

Lincoln Highway Streetscape Plan Phase 2



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Plan Purpose and Process



Plan Purpose and Process

Project Background

The Lincoln Highway (U.S. Route 30) corridor is a highly visible gateway between the rural landscapes that Lancaster County is famous for, and the thriving City of Lancaster. The highway is an important regional transportation corridor, a tourism destination, retail center, and a gateway into Lancaster County. Attractions and services in the corridor include Rockvale Outlets, Tanger Outlets, Dutch Wonderland Family Amusement Park, the Lancaster Host Resort, the American Music Theatre, and a wide range of accommodations, restaurants, and local-serving retail.

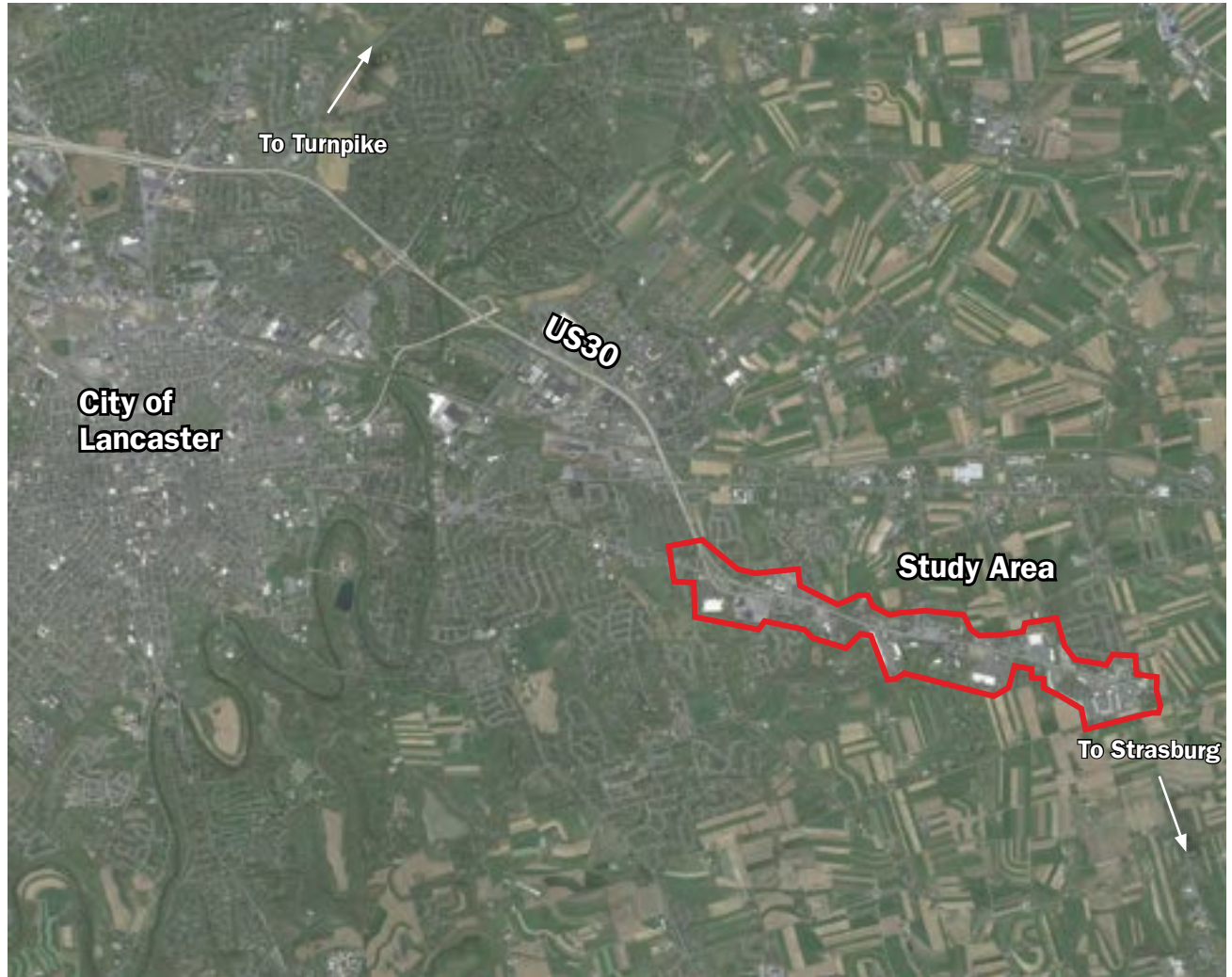
The Lincoln Highway Streetscape Plan presents a roadmap to transform the corridor from a standard commercial

highway into a safer, more attractive roadway with a stronger sense of place. It builds on the vision of the Lincoln Highway Gateway Enhancement Plan prepared by Lancaster County in 2011 and presents conceptual designs for the roadway, streetscape, and multi-modal access enhancements needed to implement that plan's vision.

The Lincoln Highway Streetscape Plan includes a roadway conceptual design, written recommendations, an implementation strategy, and detailed cost estimates to help local officials, the business community, and other stakeholders move forward to build the infrastructure needed to ensure a vibrant economic future for the corridor.

US Route 30 Bypass entrance at Harvest Road





The Lincoln Highway Corridor serves as the link between Lancaster City and the agricultural landscape of eastern Lancaster County.

Project Area and History

The Study Area encompasses the 2.5-mile segment of Lincoln Highway in East Lampeter Township between Strasburg Pike on the west and Pennsylvania Route 896 on the east. It includes the easternmost Route 30 Bypass interchange, where the Bypass ends and all traffic enters Lincoln Highway.

Despite the corridor's importance to the county's economy, the road's function and identity have been compromised by a lack of coordinated planning to ensure

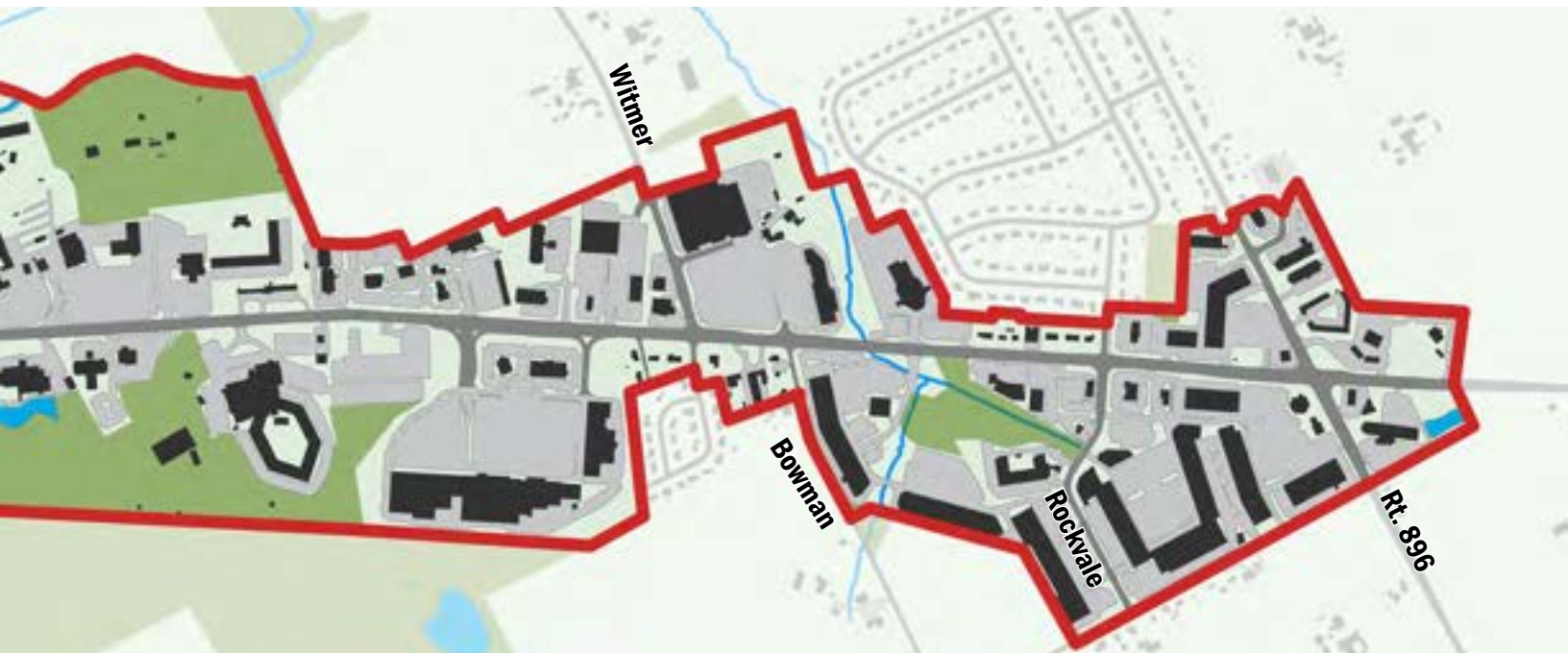
its continued success. Inconsistencies in the roadway's appearance have contributed to negative perceptions of the corridor and a discordant sense of place. Fast moving, high-volume traffic and intensive commercial development is juxtaposed against suburban residential development and Amish and Mennonite farms. A mix of locally-owned businesses and national chains serves shopping, dining, and recreation needs of both visitors and local residents.

Project study area



The route now known as the Lincoln Highway was one of the first turnpikes established in the United States. Although its character has changed significantly since it was established, it largely follows its original route. In the 1970s and 1980s, the corridor experienced an economic boom, including the construction of two retail outlet malls. By the 1990s, however, concerns began to grow about the corridor's future as a tourism destination. Visitation was down, and many of the corridor's attractions and

services were aging. Since that time, the corridor has experienced a turnaround with the addition of a theater and several new hotels, though the number of visitors has not matched the highs experienced in the 1980s. The goal of this plan is to preserve and further enhance economic growth in the corridor by improving its appearance and function to draw new visitors and better serve local residents and businesses.



Planning Process

Advisory Committee

A project advisory committee made up of business and property owners in the corridor, Lancaster County, PennDOT, Red Rose Transit Authority, and East Lampeter Township staff and elected officials managed the preparation of the Lincoln Highway Streetscape Plan. The group met regularly during the process to identify issues and review potential solutions. The interaction between the design team and the local roadway users and stakeholders during the planning process was critical to developing solutions specifically tailored to the diverse range of uses and needs in the corridor.

Stakeholder Outreach

In addition to the advisory committee, East Lampeter Township and the design team reached out to individual corridor stakeholders, including the Pennsylvania Motor Truck Association and individual property owners who were considering new investments in their properties.

Key stakeholders were invited to two afternoon workshops in which the design team, advisory committee members, and other stakeholders worked through corridor issues and prepared design solutions.

Dutch Wonderland entrance and monorail



Rockvale Outlets entrance



Open Houses

Each stakeholder workshop was followed by an evening open house to share project information and design ideas with the community and solicit feedback.

Township Supervisor Briefing

A draft conceptual design was created at the second stakeholder workshop. This draft was presented to the Board of Supervisors at its February 9, 2015 meeting. Board feedback was used to revise the draft design.

PennDOT

Prior to developing cost estimates and an implementation plan, the draft recommendations were presented to engineering design staff at PennDOT District 8-0. Feedback from this meeting was used to further revise the draft designs contained in this plan document.

Stakeholder Workshop #2





Existing Conditions



Existing Conditions

Planning Challenge

Despite the economic activity on Lincoln Highway, today the corridor can be dangerous, noisy, and intimidating for all but the most experienced user. Major issues contributing to this condition can be organized into three basic categories: safety, efficiency, and aesthetics.

Safety Issues:

- High accident rate
- Unsafe pedestrian crossings
- Poor sight distances
- Multi-modal conflicts (bikes, buggies, inadequate transit passenger facilities, etc.)
- Vehicle speeds that exceed the speed limit
- High volumes of truck traffic

Efficiency Issues:

- Multiple access points from driveways and parking lots
- Left turns at unsignalized intersections
- Buggy traffic that travels well below the speed limit

Aesthetic Issues:

- Visual clutter
- Lack of landscaping
- Varied building form, setbacks, and development density

The Opportunity

The corridor is a very busy place, serving the needs of local residents and Lancaster County visitors. This is fundamentally a good problem to have. The Lincoln Highway Streetscape Plan developed an understanding who the “users” of Route 30 are and how they are getting around and used this information to develop appropriate improvements to improve access by all modes of transportation, make the corridor safer, more attractive and an even better place to visit and do business.

The following pages summarize the existing roadway conditions, traffic volumes, multi-modal access, and development along the corridor that affect how users perceive, experience, and behave on the corridor.

Roadway Conditions

Lincoln Highway is a four-lane arterial with a median that alternates between a continuous turn lane, a dedicated left-turn, and a curbed concrete strip. Most of the 12 signalized intersections in the Study Area are T-intersections, and often include at least one leg that functions as a driveway into a business or shopping center. Inconsistent and discontinuous sidewalks are a reflection of changing sidewalk requirements over the decades of development in the corridor.

The Route 30 Bypass interchange at the western end of the Study Area was never fully constructed, which has resulted in confusing traffic patterns in which large volumes of traffic bound for Lincoln Highway are required to make quick lane changes as they merge onto the roadway. The interchange area lacks sidewalks, creating additional safety issues for all modes of transportation.

Typical roadway section with center turn lane



Right-of-Way

When considering roadway improvements, it is important to understand the extent of land owned and controlled by the transportation agency, in this case PennDOT. The existing Lincoln Highway right-of-way varies from approximately 78 to 100 feet in width. The right-of-way line is located at back of sidewalk along approximately two-thirds of the corridor, which means that the existing road and sidewalk take up the entire land area that is owned by PennDOT. In the other third of the corridor, the sidewalk is built outside of the right-of-way line, which means that the sidewalk is set on private property. The location of the sidewalk in or out of the right-of-way is influenced by many factors including a narrow right-of-way, topographic constraints, and the location of turning lanes.

Sidewalk and buffer on private property at Ramada



Access Management

“Access management” is a term used by transportation professionals for the practice of coordinating entry and exit between a roadway and the surrounding land uses via driveways and curb cuts. The frequency and width of driveways can greatly impact the safety and efficiency of the corridor. Every driveway increases the number of potential vehicular and pedestrian collisions. In general, the frequency of driveways correlates inversely to parcel size: small parcels tend to result in many individual driveways in rapid succession, while large parcels tend to have limited entry points resulting in greater distances between driveways.

Small retail businesses with individual driveways



Bridge Structures

The Study Area includes two bridge structures. Bridges often become “pinch points” in streetscape enhancement projects because bridge structure widening is complex and expensive.

Bridge Structure over Mill Creek: The bridge is located 700 feet east of the intersection with Harvest Road and Mennonite School Road. While the existing structure width meets the minimum design criteria for traffic lane widths, curb offsets, and sidewalk width, it is only 78 feet wide, narrower than much of the corridor. It includes four traffic lanes, a 12-foot center left turn lane, and five-foot sidewalks on each side. There are no buffers or physical barriers between the sidewalk and traffic lanes, creating an uncomfortable pedestrian environment.

Bridge structure at Rockvale Outlet



Bridge Structure near Rockvale Outlet:
This existing bridge structure carries five lanes with sidewalks on both sides with a guide rail at the back of the sidewalk but, as with the Mill Creek Bridge, no buffers or physical barriers between the sidewalk and traffic lanes.

Key Issues to Consider

- Lincoln Highway occupies most of the right-of-way, leaving little room within those boundaries for expansion of sidewalks, travel lanes, and shoulders.
- The lack of major cross streets intersecting with Lincoln Highway means that almost all of the access to businesses must be directly from Lincoln Highway.
- Frequent driveways create safety issues, and accident data (described on page 16) show higher concentrations of accidents where access is poorly managed on the corridor.

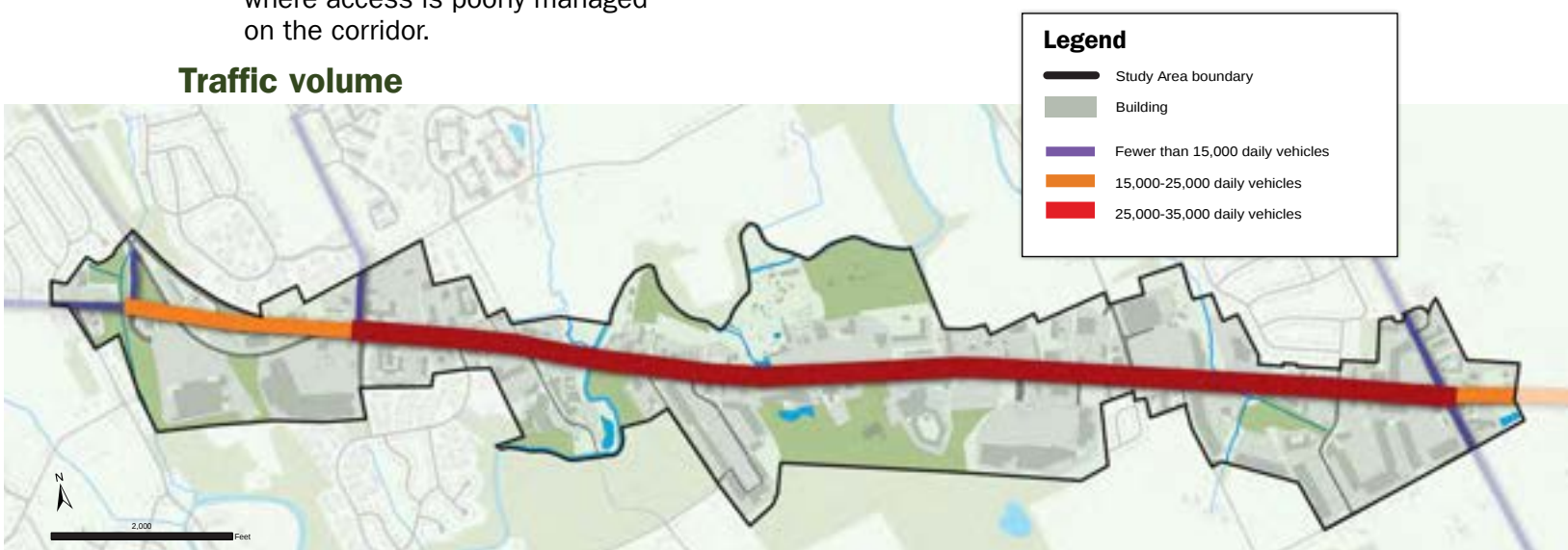
Traffic volume

Traffic Analysis

The traffic conditions along Lincoln Highway are the source of its greatest strength and its most difficult challenges. The high volume of traffic can spell success for businesses dependent on attracting as many customers as possible. The major challenge for the foreseeable future will be dealing with the high percentage of those vehicles that happen to be trucks. Walking down a sidewalk with nothing but a two-foot wide shoulder between you and an oversized 18-wheeler is not a welcoming or pleasant experience.

Overall Traffic Volume

Traffic volume along the corridor varies from an average of 22,000 vehicles per day west of the Route 30 Bypass up to an average of 30,000 vehicles per day between the Bypass and Route 896. The break at the Bypass is no surprise



as many vehicles are either entering or leaving the corridor at the interchange.

With a concentration of retail development and tourist destinations in the corridor, the Saturday peak period experiences the highest traffic volumes in the corridor, closely followed by the weekday afternoon peak period. Saturday and weekday afternoon peak volumes are an average of 50 percent greater than their corresponding morning peak traffic volumes. The graph below shows the traffic counts for each intersection on the corridor, moving from west to east.

Traffic volume efficiency is commonly measured as Level of Service (LOS). Level of Service is a grading system that categorizes the quality of traffic flow through an intersection. A general description of each grade is described at right.

Level of Service

A - Free flow at posted speed limit, motorist has complete mobility between lanes

B - Reasonably free flow at posted speed limit, speeds are maintained, but maneuverability within the traffic stream is slightly restricted

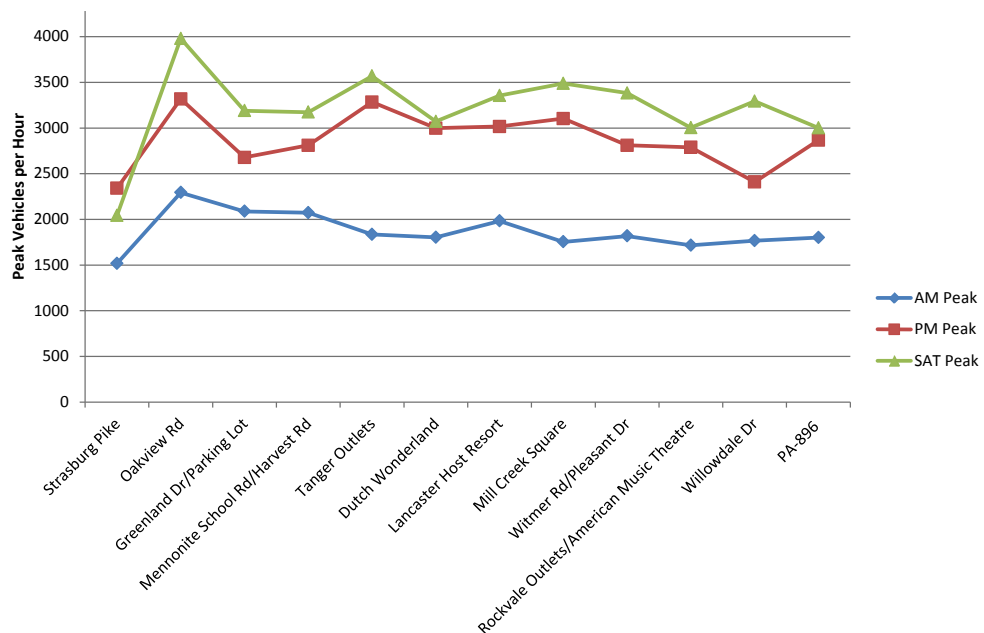
C - Stable flow at posted speed limit, motorist is generally comfortable but movement between lanes is somewhat constricted

D - Approaching unstable flow, speeds slightly decrease as traffic volume slightly increases

E - Unstable flow, speeds rarely reach posted limit, gaps between vehicles are minimal and disruptions to traffic flow create shock waves affecting upstream traffic

F - Forced or breakdown flow, every vehicle moves in sequence with the vehicle in front of it, with frequent slowing required between vehicles, and disruptions to traffic flow create shock waves affecting upstream traffic

Traffic counts by intersection



LOS D is the lowest grade experienced at any intersection in the corridor. This occurs at Oakview Road during the Saturday peak, and Route 896 during the weekday afternoon and Saturday peaks. The remaining the intersections in the corridor achieve grades of C or higher for all peak times, and many experience grades of A or B during peak periods. The Township is in the process of implementing a signal timing system to help accommodate higher volumes and better efficiency in the corridor within the existing traffic lanes.

Truck Traffic Volume

One of the biggest issues in the corridor is competing user groups including visitors, commuters, residents, and truckers. According to PennDOT Internet

Traffic Monitoring System data, the current proportion of all traffic that is comprised of trucks in the corridor goes from five percent on Lincoln Highway west of the Bypass, to more than 12 percent between the Bypass and Route 896. It is interesting to note that east of Route 896, the percentage continues to climb – all the way to 20 percent. PennDOT's 2002 Wilmington to Harrisburg Freight Study projects that truck traffic will continue to increase in the corridor and that nearly 90 percent of the truck traffic on Lincoln Highway is serving a destination within Lancaster County.

Existing sidewalks offer few protections from adjacent truck traffic

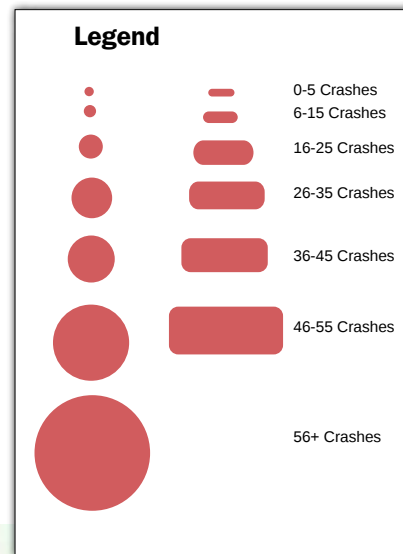


Accidents

The Study Area has a relatively high accident rate, with 343 “reportable” crashes along the corridor in the most recent five-year PennDOT study (2009-2013). PennDOT defines reportable crashes as those in which an injury or fatality occurs or where at least one of the vehicles is towed from the scene. The location of crashes is shown on the map below. One-third of all the accidents happened in three locations in and near the Route 30 Bypass at the western edge of the Study Area.

Due to PennDOT’s strict definition, minor crashes are not included in this number. The East Lampeter Police Department has reported 272 crashes in the corridor from January 2012 to June 2014. The Police Department has reported

an average of 15 crashes per month during this 2.5 year period, compared to only 5.7 crashes per month using the stricter PennDOT crash definition. These accidents included seven pedestrian crashes and four bicycle crashes. The majority of these accidents also happened near the Route 30 Bypass on the western end of the Study Area.



Accident locations



Key Issues to Consider

- Truck traffic will continue to be an issue for the corridor.
- While traffic volumes are high, the roadway is functioning at a relatively high level of service. Additional traffic capacity can be effectively created through relatively low capital investments, such as the upgraded traffic signal program currently planned by the Township, regulation of turning movements, and improved access management.
- The concentration of accidents at a few key locations provides the opportunity to make strategic safety improvements. The concentrations happen near the Route 30 Bypass interchange and in mid-block areas with a high concentration of driveways.

The Route 30 Bypass exit ramp was the site of a significant truck accident in 2014 that closed the road and caused extensive damage to the traffic signal at Oakview Road.



Pedestrian Environment

An inventory of the sidewalks along Lincoln Highway revealed a surprising fact: 86 percent of the corridor has a sidewalk. As shown in the map below, the corridor frontage without sidewalks is almost entirely contained within the Route 30 Bypass ramps at the western edge of the Study Area. Further analysis of sidewalk conditions reveals that the poor pedestrian experience is more a result of inadequate buffering of sidewalks from adjacent traffic than by a lack of sidewalks. The following is a brief description of five categories of sidewalk physical qualities and the proportion of each along the corridor.

1. Sidewalk with No Buffer - 40 Percent of Corridor

This condition is when a sidewalk is directly adjacent to the roadway curb. There is no space between the curb and the sidewalk forcing people to walk next to traffic without protection.

2. Sidewalk with a Buffer Narrower than Ten Feet - 30 Percent of Corridor

This condition involves a physical separation of less than ten feet between sidewalk and travel lane. Currently, this space is most commonly grass and between three and five feet in width.

Sidewalk conditions



3. Sidewalk with a Buffer Wider than Ten Feet - 15 Percent of Corridor

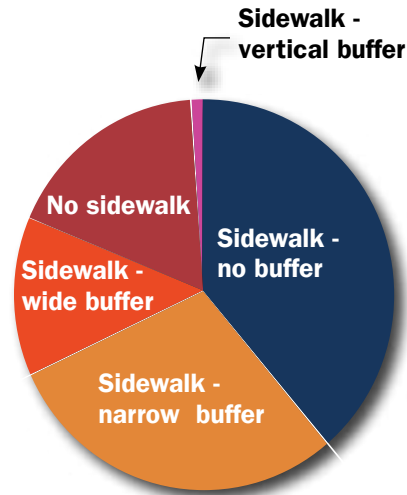
This condition consists of a physical separation of more than ten feet. Similar to the smaller buffers described above, the space is most commonly grass.

4. No Sidewalk - 14 Percent of Corridor

This condition is the complete absence of any sidewalk. It occurs predominantly on the western edge of the Study Area near the Route 30 Bypass.

5. Sidewalk with a Vertical Buffer - One Percent of Corridor

The sidewalk along the Tanger Outlets property includes a metal fence that establishes a visual and physical buffer between vehicle and pedestrian traffic.



Breakdown of sidewalk conditions along the corridor



Pedestrian Crossings

Pedestrian crosswalks are present at all signalized intersections in the Study Area. With the addition of the signal at the Lancaster Host Hotel, the corridor will contain 13 signalized intersections. The average distance between the intersections is one-quarter mile, providing pedestrians with a maximum of a one-eighth of a mile walk (approximately a three-minute walk) to reach the nearest signalized intersection and legal pedestrian crossing.

While crosswalks exist, the crossing experience is still overwhelming for many pedestrians. In most locations, people must cross five lanes of pavement in an uninviting environment. Improved crosswalk markings, countdown crossing signals, and where space permits, center median pedestrian refuges and curb bulb-outs to reduce crossing distances, would greatly improve the experience.

Key Issues to Consider

- The regular frequency of intersections with crosswalks is a good framework to get pedestrians safely across the street. The challenge becomes creating a safe and welcoming condition that people will use.
- Sidewalk design varies along the corridor, and sidewalk improvements will not have a single solution.
- Limited right-of-way means that space for expanded sidewalks and buffers will need to come from existing roadway area or occur on privately-owned property.



Faded pedestrian crosswalks at the Dutch Wonderland entrance

Transit

Overall the level of transit service on Lincoln Highway is very good compared to other low-density suburban locations in small metropolitan regions. It serves an important function for the people who need it to access jobs and shopping. The schedule provides reasonably convenient times between buses during weekday mornings and afternoons and on Saturdays.

The Study Area is served by Red Rose Transit Authority Route 14, which runs from the Queen Street Station Transit Center in downtown Lancaster to the Rockvale Outlets. Connections are available to most other Red Rose Transit routes at the Queen Street Station, including the Historic Downtown Trolley to the Amtrak station. Schedules are focused to serve retail and service job start and end times and shopping trips. Route 14 is Red Rose's busiest line.



Bus stop in front of Walmart Shopping Center



Red Rose Transit Route 14 Bus

Transit routes



Schedule and Hours of Operation

Route 14 buses run every 20 to 35 minutes between 6:30 a.m. and 6:00 p.m. and every hour before and after that on weekdays. The Saturday schedule is the same except that it starts one hour later. On Sundays buses run roughly every 60 minutes in the morning and every 45 minutes in the afternoon.

Ridership

The Lincoln Highway corridor between Strasburg Pike and Route 896 sees approximately 420 riders on a typical weekday, with outbound riders exceeding inbound riders by about 40 trips. This may simply be an effect of when the counts were made or may be due to workers taking transit to retail jobs in the corridor but carpooling or otherwise getting a ride home. The busiest stops include Walmart and East Towne Mall in both directions, the Tanger Outlets and Mill Creek Square outbound and Target inbound.

Facilities

There are few shelters or other amenities for transit riders along Lincoln Highway. Most stops consist of a small sign attached to a telephone pole or sign post. Sidewalks are often not present at stop locations requiring riders to wait in the open on the unimproved shoulder of the road.

Key Issues to Consider

- Current facilities are inadequate and basic improvements such as concrete pads, benches, and sign improvements at each stop are needed. New and rehabilitated stations will need to comply with the requirements of the Americans with Disabilities Act and will also need to have an accessible path connecting the loading/unloading area to the sidewalk.
- Bus stop locations need to be coordinated with improvements to crosswalks and sidewalks.

Bicycle and Buggy

Bicycles

High traffic volumes and speeds and a large proportion of truck traffic on Lincoln Highway make it an unattractive route for cyclists. The Study Area lacks official signed infrastructure dedicated to cyclists. Efforts are underway at the county level to improve the level of service for cyclists, which will support existing and new bicycling options for residents and visitors who wish to cycle along the scenic rural landscapes surrounding Lincoln Highway.

Buggy Routes

With a significant Amish population adjacent to the corridor, buggies regularly travel the area and cross Lincoln Highway. Due to high traffic volumes, buggy traffic generally avoids traveling along the corridor. Field visits conducted during the planning process indicate that Route 896, Rockvale Road parallel to Lincoln Highway, and Witmer and Bowman Roads are important buggy routes. Of the observed routes only the Witmer Road to Bowman Road route takes buggies onto Lincoln Highway for a short distance. Other observed routes simply cross Lincoln Highway at signalized intersections.

Key Issues to Consider

- Bicycles and buggies are using the corridor in poor conditions. Improvements should focus on access to major attractions for bike, scooter, and buggy users.
- Given the limited right-of-way in the corridor, it will be a challenge to locate bicycle and/or buggy lanes directly on the highway.



Lancaster Mennonite School students cross the corridor at Harvest Road



Buggies use the corridor for a short distance between Witmer and Bowman Roads

Infrastructure Conditions

Stormwater Management

The existing roadway drainage system consists of inlets along the curb with drainage pipes on both sides of the street that run along the curb line with outlets at various points along Lincoln Highway. Any modifications to the curb line would affect the current drainage inlets and require relocating and reconnecting them to the existing underground pipe system. Some stormwater basins are located adjacent to the roadway. Any sidewalk or other facility expansion should seek to avoid encroaching on these to avoid the costs of redesigning the facilities.

Water/Sewer Infrastructure

The portion of the corridor located between Walmart and Route 896 lacks a redundant water system. A break in the water main can leave this area without water for an extended period of time while repairs are made, as happened

during the construction of the Walmart store. In addition, fire hydrants are present on only one side of the street. When a fire occurs on the opposite side of street, Lincoln Highway must be closed to extend fire hoses. This situation causes considerable traffic and safety issues.

The Township, Lancaster County, and City of Lancaster have identified the need for a new water line that would form a complete loop that would protect the area from future extended outages; however, funding to do so has been unavailable. Approximately 2,700 feet of underground pipe needs to be installed to complete the loop. This could happen along Route 896 from Siegrist Road to Route 340. In the absence of the loop line, several properties have been required to install tanks or wells for fire suppression.

