



**DELAWARE VALLEY REGIONAL
PLANNING COMMISSION**

Making Butler Pike Pedestrian Friendly



July 2001

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.

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Introduction and Background

Over the last half of the twentieth century, the automobile has taken a predominant role in the life of most Americans, and in the design of our communities. The automobile has been a liberating force in society. Its influence on urban form and design, however, has not been without cost. The costs include degraded air quality, over-reliance on imported oil, the negative health consequences of a sedentary lifestyle, traffic congestion and noise, and declining neighborhood commercial areas.

Recognizing these indirect costs, the U.S. Congress set about changing policy to encourage a more balanced transportation system – one that promotes mass transit, bicycling and walking. The two most recent federal transportation bills embody this new thinking. The Commonwealth of Pennsylvania has also embraced this new direction. In response to state and federal policy, the Delaware Valley Regional Planning Commission (DVRPC) has begun an effort to help improve the pedestrian environment in suburban areas. County planners were asked to nominate locations where residential densities and mixed land uses are conducive to high walking rates, but where the walking environment need improvement.

In response to a recommendation by the Montgomery County Planning Department, DVRPC staff studied the Butler Pike Corridor to

Why improve the area for pedestrians?

- ✓ Walking is a healthy, non-polluting form of personal transportation which does not consume limited natural resources, nor requires a costly support infrastructure.
- ✓ An improved walking environment will increase mass transit use, reduce the demand for parking, and help alleviate traffic congestion.
- ✓ It will improve the appearance of the neighborhood, increase retail trade, and boost property values.
- ✓ It will give all area residents — regardless of age, income, or the ability to drive — safe, healthy and appealing mobility options.
- ✓ Finally, it will reduce the incidence of injuries to pedestrians.

determine ways in which the walking environment may be improved. The results of that study are presented in this technical memorandum, intended to initiate discussion among Whitmarsh Township, Plymouth Township, PennDOT, SEPTA, Montgomery County, and residents and business owners within the study area. The memorandum may lead to a plan of action, identification and securing of funding, and ultimately the implementation of real improvements.

The suggestions and possibilities presented in this report are about making the area served by the Butler Pike corridor a more livable community, by making the area safer and more appealing for travel by foot.



Area Description



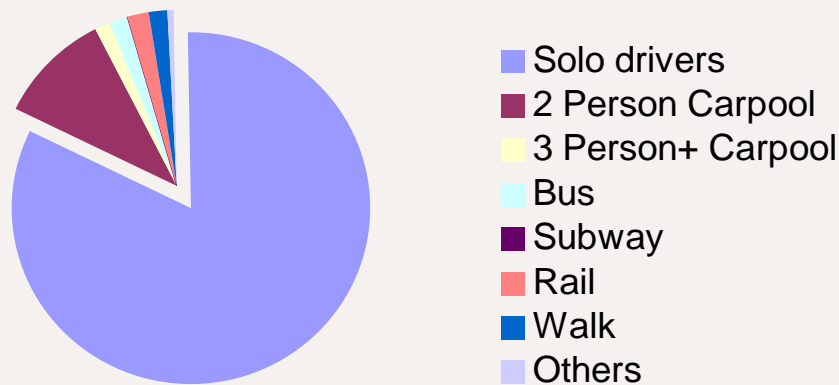
Above: A pedestrian is forced to walk in the road due to lack of sidewalks along Butler Pike (March 2001)

Butler Pike serves as a border between Whitmarsh Township and Plymouth Township in Montgomery County, in the growing suburbs of Philadelphia. The pedestrian corridor being examined extends from Flourtown Road to North Lane. Butler Pike is mainly a two-lane highway with a continuous center lane with a speed limit of 35 mph.

Whitmarsh and Plymouth Township together are home to almost 33,000 persons, according

to the 2000 Census. The townships have experienced substantial growth in the recent decade, their population having grown a collective 13 percent. Although these suburbs experienced their peak growth in the 1950's, their geographic position between historic centers, such as Conshohocken, and newer retail and business centers, such as Plymouth Meeting, has become the ideal place for residents working within these centers.

How do people around Butler Pike get to work?



Source: 1990 Census Transportation Planning Package

The 2000 U.S. Census shows that there are approximately 13,000 persons in the study area. Residents in the area predominately commute to work by driving alone, about 82% of the population in the study area. Approximately 12% commute to work by carpooling, about 2% use the rail stations, 1% use the bus system, about 2% walk, while almost no one uses a bicycle to commute to work. (See above figure)

At the approximate center of the study area is the intersection of Butler and Ridge Pikes, the locus of a major retail center. Two large anchoring strip malls are located on the northwest and south east corners: Plymouth Square and Whitemarsh Shopping Center. As a result, this intersection is subject to large traffic volumes. Generally, this intersection handles approximately 10,000 to 20,000 vehicles per day, 6-10% of it being truck traffic. This situation provides an intimidating challenge for pedestrians.

In the northern section of the corridor lies the community of Cold Point, a Nationally Registered historic district. Just south of this area is the Plymouth Meeting Historic District, also on the National Register. These communities contain historically significant

structures, such as the Plymouth Meeting Friends historic site, the March to Valley Forge site, and historic homes. Newer subdivisions of single-family homes with sidewalks and other pedestrian infrastructure are growing in the study area amidst older single-family homes.

There are existing significant pedestrian trip generators in the area, including garden apartments and schools. Three large, two-story apartment complexes, Sherry Lake, Plymouth Park, and Carriage Hill could generate a substantial amount of pedestrian trips in the area. Additionally, three schools in the area would benefit from improved pedestrian conditions: The Plymouth-Whitemarsh High School, Plymouth Friends' School, and Ridge Park Elementary School.

Walking is a primary access mode to the SEPTA bus system, which provides three bus routes on Butler Pike: 27, 95, and 97. Due to the close proximity to the Spring Mill and Conshohocken R6 rail stations, improved pedestrian conditions may provide a pleasant and safe walk to the railroad stations. This may be the lead for drivers to opt to take the train due to easier intermodal connections.



Above: A 1995 air photo of the area depicts key features important to the Butler Pike Pedestrian Study. Schools and apartment complexes provide a source of pedestrians. The shopping centers at Ridge and Butler Pike are a major commercial and retail center that provide a major destination for pedestrians. The approximate range of the historic districts are noted, providing the base for a pleasant pedestrian experience.

The area does not have a history of excessive numbers of accidents involving pedestrians. Whitemarsh and Plymouth Township police departments report a total of four accidents involving pedestrians since 1995. None were fatalities

Generally, pedestrians may be wary of traveling by foot in this corridor due to the fast traffic. However, the surrounding land uses are conducive to pedestrian activity. Hence, if a safer environment for pedestrians is provided, more will choose to walk.



Why is the land use conducive for pedestrians?

- ✓ Close proximity of apartments to major retail centers makes it easy to “walk a block to get a gallon of milk”. Walking improves the transportation system by expanding the transportation choices available to residents, displacing some short motor vehicle trips, and reducing air and noise pollution.
- ✓ Three schools lie within the study area. Many school-age children could walk to and from school safely.
- ✓ Mass transit is accessible: Bus routes and within the general vicinity of the Conshohocken and Spring Mill train stations on the R6 rail line. (Generally, people will opt to walk a distance of five minutes, approximately one-quarter mile. Many more will willingly walk to destinations of up to one-half mile. Thereafter, most people will switch to a different mode or forego the trip.)
- ✓ Aesthetic surroundings and historic districts makes walking attractive.

Above and Right:
Historic districts makes walking attractive.
(March 2001)





Identified Challenges



Above: Southeast corner of Ridge and Butler Pike, a wall prohibits safe access to shopping center for pedestrians. (November 2000)



Above: Worn dirt and gravel paths indicate a desire for sidewalks. (March 2001)

1. Lack of Sidewalks

Much of the study area is lacking in sidewalks, despite worn dirt and gravel paths that indicate a desire for sidewalks. Expansive, grassy areas up to the curb are found along Butler Pike. In other spots without sidewalks, the shoulder of the road, or extended parking lots (in front of commercial and retail uses) serve as a hazardous walkway for pedestrians. Currently, there are approximately 700 linear feet of sidewalks sporadically placed within the study area. In a portion of the study corridor, walls located on the edge of the road force pedestrians to walk in the roadway.

