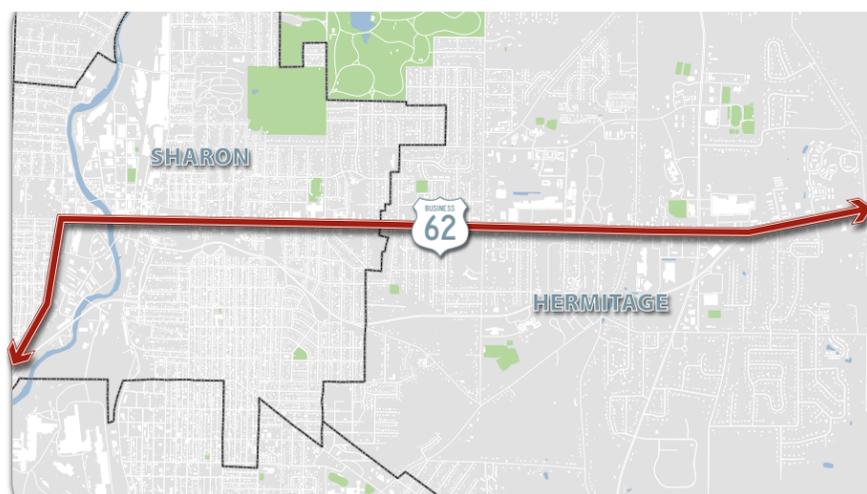


## Study Purpose / Objective

The purpose of the State Street/Irvine Avenue Corridor Study is to develop feasible transportation planning and design concepts. The objective is to improve vehicular congestion problems in both Sharon and Hermitage, enhance safety and accessibility for pedestrians and bicyclists, and enhance the aesthetic pleasantness of the corridor. Ideally, these improvements will result in economic and social benefits to the region. This study will aid officials in both Cities in guiding future land use development in such a way as to achieve a balance among modes of transportation and to obtain funding for transportation improvement projects.

## Study Area

The area included in this Corridor Study encompasses Business Route 62 beginning at the Pennsylvania line to the west and passes through downtown Sharon and Hermitage east to Keel Ridge Road. Business Route 62 is the original alignment of the US Route 62 corridor before a new alignment for US Route 62 was constructed to the south in 1958. Business Route 62 provides connections to several Pennsylvania highways including PA 18, PA 60, PA 418, and PA 518.



## Community Engagement Process

Meaningful community participation is critical in developing a reality based plan with support from elected officials, local residents, business owners, and property owners. A Public Involvement Plan (PIP) was developed to foster public participation, including open discussion, communication programs, information services and public meetings.

The study team held a public discovery workshop on Tuesday, November 15<sup>th</sup>, 2011 at the Penn State Shenango Auditorium. Approximately 20 knowledgeable and engaged citizens attended the workshop. The purpose of the workshop was to solicit input on the overall effectiveness, safety and comfort of the transportation system within the study corridor and the overall appearance of the study corridor. Members of the community have shared valuable opinions and insights regarding:

- Pedestrian and bicycle circulation and connectivity;
- Parking availability and proximity;
- Traffic congestion and safety throughout the corridor;
- Issues surrounding pedestrian crossings in the vicinity of the Case Avenue Elementary and Sharon Middle and High Schools as well as Sharon Regional Health System; and
- Overall appearance of the corridor

The recommendations that follow were developed through discussions with local community leaders, local agencies and a carefully crafted Public Involvement Plan. On June 11, 2012, the recommendations put forth based upon input from key stakeholders and public input were presented at an open house. Attendees were welcomed to review the recommendations and provide comments that ultimately helped refine the final plan.

