 for single projects and $125,000 for multi-municipal projects; 20% local match required
Deadline: Every two years
Contact: Delaware Valley Regional Planning Commission (DVRPC)
Phone: 215-592-1800
Website: www.dvrpc.org/planning/tcdi.htm

Transportation Enhancements Program (TE)
Eligibility: Pennsylvania local governments, counties, state or federal agencies, nonprofits
Purpose: Provides for the funding of nontraditional projects designed to enhance the transportation experience, to mitigate the impacts of transportation facilities on communities and the environment, and to enhance community character through transportation-related improvements.
Terms: 80% to 90% of costs can be funded
Deadline: Varies

Contact: Delaware Valley Regional Planning Commission (DVRPC)
Phone: 215-592-1800
Website: www.dvrpc.org/transportation/capital/te.htm

Environmental and Recreation Funding Sources

Challenge PLUS Grants
Eligibility: Pennsylvania local governments
Purpose: Stimulates and assists local governments in developing comprehensive urban and community forestry programs
Terms: Grant amount of $10,000 per municipality
Deadline: Varies
Contact: Pennsylvania Department of Conservation and Natural Resources
Phone: 1-888 PA-PARKS (1-888-727-2757)
Website: www.dcnr.state.pa.us/forestry

Circuit Riders Program
Eligibility: Pennsylvania local governments (multimunicipal)
Purpose: Funds a four-year grant program to hire a full-time director to share services through an intergovernmental cooperative effort
Terms: 100% of salary for first year, then 25% less each year
Deadline: Varies
Contact: Pennsylvania Department of Conservation and Natural Resources
Phone: 1-888 PA-PARKS (1-888-727-2757)
Website: www.dcnr.state.pa.us

Coldwater Heritage Partnership Grants (CHP)
Eligibility: Pennsylvania local governments, counties, and municipal authorities
Purpose: Prepares preliminary watershed assessments
Terms: Grants up to $5,000
Deadline: Varies
Contact: Pennsylvania Department of Conservation and Natural Resources
Phone: 717-787-2316
Website: www.dcnr.state.pa.us

Community Facilities Program
Eligibility: Pennsylvania local governments
Purpose: Provides funds to help develop essential community facilities for public use in rural areas
Terms: Vary
Deadline: Continual
Contact: US Department of Agricultural – Rural Development, Southeast Area
Phone: 717-755-2966
Website: www.rurdev.usda.gov

Community Improvement Grant
Eligibility: Pennsylvania local governments, volunteer groups, or school districts
Purpose: Supports local forestry projects
Terms: Grants for $500 to $3,000
Deadline: Varies
Contact: Urban Forester (in cooperation with Department of Conservation and Natural Resources)
Phone: 610-489-4315
Website: www.dcnr.state.pa.us

Comprehensive Recreation, Park & Open Space Planning Grants
Eligibility: Pennsylvania local governments
Purpose: Develops a comprehensive long-range plan for a municipality's open space and recreational needs
Terms: Grant funding for 50% of project costs
Deadline: Varies
Contact: Department of Conservation and Natural Resources

Phone: 717-787-2316
Website: www.dcnr.state.pa.us

County Natural Area Inventory Grants
Eligibility: Pennsylvania local governments
Purpose: Provides funds to inventory natural areas, special habitats, and areas for open space and recreation
Terms: Grant funding for 50% of project costs
Deadline: Varies
Contact: Department of Conservation and Natural Resources
Phone: 717-787-2316
Website: www.dcnr.state.pa.us

Delaware Estuary Watershed Grants Program
Eligibility: Public or nonprofit private agencies, institutions, and organizations, educational institutions, and local and state governments
Purpose: Develops the capacity of local governments, citizens groups, and other organizations to promote community-based stewardship and enhance local watershed-based resource management
Terms: Grants of $10,000 to $50,000; governmental agencies are encouraged to involve nonprofits in their projects
Deadline: Varies
Contact: National Fish and Wildlife Foundation National Office
Phone: 202-857-0166
Website: www.nfwf.org

Floodplain Land Use Assistance Program
Eligibility: Pennsylvania local governments
Purpose: Provides grants and technical assistance to encourage the proper use of land and the management of floodplain lands within Pennsylvania
Terms: 50% of the eligible costs. No maximum dollar limit
Deadline: Varies
Contact: Pennsylvania Governor's Center for Local Government Services
Phone: 888-223-6837
Website: www.newpa.com