The area lacks a uniform sidewalk system. Varying types of pavement, width, and maintenance visually and instinctively deters pedestrians. Walking in commercial areas along this corridor is discouraged due to the layout of parking and buildings along Butler Pike. These include poorly channelized driveways, open parking areas, and obstructions in walkways. Basically, the prevalent auto-oriented site design, typical of many suburban areas, discourages walking.

2. Lack of visible, identifiable crosswalks

There are five roads that intersect with Butler Pike to create pedestrian crosswalks: Flouertown Road/Plymouth Road, Germantown Pike, Cedar Grove Road/Keys Street, Ridge Pike, and North Lane. Butler Pike and Ridge Pike intersection is the focus of the traffic concerns. The large width of the road and the large volume of traffic create a perceived or actual safety hazard. The crosswalks are not clearly marked and cause confusion among drivers and pedestrians alike.

3. Lack of a pedestrian environment

The residents of the Philadelphia region are dependent on the car for many trips to work, school, shopping, etc.* As much of the country, this has led to a built environment that is shaped around the car. Suburban communities such as Whitemarsh Township and Plymouth Township are typical of this type of car-oriented development. In recent years, in light of damaging effects of noise and air pollution as well as adverse health effects, alternative forms of transportation are needed. These modes include mass transit, biking, and walking. The need for walking has become more apparent. However, the transportation infrastructure needs to be modified to create the type of community conducive to walking. As more pedestrians appear, they will encounter neighbors, creating a more acceptable condition for walking while enhancing a sense of community.

4. Perception of safety

Safety from traffic and crime is important to creating a successful pedestrian walkway. The speed limit on Butler Pike is 35 mph. As this is a well-used thoroughfare between Conshohocken and Plymouth Meeting, this corridor receives about 10,000 to 20,000 vehicles per day moving at high speeds. The parking and driveway configuration varies along Butler Pike, from expansive pavements of gas stations to storefront parking in which drivers must back out directly into the path of a walkway. Such open parking areas make pedestrian crossing hazardous community.

What are the identified challenges?

- ✓ Lack of sidewalks
- ✓ Lack of visible, identifiable crosswalks
- ✓ Lack of pedestrian environment
- ✓ Perception of safety
- ✓ Lack of bus stops and amenities



Above: A senior citizen uses the side of the road, which has no shoulder, as a walkway due to lack of sidewalks. (March 2001)



Left: A typical commercial area along Ridge Pike, near the intersection with Butler Pike. A congested corridor of commercial driveways and parking lots. Used as walkways, this creates dangerous conditions for pedestrians. (February 2001)



Left: An example of gravel sidewalks, clearly indicating a desire for a sidewalk along Butler Pike. Note the close distance of the walkway to the roadway creating dangerous conditions for pedestrians. (January 2001)

Below: A senior citizen uses the pavement of a gas station to walk along Butler Pike. (March 2001)



5. Lack of bus stops and amenities

The study area is located in an area relatively well served by mass transit, including SEPTA bus and rail service. Three bus routes serve Butler Pike: 27, 95, and 97. Bus route 27 connects Center City Philadelphia to Plymouth Meeting Mall. Bus route 95 links East Norriton Crossing Center to Gulph Mills and Conshohocken rail stations. Bus route 97 serves East Norriton Crossing Shopping Center and Norriton, Conshohocken, and Spring Mill rail stations. Bus Route L runs along Germantown Pike, connecting Olney Station with Plymouth Meeting Mall.

The bus stops are marked by small signs. There are no bus shelters or furniture that would encourage pedestrians and others to use the bus system. The closest rail stations are located in small downtown areas that are very conducive to pedestrians. However, travelling from downtown Conshohocken northeast towards the study area, the pedestrian accommodation becomes less adequate and the focus turns to car-oriented infrastructure. Thus, if pedestrian improvements could be made in the Butler Pike corridor, intermodal commuting by bus and train could become more of a viable option for those that live within the study area.

	WEEKDAY	Frequency	SATURDAY	Frequency	SUNDAY	Frequency
27	6am - 12am	30 min.	6am - 12am	30-60 min.	7am - 12am	60 min.
95	6am - 1am	30-60 min.	7am - 8pm	60 min.	not available	
97	6am - 1am	60 min.	6am - 12am	60 min.	7am - 12am	60 min.
L	6am - 1am	15-20 min.	6am - 12am	15-20 min.	6am - 12am	15-20 min.

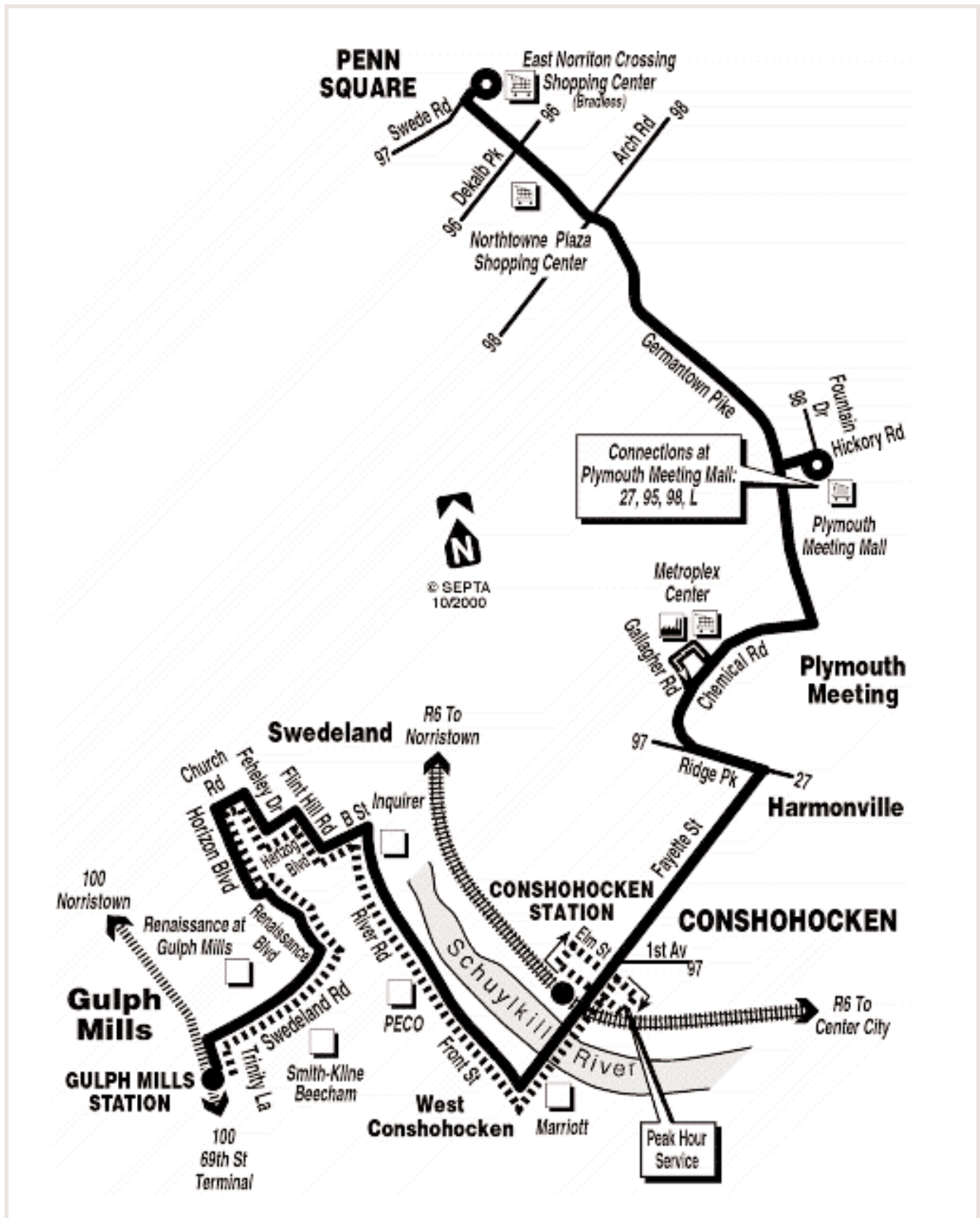


Above: A senior citizen exiting the SEPTA bus is greeted by a grassy curb. (March 2001)

