

CHAPTER 24

TRAFFIC CIRCULATION

INTRODUCTION

Land use and traffic circulation are ultimately linked. The efficient use of land as well as the local quality of life is highly dependent on an effective circulation network. In order for the network to adequately serve the land uses, it must be continually reevaluated as new development occurs. Different types of land uses require different road characteristics, and meeting future transportation needs is dependent on understanding the current network.

When programming road improvements, existing and proposed development areas should be considered. In turn, future development should not result in patterns which will adversely affect the circulation system. It is necessary to follow appropriate design standards, improve existing roads and manage access so the road network will be capable of performing its intended function. Municipal and individual land use decisions are strongly influenced by existing or proposed circulation systems, while at the same time these same land use decisions affect the circulation systems and the functions which the roads are expected to perform.

The circulation system within a community has an important influence on the type and location of development, which occurs. The location of residential, commercial, and industrial uses can influence the function or classification of roads, their design and their condition. In addition to influencing the character of a community by influencing land uses, the character of a community is influenced by the circulation system itself. A municipality with relatively narrow winding roads abutting agricultural and wooded areas will often be perceived as having a rural character. However, a municipality with a circulation system of three and four lane highways abutting intensive development will be perceived as having an urban or suburban character. In areas where development has occurred which does not respect the limitations of the circulation system, the perception can be one of poor planning and frustration.

In the chapter on Regional Influences, some of the factors affecting circulation in the area were discussed, including improvements to the Route 422 Corridor, which could result in increased land use pressure and traffic volumes in both Exeter and Amity Townships; the improvement of the Route 724 and I-176 interchange project in Cumru, which will affect traffic volumes in western Exeter Township; and the use of side roads within the area to carry thru traffic trying to avoid Route 422.

Traffic has increased in the area because of a number of developments locating within the three municipalities and will further increase as additional developments in Exeter and Amity Townships are built. Exeter Township has planned for intersection improvements at 36th Street and Perkiomen Avenue, Perkiomen Avenue and 37th Street, US 422 and West 47th Street, US 422 and Gibraltar Road, US 422 and Lorane Road, US 422 and Shelbourne Road, US 422 and Lincoln Road, East Neversink Road and Circle Avenue, Shelbourne and Gibraltar Roads, Shelbourne and Route 562 and Schoffers Road and Route 562. Amity Township has prepared a Land Use Assumptions Report, Roadway Sufficiency Analysis and Transportation Capital Improvements Plan to enable it to receive traffic impact fees from developers. The Transportation Capital Improvements Plan proposed improvements along Limekiln Road and Route 562, Amity Park Road and Weavertown Road, Weavertown Lane and 662, Geiger Road at Weavertown, Monocacy Hill and Hill Roads, Old Airport Road at Route 562, Route 662, Weavertown, Hill and Morlatton Roads, Blacksmith Road and Routes 562 and 662, Route 662 and Pine Forge and Morlatton Roads, and Nicholson Avenue and Toll Gate Road. Some of those improvements have been completed.

Composition of the Circulation Network

Exeter Township has the highest total of road mileage in Berks County. Amity Township also had one of the higher totals of road mileage in the County and was tenth overall. St. Lawrence Borough had a total of 7.8 miles of roads. In Berks County, roads are owned and maintained by the State or by the municipality. The circulation system in the St. Lawrence, Exeter and Amity area consists of a variety of roads, from the high volume Route 422, to minor arterials such as Routes 82, 562 and 662, to residential streets in the Borough and Township subdivisions, to township roads that tend to be narrow and winding. Because each municipality's needs have been different over time, major improvements have been varied in the past. All of the roads, with the exception of Route 422 which transverses the central portion of the region, are two-lane, serving mainly local traffic. Road mileage is indicated below.

TABLE 1**HIGHEST NUMBER OF ROAD MILES****ST. LAWRENCE BOROUGH, EXETER TOWNSHIP, AMITY TOWNSHIP,
BERKS COUNTY**

Municipality	State Miles	Municipal Miles	Total
Exeter Township	37.35	94.83	132.18
Greenwich Township	34.09	79.63	113.72
Muhlenberg Township	31.17	72.09	103.26
Spring Township	17.70	82.93	100.81
Bethel Township	48.15	50.86	99.01
Cumru Township	33.76	60.82	94.58
Robeson Township	35.13	57.09	92.24
Maxatawny Township	26.91	48.74	75.65
Richmond Township	28.20	44.10	72.30
Amity Township	32.16	40.13	72.29

Source: Pennsylvania Department of Transportation, Roadway Inventory Summary, 2000.

