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Appendix

Transit Analysis and Detailed Survey Results (separate document)
EXECUTIVE SUMMARY

The City Avenue Connectivity Study encompasses parts of Lower Merion Township in Montgomery County and the City of Philadelphia within approximately one-half mile of City Avenue (US Route 1). The 2.5-mile study corridor focuses on the City Avenue Special Services District, with the second densest office market in the Philadelphia region and two major universities as well as two retail centers and street retail. The study area also includes the six residential neighborhoods of Bala Cynwyd, Merion, Overbrook Farms, Wynnefield, Belmont Village and Wynnefield Heights. The residential neighborhoods include high rise apartments in addition to single family detached and attached homes. Portions of the study area have concentrations of seniors, students, or disabled residents.

The City Avenue corridor is well served by public bus transit. The southern end of the corridor is also well served by rail transit via the Southeastern Pennsylvania Transportation Authority (SEPTA) Paoli-Thorndale line station at Overbrook. The northern end of the corridor has rail service via the Cynwyd Line, but with lesser frequency and span of service than the community would like. The goal of the study is to promote greater use of transit, walking and bicycling as alternatives to driving, and to identify actions that will:

- Increase awareness of transit availability and convenience in the City Avenue District
- Improve transit services and facilities to increase ridership and decrease traffic congestion
- Improve physical pedestrian connections to transit and businesses
- Increase use of transit for travel to work destinations in the corridor
- Promote walking and bicycling for local trips within the corridor
- Encourage businesses and institutional uses to promote walking, bicycling and use of transit to and from the district.

The study advisory committee consisted of staff from Lower Merion Township, City Avenue Special Services District (CASSD), SEPTA, Delaware Valley Regional Planning Commission (DVRPC), and Philadelphia City Planning Commission. Two public meetings with neighborhood residents were conducted, as well as on-line surveys.

Recommendations for improvements are shown in Table 1. Improvement locations are shown on map Figure 1.

Table 1: Summary of recommended improvements

<table>
<thead>
<tr>
<th>TRANSIT</th>
<th>SEPTA Paoli Thorndale Regional Rail Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overbrook Station</td>
<td>Potential parking lot – northwest corner City Avenue and Merion Road. Add covered bicycle racks – under canopy or bridge.</td>
</tr>
<tr>
<td>Cynwyd Line</td>
<td>Increase service on Cynwyd Line.</td>
</tr>
<tr>
<td>Bala Station</td>
<td>Station identification signs at access driveways. Add covered bicycle racks under bridge. ADA access to platform at pedestrian crossing of track. ADA sidewalk access from City Avenue driveway entrance (input to PennDOT City Avenue bridge project). Stairway access from City Avenue (input to PennDOT City Avenue bridge project). Remove graffiti.</td>
</tr>
</tbody>
</table>
## TRANSIT

### Bus Service

<table>
<thead>
<tr>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommend to SEPTA and to Target extending Route 38 and/or Route 40 service to Target store. Investigate reopening of Presidential Boulevard connection from Monument Road to Neill Drive to improve access.</td>
</tr>
</tbody>
</table>

### Bus Access and Amenities

<table>
<thead>
<tr>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Install curb ramps for ADA access. Ramps at signalized intersections are included in City Avenue Signal Upgrade Project.</td>
</tr>
<tr>
<td>Renovate/move bus shelter at Belmont Avenue and Conshohocken Avenue (opposite Inglis House) so shelter is accessible.</td>
</tr>
<tr>
<td>Utilize the City of Philadelphia Commerce Department’s bus shelter program to install bus shelters with benches at all stops with &gt;50 daily boardings that currently do not have a shelter (19 new locations).</td>
</tr>
</tbody>
</table>

### Transit Information and Marketing

<table>
<thead>
<tr>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Install wayfinder signage at City Avenue bus stops near Presidential Boulevard directing riders to the pedestrian overpass for crossing.</td>
</tr>
<tr>
<td>Develop a ‘local transit guide’ for the City Avenue Corridor that summarizes in a clear and concise manner transit service available in the District.</td>
</tr>
<tr>
<td>Work with SEPTA Marketing and Customer Information staff to promote and distribute transit information to CASSD employers and employees.</td>
</tr>
<tr>
<td>Conduct outreach and education on availability of tools for obtaining bus arrival information and how to use them. Improve user friendliness of access to these tools. Advertise availability of these tools on buses and in shelters.</td>
</tr>
</tbody>
</table>

### Shuttle

<table>
<thead>
<tr>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consider implementing shuttle from Overbrook Station to CASSD Regional Center during primary work start and end times.</td>
</tr>
<tr>
<td>Discuss with PennDOT possible funding for local shuttle service as mitigation during City Avenue bridge reconstruction.</td>
</tr>
</tbody>
</table>

### Additional transit recommendations that are wholly in the realm of SEPTA and/or Amtrak are:

#### Overbrook Station

<table>
<thead>
<tr>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consider installing backup cameras on Route G buses since pedestrians walk through the area where buses back up.</td>
</tr>
<tr>
<td>Construct high platforms when Amtrak moves interlocking away from the station. (An interlocking allows trains to cross from one track to another or pass through track crossings, with signals designed so that it is impossible to display a signal to proceed unless the route to be used is proven safe.)</td>
</tr>
<tr>
<td>Remove boardwalks and install fencing to prevent pedestrian crossing of the tracks when Amtrak moves interlocking away from the station.</td>
</tr>
</tbody>
</table>

### PEDESTRIAN

<table>
<thead>
<tr>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add short missing sidewalk segments:</td>
</tr>
<tr>
<td>• Conshohocken Avenue south side at Bala Golf Club.</td>
</tr>
<tr>
<td>• St Asaphs Road south side west of shopping center.</td>
</tr>
<tr>
<td>• St Asaphs Road north side at 13 St Asaphs.</td>
</tr>
<tr>
<td>• Presidential Boulevard north side at 191 Condominiums.</td>
</tr>
<tr>
<td>• Belmont Avenue east side, St Asaphs Road to GSB building walkway.</td>
</tr>
<tr>
<td>• Belmont Avenue east side at State Police frontage north of parking lot driveway.</td>
</tr>
</tbody>
</table>
### PEDESTRIAN

| New paths                                                                 | • New multi-use paths within Lower Merion’s City Avenue Zoning District.  
|                                                                         | • Path from Cynwyd Station behind BMW dealer parking lot to Bala Avenue (in progress).  |
| Sidewalk connections from street to buildings                           | • Presidential Boulevard (Lincoln Green) to Target store.  
|                                                                         | • Monument Road to Target store (‘goat paths’ at corners of City Avenue and Presidential Boulevard).  
|                                                                         | • Northeast corner Belmont Avenue and St Asaphs Road, diagonal toward Bala 1 entrance.  
|                                                                         | • St Asaphs Road at Decker Boulevard to Bala 3 entrance.  
|                                                                         | • Monument Road to 401 City Avenue.  
|                                                                         | • City Avenue to Bala Cynwyd Shopping Center.  
|                                                                         | • Monument Road to 191 Presidential Condominiums.  
|                                                                         | • All future new development or redevelopment on City Avenue.  |
| Widen sidewalk                                                          | Conshohocken State Road from St Asaphs Road to Montgomery Avenue – widen to 6 feet if at curb, 5 feet if behind grass buffer.  |
| Crossing of Presidential Boulevard                                      | Create new unsignalized pedestrian crossing at One Presidential Boulevard / 555 City Avenue with median island.  
|                                                                         | Reduce vehicle queuing on southbound Presidential Boulevard by restriping for three southbound left turn lanes at City Avenue signal.  |
| Presidential Boulevard traffic calming                                 | Restripe Presidential Boulevard from four lanes to three in central section away from traffic signals.  |
| Crossing of Montgomery Avenue                                           | East crosswalk at Bala Avenue signal: Remove Montgomery Avenue right turn lane yield channelization; build out sidewalk at northeast (Cynwyd Station) corner; control vehicle turns with ‘Right Turn on Red after Stop’.  |
| Cynwyd Heritage Trail Extension                                         | • Cynwyd Station to Bala Station along unused second track of SEPTA’s Cynwyd Line in Lower Merion. (Needs feasibility study to proceed.)  
|                                                                         | • Bala Station to Parkside Avenue along unused second track of SEPTA’s Cynwyd Line in City of Philadelphia (Parkside-City Line Trail).  
|                                                                         | • Manayunk Bridge (construction scheduled for 2014).  |
| ADA ramps                                                                | Provide ramps at sidewalk crossings of streets and curbed driveways, e.g.:  
|                                                                         | • Decker Boulevard at St Asaphs Road  
|                                                                         | • Driveway south side of St Asaphs Road east of Decker Boulevard  
|                                                                         | • 555 City Avenue driveway to City Avenue.  |
| Remove encroachments                                                     | Inspect and enforce removal of private landscaping that blocks any portion of sidewalk.  
|                                                                         | Prohibit private landscaping taller than 12” from area within two feet from back of sidewalk.  |
| Repair bad sidewalk paving                                              | Conduct periodic inspection and keep database of sidewalk that needs repair.  
|                                                                         | Notify property owners of repair responsibility.  
|                                                                         | Determine policy for enforcement of sidewalk repairs on residential frontage.  
<p>|                                                                         | Consider public project to repair sidewalk on Belmont Avenue and on 47th Street from Conshohocken Avenue to City Avenue.  |</p>
<table>
<thead>
<tr>
<th>BICYCLE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New off-street facility</td>
<td>Cynwyd Heritage Trail Extension from Cynwyd Station to Bala Station in Lower Merion Township.</td>
</tr>
<tr>
<td>New off-street facility</td>
<td>Parkside-City Line Trail from Bala Station to Parkside Avenue in Philadelphia.</td>
</tr>
<tr>
<td></td>
<td>Implement City of Philadelphia bicycle network in accordance with City’s Pedestrian and Bicycle Plan. Implement Lower Merion bicycle network in accordance with proposed bicycle and pedestrian recommendations.</td>
</tr>
<tr>
<td></td>
<td>Add Woodbine Avenue from Bryn Mawr Avenue to proposed Parkside-City Line Trail to the Philadelphia bicycle network.</td>
</tr>
<tr>
<td></td>
<td>Implement new multi-use paths on Official Map within Lower Merion’s City Avenue District. Zoning requires installation as part of land development process for redevelopment.</td>
</tr>
<tr>
<td></td>
<td>Prioritize side paths on Belmont Avenue. Add Belmont Avenue side paths to next update of Philadelphia Trails Master Plan.</td>
</tr>
<tr>
<td>Residents want to be able to commute downtown by bike as alternative to driving</td>
<td>Add new network connection from Wynnefield Heights to Martin Luther King Drive trail via Ford Road. Advocate for the conversion of the Strawberry Mansion Bridge / MLK Drive ramp to pedestrian and bike use, with a new traffic signal at base of ramp for crossing of MLK Drive to the trail.</td>
</tr>
<tr>
<td>Bike parking</td>
<td>Install bicycle racks at transit stations, residential apartments, office buildings and retail destinations. Bike racks protected by cover if possible.</td>
</tr>
</tbody>
</table>
Figure 1: Proposed improvement locations

TRANSIT
1 Bala Station improvements
2 Overbrook Station improvements
3 Potential parking lot for Overbrook Station
4 Bus service to Target

SIDEWALKS
5 Lincoln Green to Target – missing link
6 Conshohocken Ave. at Bala Golf Club – missing link
7 St Asaphs Road east of Conshohocken State Road - missing links
8 Presidential Boulevard at 191 – missing link
9 Belmont Ave. at GSB building – missing link
10 Belmont Ave. at State Police – missing link
11 Belmont Ave. and 47th Street, Inglis House to City Avenue – Repair sidewalk and ADA ramps
12 Conshohocken State Road, St Asaphs Road to Montgomery Avenue - widen

PATHS
13 Cynwyd Heritage Trail Extension/Parkside-City Line Trail
14 Cynwyd Station to Bala Avenue
15 City Avenue District paths
16 Belmont Avenue side paths
17 MLK Drive connection

STREET CROSSINGS
18 Montgomery Ave. at Bala Ave.
19 Presidential Blvd. at 555 City Ave./One Presidential

TRAFFIC CALMING
20 Presidential Boulevard

CURB RAMPS
21 555 City Ave driveway
22 Vicinity St. Asaphs and Decker Ave.