Stormwater device at Rockvale Outlet



Stormwater grate at Travelodge entrance



Key Issues to Consider

- Proposed solutions need to consider the impacts of sidewalk construction and related improvements to the existing drainage and stormwater systems. Even small changes can affect inlets and basins, which can dramatically increase the cost of improvements.
- When reconstruction is needed, consider the opportunity to convert existing stormwater and street drainage systems to “green infrastructure” techniques that mimic natural processes instead of putting water into pipes.
- Improvements proposed for areas lacking water service redundancy should consider the potential for implementing the needed water supply infrastructure during construction.

Landscape Character

The varied width and condition of the road right-of-way and changing development practices over time have led to inconsistent landscape treatments along the corridor. Some newer developments are very well-landscaped; other areas lack any greenery. Even in the landscaped areas, there are almost no trees to provide shade or opportunities for pedestrian seating, which are important amenities for summertime visitors.

Large areas of the corridor lack landscaping of any kind. This results in a lack of “framing” from trees or other screening elements and has given the corridor a harsh feel from the pedestrian perspective. Pedestrians feel exposed and unprotected from the street. The lack of a developed landscape has led to a lot of “hard edges” between different parcels and uses. This is especially apparent at major intersections, where each of the four corners may have a different aesthetic treatment.

Drainage area at Rockvale Outlets



Landscaped swale at Tanger entrance



Most trees in the corridor are set back from the right-of-way, providing limited opportunities for pedestrian shade. In some cases, required landscaping and trees in the parking areas has created a de facto street tree condition along the right-of-way. However, since these areas are set back from the road, they provide no buffer from the roadway itself. The high percentage of impermeable surfaces and lack of shade has created a heat-island effect throughout the corridor.

Key Issues to Consider

- A defined landscape character can help to unify the corridor.
- Overhead utility lines create some limitations for larger vegetation but can be managed through proper tree selection.
- Street tree placement needs to maintain visibility to commercial properties and be integrated into the signage and wayfinding package.
- Installation of green stormwater infrastructure along the corridor could be integrated into pedestrian buffers and other improvements to serve both as functional and aesthetic resources.

Existing shade trees along Lincoln Highway



Sidewalk with a minimal buffer and no landscaping



Signage and Wayfinding

The Study Area contains extensive commercial signage directing customers to retail, restaurants, and recreation opportunities. The amount of signage and lack of coordination between sign types can be overwhelming and actually confuse a first-time visitor, rather than clarify. The result is an uninviting atmosphere and no “sense of place” for the corridor.

Existing directional and identifying signage is inadequate, leaving visitors largely on their own to find corridor destinations. Directional signage that does exist was installed over a long period of time, and the resulting graphic quality is inconsistent, which lessens the aesthetic impact and

hampers the identify function of the system. Consistent nomenclature and a unified look would permit visitors to quickly digest wayfinding information.

The initial audit of the Study Area shows that vertically oriented signs will best suit the corridor, in order to be visible in the myriad of existing sign types. Vertical signs occupy a fraction of space when compared to horizontal signs. Anything along the corridor should be viewed above 8 feet to accommodate oversized vehicles.

The abundance of signage and “visual clutter” along the corridor



Commercial signage mounted to local businesses



The illustration below is a summary of the signage and wayfinding environmental audit. It provides an analysis of landscape and built environment character that forms the basis for a potential signage color palette.

Color Palette Matrix



Major signage issues include:

- A chaotic and unwelcoming appearance
- Lack of signs directing motorists to public parking or corridor destinations
- Inadequate pedestrian signage to help users orient themselves, find pedestrian pathways, and building entrances
- Lack of central information source or orientation opportunities
- Lack of interpretive signage to provide information on the tremendous wealth of historic and cultural resources of the corridor

The overall goal of a wayfinding sign program is to provide visitors with visual cues identifying the corridor's shopping, historical and educational destinations. A sign program can also be an invitation to return with friends and family to learn more about the site.

Dutch Wonderland signage



The Visitor Experience

An important focus of this study is the visitor to the Lincoln Highway corridor, including potential visitors from new demographic groups. By defining the audience and examining its current knowledge of the area, along with interests and expectations, it is possible to design a wayfinding system that promises a quality visitor experience. A successful interpretive plan has the power to engage the visitor on a personal level. Such engagement often leads to further support, such as stewardship and patronage, which can only benefit the corridor. The main components of a visitor experience include the visitor's knowledge, attitudes, behavior, sensory experiences, comfort and convenience, as well as the visitor's direct contact with the site through web information, directional signage, interpretive programs, and educational programs.

Commercial signage at Mill Creek Square



Audience Analysis

An effective sign program stems from an understanding of audience. In general, first-time visitors to the Lincoln Highway corridor have little to no knowledge or inaccurate preconceptions of the corridor area. The following profiles have been identified as current and potential audiences:

Individuals and families of the East Lampeter area visit the Lincoln Highway corridor for a casual shopping/eating, shared-family experience. Currently Dutch Wonderland, American Music Theatre, the Tanger and Rockvale outlets, and the various other shopping opportunities are a large regional draw for this group and it is anticipated that through increased marketing and better signage, pedestrian wayfinding maps listing businesses, parks and other public amenities, this visitor category will grow, and with an increased web presence will include individual and family visitors from outside the immediate area.

Organizations and groups from historical societies, senior citizen communities and religious organizations currently visit the corridor more for the cultural assets. They too can be included as casual shoppers. Increased offerings and participation in local historic site consortiums will increase this visitor category and increase the potential for repeat visits.

Casual users from the local community can be encouraged by a sign program to return to learn and spend more time on the Lincoln Highway corridor and hopefully view this area as a community asset worthy of their stewardship. School-aged groups from local schools seeking educational field trips or conduct special school related events. These programs should address school curriculum needs and offer grade appropriate, hands-on learning. Tours given to students can include such places like the police and fire stations, and the East Lampeter Township Building, where students would be able to participate in local government roleplaying.

Special event participants attending private parties or special events come for a specific purpose and are often unaware of Lincoln Highway corridor and what it has to offer.

Business travelers who come to the corridor to attend meetings and other related business can be enticed to return to the area alone or with family and friends for recreation or leisure if impressed with the offerings the Lincoln Highway corridor has to offer.

Towards a Unified and Positive

Clear communication is essential to understanding. Strong print, web, signage, and interpretive systems are some of the most important tools a community can have. With many forms, it is important that the East Lampeter corridor communicate with a unified and consistent voice whenever possible. An enhanced system is one that provides compelling and overlapping verbal and visual cues for the user and visitor. These cues fall into four categories:

The identity component of the system should ensure that the Lincoln Highway name and image are presented in an effective, legible and consistent manner in all applications. The formal name, font, color, and overall design of this is often called a “word mark” in wayfinding programs. It should be distinctive and build off of the messages and colors identified in the environmental audit included as Appendix C and key findings illustrated on page 28.

The functional component of the wayfinding and interpretive signage should be site user-friendly so that visitors can safely and efficiently locate the corridor, its buildings, parks, events and parking. Where a sign system can be all things to all people; it is recommended that it be intended and

designed for the first time visitors and not the business owners or local community. In addition, the signage and interpretive elements should be designed for longevity, vandal resistance, and easy replacement and maintenance.

The promotional component of the system is to raise awareness of the place, events, create interest, and make the site attractive to new visitors. A well-designed system for the corridor should be simple, memorable and have an aesthetic character consistent and compatible with building architecture, history and the surrounding landscape.

The educational component of the system seeks to elevate the corridor’s rich physical and cultural content to make it accessible and enjoyable for everyone and give them the opportunity to self-guide and self-regulate their experience. The interpretive messages should be developed to accommodate varying levels of interest and comprehension.

Land Use and Urban Design

To understand land use and urban design along the corridor, it is helpful to discuss the Study Area as distinct “character areas,” which were described and used as a planning framework in the Phase 1 Lincoln Highway Vision Plan. Each of these districts has its own mix of uses and physical design characteristics. Beginning at the western end of the Study Area – at the intersection of Route 462 and Strasburg Pike – motorists traveling eastward encounter the character areas in the order presented on the following pages.

The Lincoln Highway Streetscape Plan used the general boundaries of the Phase 1 Vision Plan character areas to understand land uses and other items in the existing conditions analysis. However, their boundaries did not meet up well with the transportation features and recommendations, so they are listed here only as a reference point for land use discussion.

Character areas

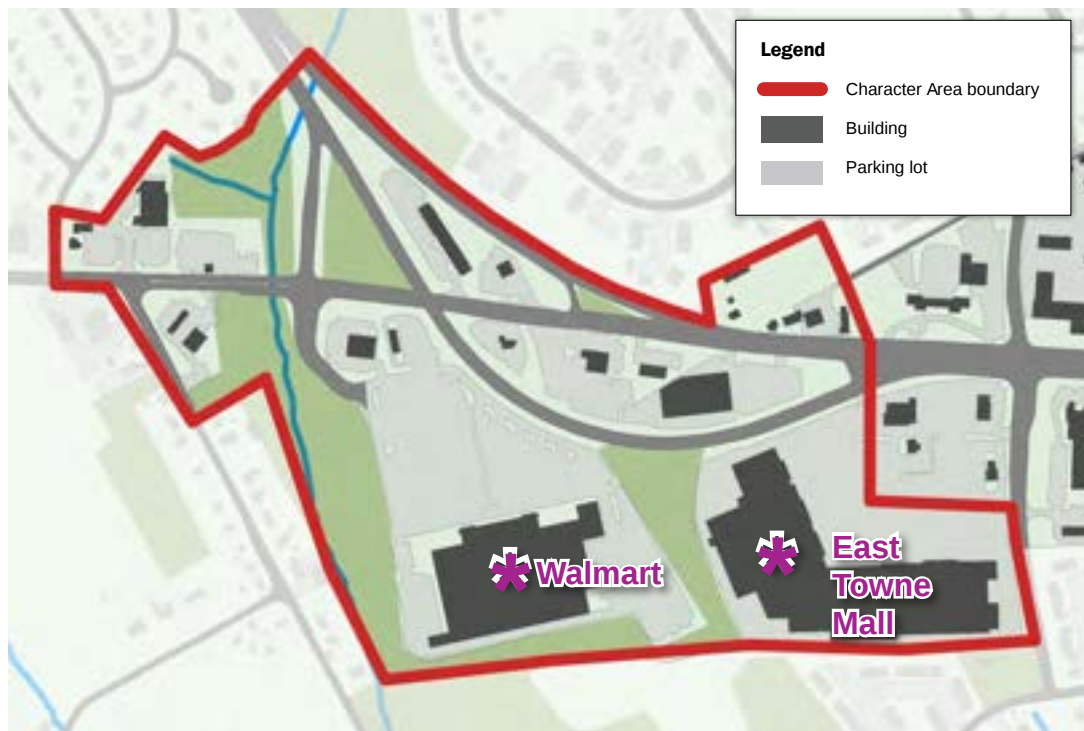


Funnel Area

Located between Strasburg Pike and the merge between the Route 30 Bypass and Lincoln Highway, the Funnel Area is characterized by small-footprint retail stores, lodging, and dining. Vehicular on and off ramps, lane merges, and driveways make this a difficult area for motorists to navigate and impossible for pedestrians. This area is home to East Towne Mall and Walmart, which primarily serve local residents. Although these two developments are adjacent to each other, there is no vehicular connection between them.

Primary Destinations

- Walmart: Situated directly across from the Route 30 Bypass off-ramp, a prime location for local residents wishing to access the store.
- East Towne Mall: This strip center includes Kmart and Burlington Coat Factory as anchor stores. The facility is older than others on the corridor, but its size and location make it a destination. Kmart is closing this store in April 2015, which creates the opportunity for new investment at this site.



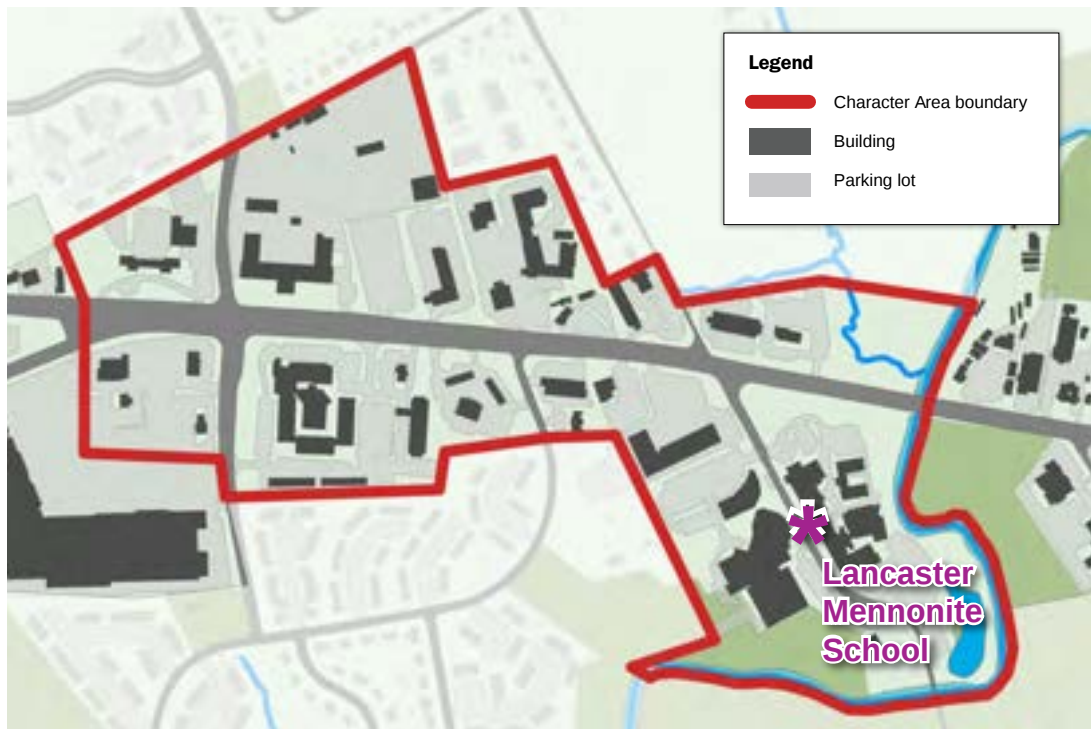
Western Gateway Area

This Western Gateway Area begins at Oakview Road where the eastbound off-ramp from the Route 30 Bypass merges with Lincoln Highway and extends east to Mill Creek. After the Bypass merge, the corridor assumes the typical five-lane cross-section that extends all the way to Route 896. It is the major gateway to the corridor for most users coming from the west. The Lancaster Headquarters of the Pennsylvania State Police (commonly called the police barracks), and the PennDOT Maintenance District 8-7 building are located at the western edge. The area is a blend of restaurants, hotels, and large institutional uses. The

Lancaster Mennonite School, adjacent to Mill Creek, encompasses a large portion of it. This mix of uses results in a dynamic blend of people using this portion of the corridor.

Primary Destination

- Lancaster Mennonite School: The school attracts many modes of transportation, including pedestrians and bicycles. The campus includes classroom buildings, a fine arts center, a dining hall, and residence hall.



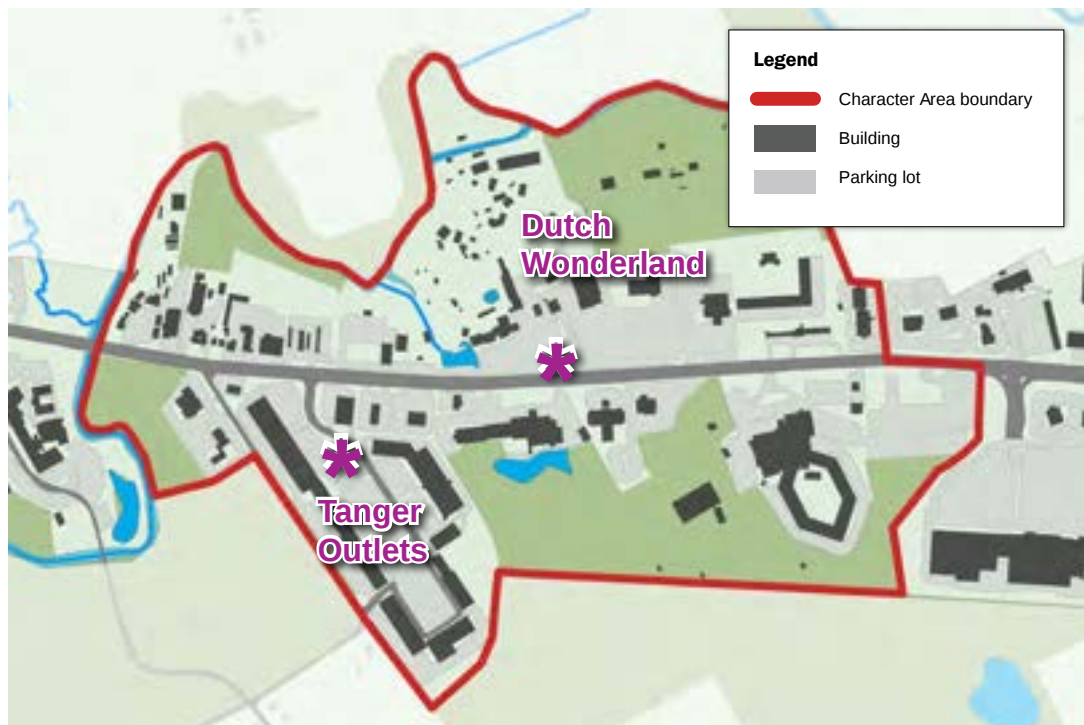
Tourism Area

The Tourism Area extends from Mill Creek to the traffic signal for the Mill Creek Square shopping center and contains many of the large regional tourism attractions in the Study Area, including the Tanger Outlet Center, Dutch Wonderland Family Amusement Park, and the Lancaster Host Resort. In addition to the Host, there are many other hotels in this part of the corridor. Numerous restaurants ranging in style and price support the hotels and tourist destinations. Some restaurants are clustered together in groups of three or four, while many stand alone or adjacent to the hotels in the Tourism Area. The former Italian Villa East is located behind restaurants, a rare vestige of

the corridor's early years as a tourism destination. Another prominent feature of this area is Mill Creek, a significant natural resource, which forms the area's western and northern borders.

Primary Destinations

- Dutch Wonderland: This amusement park occupies almost 50 acres of land along the corridor and is a regional draw. It has occupied this location on the corridor since 1963 and remains its most iconic landmark.
- Tanger Outlets: The westernmost of the two outlets on the corridor, Tanger Outlets has more than 60 stores and one signalized entrance on Lincoln Highway.



Locally Serving Area

The Locally Serving Area extends from the Mill Creek Square shopping center to Target. It has changed the most since the Phase 1 Plan was complete. Two large parcels of privately-owned open space have been developed for commercial uses. On the south side, a tract that was once part of the golf course at the Lancaster Host Resort has been transformed into the Mill Creek Square shopping center, which includes chain retailers such as Bed Bath & Beyond, Ross, Kohl's, and Christmas Tree Shops. It also includes bank and restaurant pads adjacent to Lincoln Highway. On the north side, a parcel that once formed a part of the Amish Farm and House property was developed into the Covered Bridge Marketplace, a shopping

center that includes chain retailers and restaurants including Target and Panera Bread. The shops in this character area primarily serve local residents, while the restaurants serve as a destination for residents and visitors.

Primary Destinations

- Mill Creek Square: The shopping center contains more than 285,000 square feet of retail and restaurants including a supermarket.
- Target: Occupying the corner of Witmer Road and Lincoln Highway the Target is able to utilize the two road frontages to split its access and not rely on one large entrance off of Lincoln Highway.



Eastern Gateway Area

The Eastern Gateway Area extends from the Target to the intersection of Lincoln Highway and Route 896, which provides a well-defined visual boundary between the intensive commercial uses in the Study Area and the more rural landscape to the east. The Eastern Gateway contains two prominent attractions, the Rockvale Outlets and the American Music Theatre. The theater was built on the site of the former Willows, a hotel and restaurant complex that was once one of the best-known tourism properties in Lancaster County.

The intersection with Route 896 functions as the primary gateway to the corridor for anyone traveling from the east. The slight skew of the intersection

creates a condition where the adjacent buildings are pulled back from the roadway. The surrounding uses include old and new development, including a newer Olive Garden across from an older Waffle House, an abandoned former Wawa gas station across from an operational Hess gas station. The last businesses on the eastern edge before the landscape becomes rural are the iconic Steamboat Inn and a miniature golf course.

Primary Destinations

- Rockvale Outlets: The easternmost outlet on the corridor contains more than 560,000 square feet and occupies a considerable portion of the character area.



The outlets have multiple points of access, including a signalized intersection on Lincoln Highway and entrances off of Rockvale Road.

- American Music Theater: This 1,600 seat theatre hosts 300 events each year, including touring concerts and original shows. The timing of shows often affects customer demand for the adjacent retail and restaurants.

Regulating Development

This section summarizes the Township's land use and design regulatory framework. These regulations have evolved over time, and much of the development on the corridor pre-dates current landscaping and pedestrian amenity requirements.

Use, form, and site organization are regulated through the Zoning Ordinance and the Subdivision and Land Development Ordinance (SALDO).

The Zoning Ordinance regulates:

- Permitted uses
- Building form/height
- Maximum building coverage and impervious area
- Signage
- Parking – size and number of spaces
- Parking – screening from street and interior landscaping

- Building setbacks – regulated both by zoning district type and by street type for the main frontage

The SALDO regulates:

- Sidewalk width and minimum buffers
- Block size and configuration
- Site access
- Potential traffic improvements

Zoning Districts

Three districts directly front the corridor: C-2 Commercial, R-2 Residential, and Conservation (shown on page 41). Two additional districts, R-3 Residential and Rural, are located in the Study Area but do not have frontage directly on Lincoln Highway.

Floodplain District Overlay

The Study Area also includes areas within the Floodplain District. This district is intended to regulate uses and potential development located within the 100-year floodplain. These areas are important for protecting water and soil quality along local streams. The ordinance limits development in the floodplain to agriculture and open space uses.

Site Planning and Building Form

The Zoning Ordinance and SALDO provide standards for how parcels engage with the street:

Setbacks: Buildings must be set back at least 100 feet from the centerline of Lincoln Highway. Setbacks along other streets range from 30 to 50 feet from the edge of the right-of-way.

Parking screening: Any parking lot with 10 or more spaces must have a landscaped buffer at least 10 feet wide along the right-of-way. Plants must provide a 25 to 50 percent visual barrier within two years. Additional visual screening with more stringent regulations is required where commercial districts adjoin residential or rural districts.

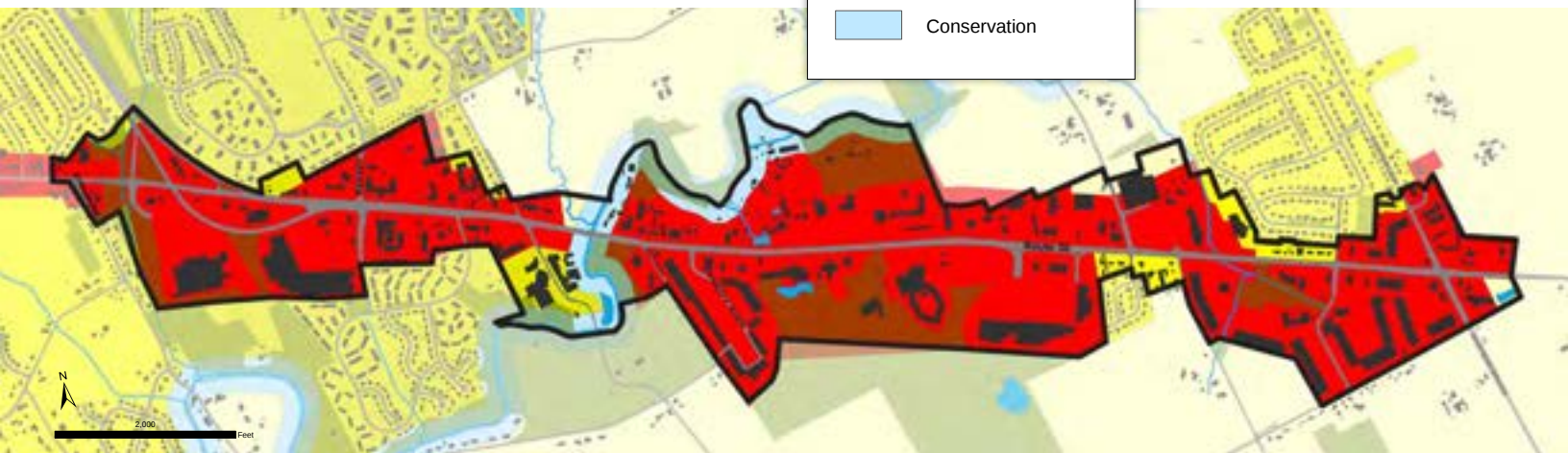
Parking landscaping: Parking lots with 20 or more spaces also require 10 square feet of landscaping per parking space and one tree per 20 spots.

Sidewalks: The SALDO requires five-foot minimum sidewalk on arterials, with a minimum two-foot buffer between the curb and sidewalk.

Key Issues to Consider

- The Zoning Ordinance and SALDO already contain tools to regulate the form and design of development, pedestrian amenities, some traffic improvements, and landscape design. They can be amended to incorporate the design standards recommended by this plan, which would mean that new development would be required to meet those standards.

Zoning Districts





Corridor Vision and Planning Principles



Corridor Vision and Planning Principles

Vision

Make Lincoln Highway an economically vibrant corridor that is safe, efficient, and beautiful for local residents and visitors.

Planning Principles

Ten planning principles guided the development of recommendations and the conceptual design for corridor improvements. They are listed along with the reasoning for each below.

1. Slow Traffic to the Speed Limit

Traffic on Lincoln Highway is not only moving people and goods along the corridor; it is providing customers for the businesses located there. The conceptual design reduces lane widths slightly in order to slow traffic to the speed limit. This change will increase safety, but will not reduce roadway capacity, create new congestion, or reduce customer access to corridor businesses.

2. Provide Multi-Modal Access Along the Entire Corridor

Multimodal facilities play an important role in providing transportation choices for people using the corridor. Working within multiple constraints, the conceptual design provides for multi-modal access along the entire corridor through the development of a multi-use path along the south side of Lincoln Highway. Additional improvements include improved sidewalks on the north side of the street, enhanced transit stops, and a network of on- and off-road trails approaching the corridor.

3. Buffer Sidewalks from Traffic

In order to create a safer pedestrian experience, it is important to create some space between the sidewalk and traffic. Forty percent of the corridor has sidewalks without any buffer between the walkway and the travel lanes, forcing pedestrians to walk immediately adjacent to trucks and other traffic. The conceptual design sets minimum setbacks between sidewalks and travel lanes. Landscaping standards are designed to further protect pedestrians from adjacent traffic.

4. Reallocate Underutilized Right-of-Way for Multi-Modal Access

The corridor currently has a continuous center turn lane, even in places where no left turn is needed. The conceptual design eliminates the center turn lane where it is not required and replaces it with a mountable raised median. Where possible, the resulting “excess” right-of-way has been shifted to sidewalk and trail elements.

5. Maintain Consistent Through Lanes

In order to address safety issues caused by merging traffic and general user confusion, the conceptual design eliminates lane shifts to maintain through lanes wherever possible.

6. Reduce Conflicts

As part of corridor safety improvements, the conceptual design proposes consolidating driveways at locations with high accident rates. Removing driveways from the corridor also reduces the need for a continuous left turn lane.

7. Increase Safety with Protected Left Turn Lanes

Many high accident locations on the corridor are missing protected left turn lanes. The conceptual design includes protected, signalized left-turn lanes at high-accident intersections and areas with a large number of left turning movements.

8. Integrate Signage And Wayfinding at all Scales

Signage and wayfinding will be scaled and located at appropriate locations for cars, bicycles, buses, and pedestrians to provide information to visitors and create a cohesive sense of place.

9. Create Attractive, Functional Landscaping Incorporating Stormwater Management Facilities

Landscape guidelines will help create a cohesive and aesthetically pleasing look for the corridor and contribute to stormwater management. Guidelines allow individual property owners to contribute to a larger coordinated landscape for the corridor.

10. Enable Interconnectivity

The conceptual design identifies new street alignments that would connect the corridor to hard-to-reach parcels, and create new navigation options for drivers, transit users, pedestrians, and cyclists. Increasing choices will improve circulation, reduce congestion, and offer calmer and more scenic routes for those traveling throughout the corridor.



Plan Recommendations



Plan Recommendations

The design team used the corridor vision and planning principles to prepare a conceptual design for the corridor. The conceptual design on page 51 the changes and physical improvements recommended to transform Lincoln Highway into an attractive, multi-modal “complete street” for the heart of Lancaster County. The recommendations listed in this section describe the proposed improvements and how they are expected to improve the function, safety, and aesthetics of the corridor.

The process that was used to develop the recommendations is slightly different than a typical planning study. The recommendations were vetted and tested by a multidisciplinary team of experts, including planners, urban designers, landscape architects, traffic engineers, civil engineers, and signage specialists. Engineering expertise was used to identify areas of concern and to test viable alternatives. The recommendations sections references alternatives and issues that were explored to ultimately develop a final recommendation.

Plan recommendations were shaped by input from traffic and civil engineers. Traffic engineers used a sophisticated computer traffic flow model developed by East Lampeter Township to test how physical recommendations, including changing roadway dimensions, geometry, and signalization, would affect traffic flow on the corridor. This step was critical in balancing the needs to maintain a

high volume of traffic to serve local businesses with those of a true multi-modal corridor that is safe for all users.

The team’s civil engineers crafted design solutions to fit a true multi-modal corridor inside the existing right-of-way of an auto-oriented corridor. The technical input from engineers on the team also ensured that even simple recommendations are rooted in pragmatic and realistic approaches to roadway design, using PennDOT and modern construction standards that make it easier to transition the recommendations into preliminary engineering and eventually into construction.

The conceptual design and plan recommendations are supported by a project implementation plan (Section V) that describes the remaining steps in the engineering design and construction process and provides planning-level cost estimates to implement each element of the conceptual design, an implementation matrix/phasing plan, and a summary of potential funding strategies and resources.

The following pages describe and illustrate plan recommendations. The full conceptual design showing all improvements proposed for the corridor is illustrated on pages 94 -101.



Proposed Typical Roadway Cross Section

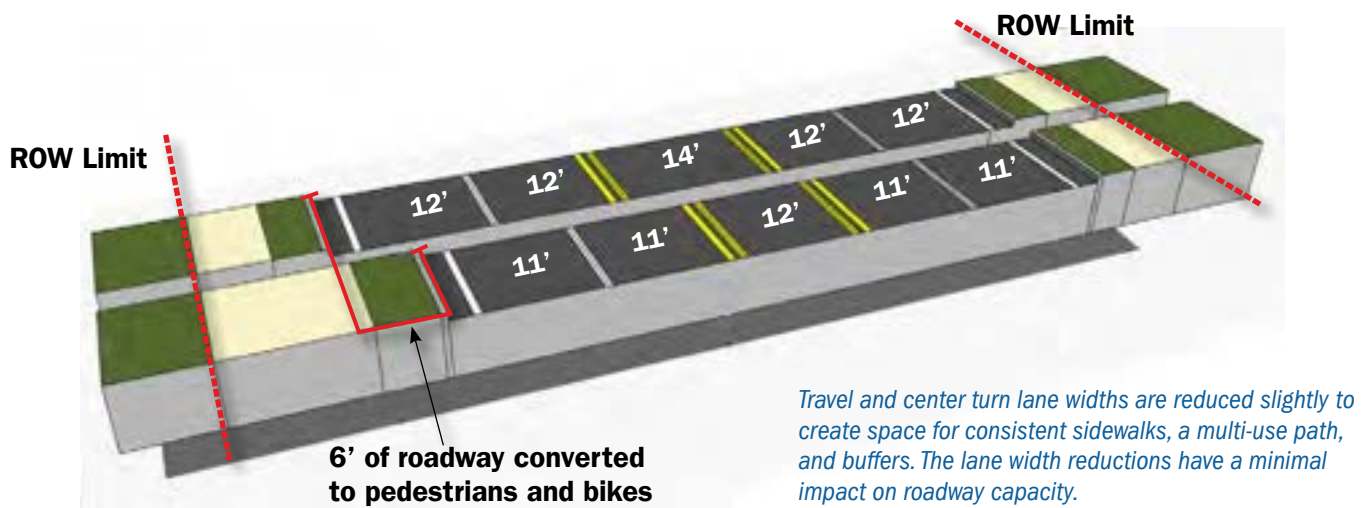
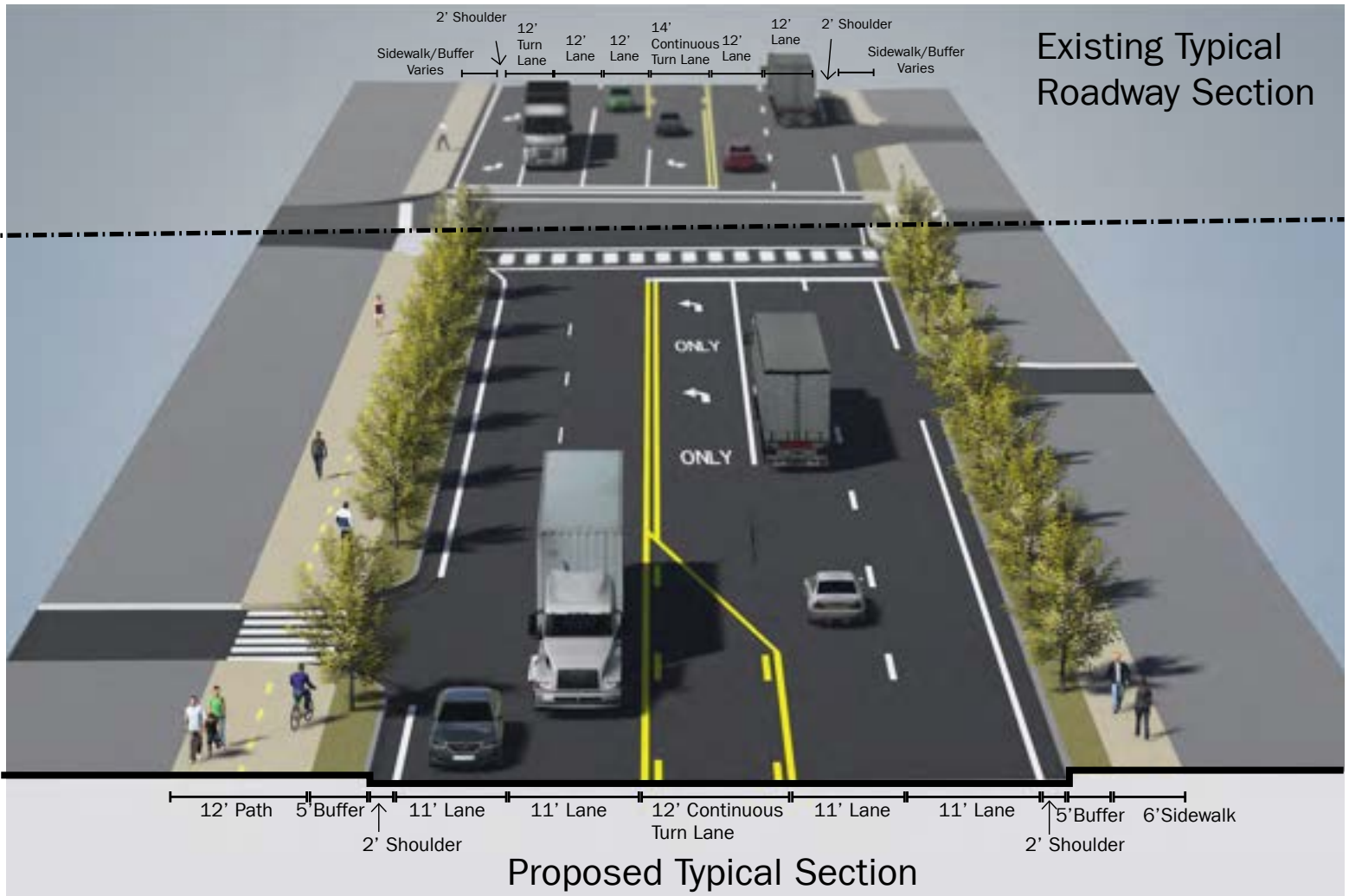
A roadway “cross section” describes all roadway elements including sidewalks, bike lanes, shoulders, travel lanes, turning lanes, and medians. The intersection of the Route 30 Bypass has resulted in a variety of cross sections for Lincoln Highway between Strasburg Pike and Oakview Road. Outside of the Bypass area, east of Oakview Road, the amount of right-of-way and lane configuration is relatively constant and has been addressed with one “typical” roadway section to accommodate cars, trucks, buggies, bicycles, and pedestrians.

