

TRANSPORTATION

The purpose of a transportation system is to permit individuals to travel to residential, commercial, industrial, institutional, and recreational areas. Roads, transit services, and pedestrian and bicycle facilities are necessary in order to travel to jobs, schools and colleges, stores, medical facilities, and recreational and social activities. The transportation system also provides a way for goods to be delivered to markets.

Lansdowne and East Lansdowne are served by major transportation facilities such as Baltimore Avenue, Lansdowne Avenue, and SEPTA's R3 Elwyn regional rail line. The transportation system consists primarily of streets, supplemented by sidewalks for pedestrians, five bus routes, and one commuter rail line. While most of the system is adequate, a number of problems exist which will be discussed throughout this chapter.

<p>GOAL: To provide a transportation system for residents, businesses, and employees that offers a choice of travel modes, is safe, minimizes pollution, enhances health, and builds a sense of community.</p>

STREETS AND TRAFFIC

Street Ownership and Classification

The street system of Lansdowne Borough and East Lansdowne Borough consists of a total of seven state owned highways and 25.74 miles of municipal streets. East Lansdowne has 4.19 miles of municipal streets and Lansdowne has 21.55 miles.

The main roads in Lansdowne and East Lansdowne are functionally classified to aid in prioritizing improvements and funding. Collector roads collect traffic from the residential areas and deliver it to the arterials. Minor arterials are meant to carry heavier volumes of traffic at slightly higher speeds, usually serving commercial uses, with an emphasis on easy access to land uses. Principal arterials are larger roads that feature higher speeds, some access control, and are intended to serve longer-distance traffic. Principal arterials usually serve major employment and shopping centers, and feed into the freeway system. Normally, roads of a higher classification are expected to carry more traffic than those of a lower classification.

This classification system is fundamental in deciding which roads are eligible for outside funding. Often the Pennsylvania Department of Transportation (PennDOT) owns roads of higher classifications, as they are regionally important. In addition to the state-owned roads, there are several Borough-owned streets that are part of the federal-aid highway system. Although these roads are Borough-owned, they are eligible for federal-aid highway funding because they carry a significant amount of regional or inter-municipal traffic. U.S. Route 13, touching East Lansdowne at the Baltimore Avenue/Church Lane

intersection, is a part of the National Highway System, which makes the road eligible for additional funds.

Table 8-1 describes the functional classification, ownership, and federal aid status of roads in Lansdowne and East Lansdowne; these routes are shown in Map 8-1.

TABLE 8-1
STREETS ELIGIBLE FOR FEDERAL AID

Classification	Street Name	State Route Number	Ownership	Section
principal arterial	Baltimore Avenue	2016	State	Entire Route
minor arterial	Lansdowne Avenue	2005	State	Entire Route
minor arterial	Marshall Road	2024	State	Plumstead Avenue to Lansdowne Avenue
minor arterial	Church Lane	2001	State	Long Lane to Baltimore Avenue
urban collector	Marshall Road	2024	State	Lansdowne Avenue to Shadeland Avenue
urban collector	Shadeland Avenue		Municipal	Marshall Road to Burmont Road
urban collector	Wycombe Avenue		Municipal	Marshall Road to Baltimore Avenue
urban collector	Union Avenue		Municipal	Entire Route
urban collector	Plumstead Avenue		Municipal	Lansdowne Ave to Marshall Road
urban collector	Burmout Road	2007	State	Shadelwand Avenue to Baltimore Avenue
urban local	Pembroke Avenue	2022	State	Entire Route
urban local	Stewart Avenue	2022	State	Lansdowne Avenue to Union Road

Source: Pennsylvania Department of Transportation, 2003.

The only two bridges in the study area are located in Lansdowne Borough. The Lansdowne Avenue Bridge crossing SEPTA’s R3 regional rail line is made of steel, and has a girder/floor beam system and was constructed in 1928. It is state owned. The County-owned Hilldale Avenue Bridge over Darby Creek into Upper Darby Township is reinforced, cast in concrete and was also built in 1928. Neither bridge has posted weight limits or restrictions. These bridges can also be seen in Map 8-1.

TABLE 8-2
BRIDGE INFORMATION

Features Carried	Features Intersected	Borough	Ownership	Year Built
Lansdowne Avenue	SEPTA	Lansdowne	State	1928
Hilldale Road	Darby Creek	Lansdowne	County	1928

Source: Pennsylvania Department of Transportation, 2003.

Street Conditions

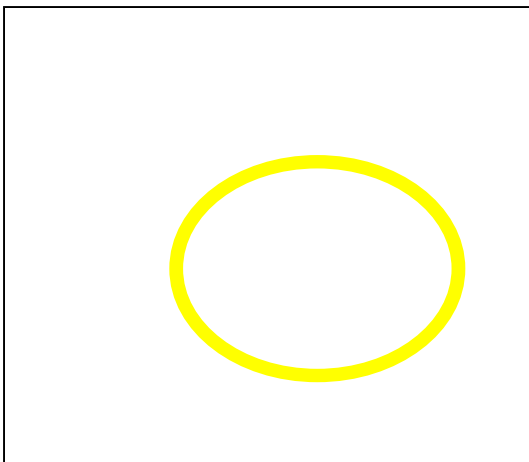
Generally, roads in Lansdowne and East Lansdowne are in good condition. There are a few areas that are in need of minor patching due to potholes or cracking such as Bryn Mawr and Eldon Avenues in Lansdowne and mid-block on Lexington Avenue between Emerson Avenue and Greenwood Avenue in East Lansdowne. These streets, however,

Map 8-1 – Functional Road Classification

carry mostly local traffic and their condition may help to stop motorists from using excessive speed in residential neighborhoods. The streets should be maintained in accordance with road safety, but there is nothing that currently warrants major reconstruction. The safe conditions of the roads can change dramatically, especially during the freezing and thawing of winter and street inspections should be maintained to ensure that streets do not become dangerous.

There are several intersections in the two boroughs that have views obstructed by shrubbery, parking, or other barriers as shown in Table 3. Remedying sight obstructions should not be seen as essential; there are many issues to consider when looking at the removal of such sight restrictions including the aesthetic qualities of the obstruction, speed of traffic on the street, and whether opposing traffic is required to stop. Sight restricted intersections should be evaluated on a case-by-case basis. Concerns are greater where there is an obstruction at a T-intersection or a four-way intersection where motorists in at least one lane of travel are not required to stop. Intersections where there is parking that comes almost directly to the intersection, such as on Baltimore Avenue in East Lansdowne, provide an opportunity for easy remedy by restricting parking for several feet or more at the intersection.

An area of particular concern in Lansdowne Borough is the limited visibility caused by the Lansdowne Avenue bridge over the R3 rail line just south of Baltimore Avenue. This visibility causes problems for both through traffic, which is not aware of stopped traffic ahead, and drivers turning from Scottdale Road or the SEPTA parking lot. Motorists turning onto Lansdowne Avenue from either of these access points are unable to see speeding vehicles coming southbound on Lansdowne Avenue. A sign hanging above the crest of the bridge warns travelers of a pedestrian crossing but this does little to deter the vehicles. Traffic calming devices such as chokers, chicanes, a speed table, or some sort of median should be implemented on the bridge to slow down traffic and make it safer for SEPTA commuters to pull out of the lot.



Parking too close to the corner restricts visibility for those looking to turn on to major streets



Lansdowne Avenue bridge poses sight restrictions and dangers for drivers and pedestrians

Some intersections in the study area lack proper travel lane markings. This makes it difficult to differentiate how many lanes the road can handle. Lane markings should be consistently implemented in those areas that are either unclear or lack adequate lane markings altogether. Baltimore Avenue at Wycombe Avenue is wide enough for two lanes of travel, but there are no lines to indicate a right turn only lane. Intersections such as this should be evaluated and the proper number of lanes should be determined so vehicles can safely use the intersection.

There are two at-grade rail crossings in the study area. These are located in Lansdowne Borough on Wycombe Avenue and Union Avenue. The speed limit on these streets is 25 mph. Both crossings pass over the SEPTA R3 line and have crossing gates with flashing signals to notify vehicles about approaching trains. Railroad crossings require more maintenance due to the increased stress placed on the road by trains and the need for multiple materials in the roadway. For this reason at-grade crossings should be more regularly and carefully inspected. The Union Avenue grade crossing is particularly uncomfortable to cross.

TABLE 8-3
SIGHT RESTRICTIONS

Main Road	Intersecting Road	Direction of Obstruction
Willowbrook Avenue	Baltimore Avenue	East
Eldon Avenue	Marshall Road	West
Highland Avenue	Plumstead Avenue	West
Bryn Mawr Avenue	Lansdowne Avenue	South
SEPTA Lot Entrance	Lansdowne Avenue	North & South
Lansdowne Court	Lansdowne Avenue	North & South
Dudley Avenue	Lansdowne Avenue	North & South
Linden Avenue	Lansdowne Avenue	North & South
Pennock Terrace	Lansdowne Avenue	North & South
Linden Avenue	Wycombe Avenue	North & South
Nyack Avenue	Union Road	South
Hirst Avenue	Pembroke Avenue	West
Lexington Avenue	Pembroke Avenue	East & West
Pembroke Avenue	Wildwood Avenue	North
Wildwood Avenue	Baltimore Avenue	East

Source: DCPD Survey, 2003.

RECOMMENDATIONS

The Boroughs should...