OTHER - CORRIDOR WIDE
23 Bus shelters
24 Transit information and marketing
25 Sidewalk connections from street to building entrance
26 Pedestrian timings, signals, curb ramps at traffic signals

BICYCLE NETWORK (see Figure 8)
Coordination with Act 209 Study

Lower Merion Township has a Transportation Capital Improvements Program (TCIP) for the eastern portion of the corridor that identifies road widenings and intersection improvements to accommodate future development traffic. The TCIP was developed and codified in an ordinance adopted in 2011 in accordance with the procedures of Pennsylvania’s Act 209. This enables Lower Merion Township to assess transportation impact fees on new development within the Act 209 Study’s Transportation Service Area boundaries. The law allows for periodic update of the TCIP and/or the impact fees.

Plans for off-street multimodal improvements such as side paths will need to coordinate with the TCIP. New shared use paths should be set back from the roadway in anticipation of future road widening in the TCIP. Conversely, if the side path is not yet constructed at the time of future road widening, the road project should include construction of the side path.

PennDOT’s planned rehabilitation of the City Avenue bridge over SEPTA’s Cynwyd Line needs to be coordinated with the TCIP, which recommended a third southbound travel lane on City Avenue from Stout Road to Bala Avenue. PennDOT has stated that the expected life span of the bridge rehabilitation is ten years. The additional southbound travel lane for future anticipated traffic in the TCIP should be revisited with PennDOT when they are planning for the next reconstruction of the City Avenue Bridge. More immediately, the current City Avenue bridge rehabilitation needs to be coordinated with the Connectivity Study recommendations for pedestrian access to the Bala Station.
INTRODUCTION

The study area for the Connectivity Plan extends along City Avenue from I-76 to Lancaster Avenue. The length of the corridor is about 2.5 miles. The study area includes the City Avenue Special Services District (CASSD) as well as the area within about 0.5 mile of City Avenue and within 0.5 mile of the Bala and Overbrook train stations, as illustrated in the study area map. The Lower Merion side of the corridor includes the Bala Cynwyd and Merion neighborhoods. The Philadelphia side includes the neighborhoods of Overbrook Farms, Wynnefield, Belmont Village, and Wynnewfield Heights. This study area covers the maximum walking distance to transit that can typically be expected.

The bulk of the CASSD Regional Center is located more than ½ mile northeast of the Bala station. This distance, combined with relatively infrequent service on the Cynwyd regional rail line, results in a low percentage of travelers to and from the CASSD using rail.

Lower Merion Township has been working on an update of its Comprehensive Plan. The process has included extensive stakeholder and public participation. Stakeholders from neighborhoods adjacent to City Avenue related concerns that redevelopment of City Avenue with more density will bring more traffic. The Township defined a Transportation Service Area (TSA) and completed a Transportation Capital Improvement Program (TCIP) for the TSA. The TCIP deals only with roadway and signal improvements aimed at maintaining acceptable levels of service for motor vehicle traffic. The Connectivity Plan is intended to increase walking and bicycling for local trips to the corridor, and to increase public transportation ridership both for outside trips to work destinations in the corridor and also for local residential trips. This will act to reduce congestion and create a more desirable environment for redevelopment.

The purpose of this study is to develop a Connectivity Plan that serves as an asset for fostering economic development within CASSD and that promotes alternatives to the automobile. Study goals are to:

- Increase awareness of transit in the City Avenue District
- Propose improvements to transit services and facilities
- Recommend improved pedestrian and bicycle connections to transit and businesses
- Promote use of transit for travel to work destinations in the corridor
- Promote walking and bicycling for local trips in the corridor

Figure 2: City Avenue Corridor
STUDY PROCESS

The study advisory committee consisted of Lower Merion Township, City Avenue Special Services District (CASSD), SEPTA, Delaware Valley Regional Planning Commission (DVRPC), and Philadelphia City Planning Commission. Lower Merion Township and CASSD provided review and input throughout the study. The study advisory committee participated in a group walking tour of the train stations and selected portions of City Avenue. A meeting was held with SEPTA staff early in the study, and SEPTA provided information on its operations and facilities. SEPTA also reviewed the study’s draft findings and recommendations.

Public involvement

RESIDENT SURVEY

A brief on-line survey of seven (7) questions focusing on public transit and mobility in the District was conducted in spring of 2013. The intent of the resident survey was to provide a better understanding of the limitations and/or barriers to making public transportation a more viable option for travel. Various neighborhood associations along with Lower Merion Township and the CASSD publicized the survey link and 430 residents responded, 85% from single family homes and 15% from apartments. For respondents who work in Center City, 58% use transit and 30% drive alone. However, for respondents who work in the City Avenue District, only 2% take transit and 83% drive alone. The most frequently cited reason for not using transit: “It’s quicker to drive.”

EMPLOYEE SURVEY

A brief on-line survey was conducted in spring of 2013 of employees of a single large employer located within CASSD. The survey had six questions focused on public transit. To the question: “If you commute to work by bus, what improvements would be most helpful to you?”, 76% of respondents said “Being able to know when the next bus will arrive.” To the question: “If you commute to work by car, please tell us if public transportation is available for your work trip”, 33% of respondents said “Don’t know”. These responses provide guidance as to where efforts should be spent to promote use of transit.

The employee survey also indicated interest in an employee shuttle from Overbrook Station to the Regional Center Area east of Belmont Avenue.

SPECIAL OUTREACH

Outreach was conducted to Saint Joseph’s University, the largest institution in the study area, to identify any unmet needs and possible opportunities for joint shuttle operations. University representatives stated that they are satisfied with the existing University shuttle operation.

A focus group meeting was held with staff of Inglis House Community Support Services, which serves the residence based and community based disabled population in the study area. Some residents of Inglis House also participated in the meeting. Information obtained through this outreach was incorporated in the study.

PUBLIC MEETINGS

Two public meetings were conducted. The first meeting at Lower Merion Township on November 5, 2012 introduced the study and obtained input on common themes and problem locations. The second meeting at Overbrook Presbyterian Church on July 30, 2013 described findings of the study and residents on-line survey, and presented improvement concepts for public input.

Other Planning Documents

The Lower Merion Township Circulation Plan element of the Comprehensive Plan Update was in development by township staff and selected consultants at the time of this City Avenue Connectivity Study. The Circulation Plan addresses transit, pedestrian, and bicycle circulation township-wide, as well as vehicle circulation, parking, freight and aviation. It is anticipated that the recommendations of the Connectivity Study for the City Avenue corridor will be incorporated in the Circulation Plan.
A comprehensive zoning analysis of the zoning districts on both sides of the corridor was performed in 2007-2008. The study presented recommendations for rezoning intended to encourage higher density, multiple use, pedestrian-oriented development and more economically productive use of land parcels in the vicinity of City Avenue. Zoning ordinances were developed and refined with public involvement. Philadelphia enacted the City Avenue zoning district in 2009. Lower Merion Township enacted the City Avenue zoning district in April of 2012.

Concurrent to the rezoning process, Lower Merion Township completed the multi-step process required to enact a traffic impact fee. The Pennsylvania Act 209 Transportation Impact Fee Study (2011)\(^1\) developed a plan for roadway capital improvements through Year 2030 in the City Avenue Special Services District from Old Lancaster Road to Presidential Boulevard. In 2011, the Lower Merion Township Board of Commissioners adopted the Transportation Capital Improvements Program that established impact fees for new development to be used for transportation improvements.

The Overbrook Farms Neighborhood Traffic Study (2010)\(^2\) focused on traffic calming and parking issues in the area bounded by City Avenue, Woodbine Avenue, Cardinal Avenue and 66th Street, including the Overbrook train station.

Three planning documents by the Philadelphia City Planning Commission include recommendations for improvements to the walking and bicycling networks within the City of Philadelphia, including the City Avenue corridor.

- The Philadelphia Pedestrian and Bicycle Plan (April 2012) is the City’s first Pedestrian Plan, and it updates the City’s Bicycle Network Plan that was first completed in 2000. In addition to pedestrian and bicycle network improvement recommendations encompassing the entire City, it includes policies for network development and design, as well as policies for management and monitoring of facilities.
- The West Park District Plan (adopted in March, 2012) was completed as part of Phase 2 of Philadelphia’s two-phase Comprehensive Plan, Philadelphia 2035. Phase 1 established the city-wide vision, and the District plans apply the concepts and provide recommendations at the local level. The City Avenue Connectivity Study area neighborhoods of Overbook Farms, Wynnefield, Belmont Village, and Wynnefield Heights are located within the West Park District.
- The Philadelphia Trail Master Plan (Summer 2013) was completed to prioritize the areas where trails are most needed, to make the best use of limited available funding for trail planning, design and construction. It identifies existing and proposed trails with descriptions of trail type and status. The entity responsible for operations and maintenance is identified for each existing trail. For proposed trails, the agency or organization that proposed the trail or that is sponsoring its development is identified. The plan defines criteria for ranking, and ranks 64 proposed trails as high, medium or low priority based on the criteria.


\(^2\) Overbrook Farms Neighborhood Traffic Study, McMahon Associates, Inc. 2010
Currently Planned Projects

Several transportation improvement projects are currently planned or are scheduled for construction within the City Avenue Corridor. The projects, contracting agency, and status as of summer 2014 are summarized below.

- City Avenue streetscape (CASSD). Project limits are 50th Street to 63rd Street. Includes streetscape but not full sidewalk reconstruction. Includes improvements to correct some areas of poor drainage. The project will also include intersection improvements, including new turning lanes, reconstruction of crosswalks, installation of stamped asphalt crosswalks and signal upgrades. City Avenue from Bryn Mawr Avenue to 54th Street, which falls within this project area, was identified in the Philadelphia Pedestrian and Bicycle Plan as a pedestrian network focus area and a corridor needing repair. PennDOT reviews are required and funding is being requested. No date is set for construction.

- City Avenue milling and paving (PennDOT). Limits: from I-76 ramps to Haverford Avenue. The project was completed in June of 2014. ADA ramps will be completed no later than June, 2015.

- City Avenue traffic signal upgrade (CASSD). 17 signals from the I-76 ramp to Lancaster Avenue. The project includes the installation of traffic-adaptive signals with pedestrian pushbuttons and ADA curb ramps at signalized intersections. Special pedestrian actuation technology for the disabled is being investigated for the signals at Belmont Avenue and at 47th Street. The project is funded, and design is expected to be completed by winter 2014.

- St Asaphs Road traffic signal upgrades (CASSD). The installation of five traffic-adaptive signals with pedestrian pushbuttons on St Asaphs Road from Monument Road to Conshohocken State Road. Funded with state Automated Red Light Enforcement (ARLE) grant funds. ADA ramps will be installed through the use of Township Community Development Block Grant Funds.

- Shared use path connection from Cynwyd Station to Bala Avenue (Lower Merion Township). This pedestrian and bicycle connection is in the conceptual stage. The path would pass under the Montgomery Avenue Bridge and through the rear parking lot of BMW of the Main Line. No implementation schedule or funding source is identified.

- Union Avenue Bridge over the Cynwyd rail line (Lower Merion Township). Bridge reconstruction includes sidewalks but is not wide enough for bike lanes. Construction bids are expected in 2014 and work is to be completed in two years.

- City Avenue Bridge over SEPTA (PennDOT). The project is in design. According to PennDOT, the bridge structure's condition allows rehabilitation rather than full reconstruction. Detours are not anticipated. Of the bridge's four pedestrian staircases leading to Bala Station (all of which are presently closed off), as of now the project will replace only the western staircase on the City side. SEPTA has requested that the wooden staircase on the Lower Merion side be replaced with a permanent structure. The bridge project will improve the pedestrian walkway along the Bala Station driveway from City Avenue. PennDOT will hold a public meeting during design. The bridge project may go to construction as early as 2017.

- Cynwyd Line (SEPTA). SEPTA plans to perform maintenance and upgrades to the track and electrical system on the Cynwyd regional rail line. The work will include installing Automatic Train Control (ATC), a step toward complying system-wide with the federally mandated positive train control (PTC) system which must be in place by the end of 2015.

- The Garden Gateway Project is a plan to improve Conshohocken Avenue in Belmont Village. The Community Design Collaborative (CDC) presented a concept design to the Belmont Village community in April 2012, and the community voted unanimously to move forward with the
project. However, funding has not yet been obtained.