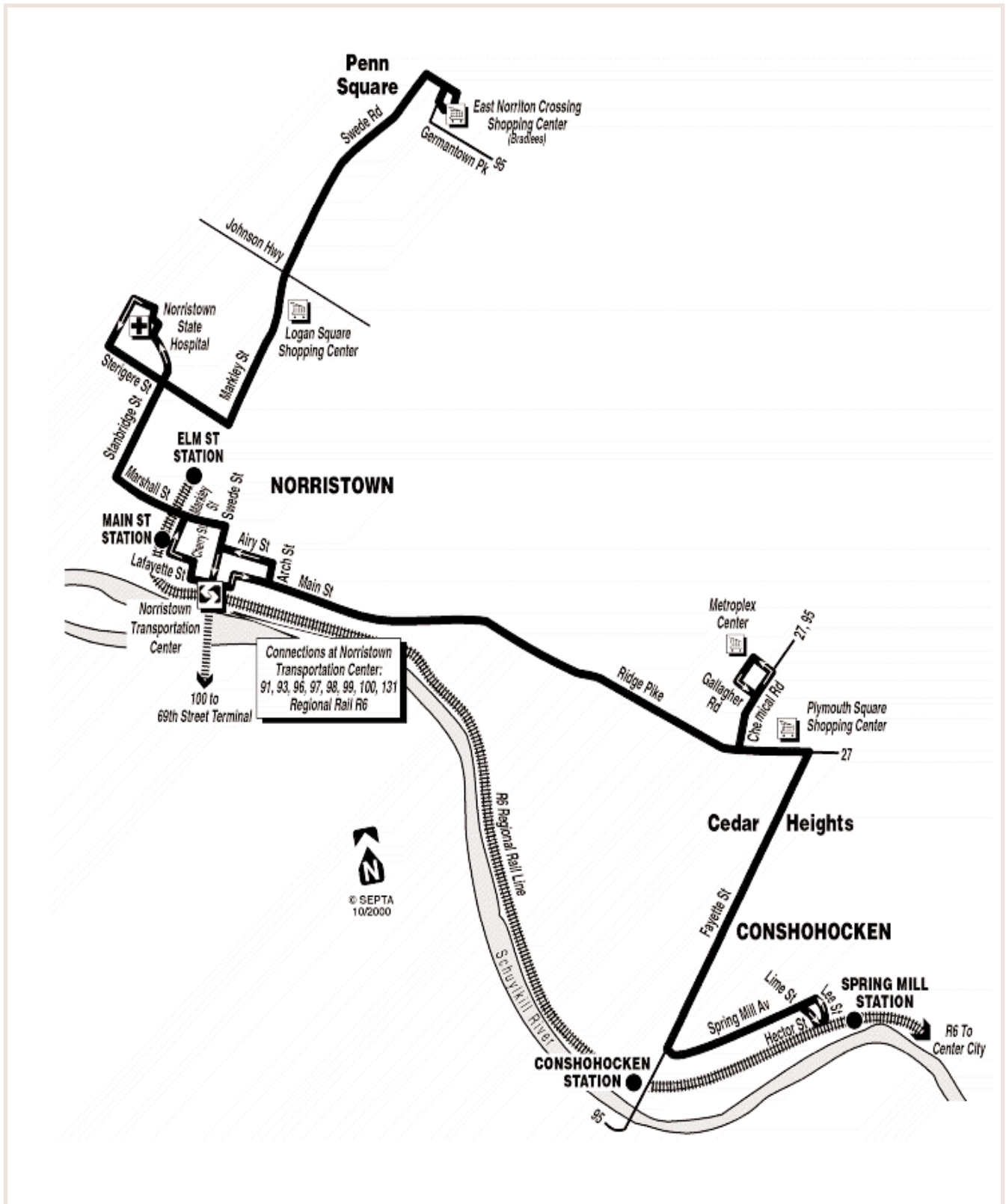
Below: The 95 makes regular stops along Butler Pike. (March 2001)