- 8-1 Maintain street inspections and maintenance on a regular basis to ensure that patching and cracking roadways do not become hazardous at their posted speed limits. Resurface Borough streets that are found to be in poor condition.

- 8-2 Study dangerous intersections to see if sight restrictions are seriously hindering motorist operations and remedy those deemed problematic.
- 8-3 Properly stripe multiple lane roads and intersections to alleviate confusion and optimize the flow of traffic.
- 8-4 Lansdowne should look at ways to improve safety on the Lansdowne Avenue Bridge over the R3 SEPTA tracks. The bridge is wide enough that traffic calming techniques may be helpful in slowing automobile traffic to protect pedestrians and cars exiting the SEPTA parking area and Scottsdale Road.
- 8-5 Lansdowne should request SEPTA to repair the Union Avenue grade crossing to make it smoother for motorists.

Funding Programs: State Liquid Fuels Tax Reimbursement
 Federal and State Highway Funds for Federal-aid
 streets
 CDBG (where eligible)
 Property owners
 Municipal funds
 SEPTA

Traffic Volumes and Cut-Through Traffic

The Delaware Valley Regional Planning Commission (DVRPC) has completed several traffic counts in Lansdowne and East Lansdowne. Traffic volumes are generally reported in terms of Average Annual Daily Traffic (AADT or ADT). AADT is a statistical estimate of the number of vehicles that pass a particular section of roadway during a period of 24 consecutive hours averaged over a period of 365 days. The AADT is the average traffic volume of the road independent of hourly or seasonal variations. The highest AADT in the two boroughs is 26,935 along Lansdowne Avenue in Lansdowne between Baltimore Avenue and Stratford Avenue. Lansdowne Avenue and Baltimore Avenue in Lansdowne and Church Lane in East Lansdowne have the highest AADT of roads surveyed in the study area. Traffic counts taken by DVRPC in Lansdowne and East Lansdowne between 1997 and 2001 are shown in Table 8-4.

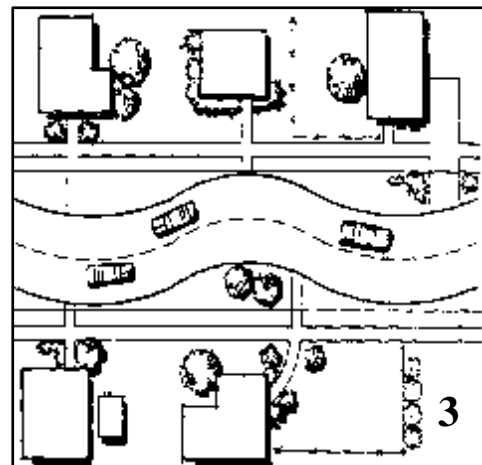
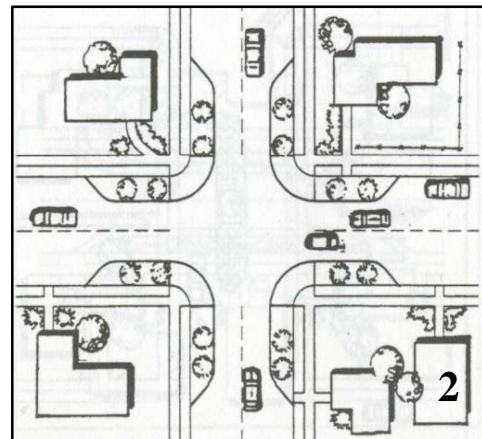
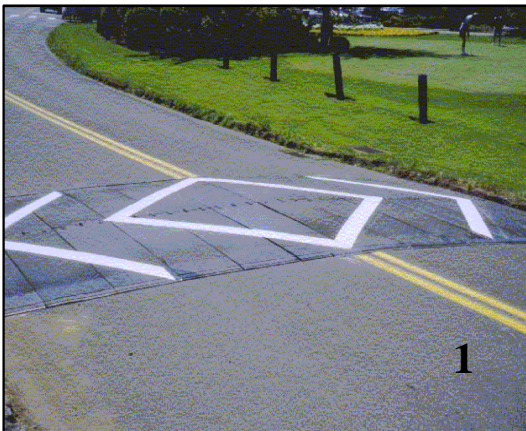
Methods of slowing or limiting through traffic on streets are generally referred to as Traffic Calming techniques. The Institute of Traffic Engineers defines traffic calming as, "...the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street users."¹ These can vary from expensive street reconstruction to the fairly inexpensive installation of signage. A list of information on traffic calming techniques and some of their results is listed in Appendix F.

¹ *Traffic Calming, State of the Practice*, Institute of Traffic Engineers, 1999.

TABLE 8-4
TRAFFIC COUNTS

	Road Name	From	To	Date	AADT	Count Direction
E. Lansdowne	Church La	Rt. 13	Pembroke Ave	8/25/1999	17,429	Both
Lansdowne	Baltimore Ave	Martin Dr	Windermere Ave	10/13/1999	14,843	Both
Lansdowne	Lansdowne Ave	Baltimore Ave	Stratford Ave	10/6/1997	26,935	Both
Lansdowne	Lansdowne Ave	Essex Ave	Drexel Ave	10/10/1997	18,424	Both
Lansdowne	Lansdowne Ave	Fairview Ave	Dudley Ave	12/19/2000	16,284	Both
Lansdowne	Marshall Rd	Eldon Ave	Ardmore Ave	11/14/2000	7,602	Both
Lansdowne	Plumstead Ave	Lansdowne Ave	Marshall Rd	8/6/2001	5,966	East
Lansdowne	Marshall Rd	Lansdowne Ave	Plumstead Ave	11/11/1998	7,485	West
Lansdowne	Union Ave	Baltimore Ave	Wycombe Ave	8/6/2001	5,148	North
Lansdowne	Wycombe Ave	Baltimore Pk	Union Ave	11/11/1998	2,894	South

Source: Delaware Valley Regional Planning Commission, 2003.



Traffic Calming Techniques

1. Speed Humps
2. Neck Downs
3. Chicanes

One example of traffic calming commonly used in neighboring municipalities is the one-way street. This is a self-regulating and inexpensive method of limiting through traffic along local roads. There are several areas in the study area where pairs of one-way streets have been implemented. While one-way streets can be used to limit through traffic on streets in certain situations, pairs of one-way streets are usually intended to increase road capacity and designate routes for through traffic. An example of a pair of one-way streets used as a through route to increase road capacity is Union Avenue and Wycombe Avenue in Lansdowne Borough. Pairs of one-way streets tend to increase rather than decrease speeds and should only be used on roads set aside for through traffic.

The geometry of the street is a consideration when it comes to limiting speeds of through traffic on residential streets. Certain factors can encourage speeders and through traffic. Long, wide, straight, or unimpeded roadways encourage faster speeds, as there is nothing that requires the driver to slow down. Scottdale Road in Lansdowne, for example, encourages speeding because of the long distances without an intersection. The use of traffic calming measures such as speed humps, chicanes, etc. on long, wide, or unimpeded roadways can discourage speeding by necessitating slower speeds.

Where width is an issue, a less expensive method of slowing traffic is merely to limit the excess width of the street. Penn Boulevard in East Lansdowne is an example of a street that is excessively wide for the amount of traffic it carries, which can also invite speeding. The road originally carried trolley tracks that connected Baltimore Avenue with 69th Street Terminal. The speed limit of 20 mph is ineffective in encouraging drivers to travel slowly because the wide road invites speeding. There is a possibility to improve the aesthetics and travel conditions of the street while slowing traffic. Creating a landscaped median in the street will limit the perceived width of the road and slow down vehicles. Bike lanes are also a low cost option for slowing down speeders, because the narrower lane striping encourages drivers to go slower to stay within their lane. These two methods can also be combined, or phased so that the cheaper lane restriping is implemented while funds are being secured for the landscaped median. Also, with the establishment of traffic calming devices, the area would be beautified making this wide street much more aesthetically pleasing.

Baltimore Avenue is also an optimum area for traffic calming uses. This corridor serves as the only principal arterial in Lansdowne and East Lansdowne Boroughs yet it is also serves as the civic and commercial heart of the Boroughs. Traffic calming measures can be used to create a more pedestrian friendly environment along this corridor and slow traffic down to posted speed limits without curtailing road capacity. Specific tools such as curb bump outs, raised crosswalks or intersections, or high visibility crosswalks could be used to increase automotive awareness of pedestrians without seriously diminishing the road's function as an arterial of regional importance. These techniques could be of particular use where there is a large amount of pedestrian traffic crossing the street, such as at Lansdowne Avenue or at Runnemede Avenue. The addition of street trees, shoulder striping or bike lanes also serve to slow automobiles, as they make the driver perceive the roadway as narrower. This technique could be of particular use to slow traffic down on long uninterrupted stretches of Baltimore Avenue, such as in East Lansdowne.

Map 8-2 – Traffic Signals, Sight Restrictions, and Poor Road Conditions

Lansdowne and East Lansdowne
Comprehensive Plan



Penn Boulevard in East Lansdowne (above) is excessively wide and provides an opportunity for beautification



Signage can sometimes be misleading (above left). Truck routes need to be clearly indicated (above right)

Truck traffic concerns are not uncommon in older areas where industry shares many roads with residential development. This problem cannot be eliminated entirely, but having a well-marked truck traffic route limits traffic to certain streets. Lansdowne, East Lansdowne, and Upper Darby should work together to identify industry and residential concerns with truck traffic and have a clear and uniformly designated truck traffic route through the Boroughs.