East-West Transportation Corridors

The highest volume road passing through the area is of course US 422. This four lane semi-divided highway is part of a system that traverses the entire County and is the primary east-west transportation corridor in the region. Since the completion of the West Shore and Pottstown Bypasses, US 422 functions as a limited access highway in many areas, providing uninterrupted travel from Lebanon in the west to the outskirts of Philadelphia in the east. Since this road bisects the area, its influence is quite significant because it allows easy access to employment centers, which will likely influence new housing construction in the area.

Although US 422 has a major effect on the area, another important road in terms of travel in the area is Route 562. It links local residents with Route 662 in the east and US 422 in the west, traversing the area in a slight southeasterly-northwesterly fashion and running roughly parallel to US 422.

Other roads carrying east-west traffic include: Jacksonwald Avenue, Parkview Road, Oley Turnpike Road, Painted Sky Road, Lincoln Drive, Weavertown Road, Monocacy Hill Road and Pine Forge Road.

North-South Transportation Corridors

Because most of the travel through Berks County has been historically east-west oriented, the number of north-south routes is more limited. This phenomenon is particularly evident within the St. Lawrence, Exeter and Amity region. Routes 82 and 662 are major north-south routes in this part of the County. Route 662, which transverses eastern Amity Township facilitates inter-county travel linking Route 78 to the north with US 422 to the South. Route 662 intersects with Route 562 in the Village of Yellow House near the Amity and Oley Township line.

Church Lane/Wegman Road, Ritters Lane/Wegman Road, Oley Line/Old Tulpehocken Road, Limekiln Road, Gibraltar Road, Old Airport Road and Blacksmith Road extend through the area and are locally-oriented north-south routes. They primarily serve intra-municipal travel.

Existing Roadway Classification

The definitions of the road classifications are as follows, developed from the classification in the Berks County Comprehensive Plan Revision:

Arterial Street – Arterials provide for the movement of large volumes of traffic over longer distances; however, these highways generally operate at lower speeds than arterial expressways due to the presence of traffic control devices and access points.

Collector Street – Collector streets serve moderate traffic volumes and act to move traffic from local areas to the arterials. Collectors, too, can be subdivided into subcategories. Major Collectors provide for a higher level of movement between neighborhoods within a larger area. Minor Collectors serve to collect traffic within an identifiable area and serve primarily short distance travel.

Local Street – Local streets are, by far, the most numerous of the various highway types. These streets provide access to individual properties and serve short distance, low speed trips.

The Berks County Comprehensive Plan Revision also contains the following recommended design features for the various highway functional classifications:

**HIGHWAY FUNCTIONAL CLASSIFICATIONS AND
RECOMMENDED DESIGN FEATURES**

<u>Classification</u>	<u>General Provisions</u>	<u>Right-of-Way Width (ft.)</u>	<u>Cartway Width</u>
Expressway	55+ MPH Limited Access No Parking Noise Barrier/Buffer (where required)	Minimum 120; however, may be wider based on local conditions and design	Minimum four 12' wide travel lanes with 10' wide shoulders capable of supporting heavy vehicles
Arterial	35-55 MPH Some access controls to and from adjacent development. Encourage use of reverse and side street frontage and parallel access road. No Parking	80	48-52 feet; 12' wide travel lanes with shoulders in rural area and curbing in urban areas
Collector	25-35 MPH Some access controls to and from adjacent development. Parking permitted on one or both sides.	60	34-40 feet; 12' wide travel lanes with stabilized shoulders or curbing; 8' wide lanes provided for parking.
Local	15-35 MPH No access control to and from adjacent development. Parking permitted on one or both sides.	53	28-34 feet with stabilized shoulders or curbing; cartway widths can be reduced based on interior traffic patterns.

Roads are classified on the existing Traffic Circulation Conditions map. The following is the list of each type of functional road:

Expressway/Principal Arterials include: U.S. Route 422

Minor Arterials include: Route 82, Gibraltar Road (from Route 422 to the southern boundary of Exeter Township), East Neversink Road (from the West Shore Bypass to Route 422), Old Swede Road (Route 662), Boyertown Road (Route 562), and Shelbourne Road.

Major Collectors include: Butter Lane, Bingaman Street, Five Points Road, Limekiln Road, Oley Turnpike Road, Shelborne Road, Gibraltar Road (from Shelbourne Road to Route 422), East Neversink Road (from the West Shore Bypass to Painted Sky Road, Painted Sky Road, Lorane Road, Lincoln Road, West Neversink Road (from Route 422 to East Neversink Road), River Bridge Road, Main Street (Amity Township), Old Airport Road, Monocacy Creek Road, Blacksmith Road, Weavertown Road and Pine Forge Road.