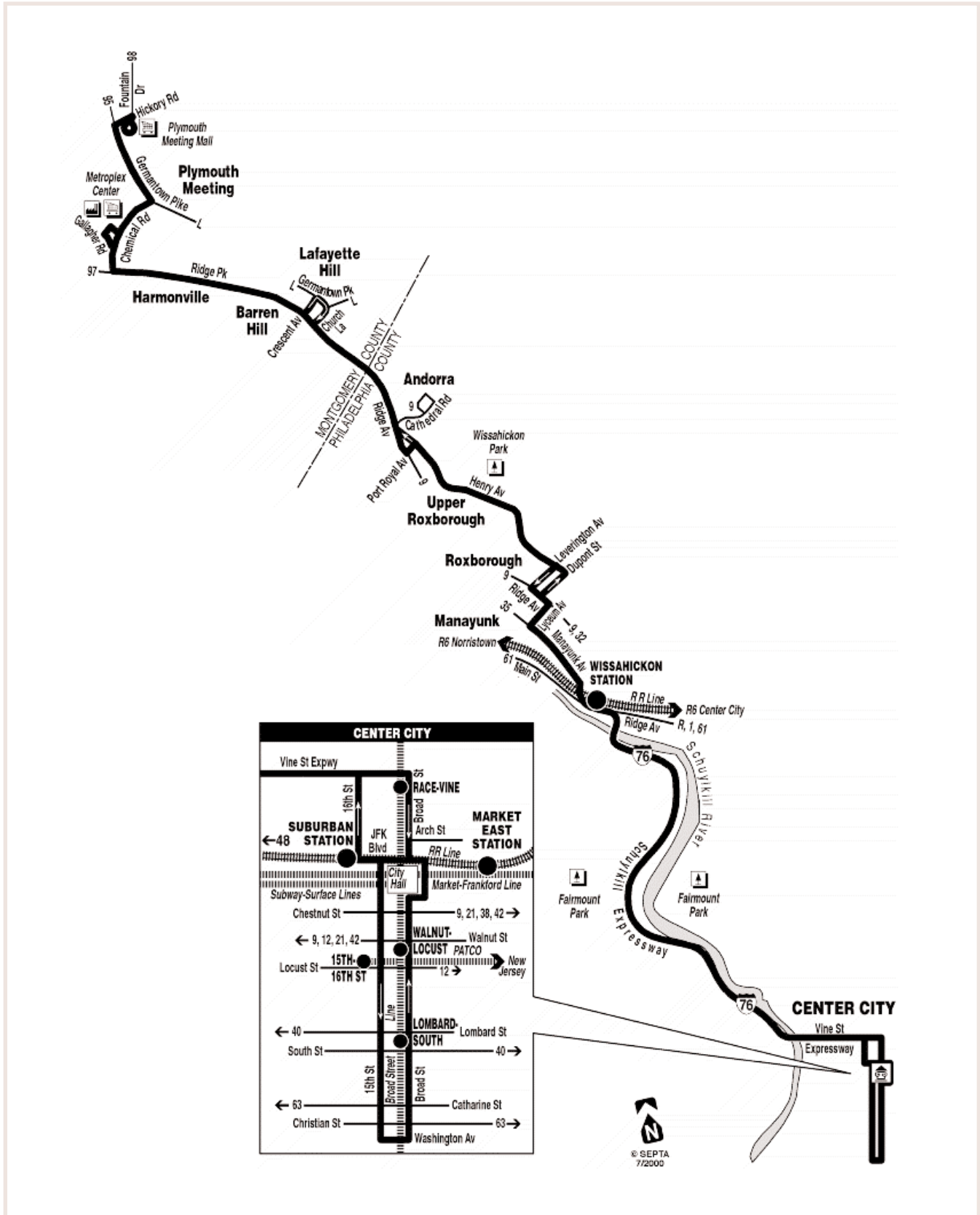
SEPTA BUS ROUTE 95



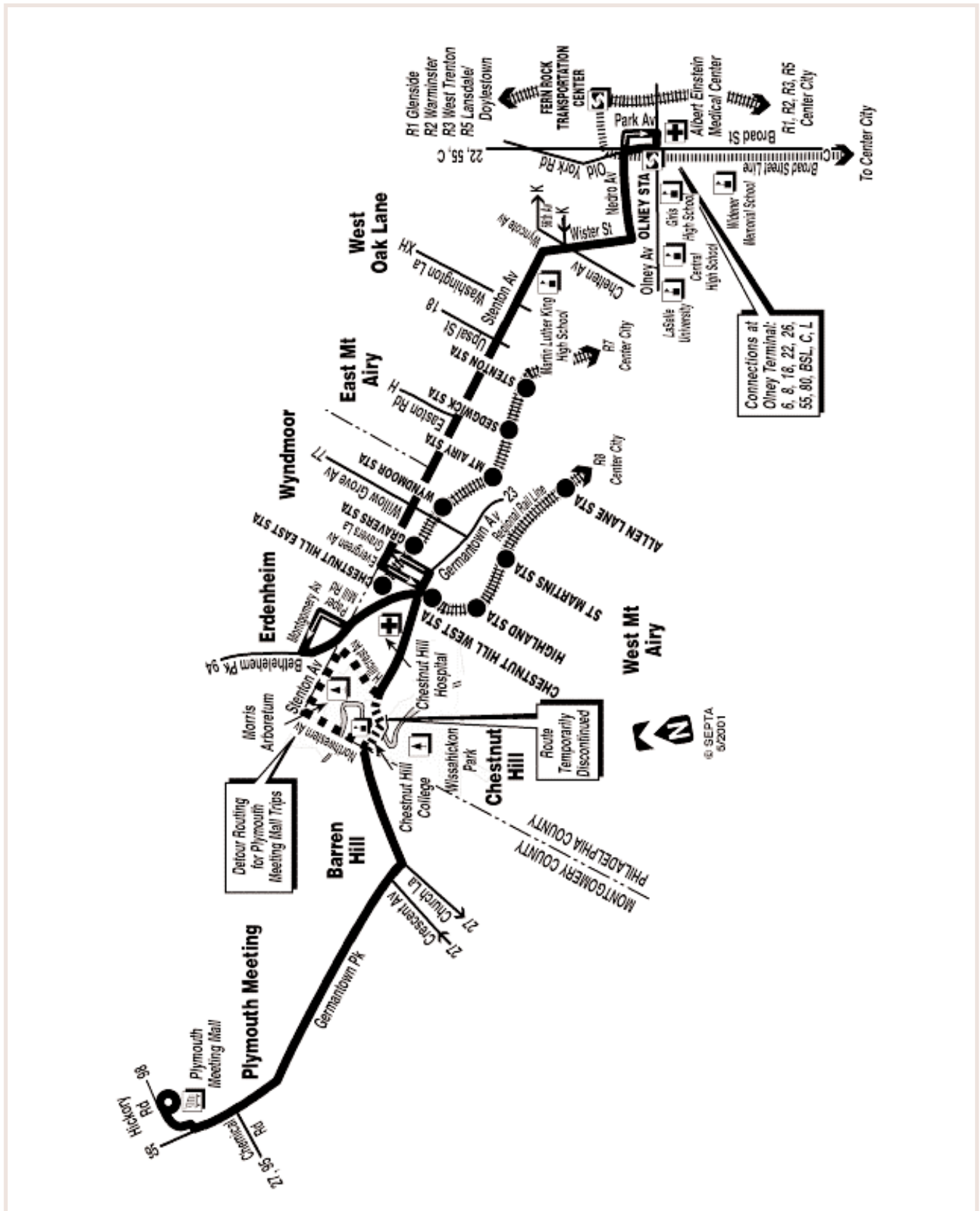
SEPTA Bus Route 97



SEPTA Bus Route 27



SEPTA Bus Route L





Solutions



“Sidewalks are a vital need throughout urban and suburban Pennsylvania. They not only encourage walking, but they also improve the safety of pedestrians. One study found that streets without sidewalks had 2.6 more pedestrian/ automobile collisions than expected on the basis of exposure, while streets with sidewalks on only one side had 1.2 times more pedestrian crashes than those with sidewalks on both sides of the street.”

-Investigation of Exposure Based Pedestrian Areas, Knoblauch, 1988



Above: An example of a safe and pleasant pedestrian atmosphere, located just south of Germantown Pike. (January 2001)

1. Construct and standardize sidewalks

Policies of requiring developers to implement community pedestrian infrastructure, tax breaks for homeowners who install or improve their sidewalk, or applying for municipal bonds which can provide funds to lend to homeowners should be implemented. In other case studies*, it is shown that sidewalks enhance the quality of life by providing recreation venue for residents as well as increasing real estate values. Sidewalks would link many types of pedestrians with various uses, including:

- Shopper to Retail Area
- Student to School
- Commuter to Bus/Rail

2. Construct and repair crosswalks

- Lengthen the clearance times of pedestrian phases of traffic signals.
- Improve and add crosswalk markings
- Install pedestrian lights.
- Install ADA curb ramps.
- Place ‘yield to pedestrian’ signs at the intersection.

3. Improve the pedestrian environment

Provide pedestrian infrastructure and a safe, pleasant pedestrian atmosphere, will directly affect and encourage walking.

4. Provide a safe atmosphere for pedestrians

Slow automobile traffic. This can be done by:

- Increasing the enforcement of the 35 mph speed limit.
- Create traffic calming devices along corridor such implementing clear markings and planting surrounding vegetation. This will visually narrow the road.
- Consolidate commercial driveway entrances and parking lots.
- Provide unobstructed view from residences and commercial area to walkway.
- Install pedestrian-scale lighting.

5. Provide bus stop infrastructure

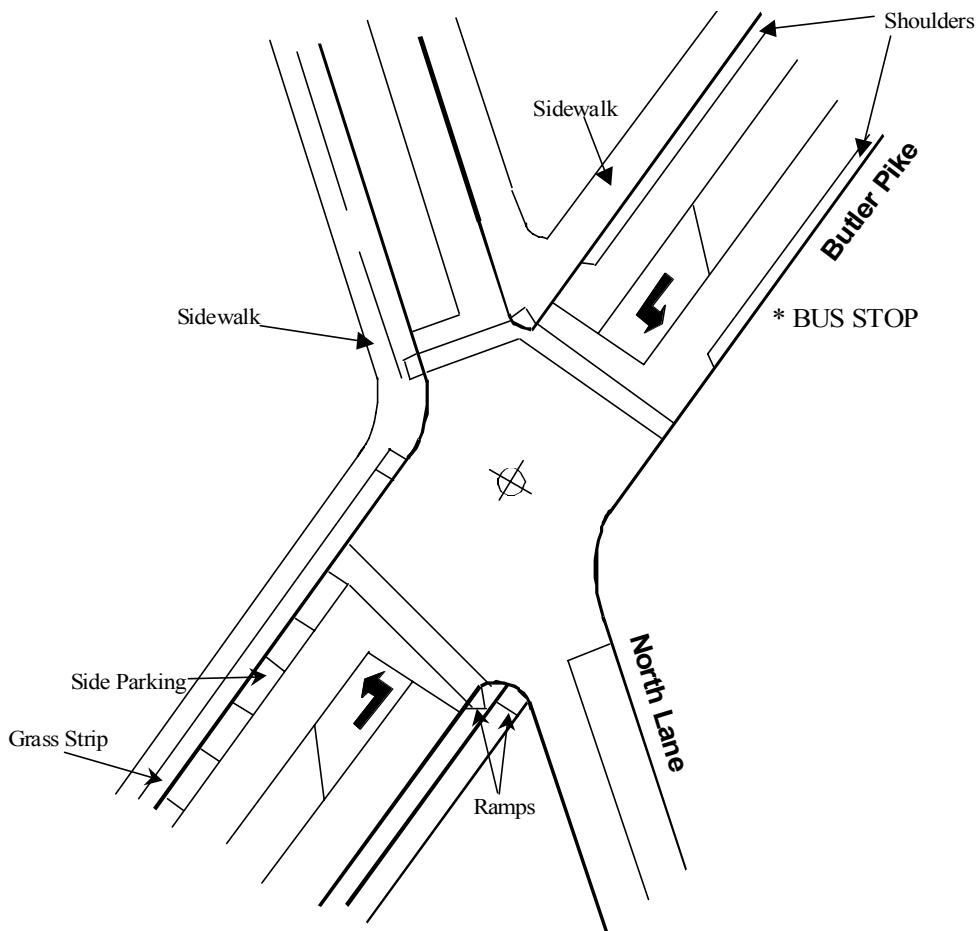
- Provide bigger, clearer bus stops.
- Install benches, shelters, and other furniture.
- Establish peak hour commuter shuttles from the apartment complexes to the Conshohocken and Spring Mill train stations.

* *American Lives. 1994 Shopper and Homebuyer Study*



Intersection Analysis

Intersection 1: Butler Pike & North Lane



Physical Description

Butler Pike at North Lane is a signalized, four-legged intersection with straight, reasonably level approaches and fair pavement conditions. North Lane (east-west) has one lane per direction; Butler Pike (north-south) has a three-lane configuration, with one lane per direction and a center left turn lane.