RECOMMENDATIONS

The Boroughs should...

- 8-6 In conjunction with Upper Darby Township, should work with residents to identify and prioritize residential streets with considerable cut-through and speeding traffic. Examine any traffic calming methods currently on those streets and consider updating them. Where existing stop signs and one-way streets do not remedy the problem, consider installing roundabouts, speed humps, or other traffic calming measures to remedy the problems. Examine the feasibility of creating curb bump outs particularly along Baltimore Avenue where a more pedestrian friendly atmosphere is needed.
- 8-7 Work with Upper Darby Township to enact an ordinance identifying streets on which heavy trucks are permitted and not permitted, including fines which would help pay for damage caused by trucks. Adjacent municipalities should also be consulted to guide truck traffic across all of the necessary municipal borders to the interstate highways or port facilities. This will help to minimize the impact on residents while simultaneously making industrial areas more attractive in terms of access.

Funding Programs: State Liquid Fuels Tax Reimbursement
Surface Transportation Program
Transportation Enhancements Program
National Highway System funds
CDBG (where eligible)

Technical Assistance: *Pennsylvania's Traffic Calming Handbook*, Pennsylvania Department of Transportation, 2001;
Traffic Calming, State of the Practice, Institute of Traffic Engineers, 1999.

Signs and Speed Limit Issues

Traffic-related signs in Lansdowne and East Lansdowne are generally in good condition and serve their purpose. In general the age of the signs adds charm while maintaining function given the slow speeds of residential streets, but several signs have issues including being faded to the point of illegibility, being inappropriately fixed to their posting so they are easily twisted so as to be inaccurate, or missing entirely.



Large-scale street signs in the center of traffic signal arms (above left) augment typical street signs on high-speed traffic routes. Historic pedestrian scale street signs (above right) are more appropriate on residential streets.

TABLE 8-5
STREET SIGNAGE ISSUES

Sign Location	Cross Street	Problem	Type of Sign
Stratford Avenue	Highland Avenue	Missing	Street
Stratford Avenue	Wycombe Avenue	Missing	Street
La Crosse Avenue	Rigby Avenue	Missing	Street
Hansel Road	Powelton Avenue	Missing	Street
Wabash Avenue	Windsor Avenue	Missing	Street
Marshall Road	Braddock Avenue	Missing	Street
Marshall Road	Cooper Avenue	Missing	Street
Marshall Road	Highland Avenue	Missing	Street
Wycombe Avenue	Sayers Avenue	Twisted	Street
Union Road	La Crosse Avenue	Twisted	Street
Wycombe Avenue	Price Avenue	Twisted	Street
Emerson Avenue	Lewis Avenue	Twisted	Street
Wycombe Avenue	Baltimore Avenue	Missing	One way
Highland Avenue	Baltimore Avenue	Missing	One way
Wycombe Avenue	Nyack Avenue	Missing	Stop
Lansdowne Court	Lansdowne Courth	Missing	Stop
Mansfield Avenue	Madison Road	Missing	Stop
Gladstone Road	Walsh Road	Missing	Stop
Willowbrook Avenue	Marlyn Avenue	Missing	Stop
Willowbrook Avenue	Bryn Mawr Avenue	Missing	Stop
Eldon Avenue	Greenwood Avenue	Faded	Street
Lexington Avenue	Baltimore Avenue	Faded	Street
Oak Avenue	Church Lane	Faded	Street
Long Lane	Wildwood Avenue	Faded	Street
Long Lane	Emerson Avenue	Faded	Street

Source: DCPD Survey, 2003.

Map 8-3 – Street Signage Issues

A more serious threat is posed by the lack of traffic control signs at certain intersections. There are six such intersections in Lansdowne where there is no appropriate stop or yield sign. This could prove extremely dangerous and result in property damage or personal injury to drivers who are not familiar with the intersection. These intersections should be assessed and the proper placement of traffic control signs should be determined. Also, two one-way streets, Highland Avenue and Wycombe Avenue, require additional signs at Baltimore Avenue. Southbound Wycombe Avenue and northbound Highland Avenue both converge onto Baltimore Avenue. Although marked with proper “Do Not Enter” signs, these signs are not visible to drivers turning from Baltimore Avenue until they have already turned, thus risking an accident with oncoming traffic on Wycombe and Highland Avenues. One-way arrows should be in place to adequately inform the driver about the one-way road.

Signs can be used to create a sense of place in a community or neighborhood. Street signs should be appropriate for both the character of the area and the use of the street. On streets used for through traffic, large easily visible street signs that can be seen at high speeds should be used. On residential streets smaller signs posted at pedestrian scale should be used to avoid visual clutter. Designs of street signs should be grouped by municipality, neighborhood, or development to clearly signal to both visitors and residents a sense of place.

Many communities identify their borders with decorative signs to welcome visitors or designate particular shopping or civic areas. Throughout Lansdowne and East Lansdowne, there are several different styles in use to welcome people into the borough. Most of the Lansdowne welcome signs include the town symbol, the sycamore tree. The consistent use of the symbol helps perpetuate a sense of place. However, the welcome sign on Wycombe Avenue and Fairview Avenue is generically black and white and placed on a telephone pole too high for maximum visibility. Several locations where welcome signs are missing can be found on the *Transportation Improvements* map. Welcome signs should be considered on those thoroughfares that have substantial traffic to other municipalities.



Gateway signs and decorative banners create a sense of place

RECOMMENDATIONS

The Boroughs should...

- 8-8 Install traffic control signs such as stop signs at all intersections that are currently unregulated.
- 8-9 Work to replace missing street identification signs to ease way finding by both visitor and residents.
- 8-10 Incorporate banner signs on streetlights to denote a Baltimore Avenue Shopping District, Downtown Lansdowne, or both.
- 8-11 Consult residents to see if they find any speed limits in the boroughs to be excessive. Spot speed studies should be conducted to see if lower speed limits are warranted on these roads.
- 8-12 Increase decorative and welcome signs throughout the Boroughs to encourage and define the sense of place. These signs serve the dual function of increasing civic pride for residents and increasing awareness of the Borough by those who visit.

Funding Programs:	State Liquid Fuels tax reimbursement Surface Transportation Program Transportation Enhancements Program National Highway System funds CDBG (where eligible) SEPTA Municipal funds
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Technical Assistance:	Pennsylvania Department of Transportation District 6-0 Traffic Unit Delaware County Planning Department
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Traffic Signals

The most common type of signal currently found in Lansdowne and East Lansdowne is the fixed-time operation (timed) signal. Timed signals are generally not considered to be state of the art in traffic operations, especially where a major street crosses smaller streets because the signal timing does not take into account side street traffic volumes. Timed signals are detrimental to traffic on larger through streets because the signal stops traffic on those streets regardless of the need for the light change, i.e. whether anyone is waiting at the cross street or not.

The second type of signal is the actuated signal. Actuation consists of (1) a magnetic loop wire buried below the surface of the side street that indicates to the signal's controller that a vehicle has approached and (2) a push button for pedestrians to use to

cross the street. Once actuated by a side-street vehicle or pedestrian, the major street light changes to red, allowing the side street vehicle or pedestrian to cross.

TABLE 8-6
TRAFFIC SIGNAL TYPE AND LOCATION

Signal Location	Cross Street	Type	Scheduled for improvement	Recommendations
Baltimore Avenue	Burmout Road/Scottdale Road	Timed	yes	n/a
Baltimore Avenue	Walsh Road/Martin Drive	Actuated	yes	n/a
Baltimore Avenue	Lansdowne Avenue	Timed	yes	n/a
Baltimore Avenue	Wycombe Avenue	Timed	yes	n/a
Baltimore Avenue	Union Avenue	Timed	yes	n/a
Baltimore Avenue	Penn Boulevard	Timed	yes	n/a
Baltimore Avenue	Church Lane	Timed	yes	n/a
Lansdowne Avenue	Plumstead Avenue	Timed	no	Create closed loop system
Lansdowne Avenue	Essex Avenue	Timed	no	Create closed loop system
Lansdowne Avenue	Greenwood Avenue	Timed	no	Create closed loop system
Lansdowne Avenue	Stewart Avenue	Timed	no	Create closed loop system
Marshall Road	Shadeland Avenue	Actuated	no	none
Marshall Road	Windermere Avenue	Timed	no	Convert to actuated signal
Marshall Road	Lansdowne Avenue	Timed	no	Convert to actuated signal
Wycombe Avenue	Plumstead Avenue	Timed	no	Convert to actuated signal
Wycombe Avenue	Stewart Avenue	Timed	no	Convert to actuated signal
Church Lane	Pembroke Avenue	Actuated	no	Convert to actuated signal

Source: Delaware County Planning Department, 2003.

The Pennsylvania Department of Transportation (PennDOT) is planning to improve the operation of all signals on Baltimore Avenue from Bishop Avenue in Springfield Township to Church Lane and US 13 in Upper Darby Township. This improvement will provide for the interconnection and coordination of all of the signals to provide better traffic flow, which will reduce congestion and pollution that is created by stop-and-go traffic. Lansdowne and East Lansdowne are both part of this signal optimization improvement that is included in the Transportation Improvement Program (TIP), meaning that funds have been set aside for the completion of this project.