## Community Objectives

The information gathered at the various meetings, interviews and workshop has proven to be instrumental in identifying issues, opportunities, and the potential for improvements all along the corridor. This study employs several guiding principles tailored to the unique challenges faced by the Business Route 62 corridor. The following project goals support the guiding principles and vision for the corridor:

- Developing a transportation system, land use pattern, and design elements that enhances our "sense of place" and instill community pride
- Ensuring the safety of pedestrian, bicycle, and motor vehicle traffic while improving accessibility within and across the corridor
- Providing an environment that entices residents to walk and bike to services; and promoting an active lifestyle
- Managing congestion and preserving market area in order to improve our economic vitality
- Celebrating the gateways into our communities and improving way-finding



## Recommendations

### Access Management Plan

The intent of the Access Management Plan is to provide PennDOT, and the local Officials and Planning Boards, a framework for assisting with decision-making regarding access, circulation, and safety for future development along the corridor.

Specific objectives include:

- Minimize number of access locations
- Increase access spacing
- Reduce through traffic conflicts
- Provide greater accessibility and connections for all users
- Manage traffic signal and intersection control
- Provide language in local codes that supports implementation of access management techniques and strategies along the corridor



### Traffic Signal Timing / Signal Coordination Plans

The traffic signals along State Street between Keel Ridge Road and Irvine Avenue are currently coordinated in several smaller groupings. The timings, phasing, and offsets in many cases have not been updated in many years. Congestion, and subsequently safety, can be improved by conducting a thorough review of the phasing, timings, and offsets throughout the corridor.

Synchro and SimTraffic computer models were utilized to evaluate and recommend appropriate signal timing plans for the corridor. Signal timing optimization was performed for the AM and PM peak time periods at the signalized intersections within the study area. The study area was broken into five separate signal coordination zones for the purpose of evaluation. These zones are based on the current signal timing coordination zones as well as the spacing of intersections and cycle lengths.

The intersections from Buhl Boulevard to Oakland Avenue make up Signal Coordination Zone 3. A new timing plan is recommended for Zone 3 which yields the following improvements in the measures of effectiveness (MOE's) for this zone:

AM PEAK HOUR	MOE	Signal Coordination Zone 3 Totals			
		Before	After	Net Reduction	Percent Improvement
	Stops (no. of veh)	2,251	2,035	216	9.6%
	Total Delay (hr)	17	16	1	5.9%
	Fuel Consumption (gal)	66	63	3	4.5%

PM PEAK HOUR	MOE	Signal Coordination Zone 3 Totals			
		Before	After	Net Reduction	Percent Improvement
	Stops (no. of veh)	2,965	2,695	270	9.1%
	Total Delay (hr)	18	18	0	0.0%
	Fuel Consumption (gal)	93	91	2	2.2%

Details of the new coordinated timing plan for Signal Coordination Zone 3 are included in the Appendix.

### Formal Gateway Enhancement Plans / Schematics

#### Shenango Valley Freeway

Based upon public input received and evaluation of the options, Alternative I: the roundabout, is the preferred Alternative. Maximum safety, operational, and aesthetic benefits are realized with this alternative.



#### Irvine Avenue Gateway

The intersection of Irvine Avenue and Shenango Valley Freeway can operate more efficiently with one southbound travel lane and a northbound exclusive left turn lane and separate through lane. This allows the intersection to become narrower providing space for a landscaped median treatment and landscaped buffer space between the sidewalk and the edge of pavement.