- Keystone Corridor Improvements (PennDOT, Amtrak). PennDOT Bureau of Public Transportation is funding the design for infrastructure upgrades including several interlocking improvement projects on the Keystone Corridor, on which SEPTA’s Paoli Thorndale regional rail also operates. Overbrook is being designed to move the interlocking approximately 1.2 miles eastward (toward Philadelphia) to a new footprint which will be called “Wynnefield Interlocking”. Wynnefield will be a fully universal (provides access to all tracks in both directions) high-speed interlocking, constructed with modern components and capable of “crossing over” trains at 80 MPH on the key passenger train routes through the interlocking. Also part of the Keystone Corridor Improvement plan are the design and construction of “Villa and Nova Interlockings” which will be located east and west of Villanova Station and will relocate the interlocking currently situated at Bryn Mawr Station. Wynnefield, Villa and Nova are all in the preliminary engineering design phase. The earliest that construction could take place is in 2017. PennDOT has not finalized the construction program for the Keystone Corridor with Amtrak at this time so the actual construction of these interlockings is not yet known and will take careful coordination with Amtrak for the staging and phasing of these projects.

CORRIDOR DESTINATIONS

The resident survey asked residents to list any destination they would like to walk to but don’t because a suitable walking path is not available. While the sample is limited, the survey clearly indicates some commonly desired destinations. The four most frequently cited destinations were Bala Cynwyd Shopping Center, Overbrook Station, Target, and Manayunk. The destinations cited and the residence locations of respondents are illustrated in Figure 3. Lankenau Hospital, just outside the study area, was also a walking destination for Overbrook Farms residents. The survey respondents included many residents who live outside the study area, such as at the Green Hill Condominiums, Rolling Road, and Cynwyd Circle. Survey respondents also listed destinations outside the study area, such as Wynnewood and the Mann Music Center. However, the survey indicated a real interest in walking to destinations in the City Avenue Corridor.

Figure 3: Destinations cited by residents in survey
TRANSIT

Existing bus and rail routes in the study area were reviewed and summarized to gain an understanding of the amount of and types of transit services offered in the City Avenue Special Services District Corridor.

Figure 4: Transit routes directly serving City Avenue Corridor

BUS ROUTES

**Route 1 – Parx Casino to 54th-City**
Route 1 originates at 54th Street and Overbrook Avenue and travels through the study area along City Avenue between 54th Street and Presidential Boulevard. This route serves the Wissahickon Transportation Center where ten (10) other SEPTA bus routes converge before continuing through Northeast Philadelphia on Roosevelt Boulevard and to the Parx Casino in Bensalem.

**Route 38 – 5th-Market to Wissahickon Transportation Center**
The 38 bus route travels between downtown Philadelphia and the Wissahickon Transportation Center. This route has service in the Belmont Village and Wynnewfield Heights neighborhoods via Belmont Avenue, Ford Road, and Conshohocken Avenue travelling on Presidential Boulevard and City Avenue just prior to terminating at the Wissahickon Transportation Center where connections are available to ten (10) other SEPTA bus routes.
Route 40 – 2nd-Lombard to Conshohocken-Monument
Route 40 provides service between Center City Philadelphia and the West Park/River Park area. The route does not operate on City Avenue, but it does serve the Wynnewfield, Belmont Village and Nineteenth/Wynnewfield Heights areas along Wynnewfield Avenue, Belmont Avenue and Ford Road with several stops in common with Route 38.

Route 44 – 5th-Market to Ardmore
Route 44 originates west of the study area in Ardmore and enters the study area on Old Lancaster Road. This route travels on City Avenue between Old Lancaster and Presidential Boulevard and then continues to downtown Philadelphia via Interstate 76/Schuylkill Expressway. A spur of Route 44 operates limited weekday service to Gladwyne and Penn Valley in Lower Merion Township.

Route 52 – 49th-Woodland to 54th-City or 50th-Parkside
The 52 bus enters the study area on 54th Street and loops on Wynnewfield Avenue, Cardinal Avenue and City Avenue back to 54th Street to return through West Philadelphia to its southern destination at 49th Street and Woodland Avenue. A few weekday trips on Route 52 are extended to Gladwyne along the same route as the 44 spur, and those trips travel on City Avenue to Bala Avenue.

Route 65 – Germantown-Chelten to 69th Street Transportation Center
This route begins northeast of the study area in Germantown and serves the Wissahickon Transportation Center before entering the study area where it travels along City Avenue between Presidential Boulevard and the Overbrook Rail Station, then turns onto 63rd Street, terminating at the 69th Street Transportation Center where 20 SEPTA bus routes, two trolley routes and the Norristown High Speed and Market-Frankford rail lines converge.

Route G – Overbrook and Lankenau Medical Center to Columbus Commons or 7th and Pattison Avenue at the Sports Complex.
Route G operates within the study area along City Avenue between Overbrook Station and Cardinal Avenue and then along Overbrook Avenue and 59th Street before continuing south to its terminus in South Philadelphia near the sports stadiums or at the Columbus Commons Shopping Center.

Figure 5: SEPTA bus routes in City Avenue study area
Most of the routes run every 10 – 15 minutes during weekday peak periods. Details for each route on the service span and intervals between buses during different periods of the day on weekdays and weekends are provided in a separate document appendix to this report.

As shown in Table 2, the routes with the highest ridership in the study area are Routes 44, 52, and 65. Route 44 has the highest percentage of “study area” trips contributing to its total weekday ridership (39.6%) while only 3% of the rides on Route G are from the study area. There are 8,157 total weekday boardings within the study area on all seven routes.

### Table 2: Weekday bus route ridership and percentage of boardings in study area

<table>
<thead>
<tr>
<th>Route</th>
<th>Average Weekday Boardings Entire Route</th>
<th>Average Weekday Boardings in Study Area</th>
<th>Percent of Route Boardings in Study Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3,866</td>
<td>445</td>
<td>11.5%</td>
</tr>
<tr>
<td>38</td>
<td>2,858</td>
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<tr>
<td>40</td>
<td>5,672</td>
<td>930</td>
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<tr>
<td>44</td>
<td>4,223</td>
<td>1,710</td>
<td>40.5%</td>
</tr>
<tr>
<td>52</td>
<td>16,930</td>
<td>2,099</td>
<td>12.4%</td>
</tr>
<tr>
<td>65</td>
<td>9,031</td>
<td>2,059</td>
<td>22.8%</td>
</tr>
<tr>
<td>G</td>
<td>12,151</td>
<td>291</td>
<td>2.4%</td>
</tr>
</tbody>
</table>

### BUS STOPS

City Avenue has 40 bus stops (19 southbound and 21 northbound) between Lancaster Avenue and Presidential Boulevard, a distance of 2.7 miles. That equates to an average of one bus stop every 750 feet or about 1½ city blocks.

The busiest bus stop along City Avenue is at Presidential Boulevard. This stop has the highest total activity for both northbound and southbound stops along City Avenue. The Presidential Boulevard stop accounts for the greatest number of boardings in the northbound direction and the highest number of alightings in the southbound direction. The stop at City Avenue and 47th Street shows the second highest rider activity in both directions. Belmont and City Avenue is a very close third in the southbound direction while 53rd Street/Oakland Terrace has the third highest activity in the northbound direction.

Of the selected stops off of City Avenue, the bus stop on 54th Street at St. Joseph’s University book store is the busiest stop followed by the stop on 54th Street at the corner of City Avenue.

Ridership by stop is depicted in Table 3.
Table 3: Daily ridership activity by bus stop on City Avenue

<table>
<thead>
<tr>
<th>Stop ID</th>
<th>Stop Location</th>
<th>Southbound Stops</th>
<th>Northbound Stops</th>
<th>All City Ave. Stops</th>
</tr>
</thead>
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<td>703</td>
<td>Presidential</td>
<td>127</td>
<td>450</td>
<td>577</td>
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<tr>
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<td>Monument</td>
<td>115</td>
<td>129</td>
<td>244</td>
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<tr>
<td>6252</td>
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</tr>
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<td>6255</td>
<td>Kings Grant</td>
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<td>174</td>
<td>255</td>
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<td>Belmont</td>
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<td>513</td>
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<td>280</td>
<td>518</td>
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<tr>
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<td>189</td>
</tr>
<tr>
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<td>Bala</td>
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<td>Maple</td>
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<td>0</td>
<td>0</td>
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<tr>
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<td>Oakland/53rd</td>
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<tr>
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<td>Old Lancaster/54th</td>
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<td>13</td>
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<tr>
<td>20591</td>
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<tr>
<td>20592</td>
<td>52nd/Maple</td>
<td>59</td>
<td>65</td>
<td>124</td>
</tr>
<tr>
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<td>Bryn Mawr</td>
<td>106</td>
<td>96</td>
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<td>Bala</td>
<td>148</td>
<td>116</td>
<td>264</td>
</tr>
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<tr>
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<td>140</td>
<td>352</td>
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<tr>
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<td>Kings Grant</td>
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<td>251</td>
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<td>Monument</td>
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<tr>
<td>699</td>
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<td>735</td>
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</table>

Approximately 42% of the 8,157 total bus boardings within the entire study area occur at stops on City Avenue.
Table 3A: Daily ridership activity for other key bus stops in study area

<table>
<thead>
<tr>
<th>Stop ID</th>
<th>Stop Location</th>
<th>Sample Stop Activity *</th>
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<tr>
<td></td>
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<td>Boardings</td>
</tr>
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<td>187</td>
<td>Drexel &amp; City</td>
<td>68</td>
</tr>
<tr>
<td>28270</td>
<td>Overbrook Station</td>
<td>99</td>
</tr>
<tr>
<td>3826</td>
<td>63rd &amp; City (Inbound)</td>
<td>74</td>
</tr>
<tr>
<td>20569</td>
<td>63rd &amp; City FS (Outbound)</td>
<td>23</td>
</tr>
<tr>
<td>20589</td>
<td>54th &amp; City (at corner)</td>
<td>211</td>
</tr>
<tr>
<td>30138</td>
<td>54th &amp; City (St. Joe’s campus)</td>
<td>962</td>
</tr>
</tbody>
</table>

* SEPTA Spring 2012 sample APC data expanded by total number of trips for all routes serving the bus stop

Bus Stop Conditions

Bus stops within the study area can be identified in three basic categories: 1) right lane on street where the bus picks up and discharges passengers while stopped in the right-most lane of traffic; 2) bus turnout where the bus pulls out of a moving traffic lane into an “offset” curb to pick up and discharge passengers; and 3) bus stop within a rail station.

Twenty eight of the thirty nine bus stops in the study area are the on-street variety, all marked with a bus stop sign that shows the routes serving the stop along with SEPTA’s website and telephone numbers and a unique stop ID. Currently, SEPTA customers can use the stop ID to access information on the next scheduled trip(s) for that stop location on cell phones via text message. Also, bus location (icons on a street map) can be viewed on computer and on web-enabled smart phones/tablets through ‘TransitView’ under ‘System Status’ on SEPTA’s website. SEPTA vehicles are Automatic Vehicle Location (AVL) equipped and report location every three minutes. Real time information (predicted arrival of next trip based on actual location of buses) is not currently provided by SEPTA primarily due to limitations on capacity to poll and transmit the location data at intervals sufficient to provide accurate information. Expanding the capacity (bandwidth) could be cost prohibitive for SEPTA.

The majority of the on-street type of bus stops do not have any other customer amenities like benches or shelters due to space limitations and the width of sidewalks. Below are three examples of on-street stops along City Avenue.
Ten of the bus stops along City Avenue are bus turnout stops where the bus pulls out of the right lane of traffic to pick up and discharge passengers. All but one of these stops is located east of the Bala rail station. All of these bus turnout stops are marked with a bus stop sign, two of them have passenger shelters and several more have benches and trash receptacles. Examples of this type of stop are provided in the following pictures.

Route G stops at Overbrook Station creating an interface between bus and rail service. The stop is located in the station’s eastern (outbound) park-and-ride lot.

All bus stops should be ADA accessible. While there is a curb ramp at or near each bus stop in the corridor, many of them do not meet the current specifications required for ADA compliance. In addition, several stops in the study area are located where there is no accessible pathway to a bus lift or ramp. The following pictures provide examples of this condition:
A description of the bus stops on City Avenue including type and amenities is provided in Table 4 on the following page. Future bus stop implementations, design and amenities will be guided further by SEPTA’s bus stop design guidelines.3

3 SEPTA Bus Stop Design Guidelines, Publication No. 12025, DVRPC, October, 2012
Table 4: City Avenue bus stop inventory

<table>
<thead>
<tr>
<th>Stop Location</th>
<th>SEPTA Stop ID</th>
<th>Turnout</th>
<th>Signal</th>
<th>Sign</th>
<th>Shelter</th>
<th>Bench</th>
<th>Trash Can</th>
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</tr>
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<td></td>
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<tr>
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<td>X</td>
<td>X</td>
<td>X</td>
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<td>X</td>
</tr>
<tr>
<td>Presidential</td>
<td>699</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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</tr>
</tbody>
</table>
SEPTA is not perceived to be unsafe by riders or by non-riders. Only a very small percentage of survey respondents (3%) indicated that safety was a concern for not using public transportation.