The project team initially considered a range of options to increase bike and pedestrian access to the corridor without sacrificing capacity. The limited amount of right-of-way and the need to maintain two through-lanes and the center turn lane throughout most of the corridor did not allow room for a conventional on-road bike lane or major sidewalk buffering without right-of-way acquisition.

The conceptual design recommends a new typical cross section for Lincoln Highway from east of Oakview Road to Route 896. The new cross section takes width from the existing center turn lane and travel lanes to create improved sidewalks, a multi-use path, and landscape buffers between the sidewalk and trail. In order to reduce construction costs and minimize the need to move utilities and reconstruct drainage systems, the cross section assumes that one of the existing curbs will be maintained wherever possible and the other will be pushed toward the center of the roadway.

Below is a summary of the physical components of the proposed roadway. The proposed minimum widths for each facility (traffic lane, medians, sidewalk, etc.) are within PennDOT and civil engineering design standards.

- Reduce center turn lane from 14 feet to 12 feet
- Reduce driving lanes from 12 feet to 11 feet to slow traffic to the speed limit while still accommodating truck and bus traffic
- Maintain a two-foot shoulder width from the outside travel lane to the curb
- Create a six-foot concrete sidewalk along the north side of the street with a five-foot minimum width landscaped buffer between the curb and sidewalk
- Create a 12-foot wide concrete multi-use path along the south side of the street with a five-foot minimum width landscaped buffer between the curb and trail
- Where the multi-use path crosses a driveway, street trees, poles and landscaping will be set back from the driveway to maintain sight lines for turning cars. These driveways will also be striped with continental style crosswalk treatments to further reinforce that bicycles and pedestrians may be crossing the driveway further back than cars would normally encounter.
- Where the multi-use path is out of the line-of-sight from the roadway, a 6-foot wide sidewalk could be added to the south side between the trail and curb. This condition will vary as right-of-way fluctuates and potential opportunities present themselves to utilize private property for portions of sidewalk or multi-use path.



Route 30 Bypass Reconfiguration

The Route 30 Bypass interchange was never fully constructed as planned, which has resulted in challenging traffic patterns where the Bypass connects to Lincoln Highway. The high volumes of traffic exiting the Bypass are required merge into one lane in a short distance in order to continue eastbound on Route 30 because the two travel lanes exiting the Bypass merge into one lane just east of Oakview Road. The much lower volume of traffic entering the corridor from the west on Route 462 is permitted to continue straight on Lincoln Highway or left onto Oakview Road without changing lanes.

The interchange is further complicated by a right turn movement that serves traffic entering from the west on Route 462. This turn crosses the Bypass interchange ramp to provide access East Towne Mall on the south side of the street. This intersection is unsignalized and a high accident location on the corridor.

At the beginning of the plan process, the design team investigated the potential for a major redesign of the Route 30 Bypass on- and off-ramp. The first alternative proposed rerouting Lincoln Highway around the back of the East Towne Mall and relocating the eastbound bypass ramp alongside the westbound bypass ramp. This option was deemed infeasible due to the impacts on traffic flow (based on analysis of a Synchro model) and the potential cost of right-of-way acquisition.

A second alternative proposed terminating the eastbound bypass exit at the Walmart entrance intersection rather than at Oakview Road. This alternative would require

additional left and right turn lanes at the intersection to prevent significant back-up on to the Bypass, and would require additional capacity along Lincoln Highway between the Walmart entrance and Oakview Road. Further analysis determined that the negative traffic impacts to the Bypass outweighed potential benefits of this approach.

Exploration of these alternatives resulted in a more focused project goal for this intersection. The final alternative emphasizes addressing issues with the Route 30 Bypass exit at Oakview, rather than the entire interchange. This solution greatly improves vehicular and pedestrian safety without having to demolish significant chunks of roadway or acquire additional right-of-way.

The conceptual design reconfigures traffic patterns exiting the interchange area to reduce confusion, increase traffic safety, and provide pedestrian access through the area. All traffic approaching from the west on 462 would be required to curve to the right and connect to an intersection at East Towne Mall to continue along Lincoln Highway. Eastbound traffic approaching from both the Route 30 Bypass and Route 462 would be able to continue straight on Lincoln Highway or turn left or right on Oakview.

From the newly signalized right turn intersection, two lanes of traffic would expand to four lanes approaching Oakview Road. The new design will permit through traffic without lane changes, reduce the number of lane changes needed for turning movements, provide a signalized intersection that will reduce accidents into East Towne Mall, and allow for the safe crossing of pedestrians.

Route 30 Bypass reconfiguration at Oakview Road

Local traffic currently either turns south into East Towne Mall through an un-signalized intersection across high speed traffic coming off the bypass or has to continue east on Route 30 (since right turns on Oakview are prohibited from traffic coming from Rt. 462) where it will merge with the higher volume traffic coming off the bypass.



Lane Reconfigurations West of the Route 30 Bypass

The Bypass area experiences a large proportion of accidents on the corridor. In addition to addressing traffic flow from the Bypass itself, the conceptual design proposes several other roadway changes to improve traffic flow and safety in the Bypass area. The largest of these recommendations is the conversion

of an existing westbound through lane approaching Strasburg Pike into a dedicated left turn lane to move traffic more efficiently between the Bypass and Strasburg Pike. There is a large volume of left turn movements from Lincoln Highway onto Strasburg Pike. During the weekday afternoon peak period, 640 cars turn left at this location compared to 490 driving through onto Route 462.

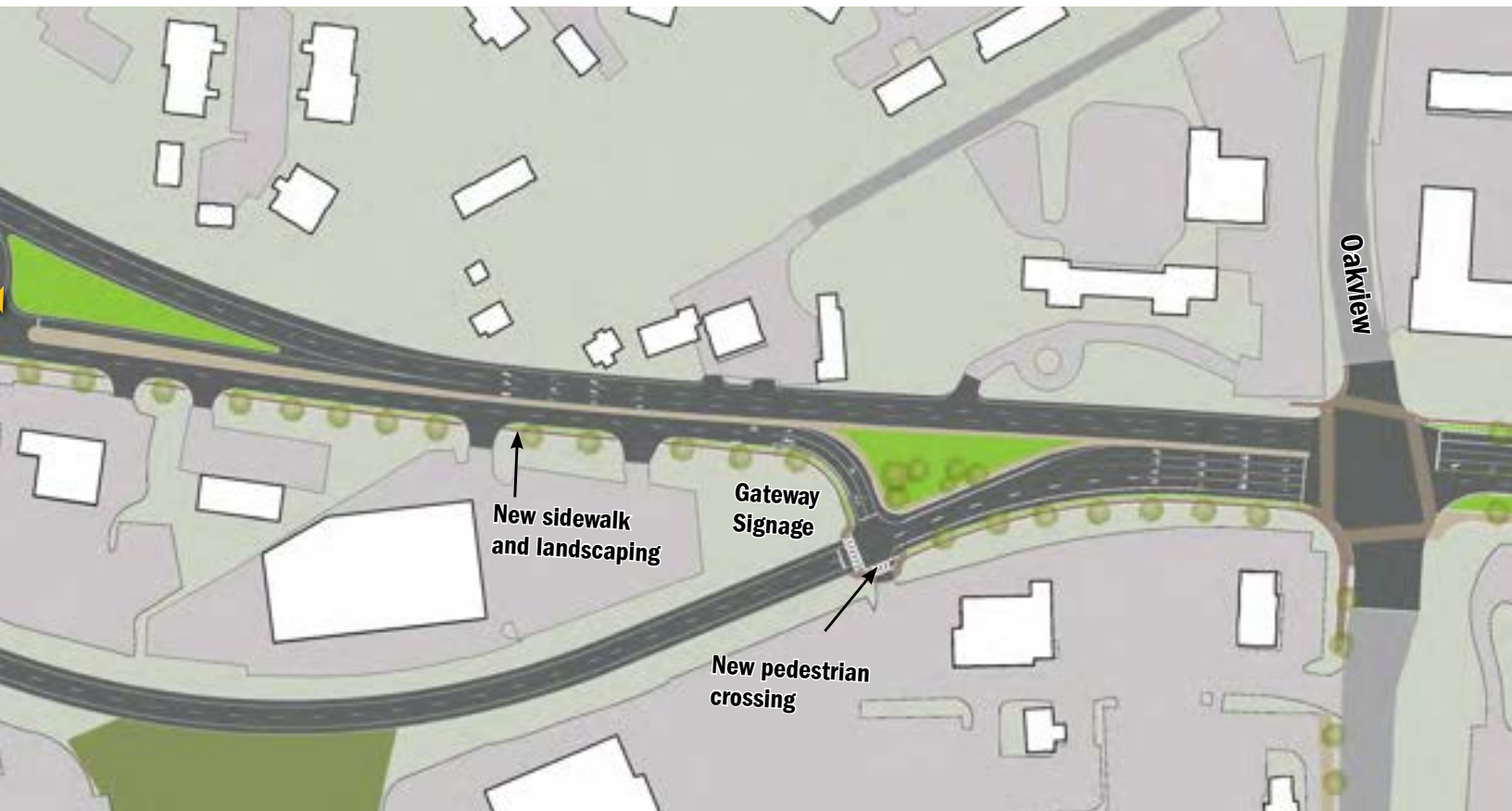
Bypass and lane reconfigurations between Oakview Road and Strasburg Pike



The conceptual design converts one of the two existing through lanes into a dedicated left turn lane to move traffic more efficiently between the Bypass interchange and Strasburg Pike.

The conceptual design also includes a reduction in lane width from 12 to 11 feet, and reconstruction of the existing medians to widen them to support left

turn protection and permit fire trucks and emergency vehicles to cross over them, and the installation of crosswalks on all four sides of the intersection of Route 462 and Strasburg Pike.



Multi-Modal Connections in the Bypass Area

Currently, no safe pedestrian routes exist along Lincoln Highway between Oakview Road and the Walmart entrance. The first Stakeholder Workshop proposed two alternatives to provide pedestrian access. The first directed pedestrian traffic around the south side of the Bypass off-ramp. The second put pedestrian traffic to a new sidewalk located on the south side of the street to Oakview Road. The first alternative was ultimately not pursued due to grading issues between the Walmart and East Towne Mall parking lots.

The conceptual design, shown in plan on the diagram on Pages 52-53, includes sidewalk extensions along the south side of Lincoln Highway and new sidewalks along the north side. The existing signal at the Route 30 Bypass entrance would receive new crosswalks, shown below. The new sidewalks are supported by the proposed new signalized pedestrian crossing at the East Towne Mall entrance to create a hospitable pedestrian realm through this high-traffic area.

View of new sidewalk and crosswalk connection at the Route 30 Bypass entrance



New Road Connection South of the Route 30 Bypass

The conceptual design includes a new road connection south of Lincoln Highway that connects Oakview Road to Strasburg Pike. There are few east-west connections in close proximity to Lincoln Highway, which forces local users to drive on Lincoln Highway or go far out of their way to avoid the corridor. A new road connection between Strasburg Pike and Oakview Road would create a local alternative to Lincoln Highway in the

western end of the corridor, which is one of the most difficult areas to navigate. This recommendation is an important step in enabling the interconnectivity discussed in the planning principles. The new roadway would provide additional local access to areas south of the corridor during an emergency closure of Lincoln Highway. It would also provide direct access to the Study Area for local users who live south of the Walmart without making local residents negotiate the Bypass area.

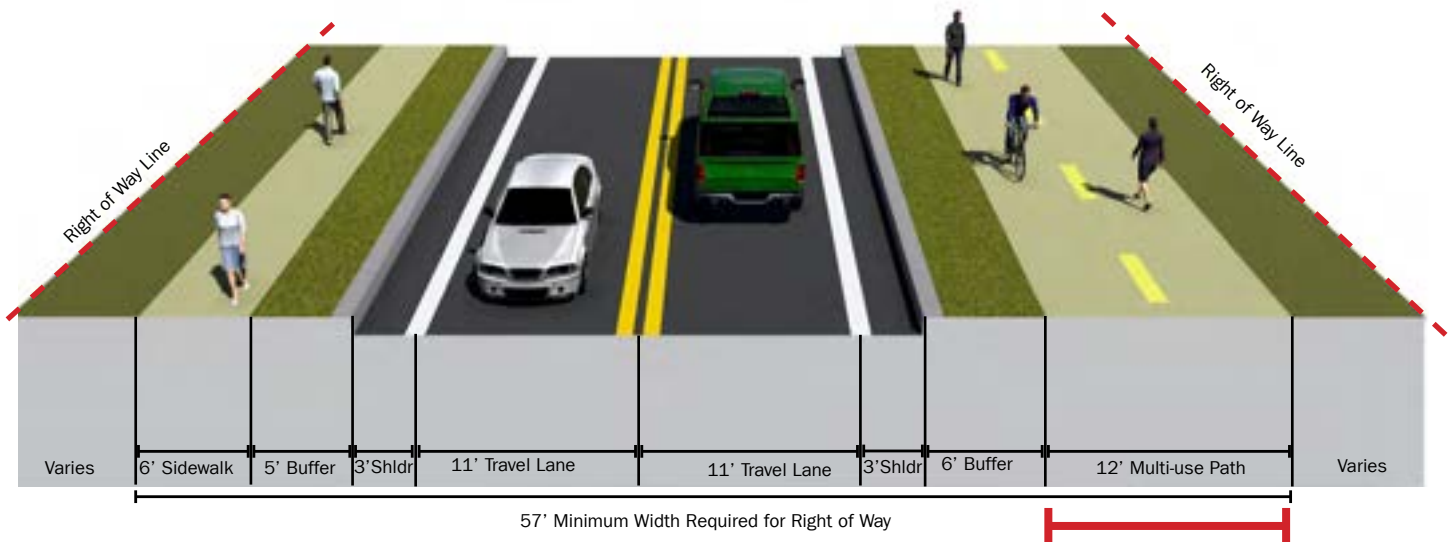
New road and path connection behind Walmart and East Towne Mall



This road is intended to be for local use, and will be limited to one travel lane in each direction. The cross section below shows the proposed width of the road and right of way. While the conceptual design includes the new roadway connection, the Lincoln Highway Streetscape Plan recognizes that considerable additional study is needed to address issues with roadway placement, topography, and proximity to the service areas of East Towne Mall and Walmart, which means that this is likely a long-term strategy.

A shorter-term strategy could be the construction of a multi-use path along the proposed roadway alignment, which would offer pedestrians and cyclists an alternative to traveling on Lincoln Highway. This would be easier to design and construct. It would provide a more scenic and lower volume cycling and walking route that would follow the existing Walmart sidewalk to a new road connection.

Typical cross section of new road connection



The path could be built as a short-term pedestrian and bicycle connection that would be completely separate from the road connection.

Upgrade the Oakview Road Intersection

The Oakview Road intersection is a major pedestrian node, but is currently very difficult to cross due to the number of lanes coming into the intersection from the Route 30 Bypass. It includes two dedicated left turn lanes from Lincoln Highway to southbound Oakview Road, which are not needed based on current traffic counts. Additionally, the reconfiguration of the Route 30 Bypass described above would eliminate the need for one of the eastbound through-lanes coming across Oakview Road.

During the planning process, the design team considered modifications to the Oakview Road intersection to improve pedestrian access, traffic management, and appearance. The first Stakeholder workshop presented two options for reconfiguring the east side of the intersection: installation of a curb extension on the north side of the road and/or installation of a pedestrian refuge median to reduce crossing distances. Ultimately, neither of these was recommended because a more effective option for reducing pedestrian crossing distance was developed, which is described below.

View of multi-modal improvements at Oakview Road



The conceptual design eliminates one of two dedicated left turn lanes for westbound traffic turning south onto Oakview Road and one eastbound through lane. The removal of these lanes allows for the south curb of the roadway to be moved toward the center line nearly 20 feet, significantly reducing the pedestrian crossing distance at the intersection. The tightening up of the lane configuration also allows for continuity of through lanes from the Bypass and across the Oakview intersection, which would reduce driver confusion and allow for more efficient traffic flow along the corridor. The conceptual design also includes landscaping and streetscape elements, including new transit shelters and street furniture, to establish its identity as a significant pedestrian and transit

node. This will be further highlighted by distinct, high-quality crosswalks that will make a statement about the area's navigability for all roadway users.

The high level of truck traffic makes it difficult to maintain any kind of pavement markings or enhanced pavement materials to designate crosswalks. Paint and tape materials wear off relatively quickly; brick pavers and concrete insets would also be damaged by truck traffic. Despite the challenges, pedestrian access at this intersection is important enough to make both the initial investment and complete future maintenance needed to create an enhanced pedestrian crossing. This plan recommends the use of thermoplastic paint materials for Oakview Road crosswalks. Two different

View of potential gateway signage at the reconfigured Route 30 Bypass entrance



applications of thermoplastic are shown on page 59. These materials can be applied to simulate the appearance of brick or use other designs to increase crosswalk visibility, without the prohibitive cost and repair of concrete or brick pavers. They are more durable than regular paint and tapes, though even these enhanced materials will require more maintenance than typical needed to manage the damage caused by truck traffic. Additional manufacturer's data for TrafficPatterns brand thermoplastic can be found in Appendix B.

Improvements will also include major gateway signage to strengthen the sense of arrival identifying the beginning and end of the Study Area. The gateway feature would be located in the grassy area immediately west of the East

Towne Mall entrance. This site was chosen because it is highly visible both from the Route 30 Bypass and from Lincoln Highway. The sign will be the first step to connecting visitors its history and importance to the region and will improve the experience and the image of the corridor for the visitors, students, neighbors, and the community. This announcement is relevant even for motorists who are only travelling through, as it will make them aware of heavy pedestrian and vehicular traffic. It is also important to note that this sign is not marking the beginning of the corridor, but is designed in conjunction with underpass-mounted signage where Route 462 passes underneath the Route 30 underpass. The landscaping around the gateway feature would be paired with a landscaped stormwater management feature in the roadway median.

Thermoplastic paving options for enhanced crosswalk treatments



"TrafficPatterns" style thermoplastic pavement marking from TrafficScapes applied to flat asphalt



"TrafficPatterns XD" style thermoplastic pavement marking applied and stamped into the asphalt surface

Millstream Road Area Improvements

The Millstream Road area is a high accident location on the corridor. Two main reasons for this are a large number of individual driveways serving small businesses, which have created a concentration of mid-block left turn accidents, and unsignalized left turns from Millstream Road onto Lincoln Highway.

The parking lots on the north side of Lincoln Highway located just to the west of the signalized intersection at Tanger Drive are largely interconnected today, though each has its own curb cut onto the street. The conceptual design consolidates seven existing driveways on the north side of the street between Mill Creek Bridge and Tanger Drive into three right-in/right-out driveways. All the properties can share internal circulation which will provide access to the existing signalized intersection located at Tanger Drive. The westernmost driveway would be positioned directly across from Millstream Road, anticipating a longer-term improvement of installing a signal in this location. Establishing a driveway in this location sets the stage for simplifying and signalizing turning movements in the future.

On the south side of the street, the conceptual design recommends consolidating the eight existing driveways between Tanger Drive and the Ramada entrance into three. Currently each property has separate entry and exit driveways, creating large and

frequent curb cuts. As on the north side of the street, the parking lots could be internally connected with a few physical alterations and only a small loss of parking spaces. The primary access to the properties would be located at the existing traffic light located at the Ramada Inn across from Dutch Wonderland. The other driveways would be configured for traffic entering and exiting, and spaced at a distance that creates a safer multi-modal experience without prohibiting access to the businesses.

In addition to driveway consolidation, the conceptual design recommends installation of a traffic signal at the intersection of Lincoln Highway and Millstream Road. Such a signal would be very close to the existing signal at Tanger Drive. Due to traffic signal timing issues created by having signals so close together, signalization of Millstream should be tied to new development on the north side of Lincoln Highway. As an interim improvement, the Township should consider prohibiting left turns onto Lincoln Highway from Millstream Road. Installation of a mountable median would further improve access management and safety in the area.

View of driveway consolidation and streetscaping improvements at Millstream Road



Existing Condition



Phase 1: Installation of median to prevent left turns from Millstream Road



Phase 2: Reconstruction of roadway and installation of multi-use path and streetscaping improvements



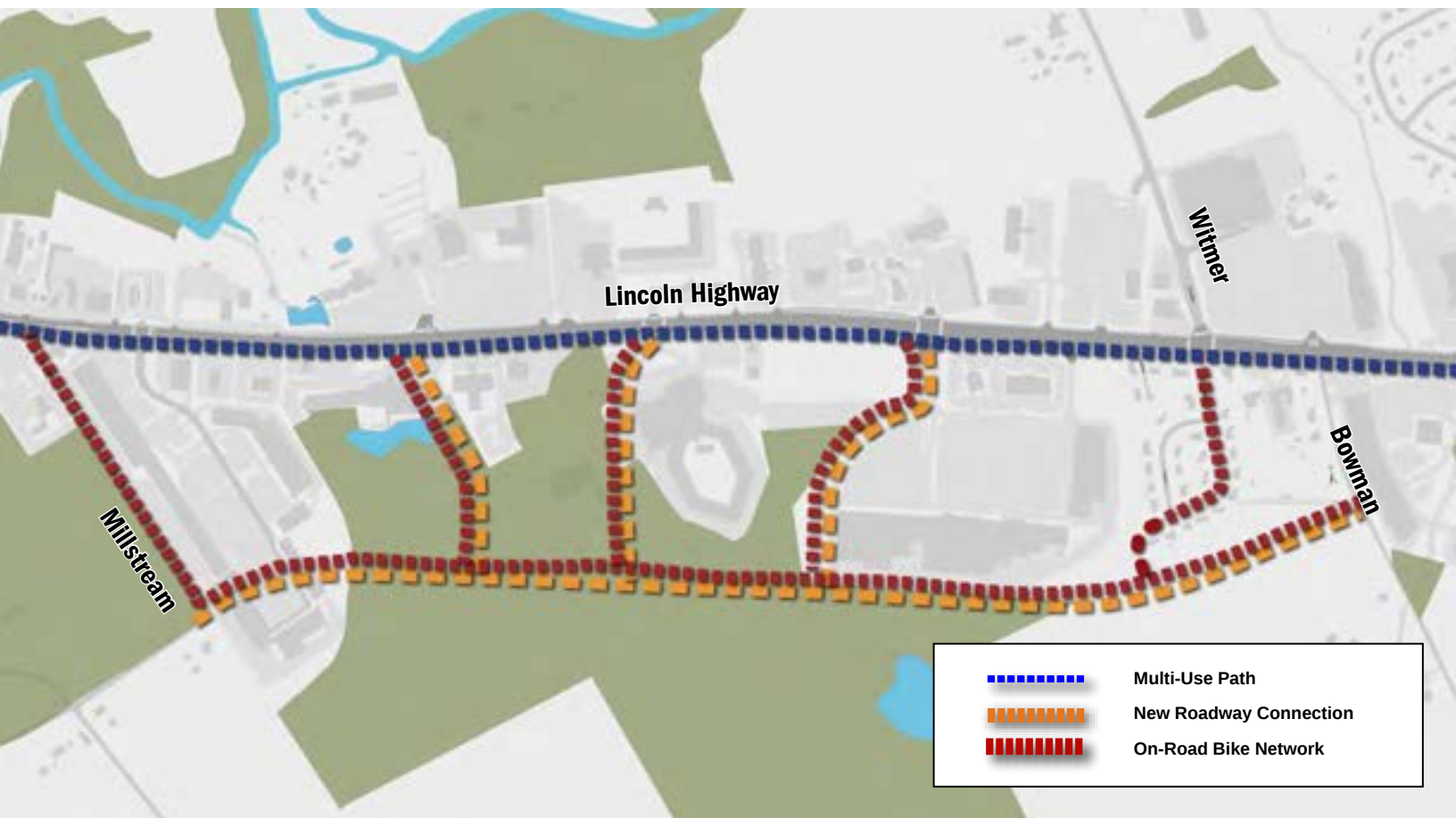
Phase 3: Installation of signal and crosswalks at Millstream Road

New Road Connections South of Lincoln Highway

The conceptual design includes a new east-west roadway and bikeway connection between Millstream and Bowman Roads, a connection which was added to the Township's Official Map during the preparation of the Streetscape Plan. The new roadway

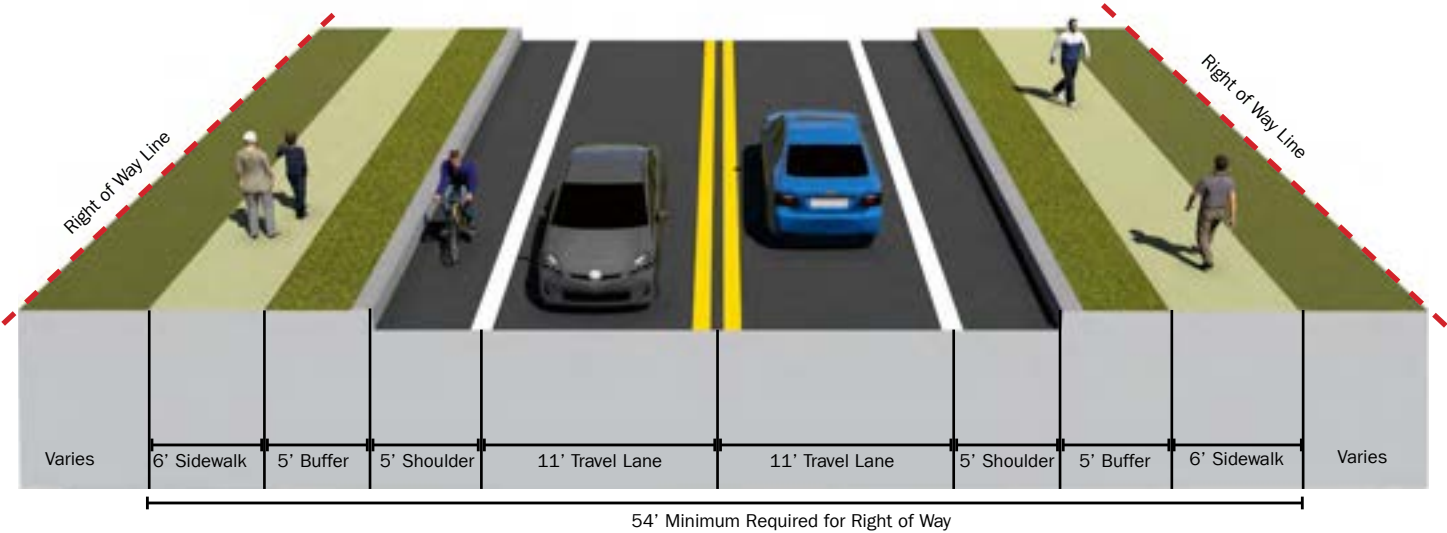
connection will improve local access, relieve traffic pressures on Lincoln Highway, and provide an off-highway bike and buggy access route. The road will form the spine of a new regional bikeway and will have connections to Lincoln Highway at Dutch Wonderland, the Lancaster Host, and Mill Creek Square.

New road and bicycle connections between Bowman and Millstream Roads



Typical cross section of new road connection

The new connections are proposed to be two-lane roads with shoulders and sidewalks. The proposed typical cross section, below, has one travel lane in each direction, wide shoulders to accommodate bicycle travel, and buffered sidewalks on both sides of the street.



Pedestrian Improvements at Route 896

The intersection of Lincoln Highway and Route 896 forms the eastern gateway to the Study Area. The conceptual design includes gateway treatments (described in the gateway and wayfinding section on pages 72-82) and pedestrian access improvements to create a positive first impression for visitors and enhance corridor safety.

The Lincoln Highway Phase I Plan investigated the possibility of converting this intersection to a two-lane roundabout. The roundabout was ultimately not pursued in this project because of its potential adverse impact on bicycle and pedestrian access through the intersection.

Recommended pedestrian improvements include installation of unique crosswalk treatments and crossing islands at the northwest and southeast corners to help protect pedestrians and calm traffic. As at Oakview Road, the crosswalk treatment should use of thermoplastic paint materials, shown on page 59. The prominence of this intersection would also justify ornamental plantings like those described on pages 84-85. These enhancements, together with

gateway treatments, will emphasize the intersection's role as an entrance to the corridor and make a statement about the area's navigability for all roadway users. Street trees along Lincoln Highway would buffer pedestrians from traffic.

The grassy area at the northeast corner of the intersection would be an ideal place for gateway signage and landscaping. This corner is highly visible from all directions, but is currently underutilized. The other three corners of the intersection are relatively built-up, limiting the size and scale of signage placed directly in front the existing buildings. The existing stormwater basin could also provide an opportunity to tie the gateway signage into a larger green infrastructure demonstration project and ornamental landscaping. Similar to the gateway signage proposed at the western end of the corridor, the gateway feature would be designed to be seen from multiple sides, acknowledging that visitors may be coming Lincoln Highway or Route 896 to enter the Study Area.

View of multi-modal improvements at Route 896

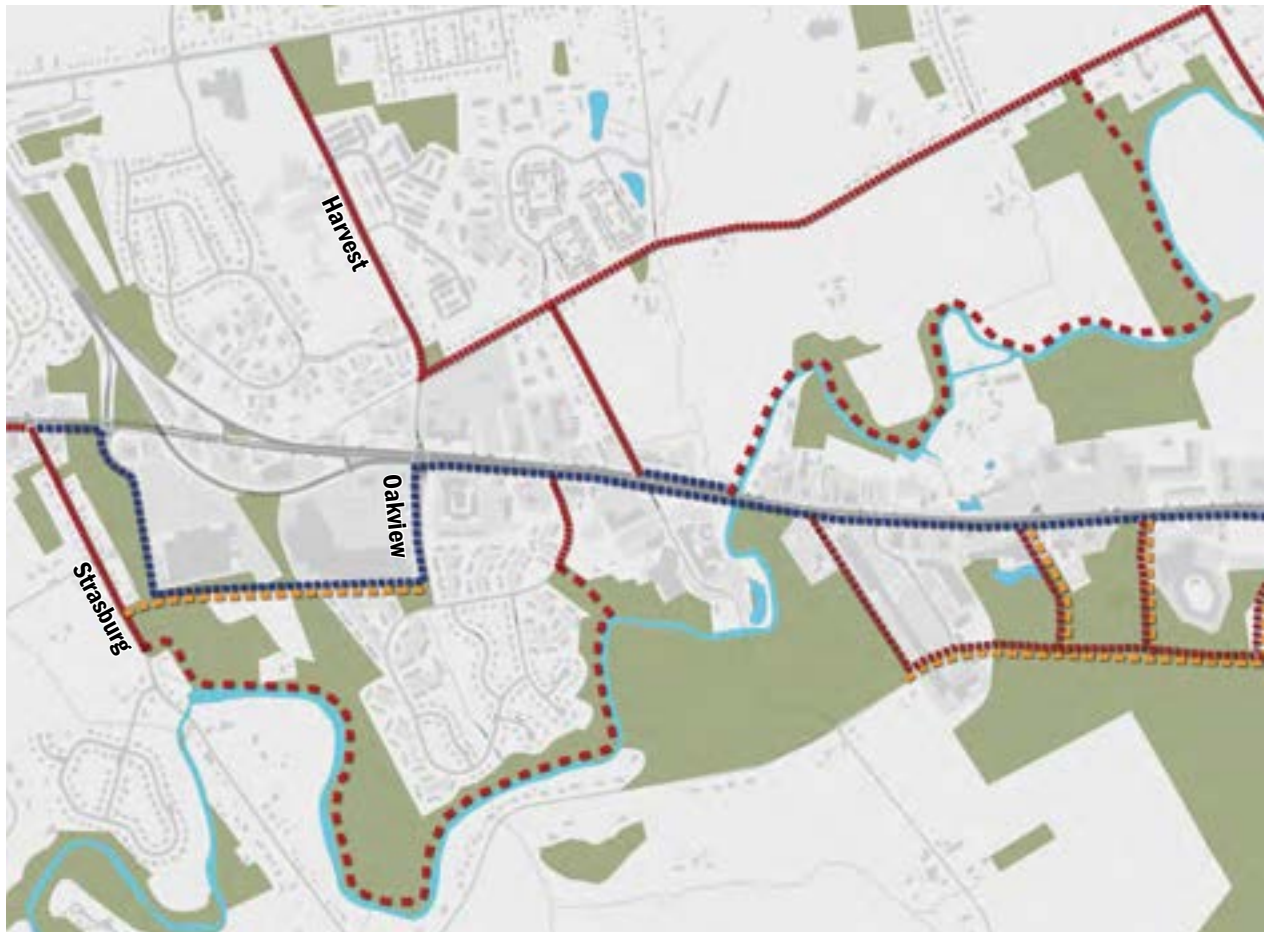


Bike Network

Today, Lincoln Highway is an inhospitable bicycling location; however, with increasing interest in cycling for daily use and at vacation destinations, the integration of bikes on Lincoln Highway became a priority during the planning process. As a result, the conceptual design includes a network of facilities on and adjacent to the Highway.