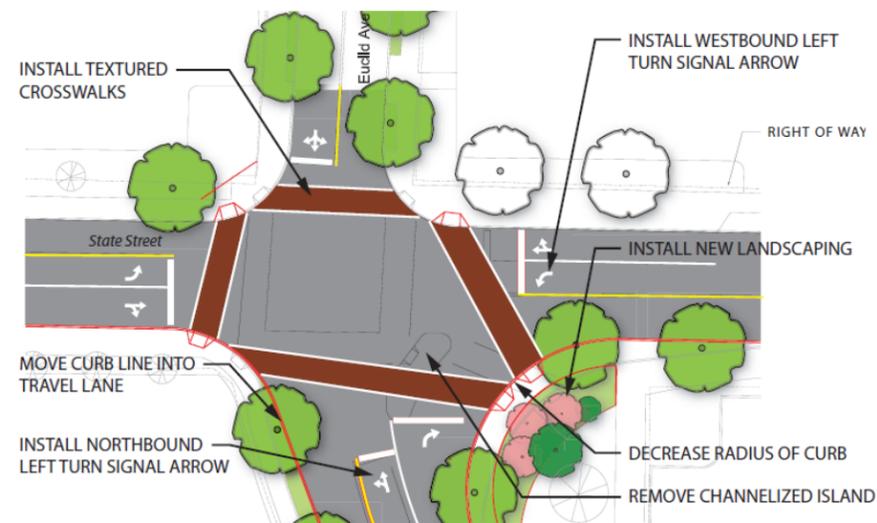
Modifications at the Addison Avenue intersection similarly result in a narrower geometry on Irvine Avenue providing space for a landscaped median and landscaping along the side of the road. In addition, an enhanced crosswalk is recommended on the northbound approach to the intersection. At the northeast corner, Emanuel Place can be closed off from Addison Avenue creating a location for landscaping a gateway treatment such as a sign.



## Advanced Concept Level Intersection Geometric Improvement Plans

### Stambaugh / Euclid Avenues

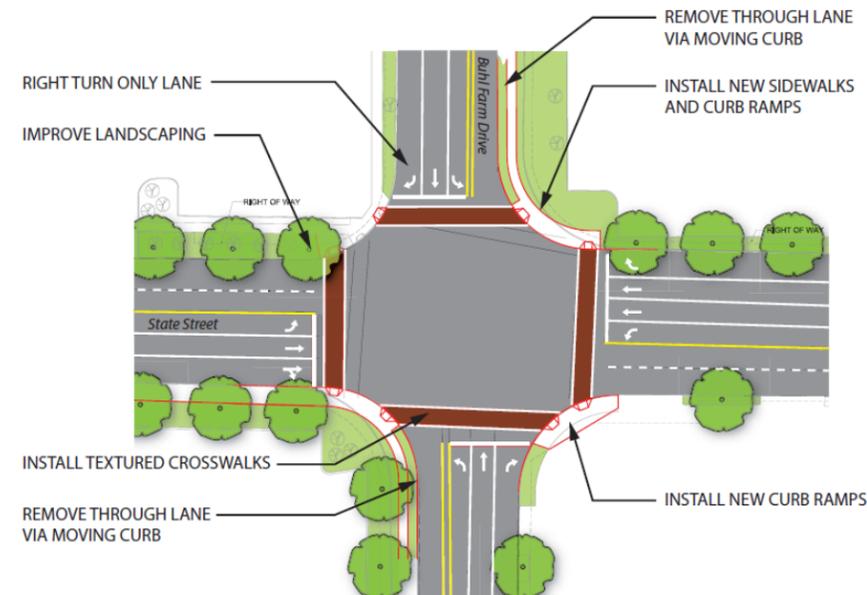
- The refuge island on the southeastern portion of the intersection should be removed. Currently, it is designed as an auto-centric island, rather than a pedestrian-centric refuge.
- Concurrently, the southeastern curb radius should be reduced to provide a shorter crossing distance for pedestrians between the southwestern and northeastern corners of the intersection.
- Additional green space can be installed on the southeastern corner, along with new sidewalks. The buffer space along the southbound side of the roadway should be increased through curb relocation.
- All around the intersection, street trees should be planted to provide shade for pedestrians and function as a traffic calming alternative.
- Stamped textured material consisting of a brick pattern is recommended for new and replaced crosswalks at this intersection. This will provide a higher level of safety and visual awareness for pedestrians and drivers travelling through the intersection.
- Additionally, a westbound and northbound left turn signal arrow should be installed to improve the intersection's operations and safety.



The removal of the refuge island should be a long term strategy. More immediate attention should be focused towards short term enhancements (i.e., textured crosswalks, landscaping).