Lansdowne Avenue is a heavily traveled north/south route through eastern Delaware County, yet there are no plans to coordinate its signals. A study should be done to look into the feasibility of updating these signals to allow for smoother traffic flow similar to the optimization currently scheduled on Baltimore Pike. Other streets with lower traffic flows should be converted to actuated signals as it becomes feasible.

RECOMMENDATIONS

The Boroughs should...

- 8-13 Work with and provide input to PennDOT on the Baltimore Avenue traffic signal improvement project.

- 8-14 Lansdowne should work with Upper Darby and Haverford Townships to secure funding for signal optimization work on Lansdowne Avenue.
- 8-15 Prioritize signal upgrades by examining where low traffic volumes on one street are hampering the high traffic volumes of the cross street. Ensure that the actuation is sensitive to bicycles and pedestrians.

Funding Programs: Federal highway funds such as National Highway System funds, Surface Transportation Program, Congestion Mitigation and Air Quality Improvement Program (CMAQ),

Technical Assistance: Pennsylvania Department of Transportation District 6-0 Traffic Unit

Parking Facilities

A common problem with older row house developments is parking. When these neighborhoods were designed pedestrian and public transit supplied a far greater percentage of the total number of trips and often there was only need for one working member of the family to commute to work. Now it is common to have as many as three cars per household in a row house development and the on-street parking system cannot always cope with the extra cars.

Overnight on-street parking is provided for and regulated by permit programs in both East Lansdowne and Lansdowne. Enforcement times for Lansdowne are between the hours of 2am and 6am. A permit that allows overnight parking costs \$40 per year and is available to any person, regardless of the municipality in which they live. East Lansdowne restricts parking between the hours of 3am and 6am. A yearly permit costs \$48 per year is available to East Lansdowne residents only.

A particular area of concern is in areas where commuters or commercial uses compete with residents for parking. The parking infrastructure is strained around the areas of the Lansdowne and Gladstone R3 stations. The surrounding streets that are within walking distance of the stations have parking restrictions from 8am-10am and 3pm-5pm that reflects the rush hour traffic period for the area. This method spreads out the impact of commuter parking because SEPTA commuters find another place to park further away from the station when it becomes full.

Another option to address issues of commuter parking on residential streets is enforcement of the parking permit policy at all times. Typically there is little conflict between residents and commuters because they are parking at different times and their needs do not conflict. Restricting long-term daytime parking for commuters in residential areas can produce benefits for downtown businesses, however. With proper

Lansdowne and East Lansdowne
Comprehensive Plan

directional signs to long-term municipal meters and parking restrictions on residential streets, commuters could be encouraged to park in underutilized municipal lots and to walk past Baltimore and Lansdowne Avenue shops on their way to R3 stations when the SEPTA lots are full.

Parking meters are a tool to increase turnover in commercial areas by limiting the time of parking. Parking meters need to reflect the desired parking habits of the area where they are located.

Meters with long time limits (7-12 hours) are used to designate areas for long-term parking (office workers, commuters, commercial and industrial employees, residents, etc.) and should be placed in less desirable parking areas farther from key commercial uses. Meters with time limits less than three hours are for short-term parkers who want to stop in one store or restaurant and then leave shortly afterwards. These meters should be placed as close to the desired building as possible. Meters with medium time limits (3-6 hours) are used for people who are making several stops in the shopping district, such as people going to dinner and a movie. These people are willing to walk longer distances than short-term parkers because their needs are not centered on one store or activity, but desire parking spaces closer than long-term parkers. There is a danger that employees with shorter shifts may use these parking spaces and employer education is necessary to ensure that they do not.

In Lansdowne and East Lansdowne, parking meters were not organized in accordance with these parking principles. Ten-hour meters are located on Lansdowne Avenue directly in front of stores and 2-hour meters are located in the relatively distant municipal lot.



Parking Meters close to stores should have lower time limits to encourage turnover for shoppers

When competing with free parking in more distant suburbs, it is important to have an active and well-managed parking management strategy. Frequent, decorative, and uniform signs to point out parking areas are a must for capitalizing on the convenience of shopping in a downtown area. Education of both employees and shoppers is necessary to effectively manage the parking spaces in the district. The truth is that there is ample parking in older downtowns that is typically closer to stores than parking at regional malls. The goal is to make shoppers aware of that fact or to augment the streetscape and pedestrian amenities to make the store seem closer and more convenient.

TABLE 8-7
PARKING FACILITIES

Location	1 hour	2 hour	4 hour	5 hour	10 hour	12 hour	Total
Municipal Lot on Highland Ave.	x	40	1	x	20	29	90
Lansdowne Ave near Stratford Ave	x	7	x	x	1	x	8
Lansdowne Ave between Stratford and Stewart	x	2	x	x	5	x	7
Windermere and Marshall	x	6	x	x	x	x	6
Owen and Marshall	x	2	x	x	x	x	2
Municipal Lot near PNC Bank	1	19	x	x	64	10	94
Lansdowne Avenue from Muni Lot to Baltimore Avenue	x	5	x	x	1	x	6
Lansdowne Avenue from Baltimore Avenue to Bridge	x	11	x	x	x	x	11
Baltimore Avenue from Lansdowne Avenue to Union Rd	x	31	x	1	2	12	46
Baltimore Avenue from Lansdowne Avenue to Owen Av	x	9	x	x	x	x	9
Glenwood Avenue	x	4	x	x	x	x	4
Lewis Avenue	x	2	x	x	x	x	2
Beverly Avenue	x	2	x	x	x	x	2
Wildwood Avenue	x	6	x	x	x	x	6
Penn Boulevard	x	8	x	x	1	x	9
Lexington Avenue	x	4	x	x	x	x	4
Melrose Avenue	x	2	x	x	x	x	2
Baltimore Avenue	x	9	x	36	x	1	46
Municipal Lot*	x	7	x	x	x	x	7
Upper Darby Side	x	x	x	30	x	1	31
Total	1	176	1	67	94	53	392

*Additional 7 permit stalls in Municipal Lot

Source: DCPD Parking Survey, 2003.

Parking meters need to be easily visible and all information regarding parking restrictions, costs, etc. need to be clear if proper enforcement is desired. Currently, some of the meters are illegible because of internal condensation so that customers cannot see the amount of time left on the meter. This makes it clear to the customer that the meters aren't enforced and it is unlikely the customer will pay. The parking compliance officers that routinely patrol should inspect meters for defects or errors.

There are options other than parking meters to ensure compliance with parking ordinances. Centralized parking stations work in a similar fashion to meters, but lessen

Lansdowne and East Lansdowne
Comprehensive Plan

the requirements of parking compliance officers by giving them one station, rather than numerous meters, to check. They also decrease sidewalk clutter and maintenance issues caused by individual parking meters. They are slightly more inconvenient for the parker, however, who may have to go out of his or her way to pay at the station.

With large amounts of commercial growth the current parking may prove not to be adequate in the future for Lansdowne and East Lansdowne Boroughs. Because of the huge expense of constructing new parking facilities (\$7,000 per space is considered the extremely economical for parking structures), all efforts should be made to most efficiently manage and market current parking resources before the construction of new parking areas is even considered. If parking studies show that more parking is needed, however, parking structure location should be decided by a matrix of factors. Factors include walking distance, safety or perceived safety, land and site preparation cost, vehicular access, historic preservation, and public acceptance. If a parking structure is decided on as the best alternative, retail should be incorporated at street level to avoid a break in the streetscape (see picture below). This also provides a source of rental income to help with the cost of the structure. Demolition of existing structures should be avoided if at all possible because these structures serve as development opportunities for more commercial uses. It should always be remembered that parking areas are used to serve retail areas and are a costly liability to city finances as few uses provide less property tax than parking facilities.



Source: *Christie Place: Design Concept for a Mixed-Use Parking Structure*; Report of the Interactive Design Process Committee to the Scarsdale Village Center Committee.

Parking structure with street level retail space

Map 8-4 – Metered Parking Survey

RECOMMENDATIONS

The Boroughs should...

- 8-16 Look into starting residential parking permit programs in areas where the limited parking is used by individuals who are not residents, such as near commercial areas or train stations.
- 8-17 Enforce parking meter regulations more uniformly to obtain greater compliance. Consideration should be given to outsourcing the enforcement of public meters to see if it is more cost-effective.
- 8-18 Conduct a parking study to identify underutilized parking areas and target these areas for increased promotion or development in conjunction with a Baltimore Avenue Corridor District. Long-term parking spaces could be promoted to SEPTA commuters, thus encouraging them to walk by and patronize businesses.
- 8-19 Based on the results of the parking study, make parking improvements, both in terms of physical improvements (improved signs in the theme of the Baltimore Avenue Corridor District, new parking meters, etc.) and marketing improvements (friendly tickets, parking vouchers that can issued by businesses, maps of business district and parking areas). Newer forms of parking enforcement such as centralized parking stations should also be considered.
- 8-20 Lansdowne should discuss with SEPTA merging the SEPTA parking lot with the Madison Road municipal lot adjacent to the Lansdowne station in order to reduce the number of SEPTA commuters that park in residential areas.

Funding Programs: SEPTA,
 Municipal funds

Streetscape Issues

Lansdowne and East Lansdowne have largely traditional streetscapes. A transit-oriented development (TOD) or Traditional Neighborhood Development (TND) code would more accurately represent the current development patterns of these Boroughs and best take advantage of their transit amenities. TOD codes are applicable to areas that are largely built-out and take the form of overlay districts that specify new design standards similar to the general characteristics of the streetscape. For example, zoning codes in these areas should shift the parking to the rear of the development, which fits the urban character of these boroughs while making the streetscape more interesting to pedestrians and better looking for drivers.