Surrounding Land Uses

The intersection is located in an older residential neighborhood of single family detached houses and two-story apartment complexes, on the edge of Conshohocken Borough. There is a gas station on the northwest corner and St. Matthews Cemetery on the northeast corner. Plymouth Park apartment complex is located behind the gas station



Above: A pedestrian uses the roadway in St. Matthews Cemetery as a walkway to wait for the SEPTA bus.

(Nov 2000)

Existing Pedestrian Facilities

Sidewalks and shoulders are absent on North Lane east of the intersection; the northbound side of Butler Pike, north of the intersection, has a paved shoulder only, approximately 5' wide. A bus stop is located here. There are no shelters at the stop. Passengers waiting for a bus must stand either on an embankment or in the shoulder. There is a signed prohibition against pedestrians crossing the eastern leg of North Lane. All other legs have crosswalks. The crosswalk of Butler Pike on the west side of the intersection terminates in a grass embankment. There are no pedestrian signal heads.

Description of Pedestrian Issues

There are no exceptional problems here—just an inferior attention to the pedestrian revealed in a lack of accommodations for pedestrians and bus riders. Access to the northbound bus stop is particularly onerous for people in wheelchairs. The reason for the prohibition of crossing onto the southeast corner of this intersection is not apparent. A residential curb cut on Butler Pike, at the intersection's southeast corner, is so positioned as to double as a wheelchair ramp.

Field Notes

- ✓ Missing crosswalks
- ✓ No pedestrian signal heads
- ✓ Residential driveway close to intersection
- ✓ No bus shelter
- ✓ No sidewalks fronting cemetery
- ✓ Pedestrians prohibited from crossing North Lane on west side of Butler Pike

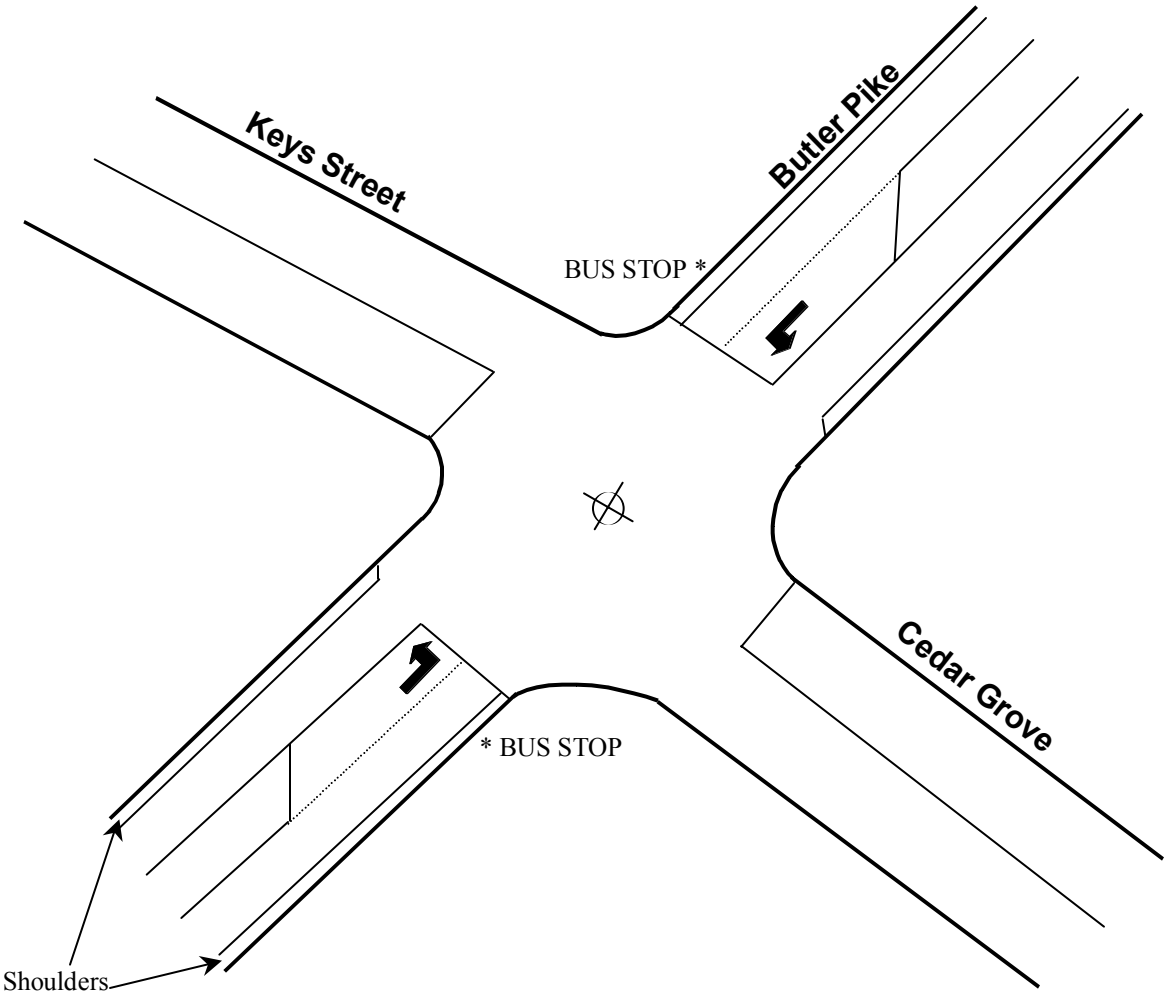
Recommendations

1. Install crosswalks on all sides of intersection
2. Modify crosswalk design to increase visibility
3. Install pedestrian signal heads
4. Work with cemetery to install sidewalks, or grant easement for pedestrian use of aisles
5. Install wheelchair-accessible bus shelters on Butler Pike
6. Install ADA curb ramps
7. Install bus shelters with street furniture
8. Reconfigure crossing on south side of intersection to go directly across the road



Right: A pedestrian uses the existing sidewalk along Butler Pike. (March 2001)

Intersection 2: Butler Pike & Cedar Grove/Keys Street



Physical Description

Butler Pike at Cedar Grove Road and Keys Street is an offset intersection. Cedar Grove and Keys intersect Butler Pike at different points; the southern curb line of Keys Street, extended across Butler Pike, roughly becomes the northern curb line of Cedar Grove Road. Both Cedar Grove Road and Keys Street are one lane by direction. Butler Pike has a three-lane configuration: one lane per direction and a center left turn lane.

Surrounding Land Uses

The surrounding land use is predominantly single family detached residential. The Sherry Lake apartment complex is located on the southeast corner of the intersection

Existing Pedestrian Facilities

There are no crosswalks at this intersection. Although there are pedestrian pushbuttons for crossing Butler Pike, there are no pedestrian signal heads. Sidewalks are absent on all approaches. Pedestrians on Butler Pike must use the 4' shoulders; on the two side streets, they must walk in the roadway. Sherry Lake residents wishing to access the bus stops at the intersection must first access one of the intersecting streets via one of the apartment complex's entrances, or scale a retaining wall at the corner. There are no shelters or pads for bus passengers.

Description of Challenge

The problems here generally stem from an overlook of pedestrian needs, revealed in a lack of facilities and accommodations for pedestrians and bus passengers. Shoulders are inadequate pedestrian facilities in urbanizing areas such as this. Basic facilities such as crosswalks, pedestrian signals, sidewalks and bus shelters are required.