The network's spine is a 12-foot wide multi-use path that generally follows the south side of the street. It will carry both pedestrians and cyclists and is buffered from the roadway by a landscape strip at least five feet wide. Given right-of-way limitations, the trail may need to move off of the road and on to private property in a few places. Specific locations where this is likely to occur include the Rockvale Outlets and the Walmart Shopping Center as noted on the map below.

Proposed bike network

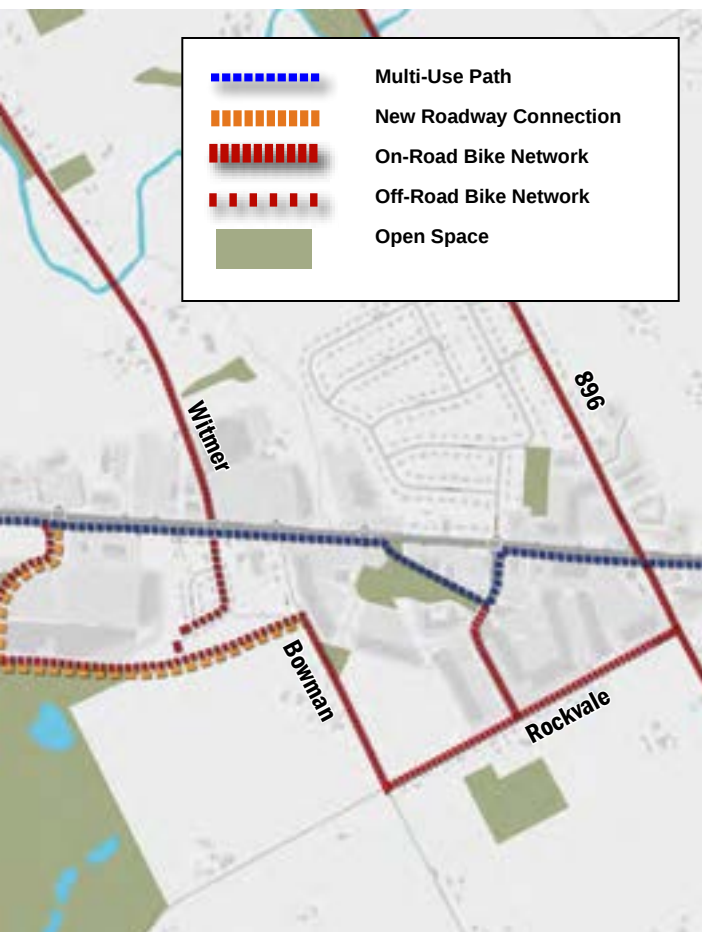


The multi-use path is supplemented by a set of on- and off-road connections to serve key locations and provide more scenic, less congested riding options. The following stretches of existing roadway are recommended to have on-road bike lanes:

- Strasburg Pike between Lincoln Highway and Flory Park
- Oakview Road between Old Philadelphia Pike and Hobson Road

- Greenland Drive between Lincoln Highway and Michael Dohner Farmhouse
- Harvest Road between Lincoln Highway and Hobson Road
- Hobson Road between Oakview Road and Witmer Road
- Witmer Road between Lincoln Highway and Hobson Road
- Millstream Road between Lincoln Highway and Gridley Road
- Gridley Road between Millstream Road and the proposed new roadway connection
- Pleasant Drive south of Lincoln Highway
- Bowman Road between Lincoln Highway and Rockvale Road
- Rockvale Road between Bowman Road and Route 896
- South Willowdale Drive between Lincoln Highway and Rockvale Road
- Route 896 from Old Philadelphia Pike to the Strasburg Township line

All new road connections illustrated on the map below will be constructed with bike lanes and sidewalks. In addition the conceptual design includes an off-road bike network following Mill Creek to provide a new recreational amenity and improved bike access to Lancaster Mennonite School and Tanger Outlets as illustrated on the bike network map.



Transit Facility Improvements

The corridor is served by Red Rose Transit Authority Route 14, the busiest line in the Lancaster County system. Its role in moving residents, employees, and visitors around the corridor is integral to the economic health of the Study Area. Current trends show transit ridership increasing significantly, especially among younger people, around the country while auto use declines slightly. This indicates an expanded role in the future for Route 14 in the Lincoln Highway transportation picture.

Many existing bus stop locations are poorly marked and have inadequate waiting areas for passengers. There are currently only a few bus shelters on the corridor, and some stops lack even a paved surface. The conceptual design proposes improvements to sidewalks, signage, and amenities to create well-marked, safe, attractive, and comfortable bus stops. Additional study is needed to assess the feasibility of installing bus pull-offs at locations along the corridor.

Two types of stops are proposed depending upon existing ridership levels, potential for increased ridership at major attractions, and whether the stop has a direct connection with the

Proposed bus stops



new pedestrian and bicycle network. Enhanced stops will be located at busier locations, major attractions, nodes on the pedestrian and bicycle path system, and at intersections with crosswalks allowing easier, more direct, and safer access. Standard bus stops will be located where transit access is needed but usage is expected to be lower.

Enhanced bus stops will include improved signage, a shelter on a concrete pad, a bench, paving between the sidewalk and curb to make boarding safe and easy, bike racks, landscaping, and will be fully ADA compliant. This provides flexibility in placement, maintains the sidewalk and multi-use

path footprints, and allows for people to wait in comfort and safely board the bus. Signage will include route and schedule information, a map of the RRTA system, phone and internet contact information, information on nearby activities, and historical or environmental interpretive signs. By making the bus stops attractive places with extensive local information the convenience of transit as a means of visiting the attractions along the corridor is reinforced.

Standard bus stops will include the same features except for the shelter and informational signage. Instead, a concrete pad with a bench will be included. Shelters will include distinctive design features that incorporate the themes of the corridor



signage and wayfinding program. This will provide valuable feature that makes the corridor more attractive in general and encourages transit use by making it more comfortable and attractive.

Enhanced bus stops are proposed on each side of the street at the following intersections:

- Strasburg Pike – Forms a western gateway to the corridor
- Walmart – The busiest bus stop on the corridor
- Oakview Road – A busy stop near the East Towne Mall
- Harvest Road/Mennonite School Road/Mill Creek Path – Key connection to the proposed

pedestrian and bicycle trail system and the Mennonite School

- Tanger Drive/Sonic – Major tourist attraction
- Dutch Wonderland – Major tourist attraction
- Kohls/Witmer Road/Target/Pleasant Drive - Set of stops near the Target and Kohl's shopping centers. Willowdale Drive /Hartman Bridge /Rockvale Outlets – Major shopping destination and near many of the hotels tourists use while visiting other attractions on the corridor

Standard bus stops are proposed for all remaining stop locations.

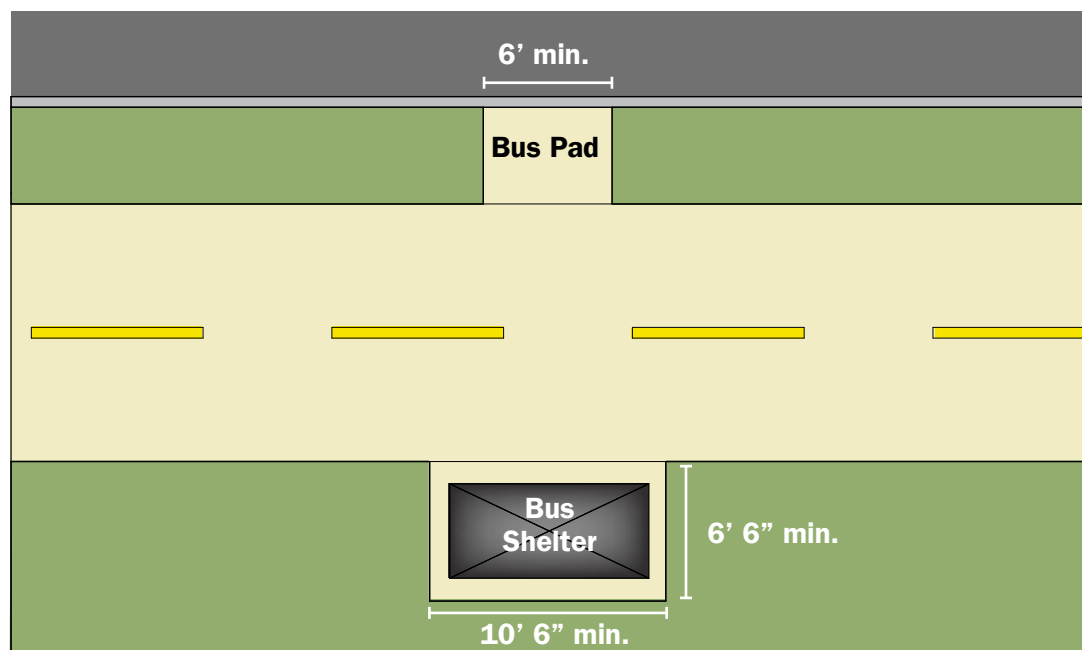


Diagram of enhanced bus stop design guidelines

Example standard and enhanced bus stop illustration



Existing bus stop at Walmart Entrance

This stop is currently demarcated by a sign.



Example of standard bus stop detail

An ADA accessible concrete pad would be installed between the sidewalk and road.



Example of enhanced bus stop detail

In addition to the concrete pad, a bus shelter with seating would be installed behind the sidewalk.

Gateway Signage and Wayfinding Program

To support the roadway and multi-modal transportation improvements, enhance the appearance of the corridor, and enrich the visitor experience, the Township should implement a gateway and wayfinding signage program, which would be supplemented by the landscaping recommendations described below. The gateway and wayfinding program should include major and minor gateway signage, pole mounted banners, vehicular directional signage, and pedestrian-scaled signage. The potential role and locations for each are described below.

Major Gateway Signage

It is important to display the identity or branding at the edges and entrances to the corridor. This provides a sense of arrival at the corridor. It also welcomes visitors and communicates a message of quality, stability, and prominence. These are typically placed at the most important gateway locations to provide visual markers that can be easily identified by travelers and help introduce a “place brand” vocabulary. Proposed locations for such signage in the Study Area include the intersection of Lincoln Highway and the Route 30 Bypass, the Route 30 overpass, and the intersection of Lincoln Highway and Route 896.

Map of proposed signage locations



The intersection of Lincoln Highway and the Route 30 Bypass is a highly trafficked area. Many vehicles converge here, and the adjacent pocket of open space provides an opportunity for a vertically oriented sign that can be seen in all directions. Further west, the Route 30 overpass provides a portal than can begin to introduce the Study Area with a horizontally oriented design. At the east end of the corridor, the intersection of Lincoln Highway and Route 896 starts to show commercial development. There is an apparent change in environment from rural to urban conditions when entering the corridor, and this would be an ideal location for a main gateway. Landscaping and illumination should also be used to enhance the gateways.

Landscaping is also an important element at entrances and along public rights-of-way that border or traverse the corridor. The landscaping and streetscape elements, buffers, multi-use path, crosswalks and other elements will assist in distinguishing the corridor from its surroundings. This serves both the identity and safety interests of the corridor. The recommended gateway and pedestrian lighting is also an important design element for a retail area that hosts numerous evening events.



Minor Gateway Signage

Minor gateways reinforce a “sense of place” and introduce the area in which travelers will be entering. Placing minor gateways outside the perimeter of the corridor informs people of the upcoming area, and can be an elegant way to show the characteristics of the surrounding neighborhoods. Secondary and tertiary entrances to the corridor should have identity and brand elements scaled to the importance of the entrance. Minor gateways provide visual markers that can be easily identified by travelers and help introduce the place brand vocabulary. Proposed locations for such signage in the Study Area include the street-side of the Taco Bell and Advance Auto Parts before the overpass on route 462, and on minor north/south streets as they approach Lincoln Highway. Such signs should be placed at 750 to 1,000 feet before the intersection to provide drivers with adequate time to view and process them. As with the major gateway signage, illumination can also provide improved identification and visibility at night.

Pole Mounted Banners

Banners can enhance and reinforce the Corridor’s identity and highlight the transition onto and along Lincoln Highway. Banners can repeat in rows at primary entrances and major circulation routes. This strong visual element can change seasonally, adding to the sense of a dynamic institution. They can advertise special events, parking, and other important activities. They are available in a variety of materials from

fabric to metal panels for temporary or permanent use. Given the amount of commercial signage present in the corridor today, banners would be a lower priority, as they risk adding to the visual clutter, but could be a good tool for promoting seasonal events.

Directional Signage

Vehicular directional signage is used to direct visitors to important areas of public interest. It is an important tool as they enter the corridor, allowing them to connect to important public places such as public parking, information, and emphasizes important pathways. Such signage is recommended typically to be installed 75 to 200 feet prior to a signalized intersection allowing the user time to make a safe decision as to which lane they are required to be in if needing to navigate a turn. Also to note, when leaving the corridor directional signs should direct a driver to major roads or highways.

Vehicular directional signs have limited space for messages; messages must be limited in number to be as clear as possible for drivers. Additional identification or branding elements should be minimized to avoid information overload for motorists. Note that only public destinations should be listed, such as: public parking, transit, parks, library, etc. No private business should be listed on vehicular signs. They can be listed on pedestrian directional signs if required.

Maximum listings for directional signs as reference in the Federal Highway Administration's Manual of Uniform Traffic Control Devices(MUTCD):

- Low-speed roads (approximately 24 miles per hour or less) can accommodate a maximum of four-inch text with three single-line messages. Note that if the size of text is preferred to be smaller or quantity of messages is to be greater, then a discussion with PennDOT should occur to determine what would be allowable.
- Roads with posted speeds in excess of 25 miles per hour or arterial roads can accommodate a maximum six-inch text with three single-line messages. Note that if

the size of text is preferred to be smaller or quantity of messages is to be greater, then a discussion with PennDOT should occur to determine what would be allowable.

Pedestrian Signage

Pedestrian-scaled signage can provide a myriad of information from directions, to orientation, maps, and other information. They can make very complex information manageable and be designed to meet specific needs, such as wayfinding, orientation, or interpretation of cultural or historic resources. Pedestrian signage should be scaled appropriately, meet all Americans with Disabilities Act specifications and written at an approved and appropriate grade level



Pole-mounted banners in Glenside, PA



Directional signage

so that is accessible to the majority of the public. Specific pedestrian sign types recommended for the Study Area include:

Pedestrian Directional Signs: These serve two primary purposes. The first is to direct people to their destination once they have left their car or bus. The second, given the chaotic look and the organization of the area, is to assist in defining major pedestrian routes along the corridor thus helping with organization. Pedestrian directional signs can carry a large variety of wayfinding information, including buildings, visitor parking facilities, major places, and major services, such as restroom or visitors' information centers.

Pedestrian directional signs should be located at intersections and along long paths where individuals may emerge from buildings or parking facilities in need of directional information. They should also be placed at pedestrian entrances/exits from parking facilities. In addition to providing orientation and direction, pedestrian directional signs bring a human scale while echoing distinctive features of the corridor. Text directional signs should be supplemented with map signs, which are a powerful tool in orienting visitors and other users. Directional signs have limited space and only list key destinations; a map can include all buildings, other specific destinations, in addition to wayfinding information.

Interpretive Sign Systems: Interpretive signage engages visitors, enhances the pedestrian experience, and speaks to the traditions that make the area unique.

Interpretive signs are a powerful way to share memories that are meaningful in the life the corridor. Whether describing people, places, buildings or events interpretive signs can highlight traditions and reflect the unique character and history of the corridor. Storytelling is especially popular with first-time visitors. For example, an interpretive sign program might highlight the corridor's history with significant episodes from its past – interesting people, timeline of events – through an interpretive storytelling program to be implemented as part of a signage master plan.

Technology can play a part in creating an interesting interpretive program for the corridor. Cell phone tours could include narration from famous figures; walking tours could utilize mobile devices allowing visitors to download a variety of podcasts, depending on their specific interests.

Implementation Strategies

In Pennsylvania, numerous municipalities have installed custom-designed decorative sign systems to aid in pedestrian and vehicular wayfinding and promote civic identity. In some cases, this has been strictly a municipal effort, with local government bearing the responsibility for the cost and maintenance of the system. However, in many instances this responsibility is shared with a private entity, often a Business Improvement District or other civic-oriented organization. Such private-sector non-profit groups can be a great asset in providing manpower, revenue, and attention to detail.

Business Improvement Districts usually have “eyes and ears” on the street to spot problems quickly, and have the ability to raise revenue through programs and events. When forming such a partnership, it is important to clearly establish the roles and responsibilities for each party. Particularly who will fund the work, who will perform the work, and who will manage the work?

Sign Maintenance

The key to the long-term success of any sign program is effective maintenance to keep the signs in good physical condition. Any object in the public environment, and particularly along public streets, is subject to the possibility of vandalism, vehicle collisions, and other hazards. It

is important that damage be corrected promptly, since the part of purpose for the signs is to project a positive and prosperous public image. Deferred maintenance can result in the opposite effect. In addition to maintenance needs, signs may need to be updated from time to time, as destinations or other listed information changes.

An annual budget should be established to fund the cost of sign maintenance. Actual maintenance costs vary based on the number of signs in the system, relative age of the signs, and the random nature of damage. One rule of thumb is to budget for annual costs equal to 10 percent of the original cost of installation.



Pedestrian map signage



Township identity signage in Bryn Mawr, PA

To provide a dedicated revenue stream to fund maintenance, it is not uncommon to establish a system of annual fees to be paid by those benefiting from the signs. For instance, individual destinations listed on wayfinding signs or maps may be charged an annual fee for each listing. This strategy should be considered up-front when the sign system is conceived. The need for revenue may lead to the decision to include commercial destinations on wayfinding signs, rather than only public places. Fee amounts may vary depending on specific circumstances. Typical fees range between \$25 and \$150 per listing per year.

Another potential mechanism to generate maintenance revenue is sponsorship. Certain elements within the overall sign system may be set-aside for paid sponsor advertising. This is commonly seen in seasonal elements such as cloth banners that are replaced frequently, allowing for new and updated sponsor acknowledgment.



Fees from listed destinations (above left) and sponsorship (above right) are potential revenue generating ideas to fund maintenance.

Suggested Sign System Colors



Black Tones - reminiscent of Amish wrought iron craftsmanship and apparel, can be used for poles and other structural members of a sign.



Blue Tones - reference to colonial dutch flags and prevalent in royal historic garments, can be used for the background sign panel and accent colors.



Green Tones - prevalent color seen within the site context reflecting the natural rural areas, can be used for branding elements or alternate background panel color.



Burgundy Tones - seen in the local architecture utilizing brick and stained wood, can be used for branding and highlighting construction details.



White Typography - the reflective quality of white on dark backgrounds creates contrast for greater legibility.

Please note that these initial color suggestions are not final. Colors are provided as a starting point for the design process. A full design exercise will be required to explore the colors that best fit the characteristics of the corridor.

Sign System Typography

The desired typography should represent the character of the corridor and its surrounding context. Typefaces need to contrast with the background color and attention to kerning details will enhance legibility. A typeface should be dynamic enough to handle issues of legibility,

and appropriate scaling for pedestrian and vehicular applications. Showing consistent typography in the corridor will create a “sense of place,” and reinforce branding.



Minor gateway sign in Lower Merion Township, Pennsylvania.

Typography:

Serif Typeface, Adobe Garamond
Semi-bold (primary message)

San-Serif Typeface, Myriad Web
Regular (secondary message)



Major gateway in Cheltenham Township, Pennsylvania.

Typography:

Serif Typeface, Adobe Caslon Semi-bold
(primary message)

San-Serif Typeface, Foundry Sans Medium
(secondary message)

Sign Typefaces

There are typically two kinds of typefaces in a system, the branding typeface and the informational typeface. The branding typeface combines typography to produce an attractive composite. Branding typefaces can utilize both san-serif and serif fonts.

Informational typefaces relay to the user important information. An informational sign should only use approved MUTCD fonts and meet MUTCD code requirements. Typically, these signs are also produced with reflective copy for visibility in the evening.



Primary Brand Typeface, Serif Typeface

Secondary Brand Typeface, San-Serif Typeface

Branding typeface in Cheltenham Township, Pennsylvania



Primary Information Typeface, San-Serif Typeface

Informational typeface in Cheltenham Township, Pennsylvania

Sign Maintenance Plan

This all points to the need for a comprehensive maintenance and operations plan. The plan should identify revenue sources to fund maintenance costs, and responsible parties to carry out the work. Typical maintenance tasks may include cleaning, graffiti removal, touch-up painting, rehang and straighten, replace knockdowns. It is important to establish an annual regimen for maintenance that outlines who will bear the responsibility for maintenance tasks, and frequencies. Signs should be inspected on a regular basis for signs of damage, and especially for structural wear (i.e., loose bolts) that might cause a sign to fall and create a risk of injury to the public. Once identified, damage should be repaired in a timely manner.

Public works personnel or other capable staff may be trained in the specific methods for maintaining signs. For instance, metals scrapers and certain chemical solvents can damage a sign's finish. Only soft-edged tools and non-abrasive cleaners (such as mineral spirits or soap and water) should be used. If it is not practical to utilize in-house staff for maintenance, a contract should be established with a reliable contractor qualified to perform the work.

Sign Management

The ultimate responsibility for the long-term health of the system should be clearly established. While success inevitably depends on the cooperation of multiple public agencies and private

stakeholders, one entity should be designated as the lead, with the responsibility of coordinating the work necessary to keep the system current and updated. The lack of a clearly established management structure can too easily result in neglected and outdated signs.

Management responsibility may or may not be the same as actual ownership of the signs. Ownership carries with it certain legal liabilities (for instance, what if a sign falls and hits someone in the head.) To protect against such liability, it may be necessary for appropriate insurance policies to be in effect. The parties should take this into account when deciding who should own the signs. For this sign, as well as others, municipalities usually "own" the signs, though they may sometimes designate another entity (such as a Business improvement District) as the stewards of the system to take responsibility for maintenance.

The sign manager's duties may include:

- Inspect and keep track of sign damage
- Schedule repair and maintenance work
- Negotiate work orders with contractors/vendors, when necessary
- Coordinate revenue collection
- Act as a liaison to stakeholders

Landscape and Streetscape Enhancements

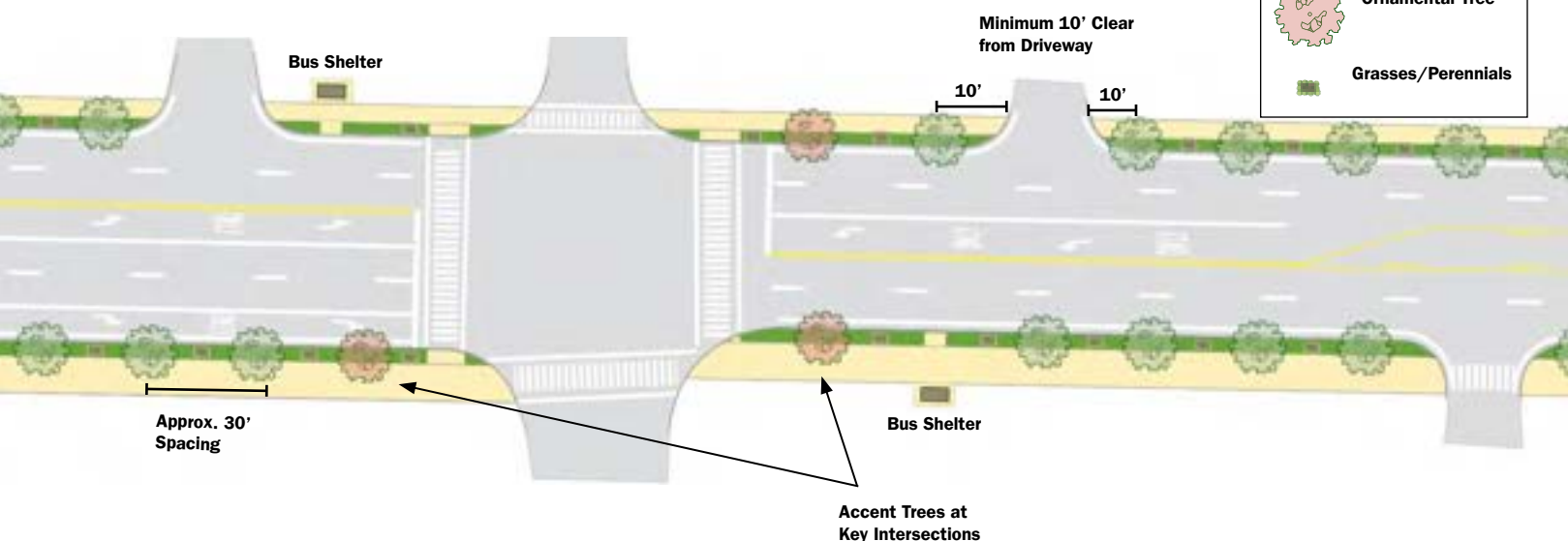
Landscaping

The vast expanse of pavement and lack of shade create a formidable pedestrian environment, especially in the summer months when visitation and retail activity is at its peak. The lack of amenities along the roadway leaves little incentive for pedestrian engagement. In addition large impervious surface coverage creates significant stormwater runoff that could be managed through landscaping in green stormwater control measures.

The conceptual design includes considerable landscaping to improve the pedestrian environment and corridor appearance and to test the application of green stormwater control measures in the corridor. The typical roadway cross section includes five-foot buffer strips between the sidewalk and the roadway on the north side of the street and between the roadway

and multi-use path on the south side. These buffers will be landscaped to provide vertical buffers, enhance appearance, and where appropriate, manage stormwater. Street trees will provide shade and help to frame the edges of the corridor and better define a separation of uses.

The conceptual design includes street trees to be planted roughly every 30 feet. Spacing would be coordinated with street light and utility locations and adjusted where needed to protect sight lines at intersections and driveways, particularly on the south side of the road near the multi-use path. Compact and hardy tree species, such as hedge maples, are recommended to avoid overhead utility conflicts and survive in harsh roadway conditions that include significant exposure to pollutants and ground salt. Other, more ornamental trees and plantings can be used to provide visual interest at significant intersections. A preliminary recommended plant palette for the corridor is shown on pages 84-85.



Schematic diagram of streetscaping plan

Plant Palette Recommendations

Primary Street Trees



Acer Campestre (Hedge Maple)

- Very tolerant of poor conditions, including salt, drought, exhaust
- Smaller size
- Bright yellow fall color



Zelkova Serrata 'green vase' (Green Vase Zelkova)

- Tolerant of urban conditions
- Often used as a substitute for American Elm
- Rich orange fall color

The environmental conditions along the corridor will require a compact, hardy tree species that can adapt to overhead wires, salt, drought, exhaust, and human interaction.

Accent Trees



Malus spp. Donald Wymon
(Donald Wymon Crab Apple)



Crataegus crus-gali var. inermis
(Thornless Cockspur Hawthorn)



Malus spp. Harvest Gold
(Harvest Gold Crab Apple)



Malus spp. Bechtel
(Bechtel Crab Apple)

The accent trees shown above are brightly flowering and moderately tolerant of urban conditions, but have a large spread that may not be appropriate everywhere along the corridor. Accent trees should be used sparingly at key intersections.

Grasses and Perennials



Pennisetum alopecuroides
'Little Bunny' – Little Bunny
Dwarf Fountain Grass



Echinacea purpurea (Purple Cone Flower)



Aster novae angliae (Purple Dome Aster)

Grass and perennial beds would be located between the main street trees. The grasses and ornamentals shown above are tolerant of urban conditions and require minimal maintenance or irrigation.

Additional Species:

- *Rudbeckia hirta* (Indian Summer Black Eyed Susan)
- *Calamagrostis acutiflora* (Karl Foerster Feather Reed Grass)

Beyond providing shade and aesthetic benefits, street trees have been shown to provide a great value to people living, working, shopping, sharing, walking, and motoring in the corridor. According to the USDA Forest Service's Center for Urban Forest Research, one hundred healthy public trees will provide \$232,000 of net benefits over a 40 year period. These economic benefits are realized through stormwater runoff reduction, uptake of tail pipe emissions, reduction of the heat island effect, increased business activity through patron perception, and reduced number of traffic and pedestrian accidents.

According to an article in *Nature and Commerce: Human Ecology in Business Districts*, tree lined commercial districts have been proven to promote more frequent shopping, longer shopping trips, and a willingness to pay 12 percent more for goods. According to the study "The Street Effect and Driver Safety," included in the *Institute of Transportation Engineer's Journal* February 2008 issue, street trees have been shown to provide a traffic calming effect. On average, traffic along tree lined streets showed reduced speeds averaging three miles per hour in a suburban condition. Additionally, as identified in the article *Landscape Design in the Clear Zone: The Effect of Landscape Variables on Pedestrian Health and Driver Safety*, a positive correlation was identified between street trees and mid-block accidents. The pilot study identified the presence of street trees resulted in a five to 20 percent reduction in mid-block accidents.

Where street trees are not possible due to utility conflicts or sight line limitations near intersections and driveways, linear swaths of perennial plantings will provide vertical buffers between the sidewalk and roadway. While the perennial planting areas will not provide shade, they will create the effect of separation and softening similar to that offered by the street trees. The use of perennial material will allow for summertime color and can highlight key intersections and nodes of activity.

In addition to the street trees, in areas with suitable topography and available non-developable open space (setbacks), there exists opportunities to develop linear roadside bioretention zones. By capturing surface flow water from the roadway and directing it through a natural filtration system, a much greater volume of runoff can infiltrate into the ground rather than to the nearest sewer or waterway. Bioretention cells are becoming increasingly common due to their high functional performance but also because they can support plants that are attractive and serve an aesthetic purpose in public spaces.

Crime Prevention through Environmental Design

Crime prevention through environmental design (CPTED) has become an increasingly popular method for discouraging criminal behavior. It is based on the approach of building in small or large-scale design elements that deter criminal activity. CPTED is a balance of encouraging legitimate users to inhabit well-designed public spaces while discouraging potential offenders from thinking a place is an “easy target.”

One major element of CPTED is the concept of natural surveillance. Natural surveillance involves the designing and programming a space to ensure maximum visibility and interaction by the legitimate users of the space. This increased activity and visibility makes potential offenders feel that they are limited in their ability to commit a crime without being seen. The most significant design modification for CPTED is the design of streets to encourage more bicycle and pedestrian traffic, which is a major cornerstone of this plan. More people on the sidewalk means more “eyes on the street.” Other key design concepts of natural surveillance include:

- Using the shortest and least opaque fencing appropriate for the location
- Installing pedestrian-scale lighting along the sidewalk, multi-use path, and major walkways
- Avoiding uneven lighting conditions that create blind spots or glare in key pedestrian areas

The second key element of CPTED proposed for this project is natural access control. Natural access control utilizes plantings, structures and other design elements to limit access or discourage movement to places that are off-limits. For the Lincoln Highway Streetscape Plan, this will be accomplished by the landscape design. In addition to providing interest along the corridor, grasses and perennials between the street tree plantings will discourage users from trying to cross the corridor at places other than designated intersections. Low landscaping along the outer edges of the sidewalk and multi-use path will also discourage users from entering private properties from places other than clearly marked entrances.

Street Furniture

In addition to the landscaping, signage, and transit facility improvements described above, the conceptual design includes the installation of streetscape amenities including benches, trash receptacles, and bicycle racks at key locations. The design aesthetic of these elements should support the brand for the corridor developed in the branding plan. The images below and at right provide a few examples of potential street furniture that tie into the existing historic and rural character of Lancaster County. Manufacturer's data for the items shown below is included in Appendix B.