TOD codes also account for the availability of transit and pedestrian facilities when calculating parking minimums, which results in less total parking area where it is not needed, benefiting developers and residents. With the R3 line and several bus lines

running through Lansdowne and East Lansdowne, a shift towards a more pedestrian friendly town would allow a portion of the under-used municipal parking lots to be made available for commuters. Commuters parking in the municipal lots would positively impact the towns' economies while walking to and from the train station. Accessible facilities such as restaurants, stores, and coffee shops would attract commuters.

There is also a movement to manage access points to developments more selectively than in traditional developments. This means allowing fewer curb cuts onto major streets through the use of joint or single access parking lots. The benefits of fewer curb cuts are multifold. Congestion is lowered because smoother traffic flows on major streets result from fewer turn movements. Pedestrians feel safer on the sidewalks because there are fewer points where they conflict with automobiles. Americans with Disabilities Act compliance for sidewalks is easier to achieve because there is less need for elevation change needed with curb cuts. Drainage issues are improved because there is a more even gutter, decreasing the need for street maintenance.

Lansdowne, East Lansdowne, and Upper Darby could also adopt an Urban Commercial/Industrial Overlay zoning district for the entire Baltimore Avenue corridor, working to create a unified design and feel for the entire area despite the mixture of uses. Currently, Baltimore Avenue serves as the dividing line between East Lansdowne and Upper Darby Township. The East Lansdowne side is characteristic of retail shops and small business while the Upper Darby side is largely industrial. The cooperation of both municipalities would produce a positive effect because industrial workers supply consumers for shops and restaurants while providing these amenities within walking distance creates a more competitive industrial development. An urban commercial overlay would ensure that future development would require a variance if it were to deviate from the current and historic mixed-use patterns of development.

Urban overlay districts are established to ensure that new development fits in with the standard of development currently in place. For the Baltimore Pike Corridor, this would mean that the Urban Overlay would require buildings to be flush with neighboring buildings at the sidewalk, have a certain percentage of display window, and require parking at the rear or to the side of the building instead of in the front. This allows for new infill developments, such as pharmacies or banks, without the alteration of the streetscape that usually go with them. Urban design integrity will not only attract visitors to the area but also preserve the historic character of the buildings.

A common request to improve the streetscape in older neighborhoods is to remove unsightly power lines. Utility poles also have safety issues, especially when they are placed too close to the curb. There are cases where utility poles within the study area are less than the current standard of 18 inches from the curb providing an added hazard for vehicles that are forced to leave the road because of adverse conditions. This is because they predate the 1969 safety standard set by PennDOT. Often, it is prohibitively expensive to bury already existing above ground power lines, but with large-scale new construction this is a cost generally covered by the developer.

Lansdowne and East Lansdowne
Comprehensive Plan



Commercial district at intersection of Windermere and Marshall with power lines buried, texturized crosswalks, and curb bump out where one-way forces a street closure.

RECOMMENDATIONS

The Boroughs should...

- 8-21 Work together with Upper Darby to create a Baltimore Avenue Corridor district. Create a single design standard for construction and marketing, helping to make the area more competitive commercially, industrially, and residentially. Focus on creating transit-oriented and pedestrian-oriented guidelines for redevelopment and consolidating access points into new and current developments. Capitalize on the need to reduce cartway width through use of medians, bike lanes, angled parking, curb bump outs, raised crosswalks, etc. Provide all of these options to the community and allow them to shape the future development of the corridor.

- 8-22 Look into creating an urban commercial overlay where appropriate so that older mixed-use streets retain their pedestrian and transit friendly feel. Work with business interests to consolidate access points to developments with off street parking. Marshall Road, Long Lane, and Plumstead Avenue should be examined for the applicability of urban commercial overlays.

- 8-23 Look into adopting TOD or urban commercial overlay zoning for areas near transit stops or stations. This will ensure that any future development optimizes its accessibility to transit and matches the current design of the community.

- 8-24 Revise zoning codes to require developers to bury power lines with any large-scale new development at their cost.

- 8-25 Work with utility companies to relocate poles that are located too close to the curb. Bury utility lines where interest is high.

Funding Programs: State Liquid Fuels tax reimbursement,
 Surface Transportation Program,
 Transportation Enhancements Program,
 National Highway System funds,
 CDBG (for eligible portions of the boroughs),
 National Trust for Historic Preservation Main Street
 Program,
 Utility companies,
 Private developers,
 Municipal funds

Technical Assistance: *Transit-Oriented Development for Southeastern Pennsylvania*, GreenSpace Alliance of Southeastern Pennsylvania, 1997;
Creating Transit-Supportive Land-Use Regulations, American Planning Association, 1996;

PEDESTRIAN AND BICYCLE FACILITIES

Pedestrian Facilities

Lansdowne and East Lansdowne are very pedestrian-friendly communities where residents are able to walk to stores, schools, borough halls, transit stops and stations, parks, libraries, and other places. Because Lansdowne and East Lansdowne are walkable and have a system of sidewalks, the towns are more attractive to potential residents than communities without these facilities. Studies have also shown that people who do more walking are healthier than people who have no alternatives to driving everywhere.

There are a number of locations where pedestrian facilities could be improved, either to fill in gaps in the sidewalk system or to make repairs.

Lansdowne Borough

Sidewalks need to be constructed at the following locations:

1. Replace a worn path connecting the end of Wabash Avenue with Woodland Avenue
2. East side of Union Avenue from north of the railroad crossing to Fairview Avenue
3. Scottdale Road from Baltimore Avenue to Knoll Road – for park access
4. Lansdowne Court near Darby Creek
5. The east side of Mansfield Avenue between Essex and Greenwood Avenues – a portion of the block.
6. Runnede Avenue between Bryn Mawr and Stratford Avenues in the unopened street right-of-way
7. Eldon Avenue from Drexel to Berkley Avenues in the unopened street right-of-way

Sidewalk maintenance is needed at the following location:

1. The west side of Wycombe Avenue from Powelton to Florence Avenues–vegetation blocks the sidewalk

East Lansdowne

Sidewalks need to be constructed at the following locations:

1. Church Lane from Pembroke Avenue to Oak Avenue
2. The south side of Baltimore Avenue at the site of the former Newtown Square rail line bridge (coordinate with Upper Darby Township)

3. Both sides of Pembroke Avenue at the former crossing of the Newtown Square rail line and the south side of the street to the Acme supermarket—for a safe walking route for East Lansdowne residents (coordinate with Upper Darby Township). Parking that forces pedestrians into the road should be prohibited.
4. To connect Glenwood Avenue and Lecarra Drive in Upper Darby Township – to replace the worn path – this is an obvious walking route because the nearest east-west sidewalks are well to the north and south (Marshall Road and Pembroke Avenue) (coordinate with Upper Darby Township)

The following pedestrian improvements need to be made so that East Lansdowne residents can more safely walk to and from the Fernwood-Yeadon train station (coordinate with Upper Darby Township):

1. At the Baltimore Avenue/Church Lane intersection, a crosswalk should be installed on the western side of the intersection, all crosswalks should be continental crosswalks (wide stripes parallel to traffic flow), pedestrian signals should be installed, and curbs should be constructed to better separate the roadway from the sidewalks.
2. Sidewalk repairs need to be made on Old Church Lane, the street that leads to the outbound platform of the train station.
3. Trailblazing signs should be installed to direct pedestrians between the station and the Baltimore Avenue/Church Lane intersection, including directional signs for the proper sidewalk and stairway to use to access each station platform.

RECOMMENDATIONS

The Boroughs should...

- 8-26 Construct “missing link” sidewalks as listed above.
- 8-27 Enforce sidewalk codes so sidewalks remain in good repair and are not blocked by vegetation.
- 8-28 Stripe all crosswalks as continental crosswalks (wide stripe parallel to traffic flow) so that they are more visible to motorists.
- 8-29 Work with Upper Darby Township to create a pedestrian-friendly streetscape along Baltimore Avenue, and consider improvements such as street trees, benches, pedestrian-scale lighting, corner bump-outs, bicycle lanes, crosswalks with different materials such as bricks, and more attractive street and store signs.

East Lansdowne should...

- 8-30 Work with Upper Darby Township and PennDOT to make the Baltimore Avenue/Church Lane intersection and pedestrian route to the Fernwood-Yeadon train station more pedestrian-friendly as discussed above.

Funding Programs: CDBG (for eligible portions of the Boroughs),
Transportation Enhancement Program,
Congestion Mitigation and Air Quality
Improvement Program (CMAQ)
Surface Transportation Improvement Program,
National Highway System,
SEPTA

Bicycle Facilities

Currently, the Boroughs’ streets serve as the facilities for bicycling. There are no bicycle lanes or off-road bicycle trails, although children use the sidewalks. The residential grid street system generally present in the Boroughs is ideal for bicyclists and few accommodations are needed to encourage bicycling on local streets. On the major streets, however, high traffic speeds and volumes may warrant the creation of bicycle lanes. Bike lanes increase bicyclists’ sense of security, notify motorists of where to expect bicyclists, and show that bicyclists have a legitimate place on the road. People bicycle more in places that have them than in places that do not.