 REGIONAL RAIL LINES

Cynwyd Line
Cynwyd Line rail service originates at Cynwyd Station and serves the Bala Station and Wynnewfield Station outside the study area before continuing to downtown Philadelphia and terminating at Suburban Station. Rail service on the Cynwyd line operates on weekdays only. Ten trains per weekday run from Cynwyd to Center City and eleven trains per weekday run from Center City to Cynwyd, with almost all trains serving commuter peak periods. This is less span and frequency of service than residents would like. Residents greatly prefer the train, which travels from Cynwyd to Suburban Station in 20 minutes, to the bus alternative (Route 44) because of travel time reliability. Bus route 44 takes about 30 minutes to travel downtown in peak periods according to the schedule, but the bus is frequently subject to long delays on I-76 and around 30th Street Station.

Paoli/Thorndale Line
The Paoli/Thorndale rail service originates in the far western suburbs in Thorndale, Chester County and serves over 20 stations prior to entering the study area at Overbrook Station before continuing to downtown Philadelphia and terminating at the Market East Station. The Paoli/Thorndale line operates seven days per week with a service span of 18 – 20 hours per day. Because of peak period express operation from the western suburbs, only eight of the 17 AM rush hour trains stop at Overbrook Station and most of those originate at Bryn Mawr Station. Passengers boarding the train beyond Bryn Mawr are required to transfer to another train at Bryn Mawr if their destination is Overbrook. The wait times for making such transfers range from 5-10 minutes which increases the travel time and could be perceived by passengers to detract from the convenience of using public transportation to access the City Avenue corridor from the northwest communities. SEPTA ridership data by station shows that over 200 people per weekday travel “locally” on the Paoli/Thorndale line to/from Overbrook Station. The transfer point is being relocated to Villanova (two stops further west) and will continue to have timed transfers where the local train sits and waits for the express prior to departing. This extension will allow direct access to Villanova University during peak travel times.

The Paoli/Thorndale line has the highest weekday ridership of all 13 of SEPTA’s regional rail lines, while the Cynwyd line has the lowest.

| Table 5: Service details for SEPTA regional rail routes in the City Avenue study area |
|-----------------|-------------------|-------------------|-----------------|-------------------|-------------------|
| REGIONAL RAIL   | AVERAGE WEEKDAY RIDERSHIP | SPAN               | WEEKDAY          | SATURDAY          | SUNDAY            |
|                 | AM PEAK | MIDDAY | PM PEAK | EVENING | HEADWAY (Interval between trains – minutes) | SPAN | HEADWAY (minutes) | SPAN | HEADWAY (minutes) | SPAN |
| Cynwyd Line     | 601     | 30     | 30      | 56      | N/A               | N/A | N/A | N/A |
| Paoli/Thorndale Line | 22,852 | 22/30  | 30      | 17/30   | 30/60             | 701A | 701A | 701A |

Note: Service details for SEPTA regional rail routes in the City Avenue study area.
Table 6: City Avenue study area rail riders as a percentage of weekday ridership

<table>
<thead>
<tr>
<th>REGIONAL RAIL LINE</th>
<th>STATION</th>
<th>AVERAGE WEEKDAY BOARDINGS (entire line)</th>
<th>AVERAGE BOARDINGS AT STATION</th>
<th>PERCENT OF LINE’S BOARDINGS FROM STATION</th>
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<tr>
<td>CYNWYD</td>
<td>Cynwyd</td>
<td>308</td>
<td>136</td>
<td>44.2%</td>
</tr>
<tr>
<td>CYNWYD</td>
<td>Bala</td>
<td>308</td>
<td>89</td>
<td>28.9%</td>
</tr>
<tr>
<td>PAOLI/THORNDALE</td>
<td>Overbrook</td>
<td>12,716</td>
<td>752</td>
<td>5.9%</td>
</tr>
</tbody>
</table>

RAIL STATIONS

Overbrook Station
Overbrook Station is located at 2195 N. 63rd Street and City Avenue. This station is the final inbound stop for the Paoli/Thorndale Regional Rail Line before entering downtown Philadelphia. There is a ticket office at the station that is open weekdays only from 5:45AM to 12:45PM. The station is served by two bus routes (65 and G). Route G actually enters the station on the outbound side at the intersection of City Avenue and Drexel Road. Route 65 passes Overbrook Station and serves the inbound side with stops on 63rd Street and the outbound side with stops on City Avenue.

There are two bike racks located at this station, each accommodating two bicycles. A total of 162 parking spaces is provided by SEPTA at the station, 50 of which are dedicated to permit parking with the remaining 112 available on a daily basis. The daily parking rate is $1.00, which riders deposit in a slot box located near the platform. Parking permits are issued on a monthly basis for $20. All available parking spaces appeared to be occupied and observations showed that riders park on Drexel Road adjacent to the station. Comments were received from the public during this study that more parking is needed at the station.

Overbrook Station is not a handicapped accessible station. Although there are ramps from the street to the station, the station does not have high platforms that would allow direct boarding by persons in wheelchairs. Crossing between the inbound and outbound platforms is accommodated via a pedestrian tunnel under the tracks with staircases on both sides or by walking across the City Avenue Bridge.

There are benches on both platforms at the Overbrook station and the train schedules are posted along with schematic maps of the entire rail system.
SEPTA bus route G pulls into the Overbrook Station to pick up and discharge passengers adjacent to the outbound platform. The operator is forced to make a backing maneuver due to the narrow aisles between parked cars and the lack of adequate space to make a direct movement with a 40 foot vehicle. Even without parked cars, the lot area may not be sufficient for the bus to execute the successive turns into the driveway, into the parking lot, and the U-turn needed to pull directly to the stop location. Backing a bus up in a congested area with parked cars and pedestrians is clearly less than ideal.

Overbrook Station appeared to be in good condition. The waiting areas on the platforms were clean and, based on observations conducted in the PM peak, there appeared to be no impediments to customers disembarking trains and walking to their cars or transferring to the bus.

**Bala Station**

The Bala Station is located at the intersection of Bala Avenue and City Avenue. This station is the second of three stops on the Cynwyd Regional Rail Line outside of center city Philadelphia stops. There is no ticket office at the station. The station is served by four bus routes (1, 44, 52, and 65) at the intersection of City Avenue and Bala Avenue.

Bala Station has an open shelter with benches, trash receptacles and newspaper boxes. The station is also equipped with an electronic sign that shows the estimated arrival time of the next train. There are no bike racks at the station.

There are 76 free parking spaces provided by SEPTA at this station, which are approximately 75% occupied, both from field observation and according to SEPTA information on their website. At the outset of this study, there was no way to distinguish station parking spaces on the west side of the tracks from office parking. The spaces are not numbered because there is no parking fee. Due to information provided by this study SEPTA has since marked the station spaces in yellow paint to identify them as SEPTA spaces.

Given that the Cynwyd Line is a single track operation there is only a need for one platform, located on the west side of the tracks. Bala is a handicap accessible station from the area west of the tracks with pedestrian access provided directly via a sidewalk along the driveway from City Avenue and via the driveway from Bala Avenue. A high boarding platform is provided at the station. However, Bala Station is not handicap accessible from the Conshohocken State Road side of the station. Although a sidewalk is provided along the station driveway to Conshohocken State Road, there is a raised curb at the pedestrian crossing of the tracks from the eastern parking lot to the passenger loading area. Additional pedestrian access to the east side of the station is provided via a set of wooden steps from the east end of the bridge carrying City Avenue over the railroad tracks. The wooden steps are owned by SEPTA and are in adequate condition. However, SEPTA anticipated that the wooden steps would be used only until the City Avenue Bridge rehabilitation project restored the bridge’s concrete staircase to service.
Platform at Bala Station; high platform for handicap boarding at southern end near bridge

Step between track crossing and platform prevents ADA access from eastern parking lot

Automobiles can access Bala Station at three locations: via the SEPTA-owned driveway at the handicap entrance off City Avenue, through a driveway from Conshohocken State Road shared with Taco Bell, or through an office driveway located on Bala Avenue. The City Avenue entrance has a large station identification sign. Station signs facing both directions are present on Conshohocken State Road and on Bala Avenue. The Conshohocken State Road signs would be better located closer to the driveway.

Bala Station access from Conshohocken State Road is via Taco Bell driveway

An internal sign would improve direction to station through Taco Bell driveway

Station sign on Conshohocken State Road
The condition of the immediate station area is fair. However, the overall appearance is poor because of crumbling old concrete steps that are barricaded leading from the City Avenue Bridge. In addition, netting is in place underneath the bridge where the concrete is deteriorating and causing safety concerns. PennDOT conducted a Structural Assessment Report of the bridge in 2012 and concluded that the bridge is in need of rehabilitation. The report recommends the removal of both concrete staircases on the Lower Merion Township side with the planned rehabilitation of the bridge. At this time, the stair entrance on the City side of the bridge near Conshohocken Avenue is the only one that is planned to be restored, although SEPTA has requested that the existing wooden staircase on the Lower Merion side be replaced with a permanent structure under the terms of the PennDOT/SEPTA Cooperation Agreement of 2005.
Cynwyd Station
The Cynwyd Station is located at 375 Conshohocken State Road. This station is the first stop on the Cynwyd Regional Rail Line. There is no ticket office at the station; however, the newly renovated station does have a heated waiting room with benches and a restroom which is open to riders weekdays from before the first train arrives until the last train leaves the station. SEPTA controls access to the waiting room by a self-timer. It is noted that the new transit fare payment technology system that will be implemented on the regional rails by SEPTA will eventually remove ticket windows and sellers from all other stations. Cash will continue to be accepted on the train. The station is served by bus routes 44 and 52 at the intersections of Bala Avenue and Montgomery Avenue or Bala Avenue at Conshohocken State Road.

The Cynwyd Station also serves as a trailhead to the Cynwyd Heritage Trail and houses a newly opened café and tea room.

There are 41 free parking spaces provided by SEPTA at this station, which are fully occupied. Twenty-six parking spaces are provided in the parking lot by the train station, eight parallel parking spaces are provided on a driveway that has access on Llandrillo Road and Montgomery Avenue/Conshohocken State Road and the remaining spaces are located on an adjacent Lower Merion Township public parking lot located on the other side of the Montgomery Avenue Bridge. There is currently one bike rack located at the station. Cynwyd is designated as a handicap accessible station. In 2012 significant improvements were made to enhance ADA access to the trail and the passenger platform from both inbound and outbound parking areas.

BUS ROUTE AND RAIL LINE INTERFACES
Site visits to each of the three rail stations were conducted to observe the interface between bus and rail service.

- Bus route G provides direct service to/from Overbrook Station with a stop on the outbound platform. In addition, Route 65 provides access
to/from the inbound side of the station with a stop on 63rd Street just south of City Avenue and the outbound side of the station at the Drexel/Merion stop on City Avenue.

- Bus service on both routes 65 and G are frequent enough in the peaks and midday to allow for convenient transfers with the Paoli/Thorndale line with minimal wait time. Route G does not serve Overbrook Station after 8:00PM (except for one trip at 1:30AM), but service on Route 65 continues throughout the late night with 7-8 minutes average wait times to transfer to/from the bus.

- Bala Station along the Cynwyd Line can be accessed by bus Routes 1, 44, 52 and 65 at City Avenue and Bala Avenue or on Conshohocken State Road on Gladwyne trips on routes 44 or 52. The frequency of the bus service far exceeds the limited service on the Cynwyd Line and therefore provides extensive and convenient transfer opportunities.

- While there are many opportunities to transfer between bus and rail service at Bala Station, the location of the station presents access challenges. Signage is limited and difficult to see. From City Avenue, a set of wooden steps provides access but the only sign at the steps refers to the accessible path to the station further west. Handicap access is designated to be via a sidewalk that runs parallel to City Avenue. The distance from the closest bus stop to the station platform is 360 feet with a slight grade. The vehicle entrance from Bala Avenue to the park-and-ride spaces is through an office driveway and parking area. All of these issues impede access to and integration of the two modes of transportation.

- The only bus connections to Cynwyd Station are provided by the limited Gladwyne trips on routes 44 and 52. These bus routes operate only 6 and 8 trips per day to Gladwyne respectively and not all trips are scheduled to accommodate a convenient transfer.

A detailed analysis of existing transit facilities and service is provided in the appendix.