Growing Greener Grants
Eligibility: Pennsylvania municipalities, authorities, or private entities eligible under PennVEST
Purpose: Funds infrastructure improvements, such as drinking water, wastewater, or stormwater
Terms: Vary
Deadline: Varies
Contact: Pennsylvania Infrastructure Investment Authority (PennVEST)
Phone: 717-783-6798
Website: www.pennvest.state.pa.us

Growing Greener II
Eligibility: Pennsylvania local governments and nonprofits
Purpose: Provides redevelopment grants to municipalities and nonprofits to help community downtown redevelopment efforts, focusing on the improvement of downtown sites and buildings
Terms: No minimum or maximum; typical grants average between $250,000 and $500,000
Deadline: Varies
Contact: Pennsylvania Department of Community and Economic Development, Customer Service Center
Phone: 866-GO-NEWPA (866-466-3972)
Website: www.newpa.com

Kodak American Greenways Grants
Eligibility: Local, regional, or statewide nonprofits, public agencies, and community organizations
Purpose: Provides grants to stimulate planning and the design of greenways in communities
Terms: Maximum grant amount is $2,500

Deadline: Annually
Contact: The Conservation Fund
Phone: 703-525-6300
Website: www.conservationfund.com

Land & Water Conservation Fund
Eligibility: State agencies and political subdivisions
Purpose: Provides financial assistance for the preparation of Outdoor Recreation Plans and the acquisition and development of outdoor recreational facilities
Terms: Department of Conservation and Natural Resources must apply on the applicant's behalf; grant can not exceed 50% of project cost.
Deadline: Continual
Contact: National Park Service, Rivers and Trails Assistance
Phone: 215-597-9175
Website: www.nps.gov

Master Site Plan Grants
Eligibility: Pennsylvania local governments
Purpose: Designs neighborhood parks
Terms: Funding for 50% of project costs
Deadline: Annually
Contact: Department of Conservation and Natural Resources
Phone: 717-787-2316
Website: www.dcnr.state.pa.us

Mini Grants
Eligibility: Pennsylvania local governments, volunteer groups, or school districts
Purpose: Supports local forestry projects
Terms: Grants for $100
Deadline: Varies
Contact: Urban Forester (in cooperation with Department of Conservation and Natural Resources)
Phone: 610-489-4315
Website: www.dcnr.state.pa.us

Municipal Challenge Grant
Eligibility: Pennsylvania local governments
Purpose: Supports municipal tree inventories, tree planting, and tree care
Terms: Grants range from $1,000 – $5,000; in-kind match required
Deadline: Annually
Contact: Pennsylvania Department of Community and Natural Resources
Phone: 1-888 PA-PARKS (1-888-727-2757)
Website: www.dcnr.state.pa.us

PECO Green Regions
Eligibility: Municipalities in Bucks, Chester, Delaware, Montgomery, and Philadelphia counties
Purpose: Provides funds to protect, acquire, and enhance open space
Terms: Grants of up to $10,000
Deadline: Bi-annually
Contact: Natural Lands Trust
Phone: 610-353-5597
Website: www.natlands.org

Pennsylvania Heritage Parks Program
Eligibility: Pennsylvania local governments, nonprofits, or federally-designated commissions
Purpose: Promotes public/private partnerships to preserve and enhance natural and historic recreation resources
Terms: Grants require a 25% to 50% match
Deadline: Annually
Contact: Schuylkill River Greenway Association
Phone: 484-945-0200
Website: www.schuylkillriver.org

Rail to Trail Feasibility Grants
Eligibility: Pennsylvania local governments
Purpose: Provides grants to determine the feasibility of converting a railroad right of way to a trail
Terms: Grants fund 50% of total project costs
Deadline: Annually
Contact: Pennsylvania Department of Conservation and Natural Resources
Phone: 1-888 PA-PARKS (1-888-727-2757)
Website: www.dcnr.state.pa.us

Rail to Trail Special Purpose Grants
Eligibility: Pennsylvania local governments
Purpose: Provides grants to develop a detailed study on a particular issue or structure that impacts the conversion of a rail corridor to a trail
Terms: Grants fund 50% of total project costs
Deadline: Annually
Contact: Pennsylvania Department of Conservation and Natural Resources
Phone: 1-888 PA-PARKS (1-888-727-2757)
Website: www.dcnr.state.pa.us

Recreational Trails Program
Eligibility: Pennsylvania county and municipal governments, state and federal agencies, and private organizations
Purpose: Provides grants for developing and maintaining recreational trails and trail-related facilities
Terms: Required 50% match
Deadline: Annually
Contact: Pennsylvania Department of Conservation and Natural Resources
Phone: 1-888 PA-PARKS (1-888-727-2757)
Website: www.dcnr.state.pa.us