**TABLE 8-8
BICYCLE COMMUTING TO WORK**

	2000 Census			1990 Census		
	Workers 16 years and over: Total	Bicycle for transportation to work	Percent bicycle	Workers 16 years and over: Total	Bicycle for transportation to work	Percent bicycle
East Lansdowne	1,222	8	0.65%	1,309	0	0.00%
Lansdowne	5,775	25	0.43%	6,237	22	0.35%
Upper Darby (census tract 4003.02)	1222	26	2.13%	989	0	0.00%

Source: U.S. Bureau of the Census, 2000.

A relatively small but rapidly growing number of commuters bicycle to work from Lansdowne and East Lansdowne. The number of bicycle commuters increased by 168 percent between 1990 and 2000, from 22 to 59. The portion of Upper Darby Township between the two boroughs has a relatively high percentage of bicycle commuters with 2.13% of workers over the age of 16 commuting via bicycle in 2000. The percentage increased in all three areas from the 1990 census to the 2000 census. Census data on bicycling is considered to underestimate the number of bicyclists in an area because the only trips counted are work trips made entirely on bicycle. This would not include trips made for recreation or shopping, trips to school or other trips by school-aged children, or partial bicycle trips made to train stations when going to work.

Bicycle parking facilities are sparse in Lansdowne and East Lansdowne. The current standard for bicycle parking is inverted U-racks that resist vandalism and provide two points on which to lock the bicycle. The bike racks that do exist are antiquated to the

point of having a negative affect on bicycle and pedestrian use. On Lansdowne Avenue, near the theater, there is a bike rack that requires the front or back tire to be placed into a slot. However, there is no method to lock the bicycle frame once it is in place. Also, this type of bike rack makes bikes quite susceptible to rim damage as the bike can fall over and subsequently twist the rim. Ardmore Avenue Elementary School has a bike rack that crosses paths with the sidewalk. This is inconvenient for pedestrians walking on the sidewalk, as they have to travel around the bikes that extend into the sidewalk. However, if pushed back, the bicycle rack is under trees and inconvenient for the users. The bike rack should be moved to a more convenient location where it is prominent to users and does not block the sidewalk.

The needs of bicyclists should be considered when making improvements to any roadway. When restriping or repaving roads, thought should be given to including wide shoulders or bicycle lanes where the need and room exist. Street sweeping should be sensitive to the needs of bicyclists and not leave debris in the shoulder or bicycle lane. When making improvements to the signalization it is important to include the needs of bicyclists. Actuated signals should be made responsive to bicycles as well as cars. This technology is not typically more expensive than the standard actuation process, but a different detection device would need to be installed.

The Delaware County Planning Department is currently working on a countywide bicycle plan. The goal of this plan is to identify important bicycle routes to improve the level of service for bicycles on these routes. Routes for examination have been selected using a combination of accident and survey data. Bicycle accident data can be reviewed in Appendix G. Several routes through the project area have been highlighted for study as possible on-road bicycle routes and are shown in map 8-5.

There are several areas in the two boroughs where bike lanes could be implemented: in East Lansdowne on Baltimore Avenue, Penn Boulevard and Pembroke Avenue and in Lansdowne on Baltimore Avenue, Lansdowne Avenue and Stewart Avenue. In coordination with new bike lanes there is a prime opportunity to educate the public on safe operating methods. Programs such as Safe Routes to School should be started that educate students who would use the lanes. Safe Routes to School relies on the four E's: Engineering and Planning, Education, Enforcement, and Encouragement. The program educates students about the advantages of walking and riding to school by incorporating pedestrian and bicycle related topics into the curriculum at schools. This program also assists municipal officials in targeting bicycle and pedestrian improvements to students' routes to school. Through this type of program, students become more aware of the safe and proper methods of how to ride and walk in congested areas.

Another possibility lies with looking for an off road multi-use trail that serves bicyclists, walkers, joggers, runners, and rollerbladers. There are limited areas in Lansdowne and East Lansdowne for off road multi-use paths. Creek beds are commonly used for multi-use paths as they often provide interesting surroundings and secure flood plain lands from development. Darby Creek in Lansdowne would be an ideal location for a multi-use trail

because most of the area is already parkland and there are poor pedestrian connections. The locations of these watershed areas can be seen on Map 8-5.

Another common location for multi-use trails is in utility or former railroad rights-of-way. The former Newtown Square Branch railroad line, now an electric line right-of-way, runs on the western border of East Lansdowne, into the part of Upper Darby Township that runs between the two boroughs, and then skims the northeast corner of Lansdowne. This right-of-way could become a multi-use path that serves various municipalities. The increasing numbers of bicycle commuters who live in the census tract through which the right-of-way runs would support a trail linking the Baltimore Avenue commercial corridor and destinations to the north, such as Barclay Square Shopping Center, Delaware County Memorial Hospital, and the three high schools near the intersection of Garrett Road and Lansdowne Avenue. Presently, the area is a strip of green that is kept-up and used by neighboring residents. Not all areas are mowed; some are overgrown and in need of grooming. However, with cooperation among the several municipalities that the old line borders, the potential of turning the path into a recreational, utilitarian, and commuting facility is quite realistic.

Lansdowne also includes several areas where the grid connection of the streets has been severed to limit through traffic. This is a good technique for limiting through automobile traffic, but pedestrian and bicycle access should be maintained. These areas also provide opportunities to produce small parks within the neighborhood. They could include playgrounds, skate parks, or picnic areas, but it should be made expressly clear that pedestrian and bicycle use is permitted through the construction of an ADA accessible sidewalk or path.

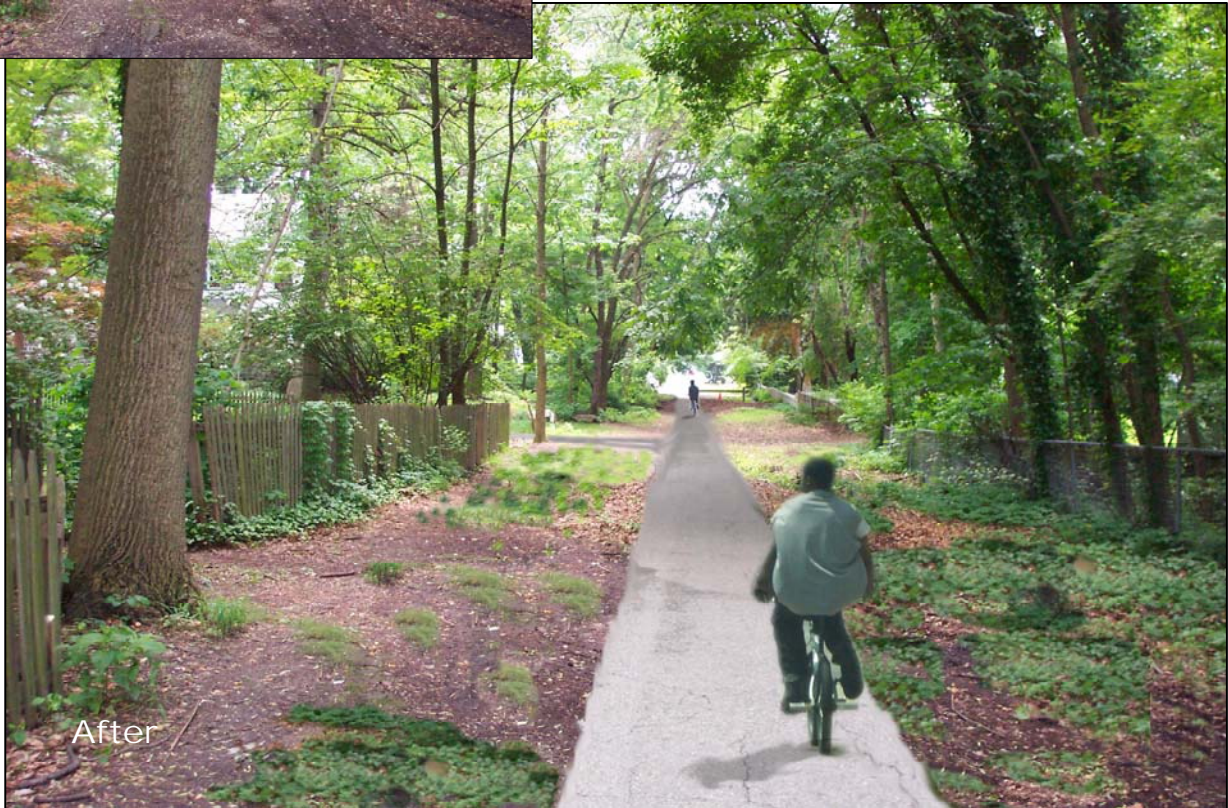
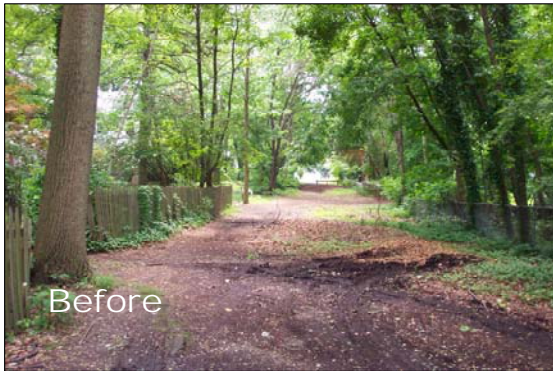
Both multi-use paths and pocket park connectors should be linked with recreation opportunities desired by the community. General observation in Lansdowne and East Lansdowne shows a large percentage of the bicycling public owns BMX trick bikes. Providing opportunities for riders to perform tricks at the trail's edge increases the popularity of paths and creates social nodes for bike riders in the community.