Transit Improvements

**TRANSIT SERVICE**

From a transit perspective, the City Avenue District is not unlike other urban fringe areas. The level of transit service that is provided by SEPTA to the district is more than adequate in terms of hours and span of service. As in many urban fringe and suburban areas, auto-centric development has occurred with little consideration for access to transit. Therefore some will perceive that transit service is not sufficient.

**Cynwyd Line**

Residents requested more service on the Cynwyd line. The issue is the service span. The Cynwyd line does not provide service on weekends or evenings and has only one mid-day train on weekdays. Residents would like to be able to use the train to Center City for purposes other than a work commute. For SEPTA, increasing the span of service needs to be justified by rider demand since it will increase operating costs. On the other hand, it is difficult to promote rider demand without having the service. Every year SEPTA receives and evaluates proposals for changes to its Annual Service Plan. The Annual Service Plan is primarily intended to investigate route changes, but suggestions from the public for schedules are accepted and passed along to the appropriate SEPTA departments for evaluation. The CASSD and Lower Merion Township should coordinate to prepare a request for a service increase for time periods that would receive the most rider support in the Bala Cynwyd, Belmont Village and Wynnewfield neighborhoods.

Implementation of more trains on the Cynwyd line will be contingent upon SEPTA’s available budget resources and increased ridership.

During commuter periods the service frequency of every 30 minutes on the Cynwyd line is comparable to the other regional rail lines. Because of the single track, the headway (time interval between trains) could not be reduced, but a second car could be added to the trains if commuter demand warrants.

The Cynwyd regional rail line is viewed as a tremendous asset by the neighboring communities. A Belmont Village resident stated: “The train station at Bala is a critical feature for the community. It is a
great marketing tool to have regional rail at your
doors.’

**Bus Service to Target**

At the time the Target store was developed, the
developer turned down an offer from SEPTA to provide
direct bus service to the center. As built, the
shopping center roads do not accommodate bus
turns. The resident survey conducted for this study
indicates there is a demand by area residents for
teach to the center. Bus service would also provide
access to employment at the shopping center for
people who rely on transit. SEPTA has indicated that
the Routes 38 and 40 are the best candidates for a
possible route modification to stop at Target. The
possibility of a bus stop at Target should be revisited
both with store management and with SEPTA.

The possibility of reconnecting Presidential
Boulevard between Monument Road and Neill Drive
should also be pursued, at least for buses, since that
would allow the most efficient bus routing.

Physical construction would be needed to create a
bus loading area within the shopping center site and
to provide bus access/circulation to the loading area.
It is recommended that a third party, such as CASSD
or the City Councilperson for the 4th District, initiate
a discussion between SEPTA and the shopping center
on how to pursue this new facility and service.

**OVERBROOK STATION**

Overbrook Station has a shortage of parking. The
property at the northwest corner of City Avenue and
Merion Road directly opposite the station has
potential to be developed as a parking lot serving
the station. It is recommended that Lower Merion
Township have discussions with the property owner,
Sun Oil, regarding future use or possible long term
lease of the property for public parking once it has
been fully environmentally repaired. The property
has an existing driveway to Merion Road, and due to
existing grades it is visually screened from City
Avenue and adjacent properties. The parcel is
22,837 square feet or approximately one-half acre
in size. Assuming conservatively that half that area
is available after grading and landscaping, the lot
could provide 30 to 40 parking spaces.

The existing westbound station platform extends
under the City Avenue Bridge. It would be possible
to provide a walking route between the parking lot
and the station under City Avenue by bridging the
Mill Creek channel that runs along the east side of
the tracks. This would increase the parking lot’s
convenience and riders would not need to cross the
busy intersection of City Avenue and Drexel/Merion
Road at the signal.

---

*Possible location for bus stop for direct service to Target shopping center*

*Potential parking lot location at City Avenue and Merion Road*
It was noted during the station field view that there is no fence between the inbound and outbound tracks. Occasionally a pedestrian attempts to cross the tracks directly, despite warning signs. This is dangerous since Amtrak trains do not stop at the station. A fence should be installed and the boardwalks that used to serve the inner tracks should be removed. According to SEPTA, this improvement should be done by Amtrak Keystone Corridor improvements (described on page 10) when Amtrak relocates the interlocking away from the station (an interlocking allows trains to cross from one track to another or pass through track crossings, with signals designed so that it is impossible to display a signal to proceed unless the route to be used is proven safe).

**BALA STATION**

Recommended improvements for Bala Station focus on pedestrian access and station identification.

Stair entrances should be provided to Bala Station from both the City and Township sides of City Avenue as part of PennDOT’s bridge reconstruction project. PennDOT proposes to remove both concrete staircases from the bridge on the Township side. The rationale is that a pedestrian entrance will be available at the City Avenue driveway or at the Conshohocken State Road driveway. However, in order to promote use of transit, the station access should be as convenient as possible. The eastern staircase on the Lower Merion side is important for station access from the Bala Cynwyd Shopping Center, which may redevelop with more density in the future. In addition, should the property be redeveloped pursuant to the City Avenue District Zoning, the Official Map will require installation of a public multi-use path extending through the shopping center to the office center further east. Relying on the station’s Conshohocken State Road driveway in lieu of the City Avenue staircase will promote pedestrians walking across Conshohocken State Road midblock, because it will be out of the way to walk south to the signal at City Avenue and back north to the station driveway. The station’s City Avenue driveway entrance is even farther out of the way and involves walking past the station and back. Restoring the eastern staircase not only provides the shortest route for pedestrians from the Bala Cynwyd Shopping Center, but it makes crossing...
Conshohocken State Road at the traffic signal the most direct and safest route to the station platform. The following additional improvements to be undertaken by SEPTA are recommended at Bala Station:

- Retrofit the curb along the west platform at the pedestrian crossing of the track to allow ADA access from the eastern side of the station.
- Provide bike racks. After restoration of the City Avenue Bridge, the underpass will provide a sheltered location for bike parking.
- Clean areas of graffiti to restore station appearance.

**BUS STOPS**

Only three of 40 City Avenue bus stops have shelters. This analysis recommends that at all stops with 50 or more daily boardings, shelters and benches should be provided. The City of Philadelphia Commerce Department’s bus shelter program should be utilized to install bus shelters with benches at these stops (19 new locations). Priority should be given to stops with the highest boarding activity. The three highest boarding stops without a shelter are listed below and each has over 200 boardings daily:

- Southbound at 47th Street (Bala Cynwyd Shopping Center)
- Northbound at 47th Street
- Northbound at 53rd Street/Oakland Terrace

All stops and shelters should be accessible with compliant curb ramps. A specific example is the existing bus shelter on northbound Belmont Avenue at Conshohocken State Road, which should be relocated so that it can be reached by a wheelchair from the sidewalk. This bus stop is located opposite Inglis House, a residential facility that houses disabled adults.

The corridor should receive a “transit presence” by providing added amenities to all bus stops with a consistent look to better promote the transit service and the City Avenue (“CityAve”) location.

Table 7 illustrates a priority for installing shelters at City Avenue stops based on the daily ridership. The northbound (City) side has 11 stops with more than 50 daily boardings and no shelter and the southbound (Lower Merion Township) side has eight. New shelters are recommended at those 19 locations. The stops with more than 200 daily boardings should be addressed first.

At many stops right of way limitations prevent location of a shelter. Shelters should be considered as part of future development where the new zoning establishes setbacks that allow the space for shelters. In the short term, amenities such as benches and trash cans should be provided at those locations wherever feasible.
Table 7: City Avenue bus stop priority for shelters

<table>
<thead>
<tr>
<th>NORTHBOUND STOPS</th>
<th>Daily Boardings</th>
<th>Priority for Shelters</th>
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</thead>
<tbody>
<tr>
<td>Presidential</td>
<td>&gt; 50</td>
<td>1</td>
</tr>
<tr>
<td>53rd/Oakland</td>
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<td>47th</td>
<td>&gt; 200</td>
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<tr>
<td>54th/Old Lancaster</td>
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<tr>
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<td>Bryn Mawr</td>
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<table>
<thead>
<tr>
<th>SOUTHBOUND STOPS</th>
<th>Daily Boardings</th>
<th>Priority for Shelters</th>
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<tr>
<td>47th</td>
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<tr>
<td>Belmont</td>
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<td>Bala</td>
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<tr>
<td>Conshohocken State</td>
<td>&gt; 100</td>
<td></td>
</tr>
</tbody>
</table>

At several stops, physical space behind the right of way line is available that could easily accommodate a shelter if an easement could be obtained. Property owners could be approached to discuss their willingness to grant an easement until such time as the new zoning comes into effect. Such locations include the high priority stops at northbound 53rd/Oakland Street and southbound 47th Street.

TRANSPORT INFORMATION PROGRAM

Service Information

The resident and employee on line surveys indicate that there is some lack of knowledge about the available transit routes and service. If more people are made aware of how they can travel to their destination without driving, some may elect to use transit to save money, avoid the stress of driving, use the commuting time for working, reading or using their mobile devices.

- Work with SEPTA Marketing and Customer Information staff to promote and distribute transit information to City Avenue District employers.
- Develop a “local transit” guide for the City Avenue Corridor that summarizes in a clear and concise manner the transit service available in the district, local destinations served and where to make connections from Center City.

Next Bus Information

In the employee survey, 76% of employees who already use transit to commute to work selected “being able to reliably know when the next bus will arrive” as the most helpful transit system improvement. Furthermore, 38% of respondents to the employee survey who currently drive indicated that “being able to know reliably when the next bus will arrive” would lead them to consider using transit.

SEPTA vehicles are Automatic Vehicle Locator (AVL) equipped and report location every 3 minutes. The bus location can be viewed on web enabled smart phones/tablets through TransitView under ‘System Status’ on SEPTA’s website. Currently, it takes a couple of steps to access the desired route. The mobile website’s Schedules page also offers “Schedules To Go” which gives the next 10 scheduled trips. It takes a series of five steps to access the trip times. SEPTA is working on app development to improve the ease and convenience of information. However, as noted earlier, buses are polled for location once every three minutes. True real time information is not possible with the available communications bandwidth and SEPTA has said that upgrading bandwidth would be cost prohibitive. SEPTA has released an app that brings the travel resources on the SEPTA website into a more convenient mobile tool. The app also utilizes GPS to provide customers with information on the SEPTA services closest to their location.

Apps should be developed that enable a rider to save route and stop information and be able to check arrival status in one step.
For phones without internet service, SEPTA also has an SMS service that texts the next four scheduled arrivals in reply when a rider texts ‘septa’ and their stop ID (and route number if more than one route serves the stop) to 41411. Although the procedure for this service is on a SEPTA website page, finding that page is extremely difficult and someone who doesn’t already know about the service would not find it.

We recommend that CASSD and Lower Merion Township work with SEPTA to improve public information regarding existing capabilities to access bus arrival information. In addition, SEPTA should conduct more outreach and education on availability of these tools and how riders can use them, and consider promoting the availability of this information in buses or installing signs or messages at shelters.

SHUTTLE SERVICE

The resident survey asked residents if they would use a shuttle bus for local trips that they currently make by car. Of those that responded, 60% said “No”. Residents responding “Yes” to a shuttle indicated that the primary use would be for local shopping and dining, and not for work trips. Residents responding “Yes” to a shuttle overwhelmingly indicated that the shuttle should be free and their use would be dependent on proximity to their home and frequency of service. Responses imply that there would be an expectation of a high level of service with no revenue generation. A resident shuttle service convenient enough to attract riders may not be practical or fundable. It could also adversely affect SEPTA ridership.

The employees survey indicated some interest in a shuttle to “complete the work trip” from regional rail. 45% of the respondents to the employee survey who currently drive indicated that a free shuttle from the local rail stations to work locations would make them consider using transit. On the other hand, 38% of employees indicated that none of the conditions listed in the survey would cause them to consider using transit. This reflects that there is a core group of employees in the district who will likely never be persuaded not to drive to work using their cars.

If funding can be identified, CASSD should consider implementing a rail station shuttle during primary work start and end times. Alternatively, funding for a shuttle could be requested from PennDOT to promote a shift to transit during City Avenue Bridge construction. This could serve as a demonstration project for determining if such a service would be utilized by local riders.

The rider demand for a shuttle is assumed to require a smaller vehicle. SEPTA does not operate any vehicle smaller than a standard 40 foot transit bus, so service would have to be provided by a private contractor.

Employee Shuttle: Service Description, Costs and Implementation

Keys to the success of a shuttle service are cost, convenience and frequency/span of service. The information received in the surveys clearly indicated an expectation that an employee shuttle would be free. It is therefore recommended that there be no fare charged to employee shuttle riders. Any additional cost to use the shuttle would prove to be a major deterrent to ridership. It is noted that any SEPTA monthly pass for the train (TrailPass) is also good on SEPTA bus, trackless trolley, and subway or trolley services.