Field Notes

- ✓ No crosswalks
- ✓ No sidewalks; walks on Cedar Grove Road stop short of the intersection
- ✓ Residential landscaping encroaches on rights of way
- ✓ Pushbuttons, but no signal heads
- ✓ No bus shelters
- ✓ No direct access to corner from Sherry Lake apartments
- ✓ No ADA curb ramps on any corner

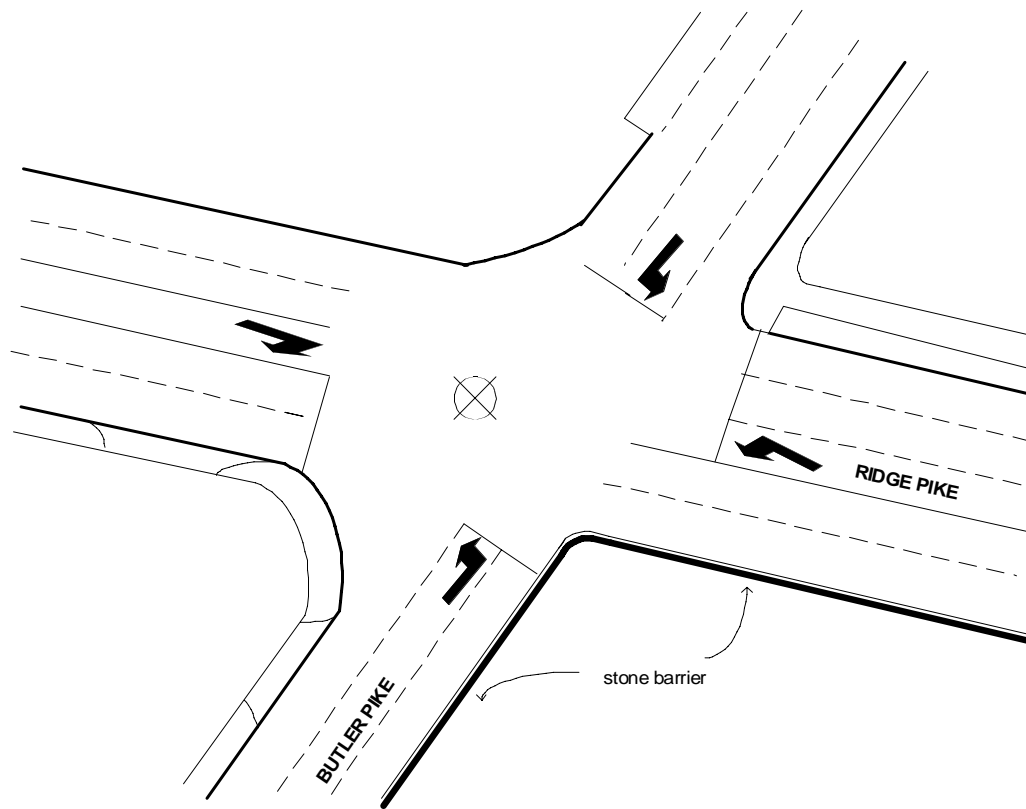
Recommendations

1. Install sidewalks on along Butler Pike
2. Install crosswalks
3. Install pedestrian signal heads
4. Install bus shelters and street furniture
5. Install stairway from Sherry Lakes parking lot to south corner of intersection



Left: The steep embankment on the southeast corner of the Butler Pike and Keys Street/ Cedar Grove Road, prohibits pedestrians of Sherry Lake Apartments. Pedestrians must go around the barrier. (March 2001)

Intersection 3: Butler Pike & Ridge Pike



Physical Description

Butler Pike at Ridge Pike is a major four-way signalized intersection. Butler Pike has one lane by direction, and a center left turn lane. Ridge Pike has two lanes by direction; and a right turn lane westbound onto northbound Butler Pike.

Surrounding Land Uses

This intersection is an important local commercial node. Whitemarsh Shopping Center occupies the southwest corner and Plymouth Center occupies the northeast corner, providing a large neighborhood shopping district. On the southeast corner, a multi-story office building provides many workers who use the shopping centers. During field observation, workers originating from the building were seen crossing Butler and Ridge Pike to reach the shopping centers during their lunch hour. There are three gasoline stations

at this intersection, as well. Small-scale office and commercial uses radiate to the north and west along the roads in question. Nearby residential uses include single family detached housing and apartments.



Above: The concrete barrier at the southeast corner of Butler Pike and Ridge Pike prohibits pedestrians. Shoppers must go around the barrier. (March 2001)

Existing Pedestrian Facilities

This intersection has sidewalk facilities with ADA curb ramps on the southwest corner. The other corners do not have any pedestrian facilities at this intersection. The paved walkways that are provided are commercial parking lots and driveways, creating an unsafe and inhospitable walkway that is not distinct from the areas where vehicles operate. The most obvious barrier to the pedestrian is a large cement wall on the southeast corner that offers no walkway, or even shoulder for the pedestrian. A pedestrian is forced to travel in heavy traffic to access that corner of the intersection.

Description of Challenge

This intersection is devoid of even the most basic accommodation of pedestrian movement. Indeed, pedestrians cannot be received on the southeast corner; a stone and concrete wall will greet them. Likewise, on the opposite corner, a gasoline station chose to terminate the sidewalks at its property line. Unrestricted turning movements make this intersection even more hazardous to cross. Elsewhere in the vicinity of this intersection, poorly channelized commercial entrances make walking unpleasant. Despite the preponderance of pedestrian productions and attractions in the area, pedestrians are made to feel as if they don't belong here.



Field Notes

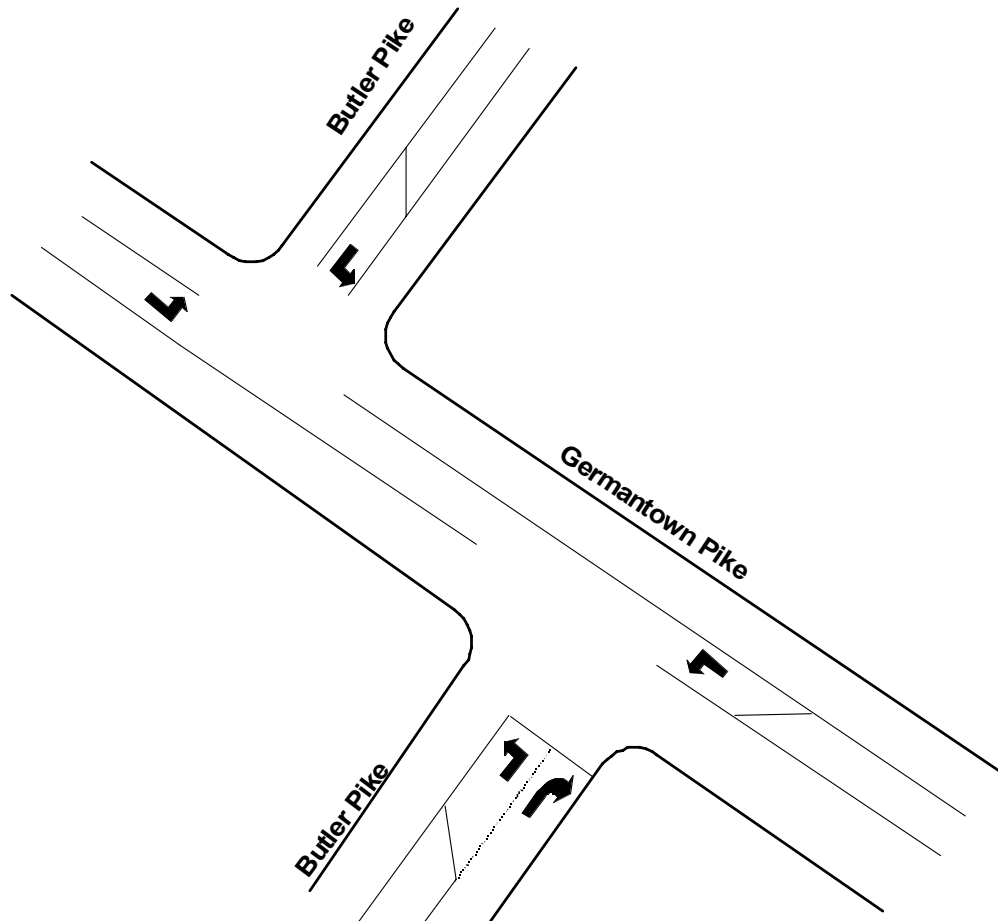
- ✓ No crosswalks
- ✓ No pedestrian signal heads
- ✓ No pedestrian pushbutton
- ✓ No accommodations for pedestrians on two corners
- ✓ Intersection turning movements pose hazard
- ✓ Commercial site design on two corners eliminates pedestrian movement
- ✓ Poorly defined commercial entrances, pedestrian areas
- ✓ No bus shelters

Recommendations

1. Install crosswalks
2. Install pedestrian signals with pushbutton access that allow an actuated pedestrian phase
3. Work with property owners to make accommodations for pedestrians
4. Redesign commercial areas to improve safety and aesthetics for pedestrians, as part of an access management program
5. Install bus shelters and street furniture
6. Remove concrete wall on the southeast corner and construct staircase to elevate the pedestrian to the intersection and allow safer access to the Whitemarsh Shopping Center
7. Add trees and vegetation to the intersection to visually narrow the road, thus slowing down cars and creating a safer environment for the pedestrian.