The placement of these amenities would be located at the following pedestrian nodes:

- Oakview Road intersection
- Tanger Outlet entrance intersection
- Lancaster Host Resort entrance intersection
- Rockvale Outlet entrance (South Willowdale Drive)
- Rockvale Outlet west entrance
- Witmer Road (To support the transit stop)
- Route 896 Gateway



Black vinyl-coated steel trash receptacle



Black vinyl-coated steel bike rack



Victor Stanley Framers Modern collection in wood and cast iron



Victor Stanley Framers Classic collection in cast iron

Lighting

Pedestrian-scale lighting is an important element of the streetscaping palette. This Plan proposes pedestrian scale lighting along the sidewalk and multi-use path. The light poles should be located on the outside edge of the sidewalk and path to minimize conflicts between pedestrian poles and trees, banner signs, and utilities located in the buffer adjacent to the roadway. Lighting should also follow the multi-use path where it goes off-corridor. Manufacturer's data for potential pole and fixture types is included in Appendix B.



Pedestrian lighting with banner sign



Pedestrian pole with globe fixture



Pedestrian pole with fluted base and lantern fixture

Pilot Project: Green Infrastructure Stormwater Control Measure at Rockvale Outlets

Due to right-of-way constraints, the multi-use path may need to be located off-corridor through part of Rockvale Outlets. This creates the opportunity to combine the 12-foot path with green stormwater infrastructure along Rockvale's existing stormwater basin. Where the path pulls away from the corridor it is recommended to be constructed in asphalt instead of concrete.

The existing stormwater detention pond at Rockvale Outlets provides an opportunity to test the application of green stormwater management controls in the corridor and to provide an attractive new landscape amenity. The pond is owned by Rockvale Outlets and located entirely on private property, so any changes would need to be fully supported by Rockvale. The project described below is relatively simple and could be achieved at a reasonable cost. The cost could be justified by the increased capacity of the improved facility or by funding through grant resources.

The existing facility functions as a dry detention pond. For an approximate cost of \$400,000 the existing system could be modified to function as an extended detention wetland facility. This modification would increase the volume of stormwater that could be filtered of pollutants and reduce runoff into the storm sewer. Improvements would include adjusting the basin grade to allow for pooling and the introduction of wetland plant species. The pooling allows for water to remain in the basin for longer periods, giving the soil and plant material time to perform filtration. As water is retained in the wetland for longer periods, evapotranspiration increases, ultimately reducing the volume of water that is discharged into the storm sewer.

The wetland facility would also create aesthetic benefits to the corridor and the Rockvale Outlets by providing a lush open space that will create a space where people could go have lunch, take a walk, or find respite from the busy surroundings.

Before



After



Due to right-of-way limitations, the multi-use path may need to be located on private property through part of the Rockvale Outlets. The path could be paired with green stormwater controls to provide an attractive landscaped amenity for the site.

Water Infrastructure Upgrades

The roadway improvements described above will be coordinated with the water supply and fire suppression infrastructure improvements needed in the corridor. East Lampeter Township and Lancaster County have identified water line additions to create a complete loop that would protect the area from future extended outages. Where recommended roadway construction coincides with the locations of the approximately 3,700 feet of underground pipe and new fire hydrants that need to be installed, the water line and hydrant installation should be included as a part of the road reconstruction utility work.

Regulatory Recommendations

The Lincoln Highway Streetscape Plan does not recommend specific land use changes for the corridor; however, the Township should monitor opportunities to continue to support the economic vitality of the corridor. Over time, this could result in changes to the Zoning Ordinance to support new development opportunities. The Township should also monitor opportunities to transition the remaining single-family residential uses on the corridor to commercial or multi-family residential over time.

Prior to Streetscape Plan adoption, the Township had already amended its Official Map to include some of the



Fire suppression systems exist in parts of the corridor, but are not yet combined in a complete loop

new roadway connections depicted in the Conceptual design. The Township should consider whether there are additional trail or roadway connections or other infrastructure improvements that should be added to the Official Map to support their implementation in future development activities.

To assist in implementation of the bicycle, pedestrian, and landscaping improvements included in the conceptual design, the Township should revise its Subdivision and Land Development Ordinance (SALDO), and possibly the Stormwater Management Ordinance, to require installation of these improvements in new land development on the corridor. To achieve this, the Township might consider creation of a Lincoln Highway Overlay District in the Zoning Ordinance. The overlay district would refer applicants SALDO, and if appropriate Stormwater Management Ordinance provisions, specific to the area.

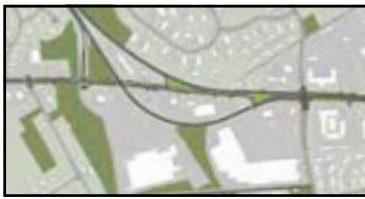
In the existing SALDO there is a greenbelt provision that requires ten feet of landscaping between the edge of a sidewalk and where a parking lot could begin. Although the general intent of the greenbelt is aligned with the recommendations in the plan, the SALDO does not require a buffer of any sort between the sidewalk and the roadway curb. Plan recommendations also treat the north and south sides of the corridor differently in terms of sidewalk and multi-use paths, so the greenbelt provision needs to be revisited to acknowledge different sides of the

roadway and to include the critical five foot buffer between the curb and the sidewalk, either as part of the required ten feet or in addition to the ten feet currently in the provision.

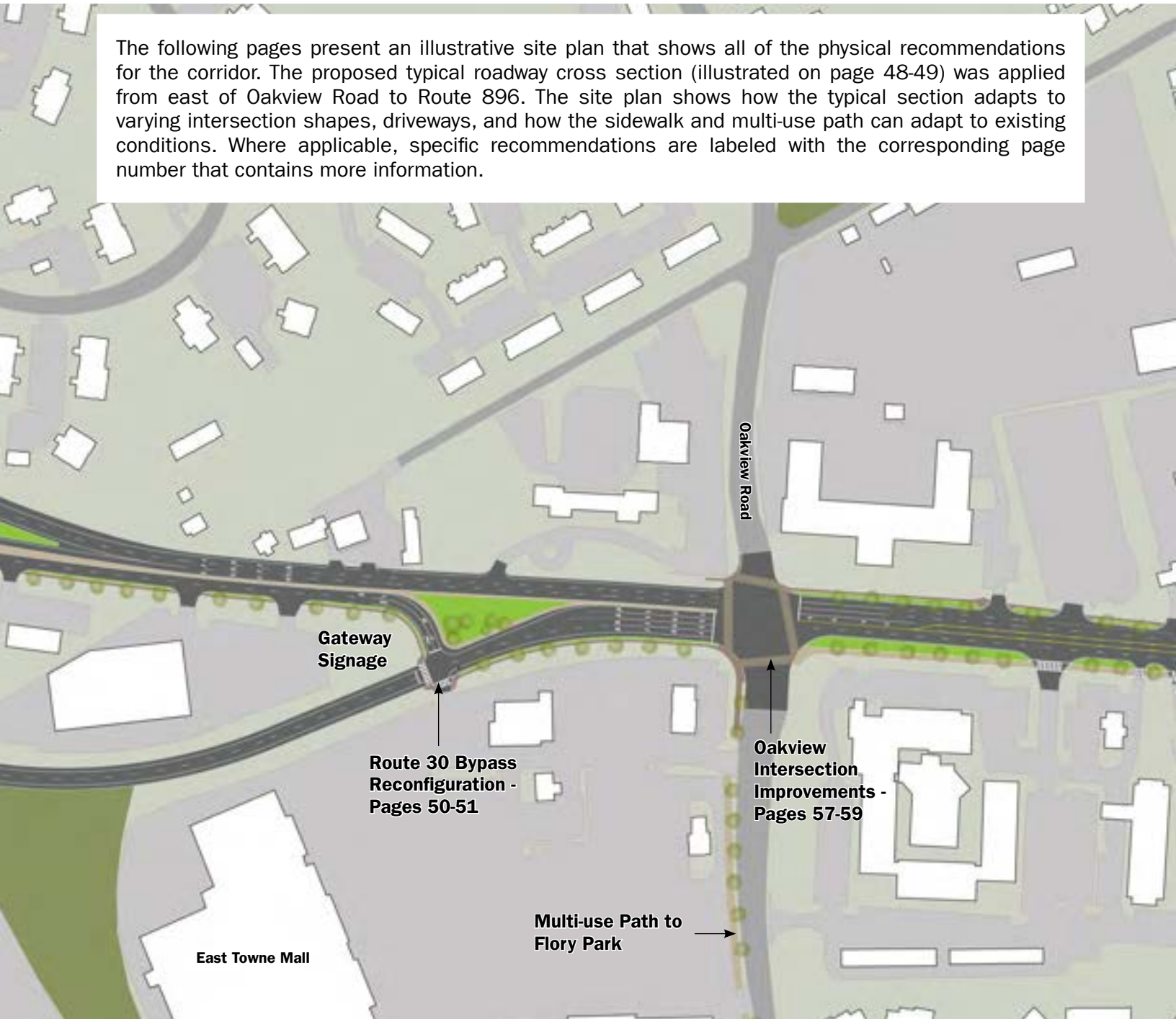
The SALDO also covers the role of landscaping, but only in terms of buffering on the side or rear of properties. In order to fully incorporate the recommendation of the plan, the SALDO should reflect the role of the landscape along the property frontage, as well as the selection and location of streetscape elements, and pedestrian scaled lighting that would exist along the multi-use path and sidewalks.

Conceptual Design Illustrative Site Plan

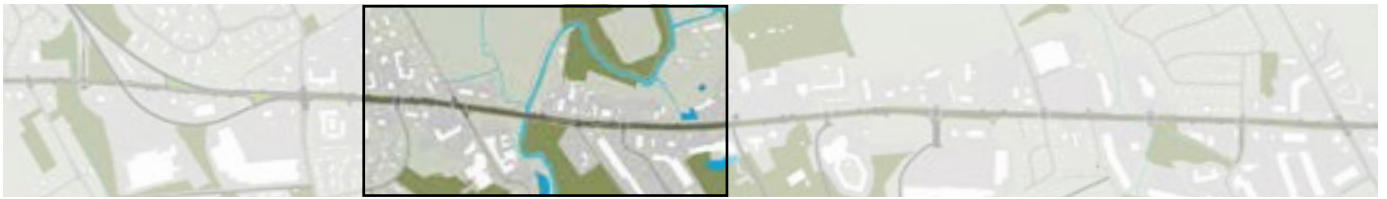




The following pages present an illustrative site plan that shows all of the physical recommendations for the corridor. The proposed typical roadway cross section (illustrated on page 48-49) was applied from east of Oakview Road to Route 896. The site plan shows how the typical section adapts to varying intersection shapes, driveways, and how the sidewalk and multi-use path can adapt to existing conditions. Where applicable, specific recommendations are labeled with the corresponding page number that contains more information.



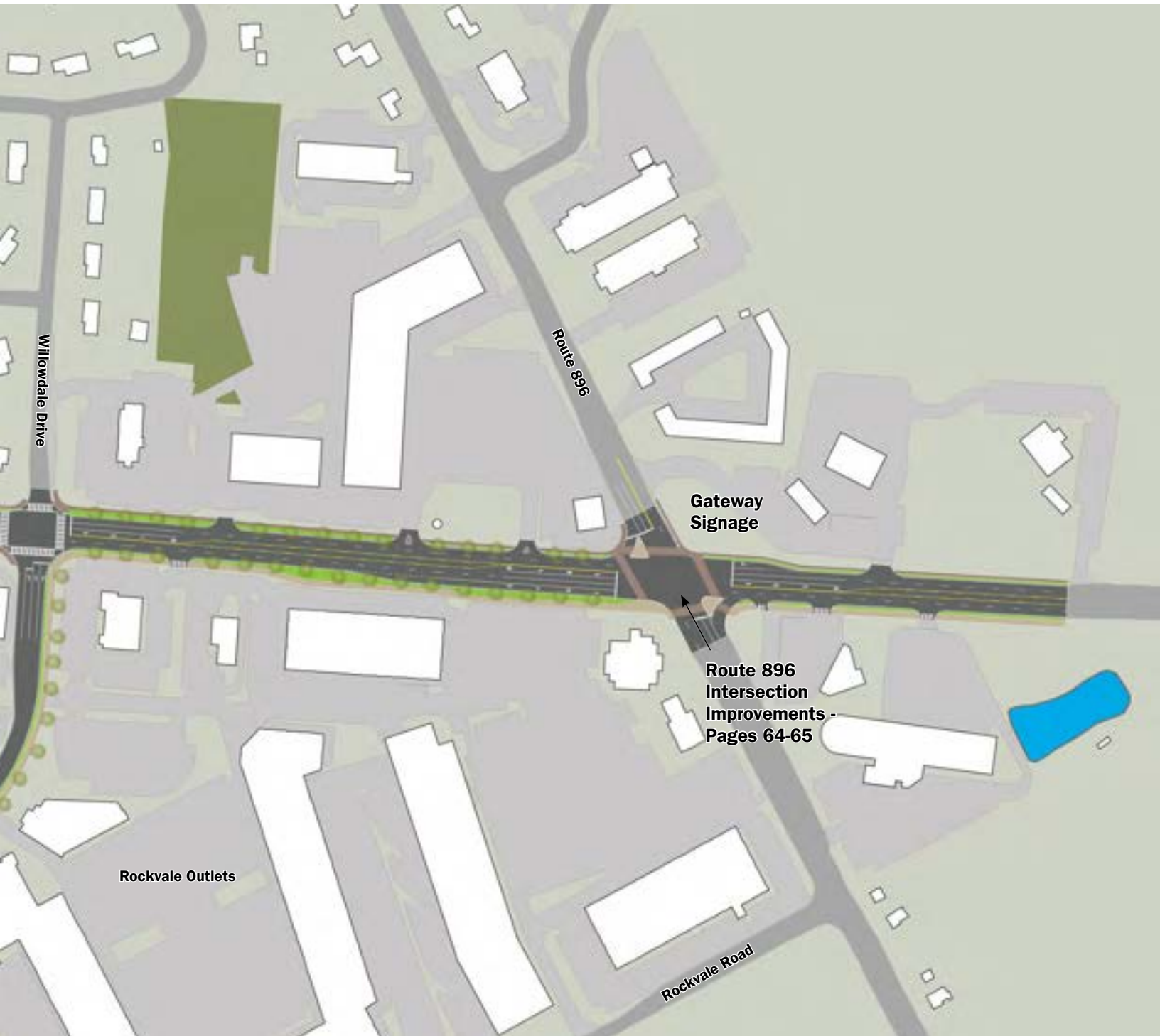














Implementation Plan



The following pages outline a series of strategies for the Township to undertake to implement plan recommendations. It is meant to provide a road map for moving forward, listing specific tasks to undertake, potential project partners, level of Township/partner investment needed to complete the task, and a time frame for implementation. Some proposed strategies are relatively simple and/or reflect projects already planned or underway. Others describe significant undertakings for the Township and will take years and multiple, private, public, and institutional partners to complete.

To understand project costs and implementation timing it is helpful to understand the planning, design, and construction process for publicly-funded road projects. Most large roadway projects have three major phases: planning, engineering, and construction. A visual representation of the process is shown on the top of page 104. The planning phase includes a vision plan to establish what is desired for the project and an alternatives analysis in which potential design ideas are tested and considered to create a preferred alternative.

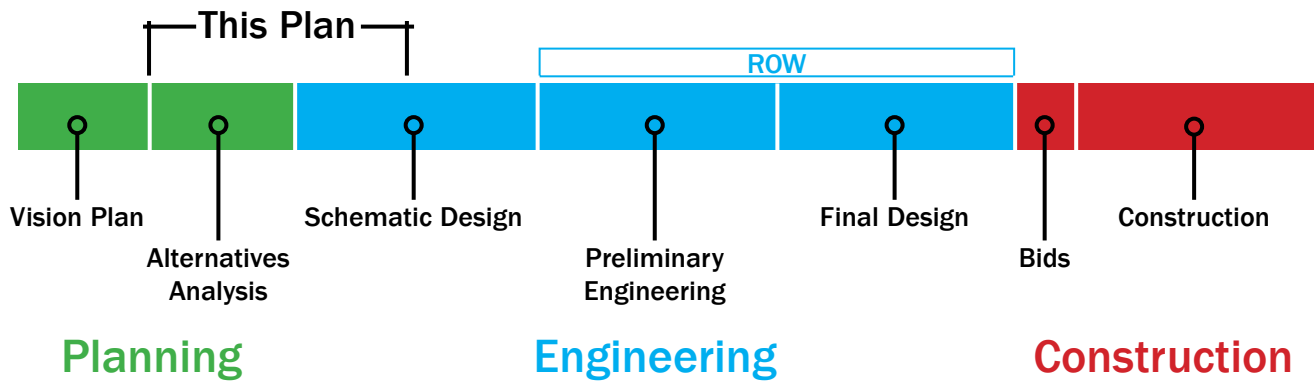
The first part of the engineering project phase is schematic design that takes the preferred alternative from the planning phase and tests feasibility from an engineering design perspective. After schematic design, preliminary engineering begins. Preliminary engineering entails more detailed data collection, including conducting field investigations, other technical studies,

and engineering designs. This work builds on and refines the information and analyses produced during the planning phase. Primary products of this phase include the completion of the environmental review and roadway alignment to determine right-of-way needs.

In final design the project design is refined and translated into construction documents that are ready to release for bid. The construction documents are the hand off between the engineering and the final phase of the project - construction. Many critical elements of a project that require a lot of lead time, including right-of-way acquisition, begins early in the engineering design and span multiple phases.

The Lincoln Highway Streetscape Plan - Phase 2 is unique in how it fits into a typical project timeline. While the Phase 1 of the Streetscape Plan was limited to the vision planning phase, Phase 2 spans two typical phases, including alternatives analysis and a portion of schematic design. This is reflected in the level of engineering that has been incorporated into the plan's recommendations. Any recommendations taken through to construction will need to complete the remaining steps shown on the project timeline, beginning with completion of schematic design. The amount of time it will take each individual recommendation to complete each step will vary based on the project's size and cost.

Basic Project Timeline



Implementation Approach and Cost

The Implementation Matrix is organized to present two extreme options for completing all plan recommendations:

- **Option 1:** Pursue all recommendations in the plan, including the reconstruction of Lincoln Highway and all off-corridor improvements, as one single project. **The estimated cost to complete all projects listed in the implementation matrix as a single project is a little more than \$165 million.**
- **Option 2:** Implement recommendations as individual project pieces, or phase larger recommendations into smaller more manageable pieces as funding opportunities become available. **The estimated cost to complete each of the projects listed in the implementation matrix individually is \$218 million.**

All cost estimates are in 2015 dollars. A more detailed breakdown of line item costs is provided in the Appendix.

Option 1 Implementation Timeframe

In a project of this scope, all improvements inside the existing roadway right-of-way (ROW) would need to go through the traditional PennDOT planning design process. This process, which includes securing funding, design, and permitting, will take years to complete prior to the start of construction. While the wait to begin construction could be as long as 10 to 15 years, once begun, construction could be completed in three years. Projects outside of the ROW would be funded from various sources, detailed in the funding section, and the schedule would be dependent on funding, future development on and adjacent to the corridor, and partner coordination.

Option 2 Implementation Timeframe & Cost Differential

Option 2 allows for early implementation of high-priority and/or incremental improvements, which would provide results faster than Option 1. As funding is secured, interim improvements such as roadway re-striping can be started soon. The flexibility of this approach comes with a cost of both time and money. Mobilization and traffic rerouting cost increase significantly as additional project phases are added over time. Design consistency becomes an issue if multiple contractors complete work over many years. Under this option it is reasonable to assume that construction could begin within two to three years, but the road would be under some form of construction during the following 10 to 15 years as funding and other opportunities allow.

The cost of Option 2 is higher than Option 1 due to the duplication of costly project phases, such as mobilization and traffic control. The increased cost and effort would vary depending how projects are combined, but could easily increase implementation costs by more than 30 percent. If each project listed in the Implementation Matrix were to be completed as a stand-alone project, the total estimated implementation cost is \$218 million. It is reasonable to assume that some combination of project recommendations will occur, which puts the total estimated implementation cost somewhere between \$165 and \$218 million.

Cost Components

The cost estimates presented in the Implementation Matrix are bundled for each recommendation. They are meant to represent as complete a picture of possible as the total cost for a project. This includes all costs from project design to final construction. A description of what is included in each cost category and what assumptions were used to create them is listed below:

Pre-Construction (PC):

- **Design:** This includes preliminary engineering, final design, and all environmental and utility clearances required for a project. This cost is typically assumed to be 15 percent of a project's construction budget.
- **Right-of-Way Acquisition (ROW):** This includes the analysis and acquisition of any additional right-of-way required for a project. This would also include any construction easements needed for a project. This cost can be considerable and varies depending on the scope and location of individual projects. The cost will range from zero to 10 percent or more of a project's construction budget.

Inspections (IN): This includes all inspections conducted during and after construction. This cost is estimated to be 15 percent of a project's construction budget.

Construction (C):

- **Materials:** This includes all physical materials required for completion of the recommendation.
- **Mobilization:** This is the cost of setting up a work site, bringing equipment to the site, and project scheduling with a contractor.
- **Traffic Control and Maintenance:** A critical part of any plan recommendation, this is the cost associated with detouring, traffic, maintaining access to properties, and securing work areas during construction.
- **Erosion and Sediment Control:** Anytime the ground is broken, erosion and sediment control is needed.
- **Labor:** This includes the cost for personnel to complete all construction tasks

Contingency (CG): All cost estimates include a contingency of 30 percent in addition to the stated cost of all project phases. This covers pre-construction, construction, and inspections. This amount is based on recent project experience in Lancaster County and will ensure the projects will not be held up when an unforeseen variable increases costs.

Based on the above explanations, non-construction costs are listed as a percentage of a construction budget. For example, \$1 million construction budget

is assumed to require \$150,000 in design fees (15 percent of construction), up to \$100,000 for ROW acquisition (10 percent of construction), and \$150,000 for inspections (15 percent of construction) or \$1.4 million. The project contingency budget would be 30 percent of the \$1.4 million and would add \$420,000 to the project cost, resulting in a total estimated project cost of \$1.82 million.

For each recommendation the percentage of each of the three major project cost elements will vary depending on the specific type of work being estimated. For example, the process of simply restriping the roadway costs very little in pre-construction (since there is no ROW acquisition needed) in relation to the cost construction (which included mobilizing and traffic control.)

Maintenance: The two most important factors for maintenance are to identify who will be responsible and what frequency is required. The maintenance frequency refers to how often a project will need to be maintained and is the most critical part of a maintenance cost. For example, a stormwater basin might have seasonal or yearly maintenance requirements, while a repaving would require maintenance every few years. A maintenance plan is developed as a part of engineering design that specifies the frequency and responsibilities for each project.

Early Action Items

The Implementation Matrix identifies certain project recommendations as “early action Items.” These projects are deemed priority efforts for a variety of reasons, including funding availability, political and public support, and/or low estimated implementation cost. The recommendations selected in the plan are only a reflection of the current priorities are in no way binding.

Funding

The following is brief summary of various funding sources and the specific projects from the plan that could be funded using each. It is common for projects, particularly larger ones, to use multiple sources.

East Lampeter Township (ELT):

The most direct source of funding would be for East Lampeter Township to create a capital fund in its municipal budget for the purpose of completing portions of this plan. For many of the grant programs listed below, a local match from the Township is required to receive those funds. Match requirements vary, and can be a set percentage of the total project costs or entail pre-construction (design) costs, with the grant covering construction.

Relevant Plan Projects: *local match for all projects, complete funding of signage and wayfinding*

Business Improvement District (BID):

A Business Improvement District (BID) is a self-help tool, created by the Pennsylvania Legislature, allowing property owners within a self-defined area to organize and assess the cost of providing desired services for their area. When owners representing 60 percent of the frontage along public streets within the proposed district have petitioned to create a BID to provide services, then all owners within the district are required to contribute their proportionate share of the established fund.

The BID provides a mechanism for property owners to commit resources for a collective effort to provide services beyond those provided by the municipality. The proposed plan allows owners to contract for management and services similar to those found in shopping centers and office parks. A BID could be utilized on Lincoln Highway to provide capital funding for projects as well as ongoing maintenance costs for projects completed with other funding.

Relevant Plan Projects: *maintenance for all projects, landscape and streetscape amenities, signage and wayfinding, transit improvements, and bike network.*

Transportation Improvement Program (TIP):

The traditional path to fund a large roadway project in Pennsylvania is to get on the Transportation Improvement Program (TIP). The Lancaster County (TIP) is a four-year program that lists all regionally-significant and federally-funded transportation projects and services in Lancaster County. It is developed in cooperation with PennDOT and Red Rose Transit Authority, and is adopted by the Metropolitan Planning Organization (MPO), in this case, the County itself. It is updated every two years.

The TIP must be consistent with the first four years of the Commonwealth's Twelve-Year Program and is ultimately approved by the Pennsylvania State Transportation Commission, Federal Highway Administration, and Federal Transit Administration. Typically in Lancaster, the MPO then solicits problem / project suggestions from municipalities. These suggestions, along with projects identified by PennDOT's asset and safety management systems, the MPO's Congestion Management Process, local bridge prioritization system, Smart Growth Transportation Program, and Red Rose Transit Authority's priorities, are used to develop a draft program within the funding available.

Relevant Plan Projects: *all projects along Lincoln Highway*

Transportation Alternatives Program (TAP):

The Transportation Alternatives Program (TAP) funds projects that include pedestrian and bicycle facilities, improved access to public transportation, creation of safe routes to school, preservation of historic transportation structures, environmental mitigation trails that serve a transportation purpose, while promoting safety and mobility. The primary category of TAP funds relevant to this plan is bicycle and pedestrian facilities that make non-motorized transport safe, convenient, and appealing. Projects may include on-road and off-road trail facilities that serve to meet transportation need for pedestrians, bicyclists, and other non-motorized forms of transportation. These projects encourage healthful physical activity, keep air clean by decreasing reliance on fossil fuels, and enrich local economies with recreational assets.

The TAP is a reimbursement program funded on an 80/20 cost share basis. As in past Transportation Enhancement funding rounds, the applicant pays the costs for all pre-construction (design, environmental, right of way, utility) activities, with all construction activities paid from the federal share up to the amount approved for the project. The project sponsor is responsible for any costs exceeding the project application award amount. In cases of right-of-

way acquisition, the sponsor pays for all pre-acquisition activities, including development of a right-of-way plan. PennDOT will pay 100 percent of the right of way acquisition costs.

Relevant Plan Projects: *bike network, multi-use path, new sidewalks, crosswalk improvements*

Department of Conservation and Natural Resource (DCNR) Grants

The State of Pennsylvania Department of Cultural and Natural Resources (DCNR) funds trail projects. The DCNR trail grant program will fund the acquisition, planning, development, rehabilitation, or maintenance of designated routes for motorized and non-motorized recreational activities. This includes the purchase of equipment for trail construction or maintenance. A project that has at least 75 percent of its total project cost related to trail activities and/or trailside facilities will be classified as a “trail project.”

Most DCNR grants require a match either by cash and/or eligible non-cash value. Generally a 50 percent match is required.

Relevant Plan Projects: *bike network, multi-use path, new sidewalks*

Multimodal Discretionary Grants (TIGER):

TIGER (Transportation Investment Generating Economic Recovery) Grants provide a unique opportunity to invest in road, rail, transit, bicycle/pedestrian, port, and multi-modal projects that achieve critical national objectives. Since 2009, Congress has dedicated more than \$4.6 billion for seven rounds to fund competitive projects that have a significant impact on the nation, a region, or a metropolitan area. The TIGER program has awarded grants to 342 projects in all 50 States, the District of Columbia, and Puerto Rico.

TIGER’s competitive structure and broad eligibility allow project sponsors to develop multi-modal, multi-jurisdictional projects that may not be eligible for funding through traditional federal transportation programs. Due to its flexible nature, the funding process is very competitive and generally requires strong partnerships and regional support for projects. Given the importance of Lincoln Highway to the county and region, it is quite possible that the Township, with the support of Lancaster County and local businesses could prepare a compelling and competitive TIGER application.

Relevant Plan Projects: *all projects*

Multimodal Transportation Fund (MTF):

The Multimodal Transportation Fund provides grants to encourage economic development and ensure that a safe and reliable system of transportation is available to the residents of the Commonwealth.

The program is intended to provide financial assistance to municipalities, councils of governments, businesses, economic development organizations, public transportation agencies, rail/freight, and ports in order to improve transportation assets in order to enhance communities, pedestrian safety and transit revitalization.

Funds may be used for the development, rehabilitation and enhancement of transportation assets to existing communities, streetscape, lighting, sidewalk enhancement, pedestrian safety, connectivity of transportation assets and transit-oriented development. Grants are available for projects with a total cost of \$100,000 or more. The maximum grant award is \$3,000,000 for any project, though total project costs may be higher.

Relevant Plan Projects: all multi-modal projects

Additional Resources:

In addition to the partners and resources listed in the Implementation Matrix, East Lampeter Township should use the Lancaster County Planning Commission's Smart Growth Toolbox, which includes a variety of tools to implement smart growth principles consistent with plan recommendations. Many of the tools provided, such as model ordinances, programs and best management practices are directly related to the action items discussed in the Implementation Matrix.



IMPLEMENTATION MATRIX

TASKS

INVESTMENT NEEDED

SUGGESTED PARTNERS & FUNDING SOURCES

OPTION 1: CONSTRUCT ALL PLAN RECOMMENDATIONS AS A SINGLE PROJECT

This option includes all improvements recommended in the plan. Individual tasks are listed below.

Reconstruct Roadway, narrowing the cross section by six feet, and consolidating driveways where feasible

Relocate utilities as necessary

Upgrade drainage facilities

Construct a twelve-foot wide multi-use path on the south side of the street with a five-foot landscaped buffer

Construct a six-foot sidewalk on the north side of the street with a five-foot landscaped buffer

Plant street trees at 30-foot intervals where possible within utility and driveway constraints

Install perennial plantings in buffer areas where trees are not possible

Install standard and enhanced transit stop improvements

Upgrade crosswalks at every intersection

Install enhanced pedestrian facilities at Oakview Road and Route 896

Construct new signalized intersections in the Route 30 Bypass area and at Millstream Road

Develop a corridor brand and signage system

Install gateway and wayfinding signage

New roadway connections from Strasbourg Pike to Oakview Road, and Millstream to Bowman Roads

Off-corridor bike network including trail segments along Mill Creek and on-road sharrows

PC: \$22,663,108

IN: \$13,597,865

C: \$90,652,433

CG: \$38,074,022

Total: \$164,987,429

Partners:

East Lampeter,
PennDOT,
Lancaster County,
Red Rose Transit,
Property Owners

Funding:

ELT, BID, TIP, TAP,
DCNR, TIGER,
MTF

IMPLEMENTATION MATRIX

EARLY
ACTION

TASKS

INVESTMENT NEEDED

SUGGESTED PARTNERS
& FUNDING SOURCES

OPTION 2: CONSTRUCT EACH RECOMMENDATION AS A STAND-ALONE PROJECT

RE-STRIPE NEW ROADWAY SECTION

The conceptual design recommends a new typical cross section for Lincoln Highway between Strasburg Pike and Route 896. The new cross section takes width from the existing center turn lane and travel lanes to create improved sidewalks, a multi-use path, and landscape buffers between the sidewalk and trail. The first step in the new roadway section can be achieved by simply re-striping the roadway. The resulting cross section is typically six feet narrower than the existing and that space can be allocated to wider shoulders until future construction moves the curbs.

Re-stripe new lane configuration for the entire corridor including turn lanes and crosswalks. This includes the upgraded crosswalk materials at Oakview and Route 896. Shoulder widths will increase accordingly.

*PC: \$147,909
IN: \$147,909
C: \$986,061
CG: \$333,558
Total: \$1,666,443
*assume 0% for ROW

Partners:
East Lampeter,
PennDOT
Funding:
ELT, TAP, TIGER, MTF

CONSTRUCT NEW ROADWAY FROM OAKVIEW ROAD TO ROUTE 896

The construction of the new roadway can be done in conjunction with the re-striping, or it can be done at a later time as funding becomes available. The cross section assumes that 25% of the existing curbs will be maintained and the other 75% will be pushed toward the center of the roadway. Maintaining existing curbs where possible reduces construction costs by minimizing the need to move utilities and reconstruct drainage systems. Curb relocation permits construction of new sidewalks, the multi-use trail, and landscaped buffers for each.

Construct new roadway
Construct multi-use path and sidewalks
Install buffer area landscaping

Implementation option 1:

Reconstruct the entire roadway from Oakview to Rt. 896 as one project.

Implementation Option 2:

Construct the roadway in sections from one signalized intersection to the next. The average length between intersections is 1/4 of a mile or 1,320 feet. This option can be constructed more quickly than Option 1, but costs more.

Cost of Option 1:
*PC: \$11,129,017
IN: \$6,677,410
C: \$44,516,067
CG: \$18,696,748
Total: \$81,019,241
*assume 10% for ROW

Partners:
East Lampeter,
PennDOT,
Lancaster County,
Red Rose Transit,
Property Owners

Cost of Option 2:
*PC: \$1,483,869
IN: \$890,321
C: \$5,935,476
CG: \$2,492,900
Segment: \$10,802,565
Total: \$97,223,089
*assume 10% for ROW

Funding:
ELT, BID, TIP, TAP,
DCNR, TIGER,
MTF

IMPLEMENTATION MATRIX

EARLY
ACTION

TASKS

INVESTMENT NEEDED

SUGGESTED PARTNERS
& FUNDING SOURCES

CONSTRUCT NEW ROADWAY FROM STRASBURG PIKE TO OAKVIEW ROAD

Changes include reducing lane widths from 12 to 11 feet, reconstructing existing medians, installation of a new intersection to connect Route 462 to Route 30, installation of crosswalks on all four sides of the intersection of Route 462 and Strasburg Pike, and conversion of one existing westbound through lanes approaching Strasburg Pike into a dedicated left turn lane to move traffic more efficiently between the Bypass and Strasburg Pike.