Minor Collectors include: Wegman Road, Dautrich Road, Church Lane, Schoffers Road, Rugby Road, Stonetown Road, Pineland Road, Daniel Boone Road, Old Tulpehocken Road, Red Lane, Fairview Chapel Road, Weavertown Lane, Monocacy Road, Tollgate Road, Monocacy Hill Road, Valley Road, Hill Road, Amity Park Road, Russel Avenue and Morlatton Road.

Local Access Roads include: all other roads.

Scenic Roads

Scenic roads are generally found in agricultural and wooded areas and near stream corridors. Scenic roads will be discussed in the chapter on Scenic Resources.

Traffic Volumes

Traffic volumes are determined through traffic counts taken at specific locations within a transportation corridor. The volume is usually portrayed in terms of average annual daily traffic (AADT). This represents the average count for a 24 hour period, factoring in any fluctuations due to the day of the week or month of the year. The AADT is an important factor that, in conjunction with the previous factors outlined, helps in determining the functional classification of a road.

Information available on traffic volumes is important in determining the potential for capacity problems. Roads that are not used for the purpose for which they are intended can experience capacity problems. This particularly evident in areas experiencing a significant amount of new development without concurrent upgrades to the transportation corridors. Capacity problems become particularly evident when the number of lanes are reduced and traffic is funneled from a roadway with a higher number of lanes to one with a lower number of lanes.

Although, the St. Lawrence, Exeter and Amity area is highly populated, capacity on the area roads is influenced by traffic originating outside the area. Roads most likely to experience capacity problems are US 422, Routes 562, 662 and 82, Shelbourne Road and East Neversink Road. All of these roads are carrying local as well as regional traffic, and

increasingly higher volumes. Traffic volumes are beginning to increase on other roads as well.

Road Corridor Concerns

Access Management

Access management problems are situations where conflicts between mobility and access are, or will be, intense and result in congestion and safety problems. Access management problems typically occur on roads serving high volumes, high speed traffic, and abutting intense trip generating uses, such as Route 422. An example of an access management problem would be where commercial development occurs on a road and the mobility of traffic is adversely affected by the increase in driveways from adjacent land to the road on which the land fronts. As the number of driveways increases, the safety and efficiency of the road can decrease. Access management will be an increasing concern on the roads in the area in the future.

Corridor Segments

Corridor segment problems are usually found in more densely developed areas when congestion, access and safety issues are all present. Corridor segment problems can include those roads that may possess maintenance issues or exhibit structural problems. Because of a number of access and safety problems, US 422, Route 562, Route 662, and Shelbourne Road are key corridors requiring attention.

Route 422 Issues

Route 422 has had a major influence on the development of eastern Berks County since the 18th Century. It has always been the major traffic route in the area, and the route along which most of the commercial development and much residential development has taken place. As the Route 422 Corridor continues to develop, it becomes more congested and more difficult to travel. As drivers seek alternative routes to 422, and development occurs outside the 422 Corridor, other roads in the area receive increasing traffic volumes. Roads, which once wound through agricultural areas, woodlands, and areas of open space, have become lined with residential subdivisions and experience increased traffic volumes from those subdivisions. It will be necessary to balance maintaining the rural nature of portions of the circulation system where possible with the need to insure that a circulation system evolves which is safe, well maintained and capable of meeting the demands placed on it.

Discussion has occurred regarding a bypass to the current Route 422 through both Exeter and Amity Townships. All municipalities involved in this joint comprehensive planning effort support the eventual construction of a bypass to the existing Route 422 corridor.

However, the exact location and design of such a bypass is outside the purview of this Plan. The Berks County Planning Commission has stressed general improvements to the corridor as a means by which immediate and short-term issues involving safety and congestion can be addressed.

Alternative Forms of Transportation

A separate chapter has been provided on pedestrian circulation, and the focus of this background chapter will be on vehicular traffic. In the plan for circulation, though, it will be necessary to address multi-modal facilities such as bicycle-pedestrian, transit-pedestrian, and bicycle-transit.

Bus Service

Barta provides bus service to St. Lawrence Borough and Exeter Township via St. Lawrence Avenue (Route 562) Butter Lane, Perkiomen Avenue and Route 422. Stops include Boscov's East/Reading Mall, Shelbourne Square, Wal Mart and Weis Markets. Capitol Trailways provides daily and weekend service between Reading, Lebanon and Harrisburg. Capitol Trailways utilizes the inter-city bus terminal at 3rd and Penn Streets in Reading.

Rail Service

Freight service is provided on the Norfolk-Southern line, paralleling Route 422. This line frequently experiences freight travel on a daily basis. A study is also underway to explore the development of a 62-mile passenger rail service between Reading and Philadelphia. Schuylkill Valley Metro stops have been initially planned for Exeter and Amity Townships. With the potential for future development of passenger rail service in the St. Lawrence, Exeter and Amity area, planning for land uses that are conducive and supportive of this type of transportation is important.