Convenience is dependent on the specific route the shuttle takes which will need to vary somewhat by time of day and “purpose”. If the employee shuttle is only operated during the AM and PM peak hours as the “final link” for transit commuters, then the stop locations are fairly straightforward (Overbrook train station and key employer locations within the district).

The recommended route for this type of employee shuttle is similar to the one proposed in the previous study conducted by GVFTMA on behalf of the City Avenue Special Services District. This route has the bus leaving Overbrook Station via Drexel Road, crossing City Avenue to Merion Road, then right on N. Latches Lane to Union Avenue, right on Conshohocken State Road and left on St. Asaphs Road to Belmont Avenue, then left on City Avenue, right on Stout Road (PCOM), left onto Monument Road, right on City Avenue, and right on Presidential Boulevard to the apartments. A backtracking movement on Presidential is then needed to cross City Avenue and serve offices and apartments in the office center in Lower Merion Township. The return trip to Overbrook Station is via St. Asaphs Road, right on Conshohocken State Road, left on Union Avenue.
to Latches Lane and left on Merion Road to Drexel Road. The shuttle could if demand warranted, also connect with a Cynwyd Line station by diverting at Bala Avenue. However, it is presumed the shuttle schedule would be dictated by the regional rail schedule at Overbrook, since that line has the most trains and serves the western suburbs target area for attracting new riders. The complete loop is 6.4 miles long. The trip needs to be completed in 30 minutes in order to meet the train schedule using one shuttle vehicle. The route could be made more efficient if Presidential Boulevard is reconnected from Monument Road to Neill Drive, since that would eliminate a segment of travel on City Avenue and provide a direct route to Presidential Boulevard in Lower Merion.

If the shuttle is expanded to lunch time service, the route could be modified to serve the restaurants and retail centers along City Avenue to and from the same employment centers.

The specific streets the shuttle should operate on may be difficult to determine. Many of the local neighborhoods have been resistant to having buses on their streets. It is recommended that any proposed shuttle route be vetted by local municipalities, neighborhood groups and affected residents prior to implementation. It is also important to review any proposed shuttle route with SEPTA to ensure there are no conflicts or competing elements with SEPTA’s existing bus service.

As for the frequency and span of service, during peak times the service must run on a schedule that corresponds to the regional rail trips at Overbrook Station. It is not recommended that the shuttle trips correspond to the Cynwyd Rail service due to the limited service on this line and the fact that the train trip to and from Center City Philadelphia is faster on the Overbrook line. The peak trips should be scheduled to meet the major start and end times identified in the employer survey. It is estimated that a morning trip from Overbrook Station along the suggested route to the employment centers will take 30 minutes. Shuttle buses should “dead head” (travel the quickest route possible with no passenger stops) back to Overbrook Station to make the next trip. The reverse would be true for the afternoon service.
Given these parameters, one bus could make three trips in each peak period making connections with approximately half of the Overbrook trains (both from Paoli/Thorndale and Center City). To meet most of the rail trips would require two buses. Obviously, the more service that is provided, the greater the cost of the shuttle becomes. And with no fare revenue being generated from the shuttle riders, alternate methods of funding will be required.

Table 8 shows an implementation plan for employee shuttle service and the associated operating costs for each phase assuming one bus is used. The amount of service to be implemented can be dictated by the estimated available funding.

<table>
<thead>
<tr>
<th>SERVICE DESCRIPTION</th>
<th>DAYS OF OPERATION, SERVICE SPAN AND FREQUENCY</th>
<th>ESTIMATED ANNUAL COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHASE 1 - Work trip connection shuttle operating from Overbrook Station and major employers along similar route as GVF study recommendation</td>
<td>Monday thru Friday 6:30AM – 9:00AM 3:45PM – 6:15PM</td>
<td>$82,875</td>
</tr>
<tr>
<td>PHASE 2 - Lunch time shuttle circulating through major employment centers (GVFTMA route) to/from City Avenue restaurants and retail</td>
<td>Monday thru Friday 11:30AM – 1:30PM</td>
<td>$33,150</td>
</tr>
</tbody>
</table>

The estimated operating costs are based on a contracted hourly rate of $65 with service provided weekdays only (255 days). It is recommended that the shuttle be provided by a private contractor who would be responsible for supplying the vehicles, operators and associated services necessary to operate the shuttle.

Additional one-time costs associated with acquiring contracted service include service design, schedule preparation, RFP development, vendor solicitation, contract negotiations and marketing and advertising. Some or all of these functions could be done in house or by a consultant. The estimated cost for using an outside consultant to do all of the tasks would range from $10,000 to $20,000.
PEDESTRIANS

Pedestrian concerns revealed in the survey and in the public meetings can be grouped into two main categories: sidewalks that are missing or in poor condition, and intersection crossings that don’t feel safe. The study has developed a series of recommendations to address those concerns.

Missing Sidewalk Links

Sidewalk locations were obtained from City of Philadelphia and Lower Merion Township GIS files. The gaps in sidewalks were mapped to show locations in the study area that do not have sidewalks.

Figure 6: Street segments without sidewalks or sidewalks on one side only

In the Philadelphia portion of the study area, sidewalk is typically provided on both sides of all streets. Some streets, such as Stout Road from City Avenue to Monument Road and Presidential Boulevard through Lincoln Green, have sidewalk on only one side, but that sidewalk is adequate given the adjacent land use or very low traffic volume. On higher volume roads, lack of sidewalk creates difficulty for pedestrians and can inhibit them from walking to destinations. The following two identified gaps in Philadelphia sidewalk should be filled:

- A missing link of about 230 feet on the east side of Conshohocken Avenue south of City Avenue along the golf course frontage in the Belmont Hills neighborhood.
A missing link of about 280 feet on the east side of Belmont Avenue along the Pennsylvania State Police frontage north of the parking lot driveway. This frontage includes a northbound bus stop opposite the Hayes Manor Retirement Residence. Bus riders must walk in the grass or in the street parking lane to reach the Hayes Manor signalized crossing of Belmont Avenue. Sidewalk should be provided in this area.

The City code in Chapter 11-500 states that “The sidewalks of all public streets, and the roadways and sidewalks of all private streets, shall be graded, curbed, paved and kept in repair at the expense of the owners of the land fronting thereon”. The Department of Streets is authorized to have sidewalk constructed after providing advance notice to property owners, and to assess 30% of the cost against the properties abutting on the sidewalks, in proportion to their property width.

In the Lower Merion Township portion of the study area, there are some residential streets with sidewalks on one side only or with no sidewalks. In general, on streets that are local and low volume without through traffic, pedestrians are able to walk on the side of the street with little conflict. On those local neighborhood streets, the residents’ preference should be considered in determining whether sidewalks should be installed.

On most streets, sidewalks should be provided on both sides of the roadway in order to complete the pedestrian routes to transit and to the City Avenue employment and retail centers. Gaps in sidewalks should be filled at the following four specific locations in Lower Merion Township:

- A missing link of about 130 feet on the north side of Presidential Boulevard east of the 191 Presidential Condominiums driveway.
- A missing link of about 340 feet on the east side of Belmont Avenue from St Asaphs Road south to the GSB Building walkway. Sidewalk exists from this walkway to City Avenue.
- A missing link of about 550 feet on the south side of St Asaphs Road east of Conshohocken State Road, along the church/school property. The Township should ask the Church property to comply with the deferred condition of approval requiring installation of sidewalk to link to the adjacent properties.
- A missing link of about 170 feet on the north side of St Asaphs Road at 13 St Asaphs Road, including two driveways and the adjacent driveway at 11 St Asaphs Road.
The east side of Decker Boulevard has no sidewalk. At present the adjacent land on the east side consists of parking lots below the street grade with no pedestrian access. When this land is redeveloped, Decker Boulevard will be subject to the City Avenue District Zoning requirements for a pedestrian way.

Connections from the Street to Buildings

A lack of pedestrian walkways connecting City Avenue to building entrances is common in the study area. At many locations pedestrians are required to walk in the vehicle driveway and through a parking lot to travel from the street to the building entrance. In any new development a dedicated pedestrian walkway should be provided leading from the street or parking area to the building.

An example of a clear and convenient walkway from street to building is at 40 Monument Road, as shown in the photo below. A direct walkway to the building entrance is provided through the parking lot. In addition, there is a sidewalk along the southern side of the 40 Monument Road driveway. In contrast, across the street pedestrians to 401 City Avenue must walk in the driveway because of the berm and landscaping. (401 City Avenue is a large site and does have connections to sidewalk at two other locations.)
Bala Cynwyd Shopping Center

The Bala Cynwyd Shopping Center was the most frequently cited destination for walking trips. Many pedestrians walk to the shopping center from the apartments and residences located across City Avenue in Belmont Village. In addition, many shopping center patrons arrive by bus at the stops at Conshohocken State Road, 47th Street, or Belmont Avenue. At the main shopping center entrance opposite 47th Street, pedestrians cross the high volume/high conflict area at the driveway throat and walk in the parking lot aisles to the stores.

Creating a good pedestrian path to the stores from City Avenue would result in a loss of at least one row of parking spaces. Bala Cynwyd Shopping Center is obligated by its store leases as well as by Zoning Code to provide a certain number of parking spaces. A future redevelopment or major change in the shopping center could require structured parking, which could provide room to incorporate good pedestrian walkways.

In the short term, pedestrian entries from the City Avenue sidewalk should be provided at lower conflict areas. Approximately four parking spaces would be lost but they are farthest from the stores.

Target

When the Target store was constructed, Presidential Boulevard at Monument Road was converted into an access to Target by disconnecting it from the remainder of Presidential Boulevard, regrading and realigning the road to access the store parking lot. Presidential Boulevard in Lincoln Green became a dead end, and the sidewalk was connected to Monument Road. However, no sidewalk was constructed to provide a direct path from Lincoln Green to the store. Rather than walk out to Monument Road and back to the store, residents walk through the grass. In the resident survey conducted for this study, comments were received on the need for a defined walkway to Target from Presidential Boulevard at Lincoln Green.

Pedestrians on Monument Road approaching the Target from the south have worn a path into the grass from the corner at Presidential Boulevard to the store.

Potential pedestrian connection locations into Bala Cynwyd Shopping Center

Lincoln Green neighborhood residents walk through the grass to reach the Target Store
the southwest corner of the parking lot. Although a sidewalk is provided along the main driveway to Target from Monument Road, the path at the southwest corner of the parking lot is the shortest route from the south. It should be properly graded and paved in order to stop the erosion that is now occurring.

A similar ‘goat path’ is worn in the grass at the City Avenue/Monument Road corner of the Target shopping center. Walking into the shopping center at this corner is a shorter route with less grade change for pedestrians from City Avenue than walking south on Monument Road to the sidewalk at the Target driveway.

Other locations were identified where a pedestrian walkway to the street that shortens the distance to a destination could encourage more walking trips.

One Bala Plaza

A sidewalk running diagonally from the northeast corner of Belmont Avenue and St Asaphs Road through the landscaped area to the parking lot would provide a more direct walking route from Bala Cynwyd Shopping Center to the western building entrance of One Bala, and would shorten the distance by about 400 feet.

191 Presidential Condominiums

The shortest walking route from the condominiums to City Avenue is via Monument Road. There is a sidewalk along the condominium’s Presidential Boulevard driveway and along Presidential Boulevard to Monument Road. However, a shorter and more sheltered walking route with less grade change could be created by installing a sidewalk along the 191 Presidential Condominiums southern driveway to Monument Road and installing a defined path from existing sidewalk at the building through the parking lot to this driveway. A sidewalk already exists on Monument Road in the short section between the driveway and Presidential Boulevard. A curb ramp would need to be installed at the driveway end of this sidewalk.

The list of sidewalk connections above is not a comprehensive survey but is illustrative of the opportunities to provide easier walking connections to City Avenue corridor destinations.
Sidewalk Widening

Within the City Avenue District, the required minimum pedestrian walkway width on the Lower Merion Township side is 8 feet (minimum unobstructed width) and on the City side the required minimum pedestrian walkway width is 14 feet.

Elsewhere in the study area, the minimum sidewalk width in Lower Merion Township is four feet. In the Philadelphia portion of the study area, the Pedestrian and Bicycle Plan calls for a minimum sidewalk width of 12 feet on all streets except the low density residential and local streets, where the minimum width is 10 feet.