Left: Lack of sidewalks along Ridge Pike, near the intersection of Butler Pike, creates a deterrent to pedestrians in front of a major retail center. (February 2001)

Intersection 4: Butler Pike & Germantown Pike



Physical Description

Butler Pike at Germantown Pike is an offset intersection. Butler Pike jogs left approximately 30 feet to go around the Plymouth Friends School on the south side of Germantown Pike. Butler Pike has two lanes of direction, a right and left turn lane. Germantown Pike has two lanes of traffic and a left turning lane heading north on Butler Pike, and a left turning lane heading south on Butler Pike.

Surrounding Land Uses

This intersection is in the center of the Plymouth Meeting Historical District. The Plymouth Friends School is on the southwest corner of the intersection, with a stone wall surrounding the school that fronts the intersection. Just east of the intersection are many historic homes and businesses that would provide a pleasant pedestrian setting, if sidewalks were provided. Small businesses and older single-family homes are the land uses adjacent to the intersection.

Existing Pedestrian Facilities

The crosswalk markings at this intersection are in need of improvement. Sidewalks with ADA ramps exist on the northeast corner, but not elsewhere at the intersection. The southeast corner is mainly a paved parking lot, forcing pedestrians to contend with cars backing in and out of parking spaces. The wall around the Plymouth Friends School on the southeast corner leaves no shoulder or room for installation of sidewalks

Description of Challenge

This intersection is lacking many basic accommodations of pedestrian movement. Indeed, pedestrians cannot be received on the southeast corner; a stone wall prevents them from doing so. The wall forces the pedestrian to walk in the road. There is no shoulder in this section of Butler Pike, which means the pedestrian would encounter heavy traffic.

Field Notes

- ✓ No crosswalks
- ✓ No pedestrian signal heads
- ✓ No pedestrian pushbuttons
- ✓ No accommodations for pedestrians on three corners
- ✓ Intersection turning movements pose hazard
- ✓ Commercial site design on two corners eliminates pedestrian movement
- ✓ No ADA curb ramps on existing sidewalks
- ✓ Wall on one corner eliminates possibility of pedestrian activity
- ✓ Intersection not standard four way stop

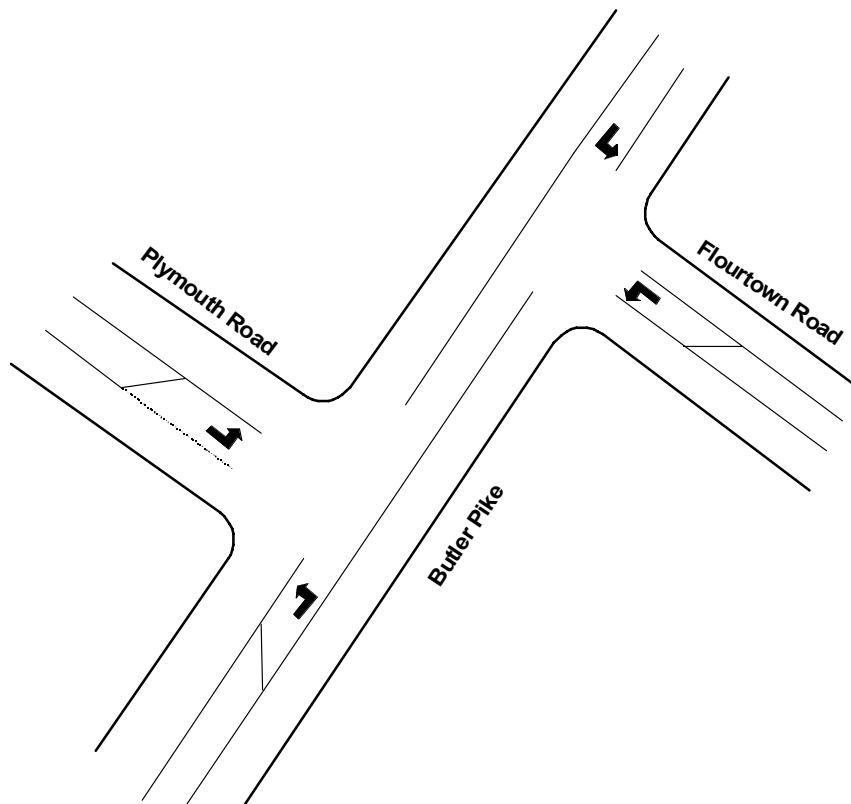
Recommendations

1. Install crosswalks
2. Install pedestrian signals with pushbutton that allow for an actuated pedestrian phase
3. Work with commercial property owners to make accommodations for pedestrians



Left: An example of historic homes that could add to a pleasant pedestrian environment. (March 2001)

Intersection 5: Butler Pike & Flourtown/Plymouth Road



Above: The corner of Flourtown Road and Butler Pike has ‘no pedestrian’ signs on every corner, despite another sign in the background announcing a school bus stop ahead. (March 2001)

Physical Description

This intersection is the close proximity of two three-way intersections: 1) Butler Pike and Plymouth Road and 2) Butler Pike and Flourtown Road. Butler Pike at Plymouth

Road and Flourtown Road is another offset intersection. Plymouth Road enters Butler Pike from the west, just south of where Flourtown Road meets Butler Pike from the east.

Surrounding Land Uses

The stretch of land in the Butler Pike corridor just north of Germantown Pike is presently being transformed from predominately rural and agriculture uses to light industrial works. The intersections are located in the Cold Point Historic District. Mainly historical homes and forests occupy the intersection around Plymouth Road and Flourtown Road. There are not many commercial or retail uses around these intersections to serve as destinations for pedestrians. However, as the area is dominated by historical architecture, it provides a pleasant walking environment. This proposed section of the study area would provide a key link between the Butler Pike pedestrian corridor and the Cross County Trail.

Existing Pedestrian Facilities

As the area has a predominately rural character, there are no pedestrian facilities at these intersections. Pedestrians are discouraged by the lack of adaptable pedestrian facilities.

Description of Challenge

As stated earlier, the intersections located in this area of the corridor offer no pedestrian facilities. There are no walkways, crosswalks, or any other pedestrian infrastructure located at these intersections. Furthermore, there are no shoulders at either intersection to facilitate any sort of walkway. The private residences in the area have lawns that lead right to the edge of the road, many with wooden fences or other protective shrubbery. In fact, pedestrians are prohibited from the intersections by the posting of 'no pedestrian signs' at both intersections.

Field Notes

- ✓ No sidewalks and accompanying ADA curb ramps
- ✓ Missing crosswalks
- ✓ No pedestrian signal heads and pushbutton access
- ✓ Lack of shoulders on the road
- ✓ Pedestrians prohibited from crossing most roads at these intersections
- ✓ Residential lawns encroaches on rights of way
- ✓ Intersection is actually composed of two three-way intersections
- ✓ 'No crossing' signs posted on almost every corner of intersections

Recommendations

1. Work with private residences to construct standard sidewalks with ADA curb ramps at each corner.
2. Install crosswalks
3. Install pedestrian signal heads with pushbutton access
4. Dismantle no crossing zones and accompanying signs



Above: A damaged 'no crossing' sign at the intersection of Butler Pike and Plymouth Road. (March 2001)



Above: A biker using the shoulder of the road at the intersection of Butler Pike and Plymouth Road, indicating bicycle activity along Butler Pike. (March 2001)



Improvement Costs



The improvement costs for the Butler Pike corridor are approximately \$2 million dollars. This is based upon current price ranges of pedestrian furniture and safety features, according to

PennDOT and the Pedestrian and Bicycle Information Center. A bulk of the cost is the construction of concrete sidewalk along Butler Pike, from Flourtown Road at the northern end of the study area to North Lane at the southern boundary. The sidewalk is approximately \$25 per square foot. The study area is in need of about 65,000 linear feet of sidewalk, with an average width of 6 feet at a total cost of \$1.5 million dollars. Extensive field survey revealed 22 laddered crosswalks, 24 pedestrian heads with pushbutton access, and 31 ADA curb ramps needed to provide the basic infrastructure

to provide a safe pedestrian environment throughout the five intersections examined in the study area. Furthermore, pedestrian amenities provided for in the cost improvements chart will encourage pedestrian use and calm traffic providing a pleasant and safe environment. This environment involves the implementation and/or construction of 10 bus shelters, 10 pieces of street furniture (i.e. benches, bike racks, etc.), 42 ornamental small-scale lamps placed throughout the study area providing light and decoration, and various landscaping areas (i.e. planting 42 trees and shrubbery throughout the area). Two areas of extensive restructuring are under consideration in the improvement costs chart. They involve the removal of concrete barriers, 'no crossing' signs, and the installation of stairways to overcome the steep embankment located at these various intersection corners.