Map 8-5 – Bicycle Route and Trail Opportunities

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A trail along the Newtown Square Branch Railroad would make already existing usage of the corridor safer and more pleasant for pedestrians and bicyclists, while creating recreational opportunities for the area



Closed streets such as Runnemede Avenue could be turned into trails and serve as through routes for pedestrians and bicyclists

Lansdowne and East Lansdowne
Comprehensive Plan



Closed streets such as Wabash Avenue could be turned into pocket parks

RECOMMENDATIONS

The Boroughs should...

- 8-31 In cooperation with DCPD, PennDOT, SEPTA, and bicyclists, encourage bicycling for short trips as a way to improve health, reduce congestion, and reduce air pollution.
- 8-32 Install inverted “U” bicycle parking at public facilities and areas such as Borough Halls, libraries, business districts, and Hoffman Park. Encourage others such as public, private, and parochial schools (for their schools), SEPTA (for the train stations and trolley stops), U.S. Postal Service (for its post office), churches, and apartment complexes to install them at their facilities. Inverted “U” parking is less damaging to bicycles because they secure bicycles by the frame, not the wheels, and more resistant to vandalism because of their sturdier construction.
- 8-33 In cooperation with PennDOT, adjacent municipalities, and DCPD, stripe bicycle lanes on major streets where space is available including Baltimore Avenue, Lansdowne Avenue, Penn Boulevard, etc.
- 8-34 Along with neighboring municipalities, look for multi-use path opportunities along rights-of-way and creek beds and apply for funding to undertake feasibility studies, such as for the former Newtown Square Branch railroad right-of-way and the Darby Creek floodplain.
- 8-35 Link transportation opportunities of bike lanes and trails with recreation opportunities of skate parks and BMX trick parks.

Funding Programs: Surface Transportation Program,
 Transportation Enhancements Program,
 Congestion Mitigation and Air Quality
 Improvement Program (CMAQ),
 SEPTA,
 William Penn Foundation,
 DCNR,
 Municipal funds,
 Property owners

Technical Assistance: *Opportunities for On-Road Bicycle Facilities in Delaware County, a Technical Memorandum*, Delaware Valley Regional Planning Commission, 2000.
Guide for the Development of Bicycle Facilities, American Association of State Highway and Transportation Officials, 1999.

TRANSIT, PARATRANSIT AND TRAVEL DEMAND MANAGEMENT

Transit Service

The Southeastern Pennsylvania Transportation Authority (SEPTA) provides daily mass transit service in Lansdowne and East Lansdowne. Within these two Boroughs, SEPTA provides two modes of transportation. These include bus service on five routes and one regional rail service line.

R3 Regional Rail Line

The R3 rail line provides seven-day-a-week service between Elwyn and Philadelphia. It is a dual-track line owned by SEPTA. The Gladstone, Lansdowne, and Fernwood-Yeadon stations serve Lansdowne and East Lansdowne. There are 25 weekday trains and 17 weekend trains that serve the Boroughs in both directions.

Gladstone Station

The Gladstone station is located at the end of Walsh and Madison Avenues in a residential area of Lansdowne, one-half mile west of the business district. The station, while in good condition, has no ticket office. Covered shelters with seats are located on the inbound and outbound platforms. According to the *SEPTA Regional Rail Ridership Census 2001*, 170 riders board here weekdays. A total of 114 SEPTA parking spaces are located adjacent to the inbound and outbound platforms. The daily lot has 91 spaces and is located on the outbound side of the station. The permit lot has 23 spaces and is located on the inbound side of the station. Pedestrians can walk to the station from the Madison and Walsh Avenue sidewalks. Gladstone Apartment residents have easy access to the station, since the apartments border the station area. The station is remote from the major thoroughfares of Lansdowne. A driveway leads from Scottdale Road to the inbound side.

Lansdowne Station

The Lansdowne station is located on Lansdowne Avenue in the Lansdowne business district. The station is in very good condition. The ticket office is located next to the inbound platform in a renovated brick building, built in 1902, that includes a 15 by 36-foot indoor waiting room. Designed by renowned architect Frank Furness, the station was damaged by fire in 1993. It was restored by SEPTA with assistance from community volunteers and reopened in 1995. Seating is available at the outbound shelter and inside the building. According to the *SEPTA Regional Rail Ridership Census 2001*, 472 riders board here weekdays.

SEPTA parking lots with 128 spaces are located off of Lansdowne Avenue. The daily lot, with 91 spaces, is on the inbound side and is also accessible from Elberon Avenue. The permit lot, with 37 spaces, is on the outbound side and is accessible from Madison Avenue. Twelve 24-hour metered municipal spaces are located near the station, in the

Madison Avenue municipal lot. Pedestrians can walk to the station from the Lansdowne, Madison and Elberon Avenue sidewalks. There is also a sidewalk along the outbound side from Wycombe Avenue, leading to the outbound platform. There is currently no inter-track fencing installed at the Lansdowne Station to prevent SEPTA riders from crossing the tracks. This is especially dangerous because there are express trains passing through. SEPTA has indicated that they intend to install inter-track fencing in the Fall of 2004.

TABLE 8-11
R-3 REGIONAL RAIL - FERNWOOD-YEADON STATION
SERVICE

	Number of Runs	Times of Service	Average Headway* (in minutes)
<i>Inbound to Suburban Station</i>			
Weekdays	25	06:02 - 23:29	44
Peak Hours	9	06:02 - 09:11	24
Weekend	17	06:42 - 22:42	60
<i>Outbound to Elwyn</i>			
Weekdays	25	06:31 - 00:19	45
Peak Hours	6	16:20 - 18:34	27
Weekend	17	07:34 - 23:34	60

* time interval between trains in the same direction.

Source: SEPTA; July, 2003.

TABLE 8-12
SEPTA ROUTE 107 BUS SCHEDULE

	Trips	Times of Service	Average Headway* (in minutes)
<i>Weekday</i>			
Eastbound	19	05:28 - 20:12	49
Westbound	19	06:37 - 19:51	44
<i>Saturday</i>			
Eastbound	13	06:57 - 19:22	61
Westbound	12	07:37 - 18:59	61

* time interval between buses in the same direction. Varies accordingly by time of day.

Source: SEPTA, 2003.

Fernwood-Yeadon Station

The Fernwood-Yeadon station is located in a commercial area near the intersection of Church Lane and Penn Boulevard, one block from the border of East Lansdowne on the

border of Yeadon Borough and Upper Darby Township. The station is in poor condition and has no ticket office. According to Thomas Judge, the Chief Administrative Officer of Upper Darby Township, both Yeadon Borough and Upper Darby Township have received a TCDI Grant from DVRPC for station area improvements. A small shelter without seats is located on the inbound platform, and a bench is on the outbound platform. According to the *SEPTA Regional Rail Ridership Census 2001*, 137 riders board here weekdays. There is no SEPTA-owned parking at the station. There are 43 twelve-hour metered municipal spaces located near the station, on Church Lane and Myra Avenue in Yeadon. Pedestrians can walk to the station from the Church Lane, Penn

TABLE 8-13
SEPTA ROUTE 108 BUS SCHEDULE

	Trips	Times of Service	Average Headway* (in minutes)
<i>Weekday</i>			
Southbound	64	24-hour service	23
Northbound	68	24-hour service	21
<i>Saturday</i>			
Southbound	38	24-hour service	38
Northbound	38	24-hour service	38
<i>Sunday</i>			
Southbound	25	24-hour service	58
Northbound	25	24-hour service	58

* time interval between buses in the same direction. Varies accordingly by time of day.

Source: SEPTA, 2003.

Street, 1st Street, Fairview Avenue, Holly Road, and Baltimore Avenue sidewalks.

Route 107

Bus route 107 connects the intersection of Baltimore Pike and Bishop Avenue in Springfield Township with 69th Street Terminal in Upper Darby. In Lansdowne, the route uses the following streets from west to east: Baltimore Avenue, Burmont Road, Marshall Road, and the one-way couplet of Marshall Road and Plumstead Avenue, using Windermere Avenue for the eastbound routing. The 107 operates Monday through Saturday. Route 107 has 25 bus stops (11 westbound and 14 eastbound) in Lansdowne, none of which have covered shelters. According to SEPTA data, daily passenger use on the 107 in Lansdowne is highest at the Marshall Road bus stops at Lansdowne, Mansfield, Windermere, Eldon and Shadeland Avenues.

Route 108

Bus route 108 travels on Church Lane, Long Lane and Oak Avenue in East Lansdowne. It provides seven-day-a-week service connecting 69th Street Terminal in Upper Darby with Philadelphia International Airport. The 108 connects with many bus and rail routes,

including the R-1 regional rail line, three subway-surface trolley lines in Philadelphia, and the Market-Frankford El and three trolley lines at 69th Street Terminal. The 108 has eight bus stops (four in each direction) that serve East Lansdowne, none of which have covered shelters. According to SEPTA data, daily passenger use on the 108 in East Lansdowne is highest at the Long Lane/Emerson Avenue and Church Lane/Baltimore Avenue intersections, in both directions.