Construct new intersection at Route 30 Bypass off-ramp with a signal and pedestrian crossings

Reconfigure lanes to maintain consistent through lanes in eastbound direction

Reconstruct median

Stripe dedicated left turn at Strasburg Pike

Install crosswalks at Route 462 and Strasburg Pike

*PC: \$3,481,697
IN: \$2,611,272
C: \$17,408,483
CG: \$7,050,436
Total: \$30,551,887
*assume 5% for ROW

Partners:

East Lampeter,
PennDOT,
Lancaster County,
Red Rose Transit,
Property Owners

Funding:

ELT, BID, TIP, TAP,
DCNR, TIGER,
MTF

UPGRADE THE OAKVIEW ROAD INTERSECTION

Changes include the removal of one of two dedicated left turn lanes on the westbound side to narrow the width of the roadway, calm traffic, and reduce pedestrian crossing time. Recognizing its role as a major pedestrian node, the conceptual design also includes high-quality landscaping and streetscape elements, including new transit shelters and street furniture, to establish an identity for this node. Distinct and high-quality crosswalks will make a statement about the area's navigability for all roadway users.

Reconfigure traffic lanes

Install pedestrian islands and upgraded crosswalk materials

Install landscaping and street furniture

*PC: \$1,085,469
IN: \$814,102
C: \$5,427,344
CG: \$2,198,074
Total: \$9,524,989
*assume 5% for ROW

Partners:

East Lampeter,
PennDOT,
Lancaster County,
Red Rose Transit,
Property Owners

Funding:

ELT, BID, TIP, TAP,
TIGER, MTF

IMPLEMENTATION MATRIX

EARLY ACTION	TASKS	INVESTMENT NEEDED	SUGGESTED PARTNERS & FUNDING SOURCES
DRIVEWAY CONSOLIDATION			
There are two large groups of parking lots near the middle of the corridor that are largely interconnected today. Today each individual property owner has its own curb cut onto the street. The conceptual design consolidates the existing driveways and ensures that one entrance/exit is at a signalized intersection.			
	Consolidate seven existing driveways on the north side of Lincoln Highway between Mill Creek Bridge and Tanger Drive into three right-in/right-out driveways, with a signalized exit at Tanger Drive	*PC: \$97,810 IN: \$97,810 C: \$652,067 CG: \$254,306 Total: \$1,101,993 *assume 0% for ROW	Partners: East Lampeter, PennDOT, Property Owners Funding: ELT, BID, TIGER
	Consolidating the eight existing driveways between Tanger Drive and the Ramada entrance into three, with the primary access located at the existing traffic light at the Ramada Inn across from Dutch Wonderland	*PC: \$97,810 IN: \$97,810 C: \$652,067 CG: \$254,306 Total: \$1,101,993 *assume 0% for ROW	Partners: East Lampeter, PennDOT, Property Owners Funding: ELT, BID, TIGER
UPGRADE THE MILLSTREAM ROAD INTERSECTION			
The conceptual design recommends installation of a traffic signal at the intersection of Lincoln Highway and Millstream Road. As an interim improvement, the Township should consider prohibiting left turns onto Lincoln Highway from Millstream Road.			
	Short-term Improvement: Prohibit left turns	Minimal	Partners: East Lampeter, PennDOT, Lancaster County, Red Rose Transit, Property Owners
	Medium term Improvements: Install traffic signal Install crosswalks Install raised median	*PC: \$647,708 IN: \$485,781 C: \$3,238,538 CG: \$1,311,608 Total: \$5,683,635 *assume 5% for ROW	Funding: ELT, BID, TIP, TAP, TIGER, MTF

IMPLEMENTATION MATRIX

EARLY ACTION	TASKS	INVESTMENT NEEDED	SUGGESTED PARTNERS & FUNDING SOURCES
UPGRADE THE ROUTE 896 INTERSECTION			
	The intersection of Lincoln Highway and Route 896 forms the eastern gateway to the Study Area. The conceptual design includes gateway treatments and pedestrian access improvements. Recommended pedestrian improvements include installation of unique crosswalk treatments and crossing islands at the northwest and southeast corners to help protect pedestrians and calm traffic.		
	Install pedestrian islands and upgraded crosswalk materials	*PC: \$1,085,469 IN: \$814,102 C: \$5,427,344 CG: <u>\$2,198,074</u> Total: \$9,524,989 *assume 5% for ROW	Partners: East Lampeter, PennDOT, Lancaster County, Red Rose Transit, Property Owners Funding: ELT, BID, TIP, TAP, TIGER, MTF
TRANSIT IMPROVEMENTS			
	Currently there are only two bus shelters on the corridor, and some stops lack even a paved surface. The conceptual design integrates bus stop locations into the pedestrian network to create well-marked, safe, attractive, and comfortable bus stops.		
	Standard Bus Stop Improvements Install pole mounted transit stop signs and concrete pads in the landscaped buffer area between the sidewalk or multi-use path and the curb at every stop	\$1,050 per stop	Partners: East Lampeter, PennDOT, Red Rose Transit, Property Owners Funding: ELT, BID, TAP, TIGER, MTF
	Enhanced Bus Stops Improvements In addition to the standard stop facilities, install bus shelters with benches on concrete pads behind the sidewalk or multi-use trail	\$30,000 per stop	Partners: East Lampeter, PennDOT, Red Rose Transit, Property Owners Funding: ELT, BID, TAP, TIGER, MTF

IMPLEMENTATION MATRIX

EARLY
ACTION

TASKS

INVESTMENT NEEDED

SUGGESTED PARTNERS
& FUNDING SOURCES

SINGAGE AND WAYFINDING PROGRAM

To support the roadway and multi-modal transportation improvements, enhance the appearance of the corridor, and enrich the visitor experience, the conceptual design includes a signage and wayfinding program.

Signage and Wayfinding System Development

\$167,400

Brand Development

\$41,250

Major Gateway Signage

Estimated Quantity: 2

Signs: \$550,000

Install: \$80,000

Total: \$630,000

Minor Gateway Signage

Estimated Quantity: 7

Signs: \$55,380

Install: \$16,000

Total: \$71,380

Pole Mounted Banners

Estimated Quantity: 60

Signs: \$210,000

Install: \$66,000

Total: \$276,000

Directional Signage

Estimated Quantity: 41

Signs: \$258,450

Install: \$49,200

Total: \$307,650

Pedestrian Signage

Estimated Quantity: 10

Signs: \$52,000

Install: \$12,000

Total: \$64,000

Partners:

East Lampeter,
PennDOT,
Lancaster County,
Red Rose Transit,
Property Owners

Funding:

ELT, BID, TAP,
DCNR, TIGER,
MTF

IMPLEMENTATION MATRIX

EARLY
ACTION

TASKS

INVESTMENT NEEDED

SUGGESTED PARTNERS
& FUNDING SOURCES

LANDSCAPING AND STREETScape ENHANCEMENTS

The conceptual design includes considerable landscaping to improve the pedestrian environment and corridor appearance and to test the application of green stormwater control measures in the corridor.

Install street trees

\$350 per tree

Install perennial plantings

\$42 per 5'x5'
section

Install roadside bioretention

\$32 per square foot

Install infrastructure/stormwater control

Wetland: \$8.50 per
square foot

Biorretention: \$32
per square foot

Install streetscape amenities

Cost for Each Item
Bench: \$1,400
Trash Bin: \$1,000

Partners:

East Lampeter,
PennDOT,
Lancaster County,
Property Owners

Funding:

ELT, BID, TAP,
DCNR, TIGER,
MTF

Partners:

East Lampeter,
PennDOT,
Lancaster County,
Property Owners

Funding:

ELT, BID

IMPLEMENTATION MATRIX

EARLY
ACTION

TASKS

INVESTMENT NEEDED

SUGGESTED PARTNERS
& FUNDING SOURCES

NEW CONNECTIONS FROM STRASBURG PIKE TO OAKVIEW ROAD

The conceptual design includes a new road connection south of Lincoln Highway that connects Oakview Road to Strasburg Pike. It may not be feasible to construct a full roadway, so an interim improvement would be a multi-use trail to offer pedestrians and cyclists and alternative to travelling on Lincoln Highway.

Mid-term Improvement:

Construct a multi-use path

*PC: \$625,354
IN: \$144,312
C: \$962,083
CG: \$519,525

Total: \$2,251,273

*assume 50% for ROW

Partners:

East Lampeter,
Lancaster County,
Property Owners

Funding:

ELT, BID, TAP,
DCNR, TIGER,
MTF

Long-term Improvement:

Construct a new one-half mile two-lane road with sidewalks and bike lanes between Strasburg Pike and Oakview Road

*PC: \$3,532,283
IN: \$815,142
C: \$5,434,282
CG: \$2,934,512

Total: \$12,716,220

*assume 50% for ROW

Partners:

East Lampeter,
Lancaster County,
Property Owners

Funding:

ELT, BID, TAP,
DCNR, TIGER,
MTF

NEW ROAD CONNECTION BETWEEN MILLSTREAM AND BOWMAN ROADS

The conceptual design includes a new east-west road and bikeway connection between Millstream and Bowman Roads. This road and supporting north/south connections were added to the Township's Official Map during the preparation of the Streetscape Plan. The new connections are proposed to be two-lane roads with bike lanes and sidewalks. The connecting roads would be two lanes and be integrated into internal property circulation where possible.

Construct one-mile of two-lane roadway with bike lanes and sidewalks.

*PC: \$6,383,123
IN: \$1,473,028
C: \$9,820,189
CG: \$5,302,902

Total: \$22,979,242

*assume 50% for ROW

Partners:

East Lampeter,
Lancaster County,
Property Owners

Funding:

ELT, BID, TAP,
DCNR, TIGER,
MTF

IMPLEMENTATION MATRIX

EARLY ACTION	TASKS	INVESTMENT NEEDED	SUGGESTED PARTNERS & FUNDING SOURCES
NEW ROAD CONNECTION BETWEEN MILLSTREAM AND BOWMAN ROADS (CONTINUED)			
	Construct three new road connections, each approximately one-quarter mile long between Lincoln Highway and the new connector road	*PC: \$3,532,283 IN: \$815,142 C: \$5,434,282 CG: \$2,934,512 Total: \$12,716,220 *assume 50% for ROW	Partners: East Lampeter, PennDOT, Lancaster County, Property Owners Funding: ELT, BID, TAP, DCNR, TIGER, MTF
BIKE NETWORK			
The Lincoln Highway multi-use path is supplemented by a set of on- and off-road connections to serve key locations and provide more scenic, less congested riding options.			
	Construct on-road connections using bike lanes where right-of-way permits and “sharrows” elsewhere	*PC: \$36,977 IN: \$36,977 C: \$246,515 CG: \$96,141 Total: \$416,611 *assume 0% for ROW	Partners: East Lampeter, PennDOT, Lancaster County, Property Owners Funding: ELT, BID, TAP, DCNR, TIGER, MTF
	Construct 12-foot wide off-road trail connections *Cost estimate includes 3 miles of paved trail	*PC: \$3,108,622 IN: \$717,374 C: \$4,782,495 CG: \$2,582,547 Total: \$11,191,038 *assume 50% for ROW	Partners: East Lampeter, Lancaster County, Property Owners Funding: ELT, BID, TAP, DCNR, TIGER, MTF

IMPLEMENTATION MATRIX

EARLY
ACTION

TASKS

INVESTMENT NEEDED

SUGGESTED PARTNERS
& FUNDING SOURCES

REGULATORY RECOMMENDATIONS

To support the roadway and multi-modal transportation improvements, enhance the appearance of the corridor, and enrich the visitor experience, the Township should implement gateway and wayfinding signage program, which would be supplemented by the landscaping recommendations described below.

Update Zoning Ordinance

Minimal

Partners:
East Lampeter,
Lancaster County

Funding:
ELT

Revise Subdivision and Land Development Ordinance

Minimal

Partners:
East Lampeter,
Lancaster County

Funding:
ELT

Revise Official Map

Minimal

Partners:
East Lampeter,
Lancaster County

Funding:
ELT





Appendix A: Line Item Cost Spreadsheet



Line item costs and quantities for the corridor.

Item Group	Item Number	Unit of Measure	Quantity	Unit Price	Item Total
Earthwork Items	0201-0001	Lump Sum CLEARING AND GRUBBING	1	\$100,000.00	\$100,000.00
	0203-000X	Cubic Yard General Excavation (Class 1, 2, & 4)	25000	\$20.00	\$500,000.00
Pavement Items	0309-0632	Square Yard SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BASE COURSE, PG 64-22, 10 TO < 30 MILLION ESALS, 25.0 MM MIX, 9" DEPTH	159621.6	\$60.00	\$9,577,295.53
	0350-0106	Square Yard SUBBASE 6" DEPTH (NO. 2A)	159621.6	\$15.00	\$2,394,323.88
	0360-0001	Square Yard ASPHALT TREATED PERMEABLE BASE COURSE, 4" DEPTH	159621.6	\$20.00	\$3,192,431.84
	0409-0641	Square Yard SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING COURSE, PG 64-22, 10 TO < 30 MILLION ESALS, 12.5 MM MIX, 1 1/2" DEPTH, SRL-E	159621.6	\$14.00	\$2,234,702.29
	0409-6620	Square Yard SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BINDER COURSE, PG 64-22, 10 TO < 30 MILLION ESALS, 25.0 MM MIX, 4" DEPTH	159621.6	\$70.00	\$11,173,511.45
	0460-0001	Square Yard BITUMINOUS TACK COAT	159621.6	\$1.00	\$159,621.59
Drainage Items	0601-7014	Linear Foot 18" REINFORCED CONCRETE PIPE, TYPE A, 15' - 2' FILL, 100 YEAR DESIGN LIFE	8100	\$116.00	\$939,600.00
	0601-7030	Linear Foot 24" REINFORCED CONCRETE PIPE, TYPE A, 25' - 1.5' FILL, 100 YEAR DESIGN LIFE	4050	\$210.00	\$850,500.00
	0601-7038	Linear Foot 27" REINFORCED CONCRETE PIPE, TYPE A, 25' - 1.5' FILL, 100 YEAR DESIGN LIFE	1620	\$220.00	\$356,400.00
	0601-8063	Linear Foot 36" REINFORCED CONCRETE PIPE, TYPE A, 50' - 1.5' FILL, 100 YEAR DESIGN LIFE	2430	\$530.00	\$1,287,900.00
	0605-2401	Set MANHOLE FRAME AND COVER	19	\$920.00	\$17,480.00
	0605-2620	Each TYPE D-W ENDWALL	10	\$8,925.00	\$89,250.00
	0605-2710	Set TYPE C CONCRETE TOP UNIT AND GRATE	182	\$1,370.00	\$249,340.00
	0605-2850	Each STANDARD INLET BOX, HEIGHT < /= 10'	201	\$2,750.00	\$552,750.00
	0610-7002	Linear Foot 6" PAVEMENT BASE DRAIN	13400	\$15.00	\$201,000.00
Project Initialization Items	0608-0001	Lump Sum MOBILIZATION	1	\$500,000.00	\$500,000.00
	0609-0002	Lump Sum INSPECTOR'S FIELD OFFICE AND INSPECTION FACILITIES, TYPE A	1	\$100,000.00	\$100,000.00
	0609-0009	Lump Sum EQUIPMENT PACKAGE	1	\$100,000.00	\$100,000.00
	0609-0011	Lump Sum FIELD LABORATORY	1	\$60,000.00	\$60,000.00
	0686-0010	Lump Sum CONSTRUCTION SURVEYING, TYPE A	1	\$1,000,000.00	\$1,000,000.00
	0689-0002	Lump Sum NETWORK SCHEDULE	1	\$25,000.00	\$25,000.00

Item Group	Item Number	Unit of Measure	Quantity	Unit Price	Item Total
Curb, Barrier Median, Sidewalk and Fence Items	0619-0610	Each PERMANENT IMPACT ATTENUATING DEVICE, TYPE V (STANDARD), TEST LEVEL 3	2	\$15,000.00	\$30,000.00
	0620-0014	Each THRIE-BREAM TO PA BRIDGE BARRIER TRANSITION	8	\$85.00	\$680.00
	0620-0400	Each TERMINAL SECTION, SINGLE	6	\$115.00	\$690.00
	0620-0862	Each TYPE 2-S POST ANCHORAGE	10	\$800.00	\$8,000.00
	0620-1075	Linear Foot TYPE 2-S GUIDE RAIL	7240	\$79.00	\$571,960.00
	0623-0052	Linear Foot SINGLE FACE CONCRETE BARRIER	1710	\$75.00	\$128,250.00
	0623-0122	Each END TRANSITION, SINGLE FACE CONCRETE BARRIER	2	\$2,000.00	\$4,000.00
	0630-0001	Linear Foot PLAIN CEMENT CONCRETE CURB	53585	\$25.00	\$1,339,625.00
	0676-0001	Square Yard CEMENT CONCRETE SIDEWALK	11772	\$65.00	\$765,180.00
	0676-0001	Square Yard CEMENT CONCRETE MEDIAN (Use same cost as sidewalk)	7768	\$65.00	\$504,920.00
	0676-0001	Square Yard CEMENT CONCRETE SIDEWALK - PEDESTRIAN PATH	17072	\$65.00	\$1,109,680.00
	0695-0002	Square Foot DETECTABLE WARNING SURFACE, CAST IRON	2070	\$57.00	\$117,990.00
	9515-0001	Linear Foot PAVEMENT SAWCUT	3255	\$5.50	\$17,902.50
	9600-0032	Each STANDARD PRESSURE FIRE HYDRANT WITH CENTER COMPRESSION LOCK	54	\$7,000.00	\$378,000.00
	9623-0122	Each BARRIER TO CURB TRANSITION	4	\$5,000.00	\$20,000.00
	9624-0001	Linear Foot RIGHT-OF-WAY FENCE, TYPE 1 VINYL COATED	2000	\$30.00	\$60,000.00
	9676-0003	Square Foot DuraTherm Thermoplastic Crosswalks	8174	\$16.00	\$130,784.00
	9694-0002	Each DESIGN OF CONCRETE CURB RAMPS [by RAMP]	207	\$1,500.00	\$310,500.00

Item Group	Item Number	Unit of Measure	Quantity	Unit Price	Item Total
Pavement Markings and Delineators	0937-0104	Each GUIDE RAIL MOUNTED DELINEATOR TYPE B, (Y/B)	104	\$5.00	\$520.00
	0937-0106	Each GUIDE RAIL MOUNTED DELINEATOR TYPE B, (W/B)	78	\$5.00	\$390.00
	0937-0201	Each BARRIER MOUNTED DELINEATOR, SIDE-MOUNT TYPE R, (W/B)	43	\$13.50	\$580.50
	0960-0001	Linear Foot 4" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	29930	\$0.65	\$19,454.50
	0960-0002	Linear Foot 4" YELLOW HOT THERMOPLASTIC PAVEMENT MARKINGS	29963	\$0.75	\$22,472.25
	0960-0005	Linear Foot 6" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	31819	\$1.40	\$44,546.60
	0960-0008	Linear Foot 8" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	1728	\$1.75	\$3,024.00
	0960-0021	Linear Foot 24" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	2146	\$5.00	\$10,730.00
	0960-0101	Each WHITE HOT THERMOPLASTIC LEGEND, "ONLY", 8' - 0"	86	\$176.25	\$15,157.50
	0960-0220	Each WHITE HOT THERMOPLASTIC LEGEND, "STRAIGHT ARROW", 12' - 0" X 1' - 8"	8	\$134.50	\$1,076.00
	0960-0222	Each WHITE HOT THERMOPLASTIC LEGEND, "RIGHT ARROW", 12' - 0" X 3' - 0"	27	\$125.75	\$3,395.25
	0960-0224	Each WHITE HOT THERMOPLASTIC LEGEND, "LEFT ARROW", 12' - 0" X 3' - 0"	36	\$133.25	\$4,797.00
	0960-0228	Each WHITE HOT THERMOPLASTIC LEGEND, "THRU AND LEFT ARROW", 20' - 0" X 3' - 7"	4	\$240.00	\$960.00
	0960-0232	Each WHITE HOT THERMOPLASTIC LEGEND, "LANE REDUCTION TRANSITION ARROW - RIGHT LANE", 18' - 0" X 5' - 6"	5	\$130.00	\$650.00
	0966-0011	Each SNOWPLOWABLE RAISED PAVEMENT MARKER TWO WAY HOLDER WITH REFLECTOR (Y/Y)	60	\$24.25	\$1,455.00
	0966-0017	Each SNOWPLOWABLE RAISED PAVEMENT MARKER TWO WAY HOLDER WITH REFLECTOR (Y/B)	168	\$24.75	\$4,158.00
	0966-0018	Each SNOWPLOWABLE RAISED PAVEMENT MARKER TWO WAY HOLDER WITH REFLECTOR (W/B)	535	\$25.75	\$13,776.25
	0966-0101	Each SNOWPLOWABLE RAISED PAVEMENT MARKER, TWO WAY BRIDGE DECK HOLDER WITH REFLECTOR (Y/Y)	6	\$27.00	\$162.00
	0966-0104	Each SNOWPLOWABLE RAISED PAVEMENT MARKER, TWO WAY BRIDGE DECK HOLDER WITH REFLECTOR (W/B)	8	\$27.75	\$222.00

Item Group	Item Number	Unit of Measure	Quantity	Unit Price	Item Total
MPT Items	0901-0001	Lump Sum MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION	1	\$4,310,000.00	\$4,310,000.00
	9901-2001	Hour CLASS 1 TOW TRUCK - STANDBY	10000	\$75.00	\$750,000.00
	9901-2002	Call CLASS 1 TOW TRUCK - ON CALL	250	\$80.00	\$20,000.00
	9901-2003	Call CLASS 2 TOW TRUCK - ON CALL	250	\$150.00	\$37,500.00
	9999-9980	Dollar INCIDENT MANAGEMENT PLAN	100000	\$1.00	\$100,000.00
E&S	--	Lump Sum Erosion and Sediment Pollution Control	1	\$2,880,000.00	\$2,880,000.00
Stormwater Management and Landscaping Items	9991-0193	Hour SELECTIVE TREE REMOVAL AND TRIMMING, MODIFIED	80	\$350.00	\$28,000.00
	--	Each 2.5" Street Trees	850	\$375.00	\$318,750.00
	--	Linear Foot 5' Tree Lawn Restoration	29000	\$2.50	\$72,500.00
	--	Linear Foot 5' Tree Lawn with Perennial Plantings	3200	\$42.00	\$134,400.00
	--	Linear Foot Retaining wall	1000	\$100.00	\$100,000.00
	--	Square Foot Green Infrastructure SMP -Wetland	44100	\$8.50	\$374,850.00
	--	Square Foot Green Infrastructure SMP - Bioretention	81800	\$32.00	\$2,617,600.00
	--	Linear Foot Wood Fence/Railing	5700	\$35.00	\$199,500.00
Signal Items	--	Each EXISTING TRAFFIC SIGNAL TIMING CHANGES	2	\$500.00	\$1,000.00
	--	LF SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	200	\$3.00	\$600.00
	--	Each VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	4	\$900.00	\$3,600.00
	--	LS NEW VEHICULAR TRAFFIC SIGNAL - US 30 EB OFF-RAMP AND LINCOLN	1	\$200,000.00	\$200,000.00
	--	LS NEW VEHICULAR TRAFFIC SIGNAL - LINCOLN HIGHWAY AND MILLSTREAM	1	\$200,000.00	\$200,000.00
Utility	--	Each Relocate Utility pole - every 150'	200	\$10,000.00	\$2,000,000.00
Streetscape	--	Each Pedestrian Light Pole	80	\$4,200.00	\$336,000.00
	--	Each Bus Shelter	16	\$10,000.00	\$160,000.00
	--	Each Bench	36	\$1,400.00	\$50,400.00
	--	Each Trash Receptacle	24	\$1,000.00	\$24,000.00



Appendix B: Manufacturer's Details



The following pages contain sample cut-sheets from manufacturers that are meant to illustrate the intended style and type of streetscape elements. The planning process did not intend to pick specific items for installation, but is including sample cut-sheets that are reflective of the general feedback we have received from stakeholders and the project's Advisory Committee.

As suggested in the plan, a branding exercise in conjunction with a wayfinding plan for the corridor will help stakeholders, Lancaster County, and East Lampeter Township make more specific decision regarding color, style, and size of the streetscape elements.

As part of any project, specifications will be written in final design that are based on the recommendations contained in this plan. Those specifications are also written to allow for up to three manufacturers to provide a product. Any less than three, and it becomes a proprietary item, which requires a more difficult PennDOT process to get the items approved. Wherever possible, the plan's recommendations are formatted a way to allow for items that can be supplied by at least three manufacturers.

All items shown match are consistent with the line item costs used to generate estimates for the plan's recommendations.

DEVELOPER SERIES

Residential



Shapes Available



1432 Maple Ave
Canton, OH 44705
Ph: 330-456-7653
Fax: 330-456-0628

e-mail:
sales@unionmetal.com

website:
www.unionmetal.com

Ornamental Pole Top & Bases

Pelco's decorative pole top and bases help make the traffic signal aesthetically pleasing to the eye. Available for various pole diameters and multiple finish options.



Ornamental Pole Top, Cast Alum, 5-1/4" - 24-1/4" Diameter Pole (36" in Height)

PB-5315	-	Cap Size 5.25 thru 24.25	-	Trim Color T__=Paint	-	Coating PNC=Process No Color P__=Paint
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Note:
Cap Size available in 1" increments.



Ornamental Pole Base, 4-Piece Cast Alum, 8" - 12" Diameter Pole (27" Footprint)

PB-5354	-	Pole Diameter 8.00 thru 12.00	-	Trim Color T__=Paint	-	Coating PNC=Process No Color P__=Paint
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Ornamental Pole Base, 4-Piece Cast Alum, 12" - 16" Diameter Pole (30" Footprint)

PB-5355	-	Pole Diameter 12.00 thru 16.00	-	Trim Color T__=Paint	-	Coating PNC=Process No Color P__=Paint
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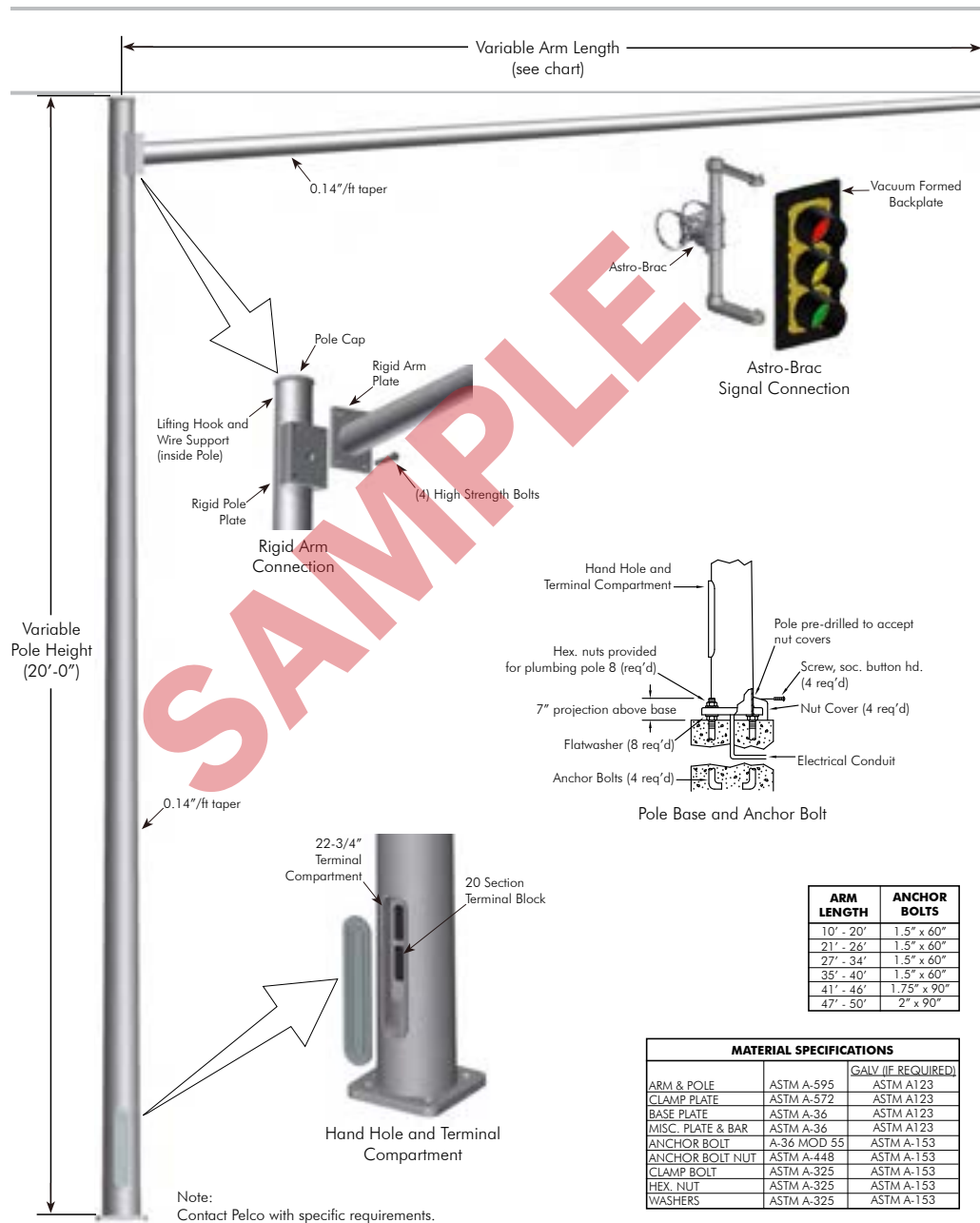
Ornamental Pole Base, 4-Piece Cast Alum, 18" - 26" Diameter Pole (40" Footprint)

PB-5381	-	Pole Diameter 18.00 thru 26.00	-	Coating PNC=Process No Color P__=Paint
---------	---	--	---	--

Note: 1. All assemblies are supplied standard with stainless hardware.
2. Contact Pelco for a complete Ornamental product catalog.
3. See Reference Section for available paint colors.

Typical Mast Arm & Pole

Pelco fabricates a variety of steel and aluminum mast arms and poles, ornamental or custom structures. Pelco offers numerous finishes from hot dip galvanized to powder coating. The ITC access compartment makes wiring and maintenance trouble free.



Guide Signs

Ordering Street Name Signs:

Step 1. Specify street name

Step 2. Specify size & style

Sizes:

- 6" Tall x Variable Width (4" Letters)
- 9" Tall x Variable Width (6" Letters)
- 12" Tall x Variable Width (8" Letters)
- 18" Tall x Variable Width (12" Letters)

M.U.T.C.D. Guidance

Roadway Conditions	Letter Height
Two-lane road with speed limit of 25 MPH or less	4" Letters
Speed limit 40 MPH or less	6" Letters
Speed limit 40 over MPH	8" Letters
Overhead Mounted	12" Letters

Other sizes available upon request.

Step 3. Specify color and reflective finish

Standard Colors:



Custom Colors Available

Available Reflective Finishes:

Finish	Nighttime Visibility	ASTM 4956-D Specification
Engineer Grade	Fair	Type I
High Intensity Prismatic	Good	Type III / IV
Ultra Prismatic Grade	Excellent	Type IX / XI

Step 4. Specify flat or extruded aluminum



Street names should be submitted in type-written format to reduce the likelihood of errors.

Additional Options:

Add a Logo:



Common Fonts:

FHWA Type B (Default)
FHWA Type C
Clearview®

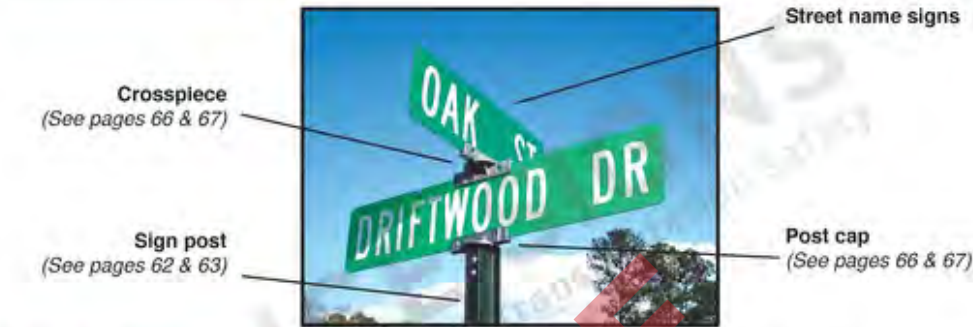
call us: 888-728-7665
fax us: 877-546-6165

web: www.RiceSigns.com
email: sales@RiceSigns.com



Street Name Signs:

See page 75 for street name sign blanks without copy.



Our most popular street name styles are listed to the left. Other layouts are available upon request. High Intensity Prismatic and Ultra Prismatic Grade finishes meet minimum reflectivity requirements. We can add logos, borders, and block numbers upon request. Custom background colors are also available.

Visit www.ricesigns.com for videos and additional product information.



Street name signs styles available with or without a border. Prefix/Suffix can be aligned to top, middle, or bottom. Block numbers may be added to street name sign upon request.

Overhead Street Name Signs:



Overhead street name sign shown to left with a custom background color and 12" high intensity prismatic letters.