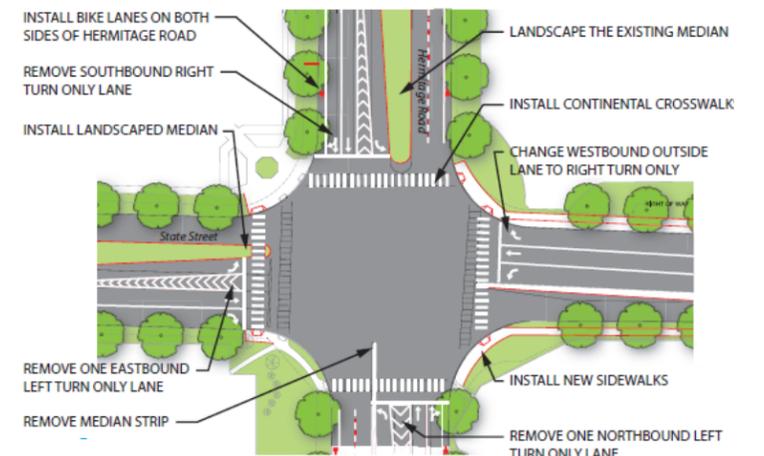
### Buhl Farm Drive

- Currently, there are two receiving lanes on the northbound and southbound approaches of Buhl Farm Drive. Removing the outside receiving lane on both approaches and moving the curbs towards the centerline would allow for additional green space and the installation of sidewalks. This will also decrease the crossing distance for pedestrians crossing Buhl Farm Drive.
- The outside shared through and right turn lane on the northbound and southbound approaches of Buhl Farm Drive should be restriped as right turn only lanes to facilitate the removal of the lanes previously described.
- The eastbound and westbound approaches of East State Street will remain unchanged.
- Improvements to the pedestrian environment include upgrading the existing curb ramps to meet ADA compliancy, while introducing sidewalks and ADA compliant pedestrian crossings elsewhere throughout the intersection.
- Roadside trees should be planted to help calm traffic and improve the look and feel of the intersection.



### Hermitage Road

- The stark concrete median in the southbound approach can be transformed into a landscaped median.
- The southbound right turn only lane should be restriped to a shared through and right turn lane. This lane is not needed from a capacity standpoint and is a safety concern for crossing pedestrians.
- All northbound and southbound travel lanes can then be restriped to incorporate a five (5) foot wide bike lane.
- The narrow median strip on the northbound approach should be removed. This strip is a maintenance issue and serves no real purpose in this case.
- In addition, one of the northbound left turn lanes should be removed. Operational analyses indicate that this lane is not needed to provide capacity and the intersection will operate at appropriate levels of service and with greater safety.
- Sidewalks should be installed as the right of way dictates.
- The eastbound approach could see the transformation of the current median into a landscaped median with a pedestrian refuge. One left turn only lane should be removed. Again, dual left turn lanes are not necessary to accommodate the current or future traffic volume at this intersection. Dual left turns make for more complex signal timings and introduce additional delay at the intersection that is unnecessary in this case.
- On the westbound approach, the outside travel lane should be restriped to a right turn only lane. The median should taper so as to gently allow eastbound traffic to safely merge into the eastbound receiving lane.
- Overall, the intersection should use a high visibility crosswalk design, similar to the current design, and maintain ADA compliancy on all pedestrian approaches and crossings.



# EXECUTIVE SUMMARY



## Unified Transportation-Land Use Concept

### Ellis Avenue

- The southbound approach, shopping plaza driveway, to the intersection can be narrowed dramatically to improve both operating conditions for vehicles as well as aesthetics and pedestrian conditions. Reducing the width from an estimated 85' to 36' will shorten crossing distances for pedestrians and could reduce confusion for drivers.
- Sidewalks should be added to all approaches, as well as ADA compliant curb ramps and high visibility crosswalks. Additionally, sidewalks should be installed to provide a linkage between Kerrwood Drive and Ellis Avenue. The installation of sidewalks along this stretch of roadway would improve the safety of pedestrians.
- The reduced pavement width of the southbound

approach will provide space for increased green space and the addition of street trees.