Route 109

Bus route 109 travels on Baltimore, Wycombe, and Union Avenues in Lansdowne. It provides seven-day-a-week service connecting 69th Street Terminal in Upper Darby with the Chester Transportation Center. The 109 connects with many bus and rail routes, including the R-2 regional rail line, the Route 102 trolley, and the Market-Frankford El and Norristown High Speed Line. The 109 has 28 bus stops (15 westbound and 13 eastbound) in Lansdowne along Baltimore, Wycombe and Union Avenues, none of which have covered shelters. According to SEPTA data, daily passenger use on the 109 in Lansdowne is highest at the Baltimore Avenue intersections with Lansdowne, Wycombe, Windermere and Union Avenues; the Union Avenue intersections with Stewart, Wycombe and Greenwood Avenues; and the Wycombe Avenue intersections

TABLE 8-14
SEPTA ROUTE 109 BUS SCHEDULE

	Trips	Times of Service	Average Headway* (in minutes)
<i>Weekday</i>			
Eastbound	57	04:19 - 02:37	24
Westbound	57	03:25 - 01:29	24
<i>Saturday</i>			
Eastbound	44	05:29 - 01:37	28
Westbound	44	04:26 - 00:29	28
<i>Sunday</i>			
Eastbound	28	07:15 - 01:38	41
Westbound	28	06:11 - 00:31	41

* time interval between buses in the same direction. Varies accordingly by time of day.

Source: SEPTA, 2003.

with Blackburn, Marshall, Baltimore, Greenwood and Stewart Avenues.

Route 113

Bus route 113 travels through Lansdowne and East Lansdowne on Lansdowne, Stewart, and Pembroke Avenues and Church Lane. The Lansdowne Avenue portion of the route is shared with bus Route 115. The 113 provides seven-day-a-week service connecting 69th Street Terminal in Upper Darby with the Chester Transportation Center and Marcus

Hook. This route connects with many transit routes, such as the Market-Frankford El, the Norristown High Speed Line, the Route 102 trolley, and the R2 regional rail line. The 113 has 24 bus stops (11 westbound and 13 eastbound) that serve Lansdowne and East Lansdowne, none of which have shelters. Nine bus stops (five eastbound and four westbound) are shared with Route 115 on Lansdowne Avenue. According to SEPTA data, daily passenger use on the 113 is highest at the Baltimore Avenue intersections with Lansdowne, Wycombe, Windermere, and Union Avenues; the Lansdowne Avenue intersections with Fairview, Baltimore, Lacrosse, and Stewart Avenues; and the

TABLE 8-15
SEPTA ROUTE 113 BUS SCHEDULE

	Trips	Times of Service	Average Headway* (in minutes)
<i>Weekday</i>			
Eastbound	53	05:25 - 01:11	23
Westbound	47	04:50 - 00:30	26
<i>Saturday</i>			
Eastbound	32	06:27 - 01:04	36
Westbound	30	05:06 - 00:30	40
<i>Sunday</i>			
Eastbound	20	06:27 - 01:02	58
Westbound	20	05:11 - 00:31	61

* time interval between buses in the same direction. Varies accordingly by time of day.

Source: SEPTA, 2003.

Pembroke Avenue intersections with Hirst, Lexington, Wildwood, and Union Avenues, Penn Boulevard, and Oak Lane.

Route 115

Bus route 115 travels through Lansdowne on Lansdowne Avenue. It provides weekday service connecting Brookline to MacDade Mall in Glenolden; terminal and intermediate points provide connections with several bus routes as well as the Route 101 trolley and the R2 regional rail line. The 115 has 19 bus stops (nine northbound and ten southbound) serving Lansdowne, none of which have covered shelters. According to SEPTA data, daily passenger use on the 115 in Lansdowne is highest at the Lansdowne Avenue intersections with Baltimore (both directions) and Essex Avenues (northbound).

TABLE 8-16
SEPTA ROUTE 115 BUS SCHEDULE

	Trips	Times of Service	Average Headway* (in minutes)
<i>Weekday</i>			
Northbound	14	06:38 - 18:49	56
Southbound	15	06:05 - 18:21	52

* time interval between buses in the same direction. Varies accordingly by time of day.

Source: SEPTA, 2003.

RECOMMENDATIONS

The Boroughs should...

- 8-36 Evaluate routing and service frequency of SEPTA routes serving the Boroughs and passenger amenities (train stations, bus stops, shelters, signs). Contact SEPTA, DCPD Transportation Section, and the Delaware County Transportation Management Association (TMA) to discuss possible route revisions or amenities.

Funding Programs: SEPTA,
Shelter advertising revenue

Technical Assistance: DCPD Transportation Section,
Delaware County TMA

- 8-37 Request SEPTA to install trailblazing signs at bus stops to direct riders to the Gladstone, Lansdowne and Fernwood-Yeadon train stations.

Funding Program: SEPTA

- 8-38 Improve pedestrian access to the regional rail stations and bus stops by creating continental crosswalks (thick lines parallel to traffic flow) at the intersections along Baltimore, Lansdowne, Stewart, Marshall, Plumstead, Wycombe and Union Avenues in Lansdowne, and the intersections along Pembroke Avenue, Long Lane, and Church Lane in East Lansdowne.

Funding Program: Municipal funds

- 8-39 Request the Delaware County Transportation Management Association to install passenger shelters with seating at bus stops at the intersections of Baltimore Avenue/Lansdowne Avenue, Baltimore Avenue/Union Avenue, Wycombe

Lansdowne and East Lansdowne
Comprehensive Plan

Avenue/Marshall Avenue, Union Avenue/Stewart Avenue, and Wycombe Avenue/Blackburn Avenue in Lansdowne; and at the intersections of Church Lane/Baltimore Avenue and Long Lane/Emerson Avenue in East Lansdowne.

Funding Programs: Shelter/advertising agency through advertising revenue.

- 8-40 Request SEPTA to determine the feasibility of establishing connecting service along Baltimore Avenue between 60th Street in West Philadelphia and the Lansdowne business district. A new bus route or route extension would better connect these areas. SEPTA service currently terminates at the Baltimore Avenue/61st Street intersection.

Funding Program: SEPTA

Lansdowne Borough should...

- 8-41 Request SEPTA to repave the inbound and outbound platforms at the Lansdowne and Gladstone train stations and install a sidewalk between the inbound platform and Wycombe Avenue at the Lansdowne station. The Delaware County Planning Department has documented the conditions of the Gladstone and Lansdowne Stations with pictures and is currently working in conjunction with Upper Darby Township and Yeadon Borough. Delaware County intends to send a letter of station and pedestrian access improvement requests March '04 to SEPTA officials.

Funding Programs: SEPTA,
Municipal funds

- 8-42 Discuss with SEPTA merging the SEPTA parking lot with the municipal lot adjacent to the Lansdowne station in order to reduce the number of SEPTA commuters that park in residential areas.

Funding Programs: SEPTA,
Municipal funds

East Lansdowne Borough should...

- 8-43 In conjunction with Upper Darby Township and Yeadon Borough, request SEPTA to renovate the Fernwood-Yeadon train station. The inbound and outbound platforms need to be repaved and there is a need for covered shelters that include seats at both platforms Boroughs notified and they have indicated they are receiving a TCDI Grant from DVRPC.

- 8-44 Request SEPTA to extend the intertrack fence 200 feet further east; the existing fence does not extend the full length of the outbound platform, permitting people to easily walk on the tracks at the eastern end of the platform.

Funding Programs: SEPTA

Paratransit Service

Community Transit of Delaware County (CTDC) provides paratransit service to Delaware County residents. Paratransit is customized door-to-door service required for individuals who are unable to use fixed-route transportation systems, such as senior citizens and physically impaired individuals. Vans usually transport these persons.

The Pennsylvania Lottery funds senior citizen reduced-fare transportation, which is provided by CTDC. CTDC also contracts with SEPTA to provide service for persons with disabilities, as required by the Americans with Disabilities Act (ADA), for those individuals who cannot use SEPTA's fixed-route bus system.

RECOMMENDATIONS

The Boroughs should...

- 8-45 Educate residents to ensure that they are properly informed of, and enrolled in, appropriate paratransit programs.

Funding Programs: Community Transit of Delaware County,
SEPTA

Travel Demand Management

Despite observed and perceived deficiencies in the transportation system, expanding the supply of roads is not usually possible. Elected officials and transportation agencies also need to manage or reduce the demand for more roads, strategies for which include public transit use, ridesharing, bicycling, walking, telecommuting, and compressed workweeks (four days instead of five or nine workdays instead of ten in a two-week period). The Delaware County Transportation Management Association (TMA) and DVRPC provide several programs of this kind that would be useful to the employers and employees of East Lansdowne and Lansdowne.

DVRPC and the TMA operate the Share-a-Ride car pool matching program and the TransitChek® program, an employer provided tax-free fringe benefit that subsidizes employees' transit and van pooling costs. The TMA administers a "guaranteed ride home" program for employees of its members in the event an employee who rides transit or car pools needs to get home during the middle of the workday for an emergency. The TMA also administers a bus stop shelter program, which can provide shelters at SEPTA bus stops, with advertising revenue going to the municipality.

RECOMMENDATIONS

The Boroughs should...

- 8-46 Meet with employers and TMA staff to discuss car pool and vanpool programs and the TransitChek® program so as to make ridesharing and transit use more attractive and make work sites more accessible to existing and potential employees who do not have access to cars.

Funding Program: Local employers