FEATURE	COST	Intersections					Sections				TOTAL
		1	2	3	4	5	A	B	C	D	
Laddered Crosswalk	\$300	4	4	4	4	6					\$6,600
Pedestrian Heads (Pushbutton Access)	\$5,000		0	8	4	12					\$120,000
ADA Curb Ramps	\$1,000		8	6	5	12					\$31,000
Bus Shelters	\$3,000	2	2	4	2	0					\$30,000
Street Furniture	\$1,000	2	2	4	2	0					\$10,000
Eliminate 'no crossing' corner, remove wall, install stairway, SW corner Ridge & Butler pikes	\$25,000										\$25,000
Install stairway, Sherry Lakes Apts.	\$15,000		1								\$15,000
Access Management Plan	\$20,000		1								\$20,000
Concrete Sidewalk	\$25 /sq. ft.						10,000	4,000	25,000	26,000	\$1,625,000
Pedestrian Scale Lighting	\$3,500 /each						12	4	18	8	\$147,000
Landscaping	\$300 /shrub						12	4	18	8	\$12,600
TOTAL COSTS		\$9,200	\$32,200	\$88,200	\$34,200	\$73,800	\$295,600	\$115,200	\$693,400	\$680,400	\$2,042,200

*Access Management Plan includes analysis of parking needs and how they might be better accommodated within the study area (roughly, all contiguous commercial properties surrounding the intersection). The ultimate goals are to (1) create curbs and sidewalks where there are none; and (2) to minimize the number of vehicular crossing points of the curb line.



Implementation



These recommendations are for programming purposes only, and, as such, constitute a suggested project scope. As a package, implementation of these recommendations are eligible for both Congestion Mitigation/Air Quality Improvement Program (CMAQ) and Transportation Enhancements (TE) funding. Applications for the next round of funding for both these programs are due in the Fall of 2001. Much work remains to be done, however, to ready this program for submission. First and foremost, the public and business

community must be sold on the need for improvements, and must be involved in defining the scope and detail of those improvements. A design "charette" should involve the public, business owners, landscape architects and traffic engineers in the crafting of detailed designs. TE applications stand a better chance of funding if the request is for construction use only. If TE funding is to be sought for construction only, the necessary design work should be completed by the time an application for funding is submitted.

An access management plan could be implemented to consolidate driveways and parking areas of commercial and retail uses along Butler Pike

Pennsylvania is a place where residents and visitors of all ages can choose to bicycle and walk. People are able to bicycle and walk with confidence, safety and security in every community, both for everyday transportation and to experience and enjoy the remarkable natural resources of the state.

— Vision Statement, PennDOT Statewide Bicycle and Pedestrian Master Plan



Possible Funding Sources

Transportation Enhancement (TE)

Ten percent of Pennsylvania's STP apportionment must be set-aside to fund activities that enhance the transportation system in ways that have not traditionally been included in the design and construction of the transportation system.

Eligibility

The list of 12 eligible activities includes one provision of facilities for bicyclists and pedestrians that can be specifically applied to the Butler Pike Pedestrian Corridor. Projects using TE funds need not be located on the Federal-aid Highway System and may be non-construction activities. However, enhancement projects should, "relate to surface transportation" and have typically been limited by the State to construction projects, planning activities, and related publications rather than salaries and administrative costs. The "relationship to surface transportation" required by TEA-21 means that a proposed transportation enhancement activity must have a direct relationship to the intermodal transportation system. This does not mean that an enhancement project has to be part of a larger current or planned highway project.

Matching Funds

The state of Pennsylvania has the flexibility to allow Federal funds to be used for all or any part of a project under the Transportation Enhancement program provided that the State program as a whole achieves an 80% Federal/20% State funding balance. PennDOT may also allow (with FHWA approval) allow in-kind contributions such as volunteer labor, land donations and in-kind services to count towards State matching funds, provided that a cash-value can be attributed to the donated time, resource, or product.

Transferability

Up to 25% of the difference between the amount set aside for TE for the fiscal year and the amount set aside for TE activities in FY 1997 may be transferred to the CMAQ program.

Discussion

As more than 80% of bicycle and pedestrian improvements under ISTEA were funded from this source, the range of exemplary projects is wide. Among the most commonly funded activities have been rail-trails, bike lanes, sidewalks, crosswalks, streetscaping, and bike route signing. The Butler Pike corridor would use the funding for the implementation and construction of crosswalks, sidewalks, streetscaping, and other pedestrian infrastructure.

DVRPC is the distributor of such funds. Therefore, a project guided by the Community involving municipal and county cooperation and support would be a better candidate for the funds. If the design and planning half of the work is done by the benefiting entities, that would count as the match.

There are a number of streamlined procedures for TE projects, including:

- Most TE projects, including the non-construction activities as well as the construction of bicycle and pedestrian facilities, are exempt from having to complete a project-specific Environmental Impact Assessment under the National Environmental Policy Act (NEPA).
- TE funds may be advanced to a State in lieu of having to wait for Federal-aid reimbursement, where agreement has been worked out with the appropriate FHWA Division Office.

- TE projects not located within highway right-of-way may be procured using State procedures and do not need to follow Federal competitive bidding procedures.
- Except for unusual circumstances, bicycle and pedestrian projects are not normally required to undergo a Section 4(f) evaluation.

The use of TE funds for the Butler Pike Pedestrian Corridor are encouraged to use qualified youth conservation or service corps for construction and maintenance activities under this program.

Further information

Transportation Enhancement Guidance Package, February 25, 1997

Congestion Mitigation/Air Quality Program (CMAQ)

The Congestion Mitigation and Air Quality Improvement Program (CMAQ) was created by ISTEA to assist areas designated as non-attainment or maintenance under the Clean Air Act Amendments of 1990 to achieve and maintain healthful levels of air quality by funding transportation projects and programs.

Eligibility

Projects funded under the CMAQ program must be located in areas that were designated as non-attainment area Section 107(d) of the Clean Air Act and classified pursuant to Sections 181(a), 186(a), or 188(a) or (b) of the Clean Air Act. The Delaware Valley Region was ranked the tenth most ozone-polluted metropolitan areas in the nation. Projects covered under this program must be likely to contribute to the attainment of national ambient air quality standards (or the maintenance of such standards where this status has been reached) based on emissions analysis. Among many eligible activities, the implementation of sidewalks and other pedestrian amenities are included:

"Transportation Control Measures published pursuant to Section 108(f) of the Clean Air Act, which includes 'limiting portions of the road surface or sections of a metropolitan area to the use of non-motorized vehicles'; 'employer participation in programs to encourage bicycling'; and 'programs for secure bicycle storage facilities and other facilities, including bicycle lanes, for the convenience and protection of bicyclists in both public and private places.'"

Matching Funds

The Federal share for most eligible activities and projects is 80% or up to 100% for certain identified activities such as traffic control signalization and carpooling projects.

Discussion

The CMAQ program has funded numerous bicycle and pedestrian improvements including bikeway networks in the city of Philadelphia. These include pedestrian and bicycle spot improvement programs, bicycle parking, bicycle racks on buses, police bicycle patrols, sidewalks, trails, and promotional programs such as bike-to-work events. CMAQ funds have also been used to fund bicycle and pedestrian coordinator positions at the State and local level.

Further information

FHWA Guidance and other information on the Congestion Mitigation and Air Quality Improvement Program are available on line at www.fhwa.dot.gov/environment/cmaq.htm.

PUBLICATION ABSTRACT

Title: Making Butler Pike Pedestrian Friendly

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Geographic Area Covered: Butler Pike between Flourtown Road and North Lane

Key Words: Pedestrian, safety, operations, facilities, bus, access, improvements, SEPTA, urban design, Butler Pike, Montgomery County, Plymouth Meeting, Conshohocken, crosswalks

Abstract: In response to a recommendation by the Federal Highway Administration, DVRPC initiated a study of pedestrian safety and accessibility in suburban locations. Butler Pike, a heavily used roadway between Conshohocken and Plymouth Meeting, was recommended by Montgomery County planners for study. *Making Butler Pike Pedestrian Friendly* presents the findings of the study illustrating dangerous and unpleasant conditions for pedestrians in the area. The report proposes a program of capital improvements designed to make pedestrian travel in the area more safe and appealing. Included is a suggested redesign of the commercial area, which includes landscaping and amenities, consolidation of driveways, improved crosswalks and standardized sidewalks.



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