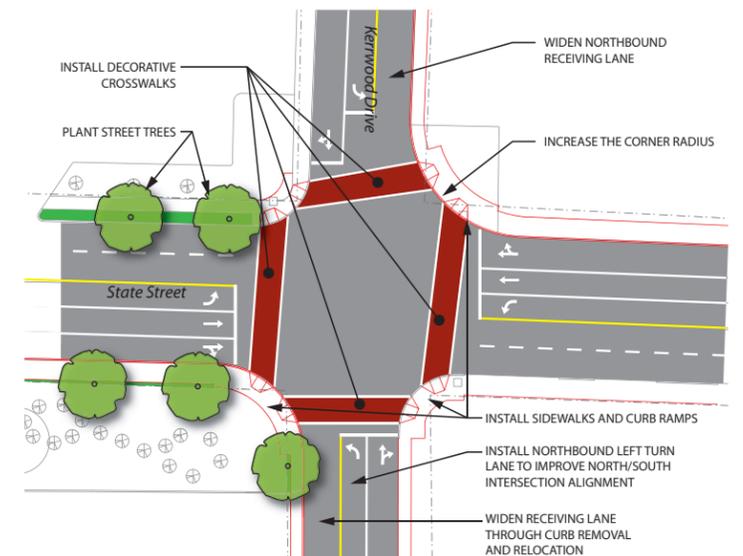
- Additionally, Ellis Avenue can be reduced in size to a pavement width of 24' from 35'. This will shorten crossing distances and align the intersection to the southbound shopping plaza approach.
- Decorative crosswalks should be considered.
- Mast arm traffic signal controls should be installed at all four corners of the intersection to replace the existing span wire design.
- The installation of roadside trees will also act as a traffic calming measure and can create a more comfortable pedestrian environment.
- Ultimately, the recommendations turn a “No Pedestrian” zone into an intersection that all users are able to interact with safely.

## ELLIS AVENUE SIMULATION



### Kerrwood Drive

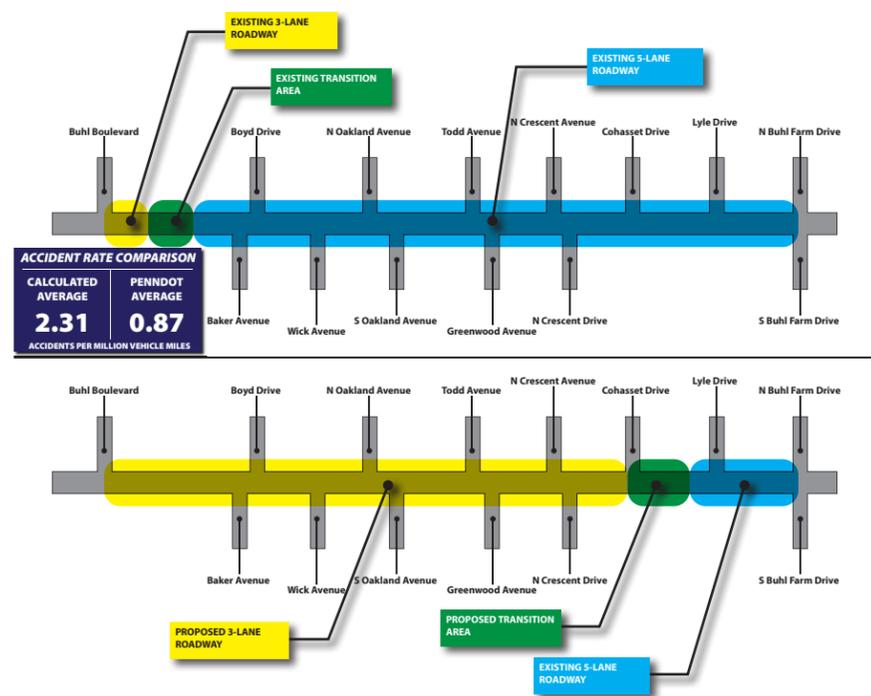
- An alternative to the current design is to install sidewalks and pedestrian countdown signals on all approaches.
- Install a left turn lane for the northbound approach.
- The southbound receiving lane should be widened through removing and relocating the existing curb.
- Increasing the curb radius on the northeastern corner of the intersection will allow for vehicles with a longer wheel base to safely maneuver through the intersection, particularly for those vehicles turning right onto Kerrwood Drive from State Street.
- The northwest corner will have room for a planted buffer zone between the roadway and sidewalk for new street trees. Additionally, roadside trees along the southwestern corner should also be considered.
- New mast arm traffic signal controls should be installed at this intersection to replace the existing span wire design.
- Decorative crosswalks should be considered as a higher visibility option for pedestrian crossings on all approaches.
- All pedestrian crossings should be installed to ADA compliancy.