Rivers Conservation Program
Eligibility: Pennsylvania local governments or appropriate organization
Purpose: Conserves and enhances river resources through planning
Terms: Funds cannot exceed 50% of the total project costs
Deadline: Varies
Contact: Pennsylvania Department of Conservation and Natural Resources
Phone: 717-787-2316
Website: www.dcnr.state.pa.us

Rivers, Trails, & Conservation Assistance
Eligibility: Local governments, states, and nonprofits
Purpose: Provides technical assistance to communities for trails and greenway planning
Terms: Technical assistance is for one year
Deadline: Annually
Contact: National Park Service, Rivers and Trails Assistance, Philadelphia Office
Phone: 215-597-1581
Website: www.nps.gov

Save a Tree, Plant a Tree
Eligibility: Montgomery and Bucks County local governments
Purpose: Supports and creates local parks and public spaces
Terms: Grants and technical assistance
Deadline: Annually
Contact: Homebuilders Association of Bucks and Montgomery Counties
Phone: 215-657-1300
Website: www.builderfusion.com

Source Reduction Assistance Grant Program
Eligibility: Pennsylvania local governments, counties, and nonprofits
Purpose: Provides funds for activities such as designing for the

environment, environmentally-friendly purchasing, or pollution prevention
Terms: Grants up to $100,000; a local match of 5% is required
Deadline: Varies
Contact: Environmental Protection Agency, Region 3 Office
Phone: 215-814-5415
Website: www.epa.gov

Source Water Protection (SWP) Watershed Protection Grants
Eligibility: Pennsylvania local governments, multimunicipal applications, or community water systems
Purpose: Funds watershed activities, such as the development of public education materials, inventories, or management activities
Terms: One-time grants up to $200,000; a 10% local match is required
Deadline: Varies
Contact: Pennsylvania Department of Environmental Protection
Phone: 717-705-5400
Website: www.dep.state.pa.us

Source Water Protection (SWP) Wellhead Protection Grants
Eligibility: Pennsylvania local governments, multimunicipal applications, or community water systems
Purpose: Funds wellhead area projects (up to five years) that are designed to protect drinking water sources that are used by community water systems
Terms: One-time grants up to $50,000; 10% local match is required
Deadline: Varies
Contact: Pennsylvania Department of Environmental Protection
Phone: 717-705-5400
Website: www.dep.state.pa.us

Tree Improvement Grant
Eligibility: Pennsylvania local governments, volunteer groups, and nongovernmental organizations for urban and community forestry projects
Purpose: Helps communities to initiate programs for public trees that are not receiving regular care and to develop local resources for continuing tree care
Terms: Grant funds must be matched with nonfederal dollars. For municipalities with populations of less than 5,000: 10 trees/year, $1,500 maximum grant. For municipalities with population of 25,000 - 50,000: 40 trees per year, $4,500 maximum grant.
Deadline: Varies
Contact: Pennsylvania Urban and Community Forestry Council
Phone: 717-783-0385
Website: www.dcnr.state.pa.us

TreeVitalize
Eligibility: County and local governments in southeastern Pennsylvania
Purpose: Develops private-public partnerships to address tree coverage in southeastern Pennsylvania
Terms: Grants and technical assistance
Deadline: Varies
Contact: Pennsylvania Horticultural Society
Phone: 215-988-8874
Website: www.treevitalize.net

Watershed Action Grants
Eligibility: Nonprofits
Purpose: Implements conservation plans to protect watersheds
Terms: Grants from $2,000 to $20,000
Deadline: Varies
Contact: The Conservation Fund
Phone: 703-525-6300
Website: www.conservationfund.org

Claneil Foundation
Eligibility: Southeastern Pennsylvania local governments, nonprofits
Purpose: Provides grants for building arts, education, environment, and community development
Terms: Grants range from $1,000 to $290,000 for building renovation,

conferences, consulting, and land acquisition and development; must submit letter of intent
Deadline: Continual
Contact: Claneil Foundation Inc.
Phone: 610-941-1143

McClean Contributionship
Eligibility: Pennsylvania local governments in greater Philadelphia area
Purpose: Helps promote understanding of the natural environment
Terms: Grants range from $1,000 to $50,000
Deadline: Quarterly
Contact: McLean Contributionship
Phone: 610-527-6330
Website: www.fdncenter.org