Call for more information.

call us: **888-728-7665**
fax us: 877-546-6165

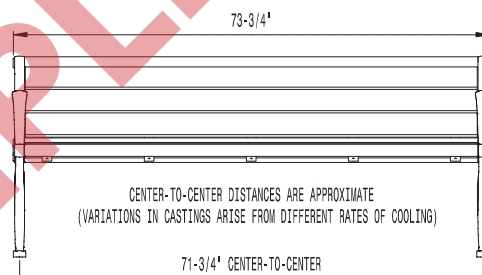
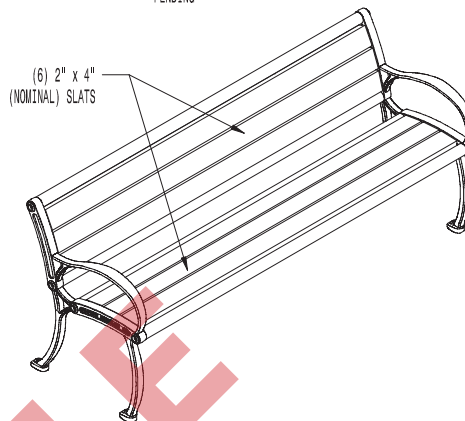
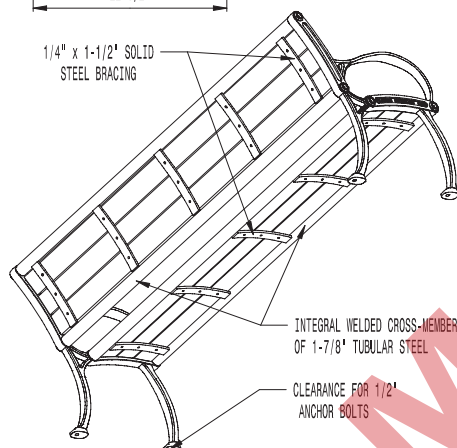
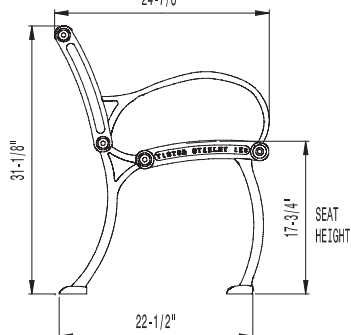
web: www.RiceSigns.com
email: sales@RiceSigns.com



P.O. DRAWER 330 - DUNKIRK, MD 20754 USA
 TOLL FREE: (800) 368-2573 (USA & CANADA)
 TEL (301) 855-8300 - FAX (410) 257-7579
 WEB SITE: HTTP://WWW.VICTORSTANLEY.COM

THIS PRODUCT IS COVERED BY ONE OR MORE OF THE FOLLOWING
 U.S. PATENTS D523,263; D526,805 S; D530,535 S; D532,620 S
 EC REG. DES. NO. 000503297-0001; OTHER WORLDWIDE PATENTS
 PENDING

* ALL DIMENSIONS ARE IN INCHES *

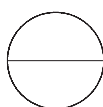


AVAILABLE OPTIONS:
 POWDER COATING
 12 STANDARD COLORS, CUSTOM COLORS (INCLUDING THE RAL RANGE)
 SLAT TYPES
 WOODS: PHILIPPINE MAHOGANY & IPE
 SEE GREENSITES SERIES™ FOR ALTERNATIVE SLAT OPTIONS
 INTERMEDIATE & CENTER ARMRESTS
 4', 6', & 8' AVAILABLE WITH OPTIONAL ARMRESTS

LENGTHS
 STANDARD 4'
 STANDARD 6' LENGTH SHOWN
 STANDARD 8'

NOTES:

1. DRAWINGS NOT TO SCALE. DO NOT SCALE DRAWINGS.
2. ALL FABRICATED METAL COMPONENTS ARE STEEL SHOTBLASTED, ETCHED, PHOSPHATIZED, PREHEATED, AND ELECTROSTATICALLY POWDER-COATED WITH T.G.I.C. POLYESTER POWDER COATINGS. PRODUCTS ARE FULLY CLEANED AND PRETREATED, PREHEATED AND COATED WHILE HOT TO FILL CREVICES AND BUILD COATING FILM. COATED PARTS ARE THEN FULLY CURED TO COATING MANUFACTURER'S SPECIFICATIONS. THE THICKNESS OF THE RESULTING FINISH AVERAGES 8-10 MILS (200-250 MICRONS).
3. IT IS NOT RECOMMENDED TO LOCATE ANCHOR BOLTS UNTIL BENCH IS IN PLACE. THIS VICTOR STANLEY, INC. PRODUCT MUST BE PERMANENTLY AFFIXED TO THE GROUND. CONSULT YOUR LOCAL CODES FOR REGULATIONS.
4. ANCHOR BOLTS NOT PROVIDED BY VICTOR STANLEY, INC.
5. FOR HIGH SALT ABUSIVE CLIMATES, HOT DIP GALVANIZING BEFORE POWDER COATING IS AVAILABLE. SEE WRITTEN SPECIFICATIONS FOR DETAILS.
6. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE. CONTACT MANUFACTURER FOR DETAILS.
7. THIS PRODUCT IS SHIPPED PARTIALLY UNASSEMBLED.



FM-324
 FRAMERS MODERN™ SERIES

STANDARD BENCH WITH DUCTILE IRON END FRAMES
 SHOWN: STANDARD 6-FOOT LENGTH

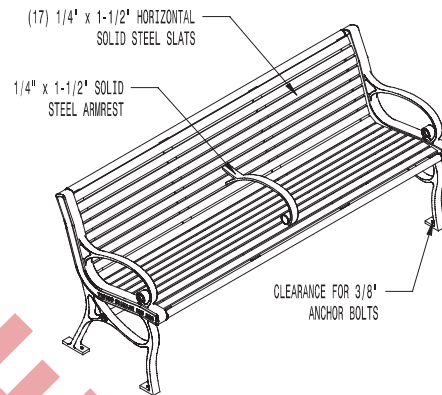
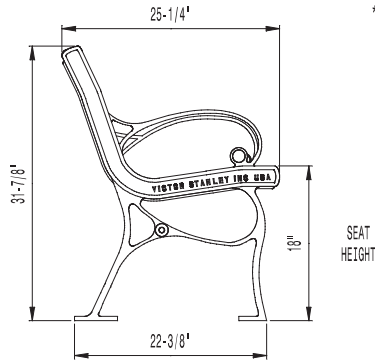


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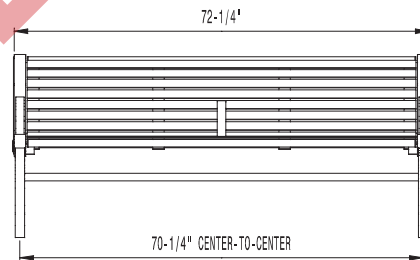
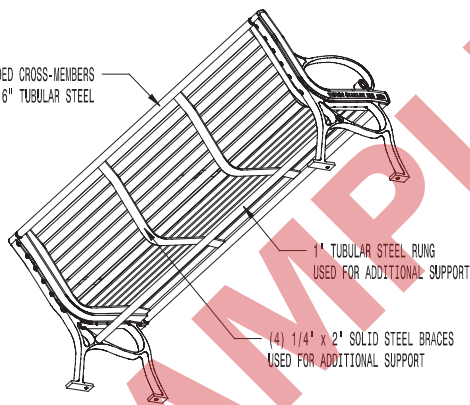
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* ALL DIMENSIONS ARE IN INCHES *



INTEGRAL WELDED CROSS-MEMBERS
OF 1-5/16" TUBULAR STEEL



CENTER-TO-CENTER DISTANCES ARE APPROXIMATE
(VARIATIONS IN CASTINGS ARISE FROM DIFFERENT RATES OF COOLING)

AVAILABLE OPTIONS:

POWDER COATING

10 STANDARD COLORS, 2 OPTIONAL METALLIC COLORS,
CUSTOM COLORS (INCLUDING THE RAL RANGE)

INTERMEDIATE AND CENTER ARMRESTS

4' & 6' OPTIONAL ARMRESTS (AS SHOWN)

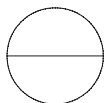
LENGTHS

STANDARD 4'

STANDARD 6' LENGTH SHOWN

NOTES:

1. DUCTILE IRON CASTINGS COME WITH A TEN YEAR WARRANTY AGAINST BREAKAGE.
2. DRAWINGS NOT TO SCALE, DO NOT SCALE DRAWINGS.
3. ALL FABRICATED METAL COMPONENTS ARE STEEL SHOTBLASTED, ETCHED, PHOSPHATIZED, PREHEATED, AND ELECTROSTATICALLY POWDER-COATED WITH T.G.I.C. POLYESTER POWDER COATINGS. PRODUCTS ARE FULLY CLEANED AND PRETREATED, PREHEATED AND COATED WHILE HOT TO FILL CREVICES AND BUILD COATING FILM. COATED PARTS ARE THEN FULLY CURED TO COATING MANUFACTURER'S SPECIFICATIONS. THE THICKNESS OF THE RESULTING FINISH AVERAGES 8-10 MILS (200-250 MICRONS).
4. IT IS NOT RECOMMENDED TO LOCATE ANCHOR BOLTS UNTIL BENCH IS IN PLACE. THIS VICTOR STANLEY, INC. PRODUCT MUST BE PERMANENTLY AFFIXED TO THE GROUND. CONSULT YOUR LOCAL CODES FOR REGULATIONS.
5. ANCHOR BOLTS NOT PROVIDED BY VICTOR STANLEY, INC.
6. FOR HIGH SALT ABUSIVE CLIMATES, HOT DIP GALVANIZING BEFORE POWDER COATING IS AVAILABLE. SEE WRITTEN SPECIFICATIONS FOR DETAILS.
7. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE. CONTACT MANUFACTURER FOR DETAILS.
8. THIS PRODUCT IS SHIPPED PARTIALLY UNASSEMBLED.



CBF-138

CLASSIC SERIES

STANDARD HORIZONTAL STEEL SLAT BENCH WITH DUCTILE IRON END FRAMES

SHOWN: STANDARD 6-FOOT LENGTH

OPTIONAL INTERMEDIATE ARMREST

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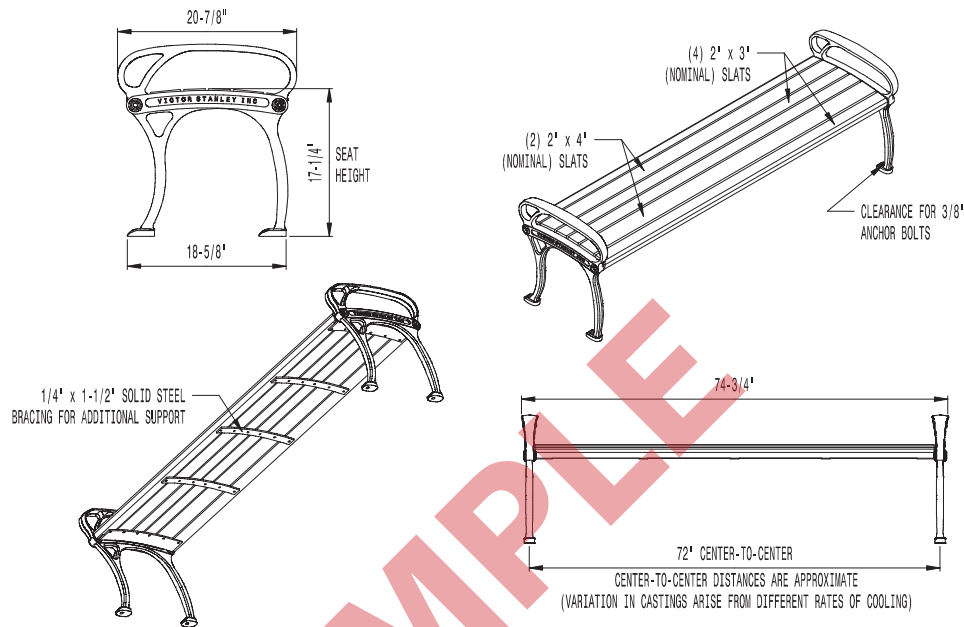
REV. 4/26/11 DRAWN R.G.O. 2011-247



P.O. DRAWER 330 - DUNKIRK, MD 20754 USA
TOLL FREE: (800) 368-2573 (USA & CANADA)
TEL (301) 855-8300 - FAX (410) 257-7579
WEB SITE: HTTP://WWW.VICTORSTANLEY.COM

* ALL DIMENSIONS ARE IN INCHES *

THIS PRODUCT IS COVERED BY THE FOLLOWING
U.S. PATENTS D579,277 S; D579,685 S; D585,220 S
CANADIAN 126323

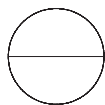


AVAILABLE OPTIONS:
POWDER COATING
12 STANDARD COLORS, CUSTOM COLORS (INCLUDING THE RAL RANGE)
SLAT TYPES
WOODS: PHILIPPINE MAHOGANY AND IPE
2nd SITE SYSTEMS REINFORCED RECYCLED PLASTIC SLATS
COLORS: GRAY, MAPLE, CHERRY, AND WALNUT
(NOT AVAILABLE IN 8' LENGTH)

INTERMEDIATE & CENTER ARMRESTS
4', 6', 8', & 12' AVAILABLE WITH OPTIONAL ARMRESTS
LENGTHS
STANDARD 4'
STANDARD 6' LENGTH SHOWN
STANDARD 8'
STANDARD 12' WITH CAST CENTER LEG
SECURITY
CUSTOM SKATEBOARD GUARD

NOTES:

1. DUCTILE IRON CASTINGS COME WITH A TEN YEAR WARRANTY AGAINST BREAKAGE.
2. DRAWINGS NOT TO SCALE. DO NOT SCALE DRAWINGS.
3. ALL FABRICATED METAL COMPONENTS ARE STEEL SHOTBLASTED, ETCHED, PHOSPHATIZED, PREHEATED, AND ELECTROSTATICALLY POWDER-COATED WITH T.G.I.C. POLYESTER POWDER COATINGS. PRODUCTS ARE FULLY CLEANED AND PRETREATED, PREHEATED AND COATED WHILE HOT TO FILL CREVICES AND BUILD COATING FILM. COATED PARTS ARE THEN FULLY CURED TO COATING MANUFACTURER'S SPECIFICATIONS. THE THICKNESS OF THE RESULTING FINISH AVERAGES 8-10 MILS (200-250 MICRONS).
4. IT IS NOT RECOMMENDED TO LOCATE ANCHOR BOLTS UNTIL BENCH IS IN PLACE. THIS VICTOR STANLEY, INC. PRODUCT MUST BE PERMANENTLY AFFIXED TO THE GROUND. CONSULT YOUR LOCAL CODES FOR REGULATIONS.
5. ANCHOR BOLTS NOT PROVIDED BY VICTOR STANLEY, INC.
6. FOR HIGH SALT ABUSIVE CLIMATES, HOT DIP GALVANIZING BEFORE POWDER COATING IS AVAILABLE. SEE WRITTEN SPECIFICATIONS FOR DETAILS.
7. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE. CONTACT MANUFACTURER FOR DETAILS.
8. THIS PRODUCT IS SHIPPED PARTIALLY UNASSEMBLED.



FB-214

FRAMERS MODERN™ SERIES

STANDARD BENCH WITH DUCTILE IRON END FRAMES
SHOWN: STANDARD 6-FOOT LENGTH

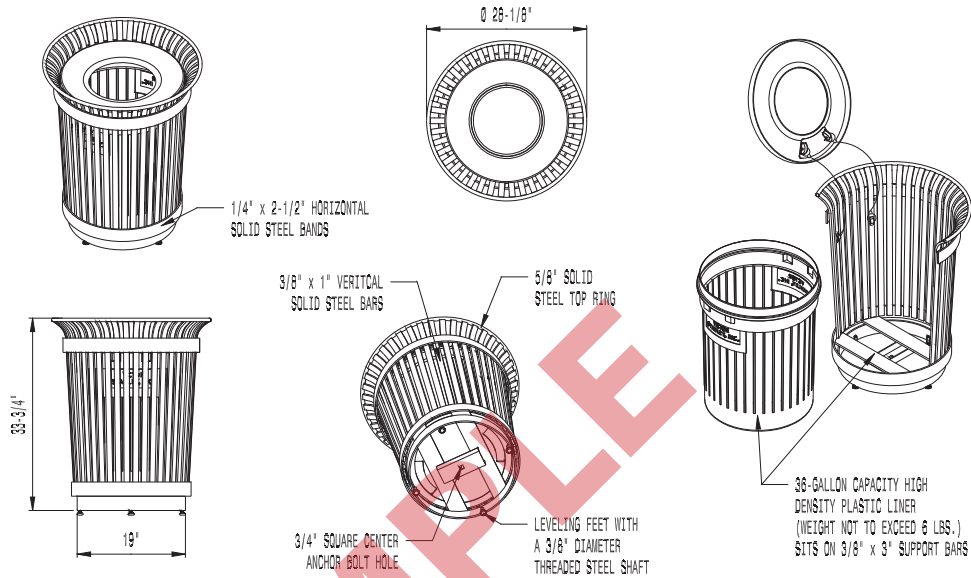
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REV. 10/22/10 DRAWN R.J.C. 2010-502



VICTOR STANLEY, INC.®
-Manufacturers of Quality Site Furnishings since 1962-

* ALL DIMENSIONS ARE IN INCHES *

P.O. DRAWER 930 - DUNKIRK, MD 20754 USA
TOLL FREE: (800) 968-2579 (USA & CANADA)
TEL (301) 955-8300 - FAX (410) 257-7579
WEB SITE: HTTP://WWW.VICTORSTANLEY.COM



AVAILABLE OPTIONS:
POWDER COATING

10 STANDARD COLORS, 2 OPTIONAL METALLIC COLORS,
CUSTOM COLORS (INCLUDING THE RAL RANGE)

CUSTOM PLAQUES & DECALS

AVAILABLE WITH STEEL PLAQUES IN VARIOUS SIZES AND PRESSURE SENSITIVE
VINYL OUTDOOR DECALS.

LIDS

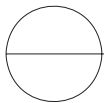
STANDARD TAPERED FORMED LID (AS SHOWN), AVAILABLE WITH OPTIONAL DOME LID, DOMED LID WITH
STAINLESS STEEL ASHTRAY, RAIN BONNET LID, RAIN BONNET LID WITH STAINLESS STEEL ASHTRAY,
CONVEX LID, CONVEX LID WITH SELF CLOSING DOOR, AND RECYCLE LIDS. ASHTRAYS AVAILABLE WITH
OPTIONAL ASHTRAY COVER.

SECURITY

LID IS SECURED WITH VINYL COATED GALVANIZED STEEL AIRCRAFT CABLE.
CABLE IS LOOPED AROUND ATTACHMENT BRACKETS AND CRIMPED IN PLACE.

NOTES:

1. DRAWINGS NOT TO SCALE. DO NOT SCALE DRAWINGS.
2. ALL FABRICATED METAL COMPONENTS ARE STEEL SHOTBLASTED, ETCHED, PHOSPHATIZED, PREHEATED, AND ELECTROSTATICALLY POWDER-COATED WITH T.G.I.C. POLYESTER POWDER COATINGS. PRODUCTS ARE FULLY CLEANED AND PRETREATED, PREHEATED AND COATED WHILE HOT TO FILL CREVICES AND BUILD FILM COATING. COATED PARTS ARE THEN FULLY CURED TO COATING MANUFACTURER'S SPECIFICATIONS. THE THICKNESS OF THE RESULTING FINISH AVERAGES 8-10 MILS (200-250 MICRONS).
3. THIS VICTOR STANLEY, INC. PRODUCT MUST BE PERMANENTLY AFFIXED TO THE GROUND. CONSULT YOUR LOCAL CODES FOR REGULATIONS.
4. VICTOR STANLEY, INC., PLASTIC INNER LINERS ARE MOLDED ON TOOLING DESIGNED FOR AND OWNED BY VICTOR STANLEY, INC. THEY OFFER MAXIMUM CAPACITY AND STRENGTH WITH LIGHTWEIGHT CONSTRUCTION USING CRITICAL MOLDED RIBS, INTEGRAL HANDHOLDS, AND HIGH-STRENGTH MATERIALS. THIS MINIMIZES HANDLING DIFFICULTY AND FACILITATES EASY EMPTYING AND STORAGE WHILE AFFORDING LONG SERVICE LIFE.
5. ANCHOR BOLT(S) NOT PROVIDED BY VICTOR STANLEY, INC.
6. FOR HIGH SALT ABUSIVE CLIMATES, HOT-DIP GALVANIZING BEFORE POWDER COATING IS AVAILABLE. HOT-DIP GALVANIZING IS PERFORMED FOR VICTOR STANLEY, INC. BY AN EXPERIENCED QUALIFIED FIRM TO WHICH PRODUCTS ARE SHIPPED FOR GALVANIZING. HOT-DIP GALVANIZING INCLUDES AN AGGRESSIVE PRE-TREATMENT AND IMMERSION IN A TANK OF CHARGED LIQUID ZINC AT OR AROUND 860°F (460°C). THE RESULTING SURFACE IS RESISTANT TO RUST BUT HAS SOME UNEVENNESS RESULTING FROM THE BONDING OF THE ZINC TO THE STEEL SURFACE. AS A RESULT, THE POWDER-COATING SURFACE FINISH OVER THAT GALVANIZED SURFACE MAY EXHIBIT BUMPS, UNEVENNESS, AND MAY NOT BE AS SMOOTH AS THE STANDARD FINISH; THIS UNEVEN AND INCONSISTENT FINISH IS NORMAL FOR GALVANIZING. CONTACT MANUFACTURER FOR DETAILS.
7. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE. CONTACT MANUFACTURER FOR DETAILS.
8. THIS PRODUCT IS SHIPPED FULLY ASSEMBLED.



RB-36

STEEL SITES™ RB SERIES

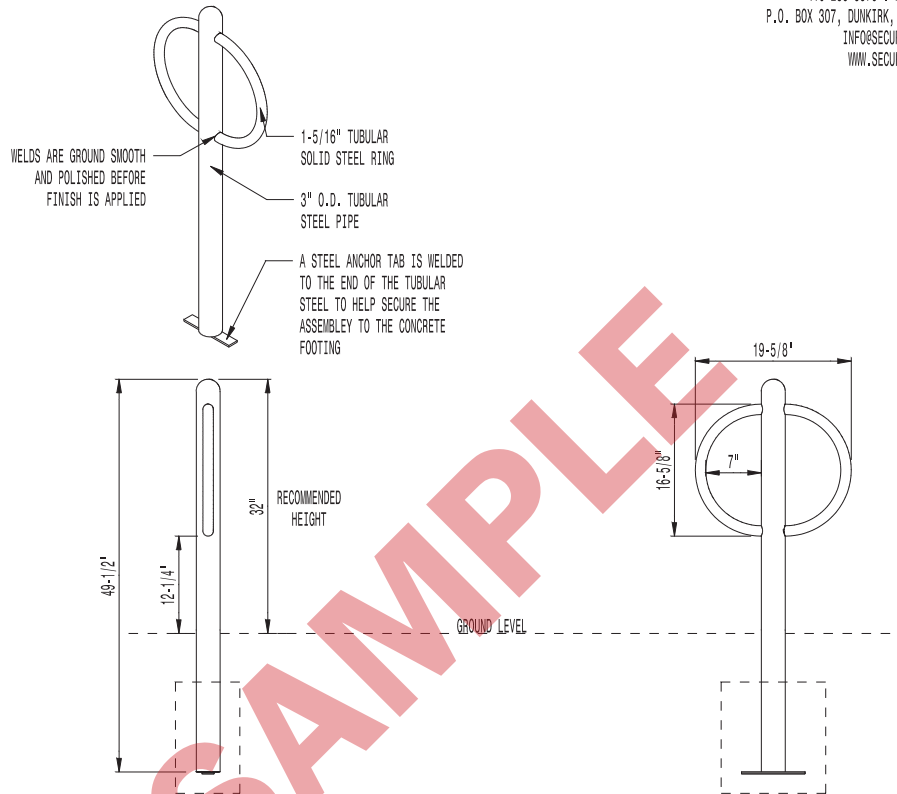
36-GALLON LITTER RECEPTACLE
SHOWN: STANDARD TAPERED FORMED LID

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REV. 6/20/14 DRAWN L.D.L. 2014-695



* ALL DIMENSIONS ARE IN INCHES *

TOLL FREE (USA & CANADA): 1-888-ANTI-RAM (888-268-4726)
 410-286-3375 : FAX 410-479-0175
 P.O. BOX 307, DUNKIRK, MD 20754 U.S.A.
 INFO@SECURESITEDESIGN.COM
 WWW.SECURESITEDESIGN.COM

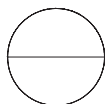


AVAILABLE OPTIONS:
 POWDER COATING
 10 AVAILABLE COLORS, 2 OPTIONAL METALLIC
 CUSTOM COLORS (INCLUDING THE RAL RANGE AT AN ADDITIONAL COST)
 (ALL POWDER COAT FINISHES ARE DONE AT VICTOR STANLEY, INC. (VSI) TO MATCH THE VSI PRODUCT LINE)
 OTHER FINISHES: GALVANIZED (SPECIAL QUOTE NEEDED)

MOUNTING
 STANDARD IN-GROUND (AS SHOWN) AND SURFACE

NOTES:

1. DRAWINGS NOT TO SCALE. DO NOT SCALE DRAWINGS.
2. ALL FABRICATED METAL COMPONENTS ARE STEEL SHOTBLASTED, ETCHED, PHOSPHATIZED, PREHEATED, AND ELECTROSTATICALLY POWDER-COATED WITH T.G.I.C. POLYESTER POWDER COATINGS. PRODUCTS ARE FULLY CLEANED AND PREHEATED, PREHEATED AND COATED WHILE HOT TO FILL CREVICES AND BUILD COATING FILM. COATED PARTS ARE THEN FULLY CURED TO COATING MANUFACTURER'S SPECIFICATIONS. THE THICKNESS OF THE RESULTING FINISH AVERAGES 8-10 MILS (200-250 MICRONS).
3. THIS SECURE SITE DESIGN, LLC. PRODUCT MUST BE PERMANENTLY AFFIXED IN THE GROUND. CONSULT YOUR LOCAL CODES FOR REGULATIONS.
4. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE. CONTACT MANUFACTURER FOR DETAILS.
5. THIS PRODUCT IS SHIPPED FULLY ASSEMBLED.



BRBS-103

CYCLE SENTRY™ SERIES

BIKE RACK
 SHOWN: STANDARD IN-GROUND MOUNT

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 REV. 8/8/13 DRAWN C.R.K 2013-882



* ALL DIMENSIONS ARE IN INCHES *

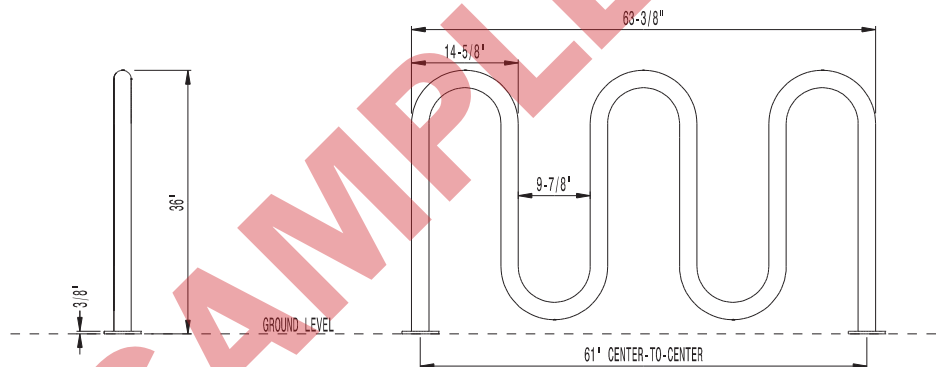
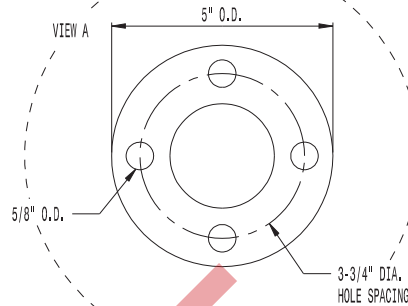
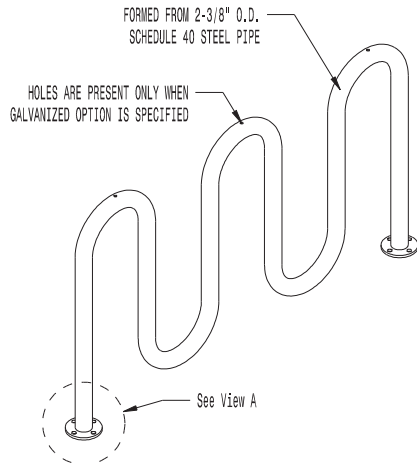
TOLL FREE (USA & CANADA): 1-888-ANTI-RAM (888-268-4726)

410-286-3375 : FAX 410-479-0175

P.O. BOX 307, DUNKIRK, MD 20754 U.S.A.

INFO@SECURESITEDSIGN.COM

WWW.SECURESITEDSIGN.COM



AVAILABLE OPTIONS:
POWDER COATING

12 AVAILABLE COLORS, CUSTOM COLORS (INCLUDING THE RAL RANGE AT AN ADDITIONAL COST)
(ALL POWDER COAT FINISHES ARE DONE AT VICTOR STANLEY, INC. (VSI) TO MATCH THE VSI PRODUCT LINE)
OTHER FINISHES: GALVANIZED (SPECIAL QUOTE NEEDED)

MOUNTING
STANDARD IN-GROUND AND SURFACE (AS SHOWN)

NOTES:

1. DRAWINGS NOT TO SCALE. DO NOT SCALE DRAWINGS.
2. ALL FABRICATED METAL COMPONENTS ARE STEEL SHOTBLASTED, ETCHED, PHOSPHATIZED, PREHEATED, AND ELECTROSTATICALLY POWDER-COATED WITH T.G.I.C. POLYESTER POWDER COATINGS. PRODUCTS ARE FULLY CLEANED AND PREHEATED, PREHEATED AND COATED WHILE HOT TO FILL CREVICES AND BUILD COATING FILM. COATED PARTS ARE THEN FULLY CURED TO COATING MANUFACTURER'S SPECIFICATIONS. THE THICKNESS OF THE RESULTING FINISH AVERAGES 8-10 MILS (200-250 MICRONS).
3. IT IS NOT RECOMMENDED TO LOCATE ANCHOR BOLTS UNTIL THE BIKE RACK IS IN PLACE. THIS SECURE SITE DESIGN, L.L.C. PRODUCT MUST BE PERMANENTLY AFFIXED TO THE GROUND. CONSULT YOUR LOCAL CODES FOR REGULATIONS.
4. ANCHOR BOLTS NOT PROVIDED BY SECURE SITE DESIGN L.L.C.
5. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE. CONTACT MANUFACTURER FOR DETAILS.
6. THIS PRODUCT IS SHIPPED FULLY ASSEMBLED.