## Transition Area (Buhl Farm Drive to Buhl Boulevard)

The recommended improvements will move the transition area between the three and five lane sections to a better designed location just west of Buhl Farm Drive. The transition will occur over a greater distance creating a safer merge for motorists in the westbound direction transitioning from two through lanes to one through lane.

Reducing the number of travel lanes will result in slower speeds, safer ingress and egress for businesses and side streets, less exposure to vehicular traffic for pedestrians wishing to cross State Street, and the ability to provide a paved shoulder area that could be used by bicyclists. The increased width of the center turn lane would provide more space for vehicles both entering into the stream of through traffic on State Street without risk of the vehicle overhanging into travel lanes, as well as exiting the traffic stream while waiting to turn left from State Street. Additionally, the shoulder space would provide a portion of the roadway to bicyclists separate from vehicular traffic.



## Downtown Sharon Plan

The Conceptual Plan on the following page highlights key recommendations that are geographically important. Some are long-term improvements or projects and others could happen relatively quickly if leadership and funding becomes available. In some cases, a more detailed discussion of the topics are located later in the report.

- Potential Mixed-use Development (Near Term)** - The proposed multi-story and mixed-use building (under consideration) near the corner of Penn Avenue and Shenango Avenue would bring activity to the street, the waterfront and help to better define the street edge on both Shenango Avenue and Penn Avenue. The City should continue to help shepherd the project.
- Potential Mixed-use Development (Long Term)** - The City should encourage infill and multi-story mixed-use development throughout its downtown. Areas for consideration are along S. Water Street and at the corner of State Street and Irvine Avenue. Development in these areas would improve the quality of the street. Shared parking would likely be required in both locations.
- Streetscape Improvements** - The State Street streetscape project is anticipated to begin in the Fall of 2012. This project is critically important for the downtown. For additional information see the streetscape section below.
- Festival / Event Area** - The downtown area between Silver Street and Connelly Boulevard and S. Water Avenue and Chestnut Avenue sets up nicely for a festival area along the waterfront. Streets could be temporarily closed in this area with limited impact on circulation and mobility.
- Future Mixed-use Area** - This area along the east side of South Irvine Avenue between State Street and W. Connelly Boulevard already includes a mix of uses. However, it is not zoned as such. Consideration should be given to rezoning the area to allow and encourage mixed-use, which is consistent with the City's Comprehensive Plan.
- Critical Pedestrian Intersections** - These six areas identified on the Conceptual Plan with an asterisk are important crossings. They should be made more visible with a special treatment, such as decorative asphalt or pavers.
- Make Pitt Street Two-way** - After careful evaluation by traffic engineers, it has been determined that the existing one-way configuration is unnecessary. Making the street two-way will improve circula-

tion and make the area less confusing.