Wachovia Regional Foundation
Eligibility: Potential grantees must have a current 501(c) (3) status and a minimum of three years of audited financial statements
Purpose: Provides Neighborhood Planning Grants to support the development of resident-driven neighborhood plans that take comprehensive approaches to revitalization
Terms: Grants from $25,000 to $100,000
Deadline: Annually
Contact: Wachovia Regional Foundation
Website: www.wachovia.com

Wachovia Regional Foundation
Eligibility: Potential grantees must have a current 501(c) (3) status and a minimum of three years of audited financial statements
Purpose: Provides Neighborhood Development Grants to support comprehensive community development projects that target specific neighborhoods
Terms: Grants vary in size from $100,000 to $750,000 and are disbursed over three to five years
Deadline: Bi-annually
Contact: Wachovia Regional Foundation
Website: www.wachovia.com
William Penn Foundation
Eligibility: Must be 501(c) (3)
Purpose: Promotes the arts and culture, youth, and community development
Terms: Grants average $10,000 to $500,000; must send letter of intent
Deadline: Continual
Contact: William Penn Foundation
Phone: 215-988-1830
Website: www.williampennfoundation.com

Historical Marker Grants
Eligibility: Pennsylvania public agencies or nonprofits
Purpose: Supports the manufacturing of approved state historical markers
Terms: 50/50 grants requiring a cash match; grants cannot exceed $650
Deadline: Continual
Contact: Pennsylvania Historical and Museum Commission
Phone: 717-787-8823
Website: www.artsnet.org

Local Government Capital Project Loan Program
Eligibility: Pennsylvania municipalities with populations of 12,000 or less
Purpose: Provides funds for the purchase of equipment and construction, renovation, or rehabilitation of municipal facilities
Terms: Loans at an interest rate of 2%. Equipment: Maximum $25,000 or 50% of single piece of equipment, whichever is less. Facilities: Maximum $50,000 or 50% for purchasing, constructing, renovating, or rehabilitating facility, whichever is less.
Deadline: Continual
Contact: Pennsylvania Governor's Center for Local Government Services
Phone: 800-379-7448
Website: www.newpa.com ●

Source: DVRPC, 2007

Publication Abstract

Title of Report: US 202/PA 179 Corridor Study
Publication No.: 07033
Date Published: June 2007

Geographic Area Covered:
The study area includes portions of the Bucks County municipalities of Buckingham Township, Solebury Township, and the Borough of New Hope.

Key Words:
intersection analysis, roundabout, gateway, crosswalk, streetscape, access management, bike network, open space, environmental assessment

Abstract:
This study was developed using a consensus-based approach with input from the corridor communities of Solebury and Buckingham townships and the Borough of New Hope, as well as state and county representatives in the identification of transportation issues. This study documents and describes the existing conditions along the corridor and identifies alternative concepts that address existing deficiencies. Operational improvements were suggested ranging from intersection redesign to improved regulatory signage and pavement markings.

An access management plan was developed for the section of US 202 in the vicinity of Logan Square in Solebury Township. Access management techniques were recommended to improve the safety and efficiency of the corridor. In addition, pedestrian safety recommendations, such as improved crosswalks, sidewalks, and buffers were identified for areas in the vicinity of schools, shopping, and other areas with high pedestrian activity. A bicycle trail map was developed identifying existing and proposed bicycle trails within the corridor and showing their connectivity with other networks in surrounding communities.

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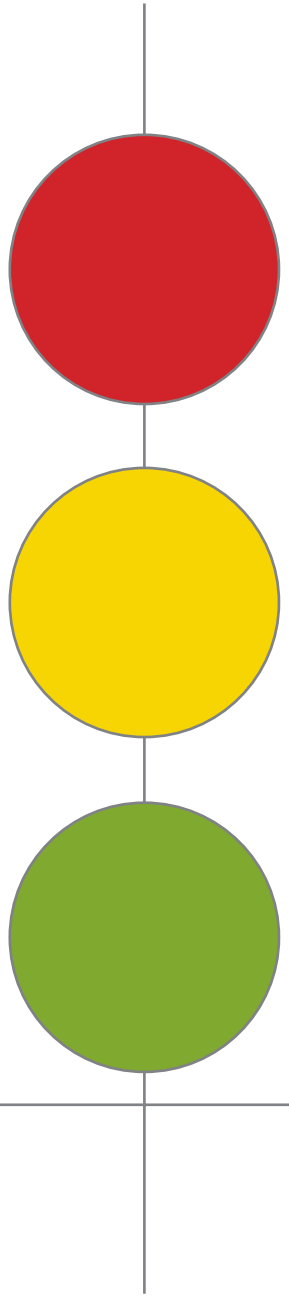

US 202 | PA 611 Corridor Study

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