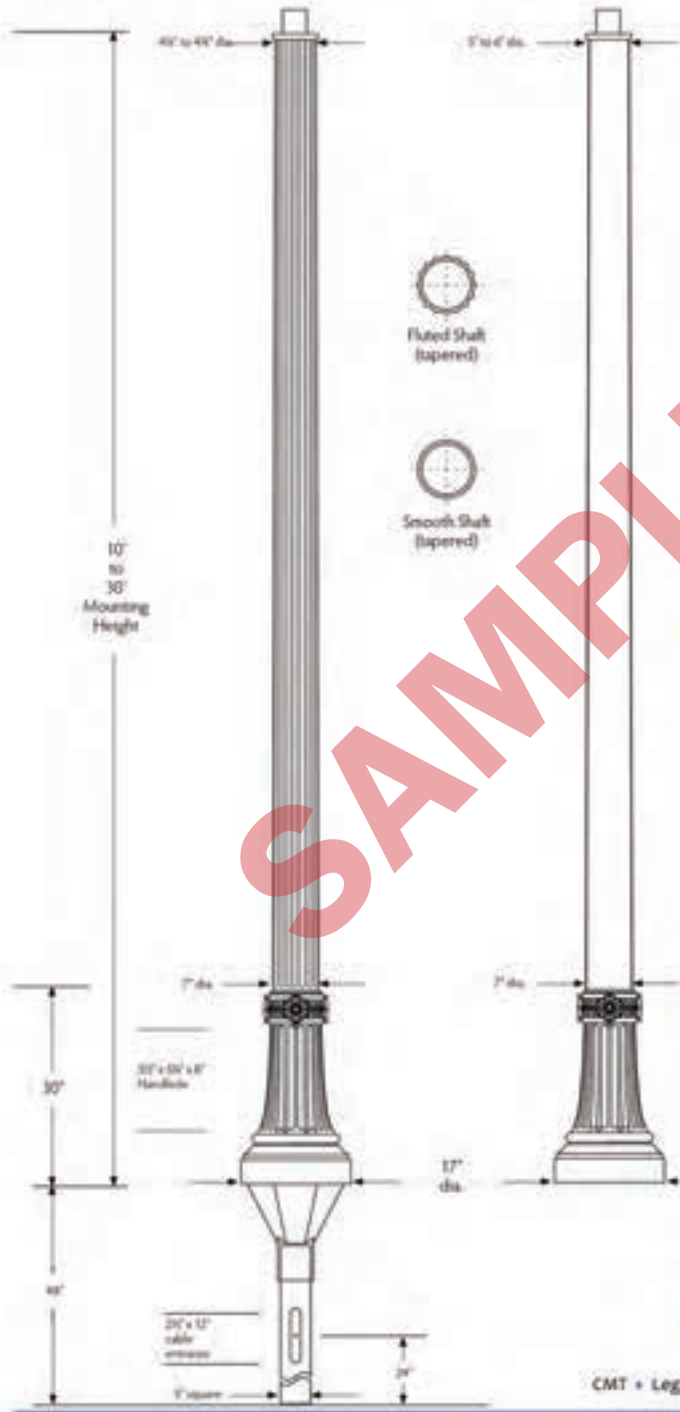


CYCLE SENTRY™ SERIES

BIKE RACK
SHOWN: STANDARD SURFACE MOUNT



17" Promenade Style, 17" x 30"



- ❖ Fiberglass reinforced composite, virtually maintenance free
- ❖ One-piece construction, non-conductive
- ❖ Superior wind, loading, and environmental tolerance
- ❖ Anchor Base or Direct Burial mounting
- ❖ Smooth or fluted tapered shafts
- ❖ Standard or architectural colors available, or any color can be matched
- ❖ Gloss or semi-gloss finishes standard; aggregate and custom finishes available
- ❖ Mounting heights of 10 to 30 feet
- ❖ Standard 3" x 3" dia. aluminum tenon for luminaire mounting (2 1/4" also available)



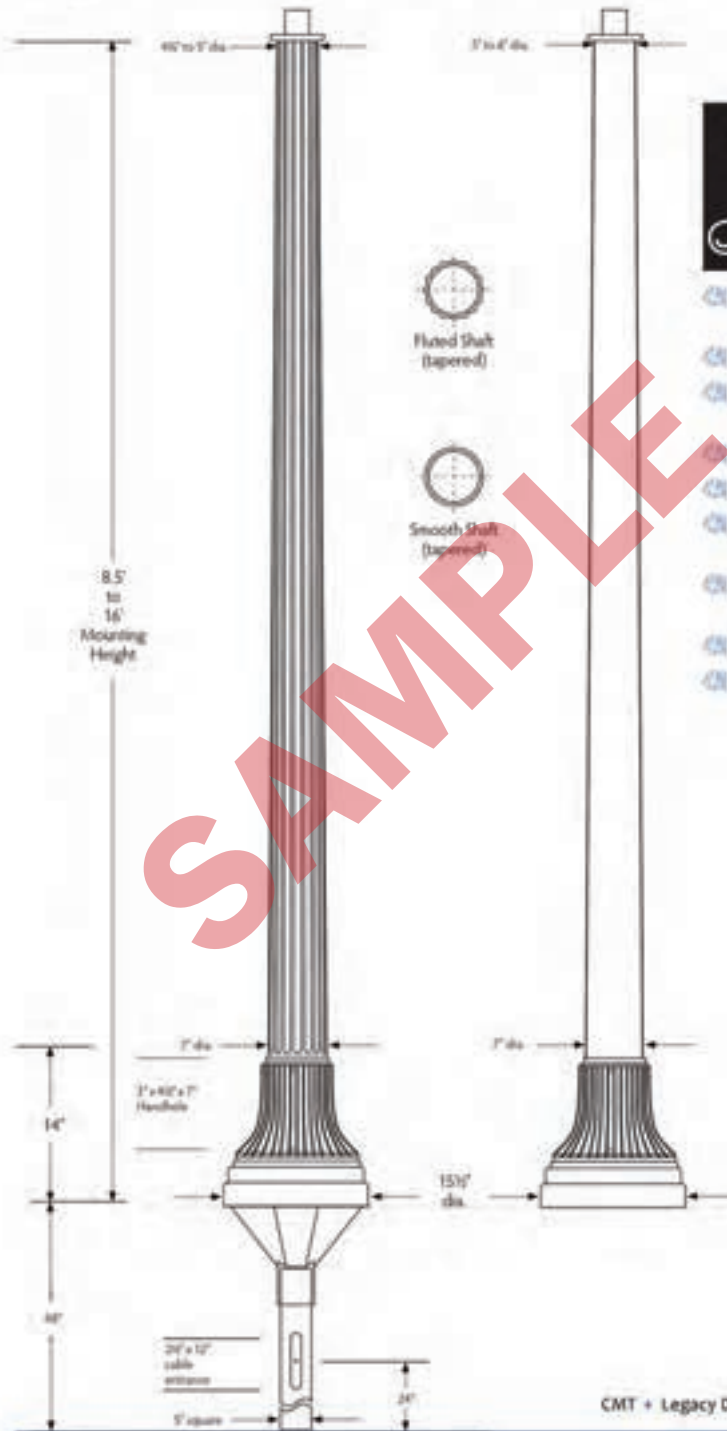
CMT • Legacy Decorative Poles • 800-416-4276 • www.cmt-poles.com



Beaufort Style, 15.5" x 14"



- Fiberglass reinforced composite, virtually maintenance free
- One-piece construction, non-conductive
- Superior wind, loading, and environmental tolerance
- Anchor Base or Direct Burial mounting
- Smooth or fluted tapered shafts
- Standard or architectural colors available, or any color can be matched
- Gloss or semi-gloss finishes standard; aggregate and custom finishes available
- Mounting heights of 8.5, 12, 13.5 or 16 feet
- Standard 3" x 3" dia. aluminum tenon for luminaire mounting (2 1/4" also available)



CMT + Legacy Decorative Poles • 800-416-4276 • www.cmt-poles.com

FGS – Federal Globe™ LED – Small Housing Scale

TYPE

SPECIFICATIONS (CONT.)

SERVICING

- The electrical assembly shall be mounted to a prewired internal service tray and accessed by releasing the service latch to allow the fixture to hinge open into a service position.

FINISH

- Luminaire finish shall consist of a five stage pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish.
- Luminaire finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance.

CERTIFICATION

- Luminaire shall be listed with ETL for outdoor, wet location use, UL1598, UL 8750 and Canadian CSA Std. C22.2 no.250. IP66.

WARRANTY / TERMS AND CONDITIONS OF SALE

Download:

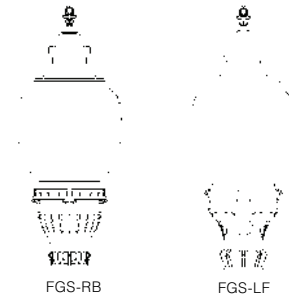
<http://www.hubbelling.com/resources/warranty/>

AAL reserves the right to change product specifications without notice.

DIMENSIONS

FGS

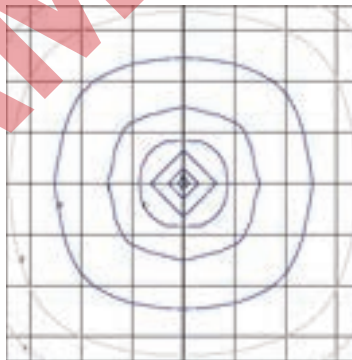
HEIGHT: 36" 914mm
LENGTH: 14" 356mm
WIDTH: 14" 356mm
WEIGHT: 22 lbs
EPA: 1.19



PERFORMANCE DATA (36 LEDS, 450 MA DRIVE CURRENT, 53 WATTS)

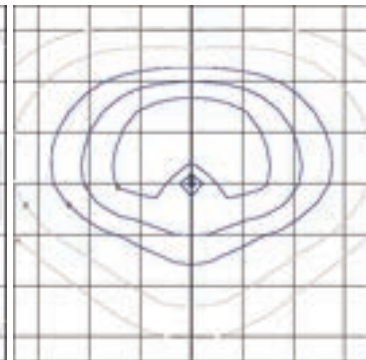
TYPE	LENS	5K					4K					3K					Amps @ 120VAC	Amps @ 277VAC
		LUMENS	LPW	B	U	G	LUMENS	LPW	B	U	G	LUMENS	LPW	B	U	G		
T2	SAL	4712	88.9	2	4	2	4201	79.3	2	4	2	3227	60.9	1	3	2	.4	.2
T3		4243	80.1	1	4	2	3782	71.4	1	4	2	2905	54.8	1	3	1		
T4		4621	87.2	1	4	2	4119	77.7	1	4	2	3164	59.7	1	3	2		
T5		4223	79.7	2	4	2	3764	71.0	2	3	2	2891	54.6	2	3	2		
		5K					4K					3K						
CCT Average		5100K					4200K					3000K						
CCT Range		4600K – 5600					3800K – 4600K					2800K – 3175K						
CRI Minimum		≥70					≥70					≥80						

FGS-RB-SLG-Y5-36LED-5K-450



10' MOUNTING HEIGHT

FGS-RB-SLG-Y3-36LED-5K-450



10' MOUNTING HEIGHT

IES files can be found at www.aal.net

AMBIENT TEMP.	0	25,000	50,000	*TM-21-11 60,000	100,000	REPORTED L70 (HRS)
25°C/77°F	100%	97%	96%	95%	93%	>60,000
40°C/104°F	100%	95%	93%	92%	89%	>60,000



ARCHITECTURAL AREA LIGHTING
16555 East Gale Ave. | City of Industry | CA 91745
P 626.968.5666 | F 626.369.2695 | www.aal.net
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JOB _____
TYPE _____
NOTES _____

| 2 |

ALN438 – Towne Commons®

TYPE

FINISH

Fixture finish shall consist of a five stage pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 2604-02 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance.

CERTIFICATION

Fixtures shall be listed with ETL for outdoor, wet location use, conforming to the UL 1598 and Canadian CSA 22.2 no. 250 standard. IP=66

WARRANTY / TERMS AND CONDITIONS OF SALE

Download:

<http://www.hubbellighting.com/resources/warranty/>

AAL reserves the right to change product specifications without notice.

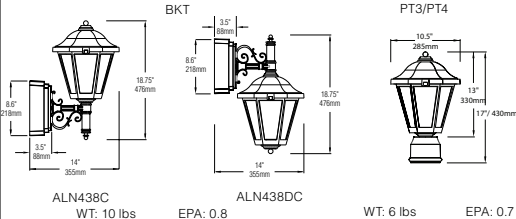
DIMENSIONS

POST TOP



ALN 438
WT: 10 lbs EPA: 0.8

MOUNTING



ALN438C
WT: 10 lbs

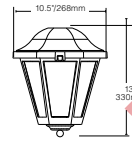
EPA: 0.8

ALN438DC

WT: 6 lbs

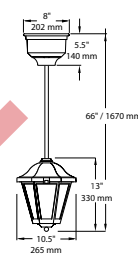
EPA: 0.7

ARM MOUNT



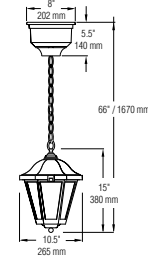
ALN 438D
WT: 6 lbs EPA: 0.7

PMS



WT: 7 lbs EPA: 1.1

PMC



WT: 7 lbs EPA: 1.1

ALN438 CF32 WATTAGE: 35

LUMEN OUTPUT: 710

EFFICACY: 20.3 Lm/W

B0 U3 G1

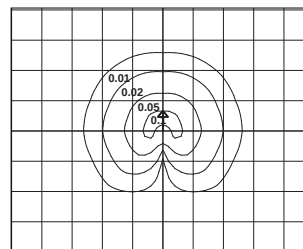
FORWARD LIGHT		LUMEN
FL	30°	3.1% 22
FM	60°	13.0% 92
FH	80°	12.8% 91
FVH	90°	6.5% 46

BACK LIGHT

BL	30°	2.5% 17
BM	60°	9.1% 65
BH	80°	10.2% 72
BVH	90°	5.8% 41

UPLIGHT

UL	100°	11.5% 82
UH	180°	25.5% 181



14' MOUNTING HEIGHT

UPLIGHT 11%
DOWNLIGHT 18.6%

IES files can be found at www.aal.net



ARCHITECTURAL AREA LIGHTING
16555 East Gale Ave. | City of Industry | CA 91745
P 626.968.5666 | F 626.369.2695 | www.aal.net
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Interconnected, Surface-Applied Preformed Thermoplastic Crosswalks and Traffic Calming Surfaces for Asphalt and Concrete

TrafficPatterns® provides a cost-effective, traditional look and alternative to the use of brick and stone pavers because the material is surface applied and virtually maintenance free. The pattern and color combinations of the interconnected sheets allow designers the flexibility to create the ideal crosswalk or traffic calming pattern that complements the overall streetscape design.

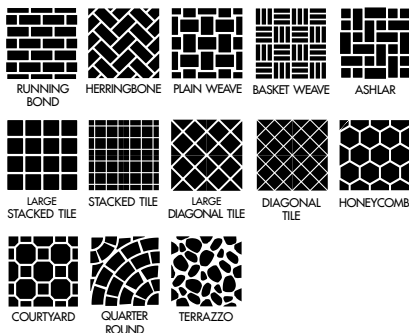
PERFORMANCE-BASED FEATURES AND BENEFITS

- Engineered as heavy-duty intersection grade pavement marking material with enhanced durability
- 125-mil; interconnected sheets of material
- High skid/slip resistant for safety. As material wears, new anti-skid elements are exposed.
- Can be applied on newly-stamped asphalt as soon as the road surface cools and sets
- Does not alter substrate
- Does not require stamping templates or grids
- Open to traffic minutes after application
- ADA compliant - Pedestrian and wheelchair friendly surface
- Eliminates the maintenance and safety concerns of loose pavers
- All preformed thermoplastic materials are made at Ennis-Flint's manufacturing facility which is ISO 9001:2008 certified for design, development and manufacturing of preformed thermoplastic. Quality, value and long-term performance are built into the marking. Anti-skid elements are added at time of manufacturing for optimized application at the jobsite.

TrafficPatterns® does not require expensive capital equipment, customized tools, templates or grids for application. The 2'x2' sheets of interconnected material are easily lifted and positioned onto an asphalt or concrete surface. Border segments can be added for design variability. Application is simple with a large infrared heater or a propane heat torch.



STANDARD PATTERNS (2'x2' Sheets)



STANDARD BORDERS



STANDARD COLORS



PREMIUM COLORS



New
Patterns/Borders
and Colors in
2'x2' Format





Impressed Preformed Thermoplastic Crosswalks and Traffic Calming Surfaces for Asphalt

TrafficPatternsXD™ is an extremely durable preformed thermoplastic material that incorporates a unique aggregate-reinforced formula with unprecedented wear resistance. The result is a traffic-tough crosswalk that provides traditional brick-like aesthetics built to last.

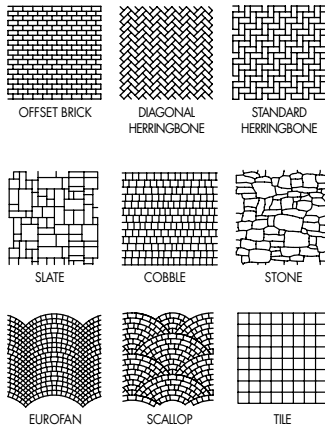
PERFORMANCE-BASED FEATURES AND BENEFITS

- Designed for extreme use and wear in high-traffic crosswalks and traffic calming surfaces.
- 150-mil thickness engineered for a robust application system and enhanced durability
- Enhanced performance in all climates
- Applied to high-quality, stable asphalt, with minimal substrate impact
- Fast installation; minimal traffic downtime
- High skid/slip resistant for safety. As material wears, new anti-skid elements are exposed.
- ADA compliant - Pedestrian and wheelchair friendly surface
- Eliminates the maintenance and safety concerns of loose pavers
- All preformed thermoplastic materials are made at Ennis-Flint's manufacturing facility which is ISO 9001:2008 certified for design, development and manufacturing of preformed thermoplastic. Quality, value and long-term performance are built into the marking. Anti-skid elements are added at time of manufacturing for optimized application at the jobsite.

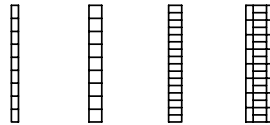
TrafficPatternsXD™ is installed by a network of Certified Applicators so you can be confident that your design intentions will translate to fully-met expectations on the job site. The 2 ft. x 2 ft. sheets of material are positioned on the non-stamped, prepared asphalt surface. The material is heated to allow proper embedment of the anti-skid elements. A specialized grid gently stamps a pattern into the material and just into the top layer of the asphalt.



STANDARD PATTERNS



STANDARD BORDERS



STANDARD COLORS





COCALICO CREEK
COUNTRY STORE

A
S
NO

AMISH
STUFF
YOU WANT

AMISH STUFF
←

Appendix C: Signage and Wayfinding Audit





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East Lampeter Lincoln Highway

East Lampeter Township

Environmental site audit, preliminary studies, suggested locations for signage

July 22, 2014

Environmental Audit (draft)

Project Overview



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1.3 PROJECT OVERVIEW

Existing Signage and Needs Analysis

Existing Signage

The current Lincoln Highway corridor is riddled with a plethora of retail, restaurant and hospitality signage. So much that it is completely overwhelming, as to actually confuse rather than clarify. There is no over arching organizing system creating complete chaos to the first time visitor.

Existing directional or identifying signage in the Lincoln Highway corridor is inadequate. There are areas where signage is completely non-existent and with little or no direction, resulting in ineffective wayfinding and identification for most destinations.

Because the existing DOT issued signage is the result of disparate efforts over a long period of time, the graphic quality is inconsistent and problematic. Not only does this lessen the aesthetic impact and hamper the identity function of the system, it has a negative effect on wayfinding as well. Consistent nomenclature and a unified look permit visitors to quickly and easily digest wayfinding information, rather than having to scan every sign or look for signs that don't exist.

DOT signs directing motorists through the corridor need to be analyzed to verify whether they are sufficient.

Needs Analysis

A range of issues affect the need for wayfinding and interpretive signage within the Lincoln Highway corridor. Some of these are easily quantified, such as the number of annual visitors to a particular destination, while others are more difficult to ascertain. Questions addressed in the study included:

- Who is the program intended to reach?
- How comprehensive a program is appropriate?
- How effective is the current signage and what might be retained?
- To which destinations are we signing?
- Who will purchase, maintain, update and replace the signs?

In the ongoing process of gathering information about the current physical conditions, opportunities outside of the scope of this audit were identified which have an impact on the findings. In order to improve the overall information system, policy, personnel, budget and procedural issues will need to be evaluated.

Major signage issues include:

—For motorists, existing signs are inadequate whether approaching the corridor, looking for parking, locating buildings or exiting the corridor.

—To vehicular travelers the Lincoln Highway corridor appears chaotic and unwelcoming. To most there is no sense of organization, arrival or formal entrance to the corridor area. There is no, "place" just a "pass through".

—There is no vehicular signage system directing to public parking or other public destinations.

—Visitors on foot have an equally difficult time, with few signs to assist them. Unclear or non-existent signs make it difficult to determine orientation, pedestrian pathways and entrances.

—There is no central source of information for finding directions, hours of operation or event listings that is easily found or directed to. There appears to be no official "Visitor Center".

—There is no temporary signage to indicate to visitors when or where a special event may be taking place.

—There is void of ADA pedestrian friendly signage welcoming those with accessibility issues.

Major interpretive issues include:

—A tremendous wealth of historic and cultural information about the Corridor spanning the full continuum of American history, is inaccessible to visitors, students and the general public.

—There is no interpretive information available to visitors.

—There are no orientation/pull off maps that assist visitors.

Other issues and considerations include:

—The image and presentation of the Lincoln Highway corridor does not create an atmosphere that supports a accessible or inviting place.

—There are inadequate pre-visit, promotional activities, whether through traditional media or virtual media, to announce special events.

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PROJECT OVERVIEW

1.2

Introduction, Plan Intent and Acknowledgements

Introduction

Located in the heart of Dutch Country, Lincoln Highway is the gateway to a myriad of authentic Amish experiences and Dutch attractions. East Lampeter Township is moving towards a strategy to spur revitalization and redevelopment of the Lincoln Highway area from Strasburg Road to Pennsylvania Route 696. In addition to supporting the new Lincoln Highway Streetscape plan this signage study and plan will support the information infrastructure, helping direct visitors to specific destinations like public parking, historic and cultural destinations.

The area is proud of its long history and rich Dutch authenticity. A characteristic that helps define and make a friendly and welcoming setting. Stories which should be brought to the surface, accessible to the community and placed into the environment.

Plan Intent

This plan will establish guidelines for the development and implementation of a systematic network of informational elements within East Lampeter - Lincoln Highway route 30. It includes observations and recommendations for the wayfinding strategy, sign system components, operational policies and "non-sign" elements that comprise a comprehensive wayfinding system.

Stakeholder involvement

Over the next few months, CGA and the URS team will document existing conditions related to signage and collect information from a wide range of individuals including staff, neighbors, developers, local business owners and other stakeholders.

Documentation of the findings included photographic documentation of existing conditions, field observations and documentation of major approach routes to the Lincoln Highway area.

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PROJECT OVERVIEW

1.4

The Visitor Experience

The Visitor Experience

The primary focus of this study is the visitor to the Lincoln Highway corridor, including potential visitors from new demographic groups. By defining the audience and examining their current knowledge of the area, along with their interests and expectations, it is possible to design a system that promises a quality visitor experience.

A successful interpretive plan has the power to engage the visitor on a personal level. Such engagement often leads to further support, such as stewardship and patronage, which can only benefit the corridor.

The main components of a visitor experience include the visitor's knowledge, attitudes, behavior, sensory experiences, comfort and convenience, as well as the visitor's direct contact with the site through web information, directional signage, interpretive programs, and educational programs.

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The Americans with Disabilities Act

The Americans with Disabilities Act

The Americans with Disabilities Act was signed into Law in July 1990 and updated in 2010. This historic act was designed to provide equal access and opportunities to all Americans with disabilities, a constituency which in the context of the ADA's broad definition presently accounts for approximately 50% of the population.

The act made as part of its conditions regulations that would be developed to support it within the following year. Most professional design organizations did not become aware of this fact until a draft of the proposed supporting regulations appeared in late 1990. At that time, the Society for Environmental Graphics Design (SEGD) in addition to groups representing many other organizations and user groups, such as the American Hospitals Association, attempted to "set aside" those aspects of the regulations dealing with signage until a thorough study could be made of the real needs of people with disabilities.

While the intention of the law was applauded by many and is clearly an important achievement for all people with disabilities, the resulting regulations fail to respond adequately in some areas to the needs of the ADA's target audience. Those parts of the regulations that apply to signage do not display an adequate understanding of wayfinding and communication principles, character and symbol recognition, and typography.

For instance, permanent room designations are required to be tactile and all in caps. This is potentially helpful to the small number of clinically blind people who can read tactile letters but cannot read Braille. However, because of the reduced readability per inch of line length of an all caps message – particularly when spaced correctly – and the fact that we read most upper and lower case sign messages as a single footprint rather than as individual characters (which is not possible with an all caps inscription), it is detrimental to the vision-impaired constituency.

This is a target group whose numbers are extensive and growing at a rapid rate as the average age of the population increases.

In order to produce an ADA friendly signage system, which will make the site more accessible to the disabled, the design and manufacturing of the signage should adhere to proper ADA standards.

For more detailed information please refer to the ADA White Papers.

Information can be found by contacting the Society for Environmental Graphic Design.

Society for Environmental Graphic Design
1000 Vermont Ave., Suite 400
Washington, DC 20005
segd@segd.org
202.638.5555

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Audience Analysis

Audience Analysis

An effective sign program stems from an understanding of audience. In general, visitors who come to the Lincoln Highway corridor, whether a first-time visitor or a repeat visitor visiting the area for recreation, shopping or special events, have little to no knowledge or inaccurate preconceptions of the corridor area.

Approximately 13,556 people live in East Lampeter Township and another 59,360 in Lancaster County, countless others pass through the corridor annually. The following profiles have been identified as current and potential audiences:

Individuals and families of the East Lampeter area who visit the Lincoln Highway corridor for a casual shopping/leisure shared-family experience. Currently Dutch Wonderland, American Music Theatre, the Tanger and Rockvale outlets, and the various other shopping opportunities are a large regional draw for this group and it is anticipated that through increased marketing and better signage indicating the public parking lots, pedestrian wayfinding maps listing businesses, parks and other public amenities, this visitor category will grow, and with an increased web presence will include individual and family visitors from outside the immediate area.

Organizations and groups from historical societies, senior citizen communities and religious organizations although currently visit the corridor more for the cultural assets, they too can be included as casual shoppers. Increased offerings and participation in local historic site consortiums will increase this visitor category and increase the potential for repeat visits.

Casual Users from the local community for whom it is anticipated will be encouraged by a sign program to return to learn and spend more time on the Lincoln

Highway corridor and hopefully view this area as a community asset worthy of their stewardship.

School-aged groups from local schools seeking educational field trips or conduct special school related events. These programs should address school curriculum needs and offer grade appropriate, hands-on learning. Tours given to students could include such places like the police and fire stations, the East Lampeter Township Building where students are able to participate in local government role playing. There could be outdoor programs that could take advantage of the various parks.

Through ongoing program development and increased awareness of these programs, growth in this area is anticipated. The development of these group programs can also address ways to engage children who are visiting with families.

Special event participants attending private parties or special events come for a specific purpose and are often unaware of Lincoln Highway corridor and what it has to offer.

A goal of a sign program is to provide visitors with visual cues identifying the corridor's shopping, historical and educational destinations. A sign program can also be an invitation to return with friends and family to learn more about the site.

Business Travelers in addition to attending meetings and other related business within the Lincoln Highway corridor area, this user may come back to the area alone or with family and friends for recreation, or leisure if impressed with the offerings the Lincoln Highway corridor has to offer. The business traveller will typically spend two hours to a couple of days, depending on the type of business.

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Towards a Unified and Positive Experience

Towards a Unified and Positive Experience

Clear communication is essential to understanding. Strong print, web, signage and interpretive systems are some of the most important tools an institution, city or town can have. With many forms, it is important that the East Lampeter Corridor communicate with a unified and consistent voice whenever possible. An enhanced system is one that provides compelling and overlapping verbal and visual cues for the user and visitor. These cues fall into four categories:

The identity component of the system should ensure that the East Lampeter Corridor name (wordmark) and image are presented in an effective, legible and consistent manner in all applications.

The functional component of the wayfinding and interpretive signage should be site user-friendly so that visitors can safely and efficiently locate East Lampeter Corridor, its buildings, parks, events and parking. Where a sign system can be all things to all people, it is recommended that it be intended and designed for the first time visitors and not the business owners or local community. In addition, the signage and interpretive elements should be designed for longevity, vandal resistance and easy replacement and maintenance.

The promotional component of the system is to raise awareness of the place, events, create interest and make the site attractive to new visitors. A well-designed system for the East Lampeter Corridor should be simple, memorable and have an aesthetic character consistent and compatible with building architecture, history and the surrounding landscape.

The educational component of the system seeks to elevate East Lampeter Corridor's rich physical and cultural content to make it accessible and enjoyable for

everyone and give them the opportunity to self-guide and self-regulate their experience. The interpretive messages should be developed to accommodate varying levels of interest and comprehension.

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Public Destinations

East Lampeter Destination Listing Priority Suggested listing

- **Parks & Recreation**
 - East Lampeter Park
 - Flory Park
- **Social, Civic & Cultural**
 - Visitor Center (TBD)
 - East Lampeter Police Department
 - East Lampeter High School
 - Lafayette Fire Company
 - Lancaster Mennonite School
 - Library of Lancaster County
 - Township Building
- **Arts & Entertainment/Shopping**
 - American Music Theatre
 - East Towne Mall
 - Dutch Wonderland
 - Mill Creek Square
 - Rockvale Square Outlets
 - Rest Stop
 - Tanger Outlets

Lancaster County Destination Listing Suggested listing

- **Parks & Recreation**
 - Chickies Rock County Park
 - Conestoga Greenway Trail
 - Conewago Recreation Trail
 - D.F. Buchmiller County Park
 - Lancaster Junction Recreation Trail
 - Theodore A. Parker III Natural area
 - Speedwell Forge County Park
- **Social, Civic & Cultural**
 - Environmental Center
 - Skate Park
 - Shuts Environmental Library
 - Visitor Center
 - Downtown Lancaster
- **Arts & Entertainment/Shopping**
 - Strasburg Rail Road and Rail Road Museum

Note: This listing of destinations are ONLY suggested public destinations. Destinations will require approval prior to design development phase.

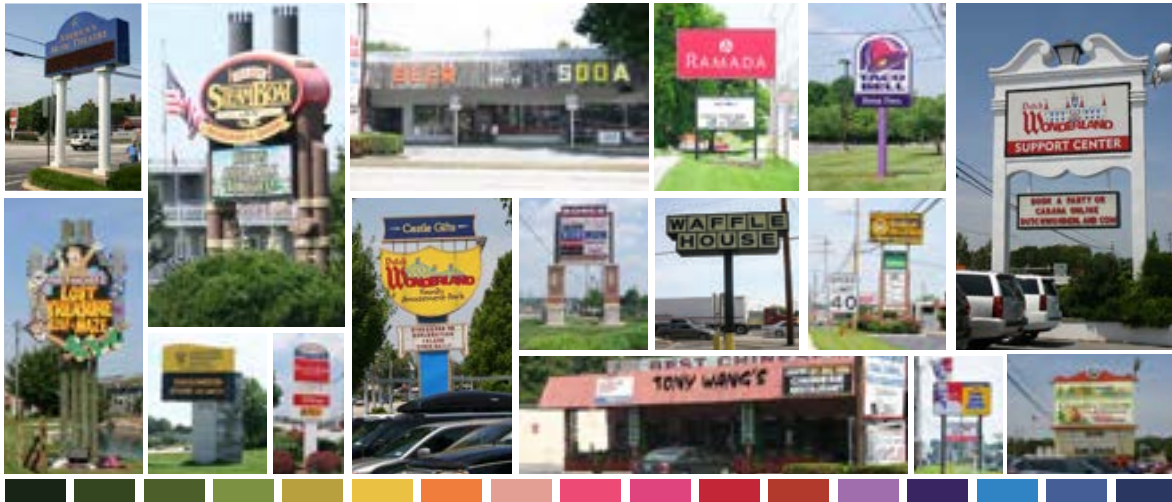
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Environment Audit

Site Audit - Rural

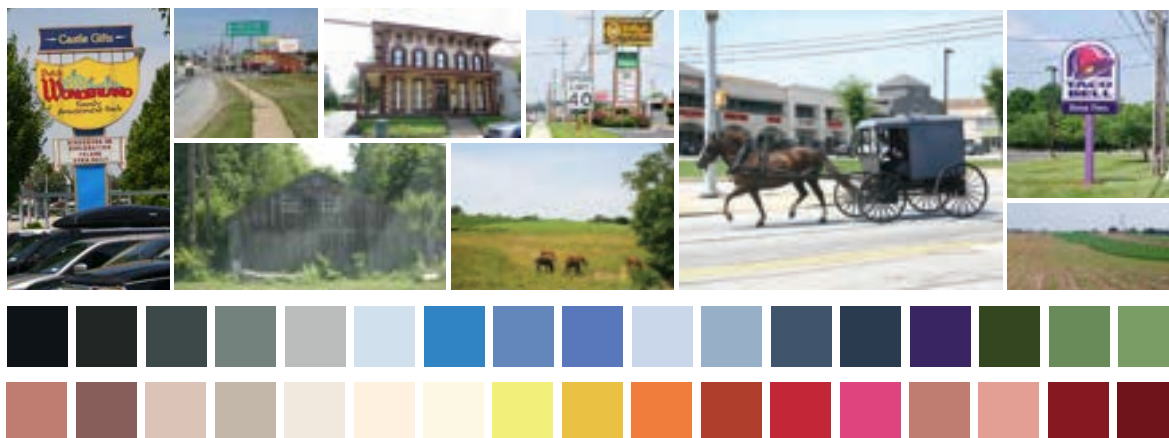


Site Audit - Urban



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Color Palette Matrix



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East Lampeter Township
Signage and Wayfinding Master Plan

ENVIRONMENTAL AUDIT

2.6

Site Audit - Streetscape



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East Lampeter Township
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2.2

Site Audit - Rural



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Identity Typefaces - East Lampeter Township (Serif Font Type)

Berthold Bodoni
Regular

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890 &!?,."

Berthold Bodoni
Medium

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890 &!?,."

Berthold Bodoni
Bold

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890 &!?,."



Lafayette Fire Company
Building ID

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Identity Typefaces - East Lampeter Township (San-Serif Font Type)

Avenir
55 Roman

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890 &!?,."

Avenir
66 Medium

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890 &!?,."

Avenir
85 heavy

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890 &!?,."



East Lampeter Township
Building ID

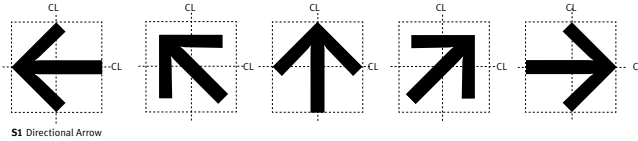
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Arrows & Symbols

Arrows



Symbols



S2 No Smoking



S3 Restrooms



S4 Telephone



S5 Food



S6 Handicapped Accessible



S7 Parking



S8 Library



S9 Buggy Crossing

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Informational Typefaces - Interstate Highway (San-Serif Font Type)

Clearview Highway
3 - W

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890 &!?,."



Interstate Highway
Directional

Clearview Highway
5 - W

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890 &!?,."

Clearview Highway
6 - W

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890 &!?,."

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Observational Study



OBSERVATIONAL STUDY 3.2

Gateway and Directional Overview

- Key
- Major Gateway
 - Minor Gateway
 - Directional Sign



1 Character Areas - Project area sectioned into 5 areas

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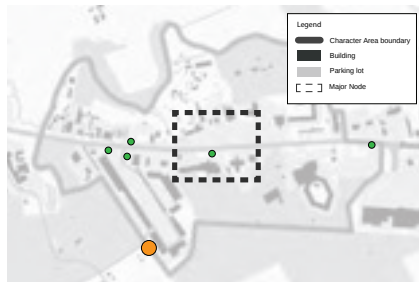
Gateway and Directional Overview



1 Intersection - Walmart entrance/Route 30 bypass off-ramp
SCALE: 1:500



2 Intersection - Oakview road intersection
SCALE: 1:500



3 Intersection - Dutch Wonderland entrance
SCALE: 1:500



4 Intersection - Mill Creek Square entrance
SCALE: 1:500

- Key
- Major Gateway
 - Minor Gateway
 - Directional Sign

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Gateway and Directional Overview

- Key
- Major Gateway
 - Minor Gateway
 - Directional Sign



5 Intersection - Route 896 intersection
SCALE: 1:500

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Lincoln Highway Streetscape Plan Phase 2



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