- Major Pedestrian Route to Penn State** - Shenango Avenue is the primary link between State Street and the campus. The City and Penn State should continue to highlight this street with improvements including wayfinding signage.
- Pedestrian Connector from Parking Garage** - Vine Street is the most direct route from the public parking garage, located on Pitt Street, to State Street. Wayfinding, streetscape enhancements, and facade improvements should be targeted for this street.
- Facade / Streetwall Improvements Priority** - Buildings' facades are typically the primary interfacing element between the public and private realms. When they are out of character or in poor condition it negatively impacts the experience along the street. In a retail or commercial environment, like a downtown, these types of facades reflect poorly on local business and the City as a whole. There are numerous buildings and areas that either need facade improvements or lack the building streetwall to positively define the public realm. Therefore, the City should consider the priorities identified on the conceptual plan when targeting areas for improvements.

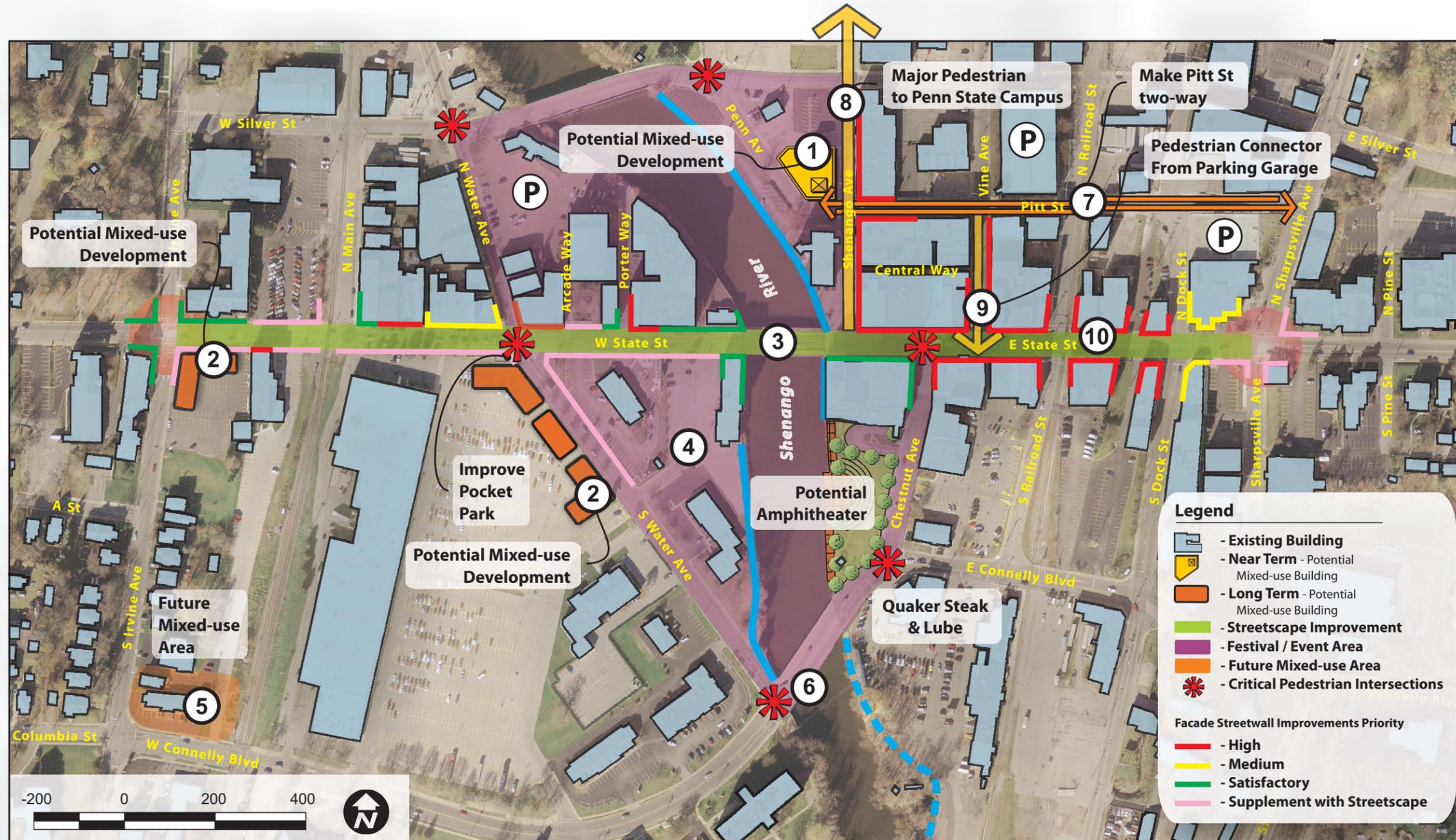
**High** - these buildings have the highest need for improvements either due to condition or their location.