Conshohocken State Road should be considered for sidewalk widening beyond the minimum four feet in width. Conshohocken State Road was observed to have regular pedestrian use, for both transportation and recreation. It provides pedestrian access to destinations such as the apartments and condominiums, Bala regional rail station, City Avenue bus transit, the major retail center, a fitness center, and the Post Office.

In particular, Conshohocken State Road sidewalk north of Righters Ferry Road on the east side is only three feet wide. The narrow sidewalk combined with vegetation right at the back of the sidewalk, lack of a grass buffer at the curb, and high traffic volume makes walking in this area uncomfortable, and walking side by side with another person is not possible.

It is recommended that sidewalks on Conshohocken State Road outside the CASSD (north of Bala Station) be widened to an unobstructed width of five feet, separated from the street by a landscaped buffer.

ADA access

Curb ramps are missing at some driveways and intersections. Sidewalks that cross curbed driveways and roads need curb ramps to make the sidewalk accessible.

CASSD is working with PennDOT and with private property owners to ensure curb ramps and related accessibility features are incorporated into future projects.

Specific locations of missing ramps were cited in survey responses. These locations should be addressed at the earliest opportunity. They are:

- The eastern corner of Decker Boulevard at St Asaphs Road. (This intersection will be an add alternate in the bid for installation of curb ramps by Lower Merion Township to be done in conjunction with the St Asaphs Road signal project.)
- Driveway on south side of St Asaphs Road east of Decker Boulevard
- 555 City Avenue driveway to City Avenue. These driveway curbs impede access to the pedestrian overpass over City Avenue.
Sidewalk Maintenance and Obstruction Removal

In the City of Philadelphia, the issue of maintenance is described as follows: “The laws requiring property owner maintenance are seldom enforced. Thus, routine sidewalk maintenance is often neglected. The city has neither a dedicated source for funding nor a line item in the capital budget, even for publicly owned sidewalks (except those in Fairmount Park), although sidewalks in commercial corridors sometimes receive public funds as part of targeted streetscape projects.”\textsuperscript{4} The issue of maintenance is similar in Lower Merion Township. Enforcing property owner maintenance requires periodic inspection and a process for enforcement, both of which involve cost for the municipality. There is also an issue of financial hardship for the property owner, particularly for residents.

Belmont Avenue at Sherwood Road. Sidewalk is in poor condition due to overgrowth of tree roots in several areas.

Poor sidewalk conditions in the vicinity of Belmont Avenue, Conshohocken Avenue and 47\textsuperscript{th} Street leads to disabled residents using motorized wheelchairs in the street. Given the high numbers of disabled residents from Inglis House that traverse this area in motorized wheelchairs, the sidewalks should be prioritized for replacement and upgrades.

\textsuperscript{4} Pedestrian and Bicycle Plan, Philadelphia City Planning Commission, April 2012.
Conshohocken State Road

Property owners should be required to keep private landscaping cut back two feet behind the sidewalk so that the full sidewalk width is usable. As with sidewalk condition, enforcing landscape maintenance requires periodic inspection and a process for enforcement.

Intersection Crossings

Difficulty crossing at intersections was one of the main issues voiced by the public. The most frequent comments concerned insufficient signal time for pedestrian crossing and drivers making turns across the crosswalk failing to yield to pedestrians. Intersections mentioned specifically included City Avenue at Monument Road, Belmont Avenue and Drexel Road/Merion Road. Intersections throughout the district would benefit from the installation of High Visibility Crosswalks as recommended in the Circulation Element of the proposed Lower Merion Township Comprehensive Plan.

Traffic signal provisions for pedestrians are being addressed in the City Avenue District through two projects that are already in design: CASSD’s City Avenue signal upgrade project and CASSD’s St Asaphs Road signal upgrade project, described on pages 8 and 9. The City Avenue Signal Upgrade project will:

- Add pedestrian countdown signals
- Provide standard crossing times
- Upgrade ADA curb ramps (The St Asaphs Road portion of the work will be funded by Lower Merion Township.)
- Provide features for the mobility impaired and visually impaired at selected locations
- Add detection and traffic-adaptive control that enable signal timings to respond to traffic conditions.

With regard to driver yielding behavior, the City of Philadelphia has employed a PennDOT-approved sign “Turning Vehicles Yield to Pedestrians” at Center City traffic signals such as pictured below. This sign would be appropriate for the City Avenue signals.
PEDESTRIAN CROSSING OF MONTGOMERY AVENUE AT BALA AVENUE

The pedestrian crossing across Montgomery Avenue on the east side of the intersection with Bala Avenue involves crossing a heavy right turn movement from Montgomery Avenue to Route 23 West. The right turn lane is channelized with a small island and yield right turn. Pedestrians cross an unsignalized crosswalk between the Cynwyd Station corner and the island. Pedestrian signals are provided for the crossing between the island and the south side of Montgomery Avenue.

The channelizing island and yield lane result in a very narrow sidewalk at the train station corner. Sight distance between pedestrians at the corner and the right turning vehicles is limited by the bridge parapet wall, making this an uncomfortable crossing. Furthermore, some pedestrians were observed using the pedestrian signals as an indication of when to cross the right turn yield lane, waiting at the train station corner and then starting to cross on the “Walk” signal. They may not understand that right turn vehicles are not controlled by the signal. In addition, the pedestrian signal time is based on crossing from the island, not the train station corner.

When the City Avenue Special Services District was planning the Bala Avenue Improvement Project, they approached PennDOT about removing the island, but PennDOT did not concur. The possibility of revising this crossing should be revisited with PennDOT. The proposed improvement would remove the small island, build out the curb line on the northeast (train station) corner, relocate the pedestrian signals to that corner and revise the signal timing for the pedestrian crossing. Right turns from Montgomery Avenue to Route 23 West would be controlled by the traffic signal with ‘Right Turn on Red After Stop’. The capacity for auto traffic will not differ greatly from the yield condition. The revised curb will slow truck turns and may require that the stop line on Bala Avenue be moved back. This improvement eliminates the pedestrian sight distance problem and provides a comfortable sidewalk area at the train station corner.

Pedestrians waiting for “Walk” signal at yield right turn. Sight distance between pedestrians and right turning drivers is poor.

Pedestrian crossing improvement at Montgomery Avenue and Bala Avenue
PEDESTRIAN CROSSING OF PRESIDENTIAL BOULEVARD

The office buildings on the north/east side of Presidential Boulevard in Lower Merion are isolated from City Avenue. Although sidewalk exists along both sides of Presidential Boulevard, there are no pedestrian crossings along the street other than at the signal at the intersection with Monument Road. Pedestrian connections are only possible between destinations on the same side of the street. At the intersection of City Avenue and Presidential Boulevard all crossings are prohibited. A pedestrian must be on the west side of Presidential Boulevard to be able to use the pedestrian overpass across City Avenue, since there is presently no place to cross from the east to the west side. The 40-foot wide Presidential Boulevard roadway is striped for four 10-foot wide travel lanes. Despite a 25 mph speed limit, cars travel much faster and traffic volume at peak hours is high.

Looking southeast toward One Presidential Boulevard

A logical place to provide a pedestrian crossing is at One Presidential Boulevard and 555 City Avenue. Crossing demand exists between the two buildings; there is no other pedestrian generator closer to City Avenue. A crossing is proposed just north of the driveways to the main parking lots, 650 feet from City Avenue.

The pedestrian crossing volume does not warrant a traffic signal. A center refuge island is desirable so that pedestrians will be able to cross one direction of traffic at a time. A median refuge area can be created by converting one of the four existing vehicle travel lanes. The southbound lanes approaching City Avenue will not be changed because they are typically occupied by queues generated proximate to the traffic signal during peak hours. In the northbound direction, only one lane of traffic enters Presidential Boulevard at a time from the City Avenue intersection. Therefore, it is proposed to continue northbound traffic in one lane. The existing second northbound lane could be reversed to provide a third southbound left turn lane through the City Avenue traffic signal. A third left turn lane on Presidential Boulevard approaching the City Avenue traffic signal is consistent with Lower Merion Township’s Transportation Capital Improvements Plan. The additional southbound left turn lane would allow more left turns to get through the signal on each cycle, and shorten the queue length on Presidential Boulevard. Only about 10 cars per lane can get through per cycle with the existing green time, so that 250 feet of triple left turn storage is sufficient to fully utilize the available green time.

Between the proposed new third southbound left turn lane and the proposed new pedestrian crossing, the former northbound lane could provide short northbound left turn lanes for the driveways to 555 City Avenue; this proposed configuration is desirable to prevent blockage of the single northbound through lane.

One Presidential has a right turn entry only driveway on northbound Presidential Boulevard 150 feet from City Avenue. Because northbound Presidential Boulevard would be reduced to a single lane at that point where the road is on an upgrade, a widening to provide a new separate right turn lane is recommended so that right turns into the driveway do not impede the northbound traffic flow. Otherwise, the curb lines on Presidential Boulevard would not change.

The figure on the following page illustrates proposed changes to Presidential Boulevard to create a pedestrian crossing.
Proposed restriping of Presidential Boulevard at City Avenue to create pedestrian crossing. A traffic improvement from Lower Merion’s Transportation Capital Improvement Program can be implemented at the same time.

Northwest of the new pedestrian crosswalk and refuge island, Presidential Boulevard is proposed to be restriped as one 10-foot wide travel lane per direction with a 12-foot wide center turn lane and 4-foot wide shoulders. There would be one travel lane each direction at the new pedestrian crosswalk, eliminating the ‘double threat’ safety issue that occurs with pedestrians crossing multi-lane approaches.

The peak hour volumes on Presidential Boulevard justify use of an enhanced, high visibility, or “active when present” device. If a median island is provided, pedestrians will be crossing one direction of single-lane traffic at a time. Sight distance is adequate and there is no visual clutter. The enhanced crossing, with high visibility signs and crosswalk markings, should be adequate to advise motorists of the crossing without an “active when present” device such as Rectangular Rapid Flashing Beacons (RRFB). If used, RRFB require a PennDOT permit.

Further northwest, around the curves at the residential condominiums, cars do not travel side-by-side in the existing four lanes and often straddle the lane line because they are exceeding the 25 mph speed limit. Residents report they are not comfortable walking along Presidential Boulevard and hearing squealing tires. At the public meetings, residents expressed support for traffic calming. Reducing the through travel lanes from two to one per direction will calm speed and shift the travel lane further from the curb. This would increase safety as...
well as comfort for pedestrians on the sidewalks and provide increased sight distance to oncoming traffic from those driveways that are on the inside of a curve, such as The Corinthian. Left turning vehicles would use the center left turn lane and not block through traffic.

On the approach to Monument Road, Presidential Boulevard should transition back to four lanes to maintain future capacity through the traffic signal. The picture below shows the transition. The merge for eastbound traffic from St Asaphs Road is shown for the posted speed limit of 25 mph. At the driveway to 201/215/225 Presidential Boulevard, the center left turn lane is not fully developed, but the eastbound roadway at this location would still be 20 feet wide as it is today. At the driveway to 191 Presidential Condominiums, the through traffic would merge to one lane and left turns would be made from the center left turn lane.

The implementation of a three-lane pattern on Presidential Boulevard would not only allow a pedestrian crossing at One Presidential/555 City Avenue, but also allow other crossings to be created at locations with adequate sight distance and crossing demand.

Looking south on Presidential Boulevard from 191 Condominiums driveway

Proposed restriping of Presidential Boulevard east of Monument Road
Figure 7 illustrates locations of the pedestrian improvements described in this section. In addition to the improvements shown, CASSD projects on City Avenue and on St Asaphs Road will improve pedestrian crossings at signalized intersections.

Figure 7: Pedestrian improvements
BICYCLE CIRCULATION

Bicycle facilities in the study area, where provided, fall into one of the following categories:

Shared lane: A roadway lane that may be used legally by both bicyclists and motor vehicles. Roadways with low traffic volumes and speeds (say 25 mph or less) often need no special provisions for bicyclists. Casual, less confident riders may be unwilling to use shared lanes on anything but a low-volume, low-speed street. An example of a shared lane facility is Union Avenue.

Bicycle lane: A portion of the roadway that has been designated by pavement markings for preferential or exclusive use by bicyclists, and, if used, by signs. A bicycle lane is intended for one way travel in the same direction as traffic. A bicycle lane serves the experienced, confident cyclist well; casual, less confident riders may be unwilling to use bicycle lanes on roadways with higher motor vehicle traffic volumes and/or speeds. The City of Philadelphia has striped bicycle lanes on most of the streets where sufficient width is available after consideration of vehicle travel lanes and on-street parking.

Climbing lane: On streets with insufficient widths to provide bike lanes in both directions, a bike lane (the climbing lane) is provided in the uphill direction to accommodate slow moving cyclists and a shared lane is provided in the downhill direction.

Shared use path: A path physically separated from motor vehicle traffic by an open space or barrier. It can be within the roadway right of way or an independent right of way. A shared use path may be used by pedestrians, bicyclists, skaters, wheelchair users, joggers, and other forms of active transportation.

Sidewalk: A shared use path located immediately adjacent to and parallel to the roadway. Sidewalks are best used where intersections and driveways are infrequent because intersection and driveway crossings can create safety concerns. The most serious issue involves conflicts between bicycles and turning motorists who are not expecting or looking for cyclists traveling in the “wrong” direction from their point of view.

Several past and current studies have provided recommendations for accommodating bicycles that include the Connectivity Study area. In Lower Merion Township, the Circulation Element of the Comprehensive Plan Update includes recommendations for a Township-wide bicycle network. In Philadelphia, three planning documents described on page 9 of this report include recommendations for improvements to the bicycling network.

City Avenue

City Avenue was designed for auto commuting and is very intimidating and difficult for bicyclists since there are no shoulders, lanes are narrow and traffic volumes are high. Both the City of Philadelphia and Lower Merion Township have established zoning districts in a portion of the corridor with zoning provisions that are aimed at eventual provision of off-street bike facilities and improved pedestrian connections. The land use standards support new high density commercial, institutional, and residential uses. They limit the number, width, and location of driveways. Lower Merion’s City Avenue District includes a Regional Center area from I-76 to Belmont Avenue, and a Bala Cynwyd Retail District from Belmont Avenue to the Bala train station. A Bala Village District from City Avenue to Conshohocken State Road along Bala Avenue is the next proposed zoning amendment. Provisions of the township zoning code establish a 25-foot minimum building setback from City Avenue in both the Regional Center and Bala Cynwyd Retail areas. Further, the code requires a Pedestrian Way along City Avenue from I-76 to Conshohocken State Road consisting of a 6-foot landscaped verge, 8-foot multi-use path, 2-foot buffer and 8-foot sidewalk. The connection to the Bala train station is made via Conshohocken State Road and the SEPTA driveway to the station.

The City of Philadelphia’s City Avenue zoning district extends from I-76 to 52nd Street. Within the District, the Regional Center Area extends from I-76 to Belmont Avenue, the same as in Lower Merion. In this area the Zoning Code established a minimum setback of 25 feet from curb line to the building line. The Bala Cynwyd Retail area of the District extends from Belmont Avenue to 52nd Street. In this area the minimum building setback is 20 feet. In both areas, public walkways have a required minimum width of 14 feet and may be provided both within the street right-of-way and within the lot line. There is no requirement for a verge between the curb and sidewalk.

Development of an off-street path on the Lower Merion side of City Avenue for improved pedestrian access and for bicycles will be accomplished.
property by property as redevelopment occurs, and therefore will require redevelopment along large portions of the corridor in order to be accomplished and will take many years. Therefore, the development of bicycle routes on lower volume streets parallel to City Avenue is an important strategy for bicycle travel along the corridor.

An east-west bicycle route parallel to City Avenue is available from Merion Road to Belmont Avenue using Latches Lane, Union Avenue, and Llanberris Road. At present, in order to cross Belmont Avenue at a traffic signal to continue east, a bicyclist at Llanberris Road would need to travel about 500 feet along the west side of Belmont Avenue to either Righters Ferry Road or St Asaphs Road. A four-foot wide sidewalk exists in this area of Belmont Avenue. Connections from this east-west parallel route to City Avenue:

- Marked bicycle lanes are proposed on Bryn Mawr Avenue.
- The City Avenue District Official Map shows a public multi-use path along Belmont Avenue from the West Laurel Hill Cemetery entrance to City Avenue. Once constructed, that path will provide a connection from the parallel east-west bike route to City Avenue.
- A proposed public multi-use path connecting Belmont Avenue and Monument Road is shown on the City Avenue District Official Map. The map shows the path intersecting Belmont Avenue about 100 feet north of Llanberris Road at the driveway to One Bala Plaza. If a major new development occurs on the One Bala Plaza property that would involve a signalized access on Belmont Avenue, the access as well as the public multi-purpose path should be located opposite Llanberris Road to provide a continuation of the east-west bike route.

On the City side, the parallel route closest to City Avenue is Overbrook Avenue. 54th Street and Bryn Mawr Avenue, which have marked bike lanes, provide connections from Overbrook Avenue to City Avenue. The proposed Parkside-City Line Trail section from Woodbine Avenue to Bala Station could provide a connection from the parallel east-west route to City Avenue at the Bala Cynwyd Shopping Center.

On other busy roads like Conshohokken State Road bicyclists often ride on the sidewalk if they are able. There is no good option for accommodating bicyclists on-street on Conshohocken State Road. The extension of the Cynwyd Heritage Trail to Bala Station would be an ideal alternative to Conshohocken State Road for bike travel between Montgomery Avenue and City Avenue for nearby destinations such as the Post Office or the Bala Cynwyd Shopping Center.

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**Bicyclist on west sidewalk of Conshohocken State Road at Union Avenue**

**Bicycle Network**

The proposed bicycle network is illustrated in Figure 8 on the following page. In the City, Woodbine Avenue east of Bryn Mawr Avenue is added to the network.
Figure 8: Bicycle Network
Extension of the Cynwyd Heritage Trail

A strong desire was expressed by the community in both Lower Merion and Philadelphia to extend the Cynwyd Heritage Trail along SEPTA’s Cynwyd Regional Rail Line to Fairmount Park in Philadelphia, connecting it to the bicycle network there. The extension would be approximately ½ mile long between Cynwyd and Bala Stations in Lower Merion and approximately 1.2 miles within the City of Philadelphia.

SEPTA currently operates one track on this segment of the Cynwyd Line and has no plans to restore a second track to the line. Trains reach a top speed of 25 miles per hour between stations. The proposed trail extension will likely necessitate the removal of the second track south of the Cynwyd Station and run parallel to the operating track. While SEPTA has allowed trails on property they own, they have not yet allowed a trail adjacent to a line with operational train service. SEPTA is cautious about developing trails such as this and concerns relative to safety and train operations would need to be addressed. Preliminary discussions should be held with SEPTA to determine the issues and process for this rail/trail extension. A sponsor for this trail would then need to be identified in order for the trail extension to move forward.

The next step would be to perform a comprehensive feasibility analysis that documents the setting, the trail’s identification in both City and Township planning documents, land ownership, railroad activity, SEPTA’s concerns and ability to address them, physical conditions, conceptual design of the trail, and the agency or agencies that would accept operations and maintenance responsibility for the trail. Safety of trail users is the overriding concern for a rail-with-trail which drives many of the policy and design issues.

A feasibility study would address:

- Ability to design the trail within right-of-way constraints and physical constraints (bridges, underpasses, etc.)
- Setback, i.e. distance from the centerline of the active rail line to the nearest edge of the trail or to a separation feature (fence, wall, etc.).
- Trail access points.
- Track crossings. The three stations have existing pedestrian crossings of the track.
- SEPTA’s access to its facilities for routine maintenance and emergency repairs.
- Trail maintenance.
- Cost.

The Cynwyd Heritage Trail showing setback from rail. In foreground is the at-grade pedestrian crossing at Cynwyd Station.

The Cynwyd Line south of Cynwyd Station.

**Bicycle routes to Martin Luther King Jr. Drive**

Residents in both Lower Merion and City neighborhoods expressed a desire to be able to commute by bike to Center City Philadelphia. Although this is beyond the scope of the Connectivity Study, potential connections to Martin Luther King Jr. Drive (MLK Drive) were identified that would facilitate a bicycle commute. MLK Drive has a shared use path along its entire length from the Falls Bridge to the Philadelphia Museum of Art.

The West Park District Plan echoes this need. One of its recommendations states: “Enhance bicycle and pedestrian connections to the Martin Luther King, Jr. Drive Trail by improving bike lanes and sidewalks on Lansdowne Drive, Sweetbriar Drive, Black Road, and Montgomery Drive as well as the crossings of Martin Luther King Jr. Drive at these locations.”

Belmont Avenue

For the City Avenue study area, having a good bicycle facility along Belmont Avenue is essential in order to reach any of the connections recommended in the West Park District Plan.

Belmont Avenue has a patchwork of sidewalk and shared use side paths along both sides in varying states of repair. There is no continuous shoulder on Belmont Avenue that could provide bike lanes, because at signalized intersections the vehicle through lanes shift to the curb to provide left turn lanes. Upgrade and completion of shared use paths on both sides of Belmont Avenue is needed between Conshohocken Avenue and Parkside Avenue. From Parkside Avenue, bicyclists can travel to MLK Drive via existing paths through Fairmount Park.

The stretch of Belmont Avenue between Conshohocken Avenue and Parkside Avenue is also used by residents of Inglis House, a skilled nursing facility for approximately 300 disabled adults. Residents travel in motorized wheelchairs to Carousel House, a City recreation center at Parkside Avenue dedicated to serving the physically disabled. In addition to the need for those residents to make trips between the two sites, Inglis House and several other rehabilitative, medical and nursing care institutions near the corner of Belmont and Conshohocken Avenues employ hundreds of caregivers, many of whom do not drive to their jobs but typically arrive by bus.

The Philadelphia Trail Master Plan did not include Belmont Avenue because the plan considered new facilities only. The Trail Committee that prepared the plan recognizes that Belmont Avenue should be included in the next plan update. The West Park District Plan calls for a sidepath to continue north of Wynnewfield Avenue to Conshohocken Avenue. The Belmont Avenue sidepath has not undergone a prioritization analysis by the Trails Committee, so its
status will need to be determined. Sidewalks on Belmont Avenue are a priority project in Philadelphia’s Pedestrian and Bicycle Plan.

Ford Road

A review of existing access routes from the study area to MLK Drive shows that although Montgomery Drive and Sweetbriar Drive have traffic signals to enable crossing MLK Drive to get to the bike path, they have some challenges. The route via Montgomery Drive involves crossing the busy on and off ramps to I-76, and the route via Sweetbriar Drive involves turns through heavily trafficked intersections. Black Road is not a route that would be used for a City Avenue neighborhood commute to Center City.

A route that should be explored as a pedestrian and bicycle route for commuters from study area neighborhoods is via Ford Road and Greenland Drive. Two (2) two-way ramps extend from the west side of MLK Drive up to Greenland Drive at the Strawberry Mansion Bridge. One ramp connects to MLK Drive north of the bridge and one ramp connects south of the bridge. The intersection of Greenland Drive/Strawberry Mansion Bridge and the two ramps is a four-way stop.

It is suggested that the southern ramp could be converted to pedestrian and bike use only. All vehicles travelling from Greenland Drive/Strawberry Mansion Bridge to MLK Drive could be directed to the northern ramp. Vehicles destined to Center City would turn right on MLK Drive at the base of the ramp to travel south. A minor ramp alignment change could be constructed if needed to ease the right turn movement.

Removing all vehicles from the southern ramp would eliminate the movement from northbound MLK Drive to Greenland Drive/Strawberry Mansion Bridge. This might not have a severe impact. Left turns from northbound MLK Drive are already prohibited during peak hours at the southern ramp and are prohibited at all times at the northern ramp. Therefore the ramps cannot be used by commuters travelling northbound from Center City to neighborhoods east or west of the river. Alternative routes exist for vehicle traffic. No volume information was obtained, but the traffic volumes on these ramps appear to be light. If it is determined that a vehicle connection from northbound MLK Jr. Drive up to the bridge needs to be maintained, the southern ramp could at least be restricted to one-way ‘up’ (north) vehicle traffic, and half of the ramp could be dedicated to pedestrian and bike use.

At the southern ramp junction with MLK Drive, it would be possible to create a signalized pedestrian/bike crossing of MLK Drive, to complete the connection to the MLK trail.
Bicycle Racks

The Overbrook Station has two bike racks, accommodating a total of four bicycles. Cynwyd Station has one rack, accommodating two bicycles, and Bala Station has no racks. The community has expressed a need for more bicycle parking capacity, and desires covered bike parking to shelter bikes from inclement weather. The bridge overpasses at the stations provide a sheltered area underneath the overpass in which bike parking could be located.

Bike racks should also be located at residential apartments, office buildings and retail destinations.

CONCLUSION

This study has developed a series of recommendations for promoting use of transit through improvements to transit facilities, improved access to transit, and marketing and information. The recommendations are summarized in Table 1 and Figure 1 at the beginning of this report.