**Medium** - buildings that might not be in ideal condition but should be targeted after the high level buildings.

**Satisfactory** - based on the high number of High and Medium priority buildings these are in satisfactory condition but should be evaluated periodically.

**Supplement with Streetscape** - these are areas with no or little streetwall. Buildings are missing or parking lots front the street. Street trees and other landscaping should be used to mitigate impacts until infill development occurs.





June 4, 2012

US 62 Business Corridor Study



# Downtown Sharon Conceptual Plan

## Downtown Sharon Plan (continued)

This collection of recommendations for Downtown Sharon was developed by the Steering Committee to help improve and revitalize the downtown area. The recommendations reflect the issues, opportunities and assets identified through discussions with attendees at the community workshops and at meetings with local stakeholders. A list of recommendations are as follows:



- Develop an organization to develop and lead the revitalization program.
- Develop a facade improvement program for downtown.
- Encourage mixed-use development in the downtown.
- Leverage public sector dollars for private investment.
- Position the waterfront as a recreational and economic development attraction.
- Bring festivals and events downtown.
- Improve the streetscape to create attractive, pedestrian friendly, and walkable streets.
- Incorporate Crime Prevention Through Environmental Design (CPTED) principles in the development review process.

## Streetscape Design

Streetscape amenities should be orchestrated to create a unique character and consistency for the Business Route 62 corridor. Amenities should be coordinated so that there is a seamless blend of materials, colors, shapes, forms and textures from one amenity to the other. Many manufacturers of streetscape components, such as lighting and street furniture, offer series that match in color in style. This provides a cohesive look.

Sharon and Hermitage should capitalize on every opportunity to improve the streetscape along the Business Route 62 corridor. This is a must in order to improve walkability. When possible, Hermitage should work with PennDOT to add street trees on every street improvement project. It should continue to partner with developers to add sidewalks and complete the sidewalk network. When there is not room for trees within the right-of-way, the City should work with developers to include trees and landscaping on the private side of sidewalks. Benches, trash receptacles and bike racks should also be included at key locations.

## Wayfinding

A wayfinding system in Sharon should include a hierarchy of signs and design features for pedestrians and motorists with consideration given to the quadrant and landmark levels. Sign types to consider include:

- banners
- directional signs
- destination arrival signs
- general information signs kiosks
- landmark signs
- pavement treatments
- inlaid medallions



## Design Guidelines & Standards

The following design and zoning recommendations are based upon the recommendations contained in the local planning documents, results of the Community Preference Survey, input from the Steering Committee, and feedback provided at the two public meetings held as part of this project. In order to ensure that new and in-fill development serves to achieve the community goals, it is recommended that the Cities consider incorporating some or all of the following recommendations into their existing regulatory framework:

This study contains two levels of zoning and design recommendations. The first are a complete set of zoning and design requirements that address the components necessary to improve the operation and appearance of the Business Route 62 corridor. These recommendations are provided later in the report and it intended to serve as a template for both cities to consider adding to their existing zoning codes. Briefly, the recommendations include:

- Mixing of Land Uses
- Building & Site Design
- Vehicular & Pedestrian Circulation
- Off-street Parking Areas
- Bicycle Parking
- Multi-building Development

The second level of zoning recommendations were developed specifically for Sharon and Hermitage. These include:

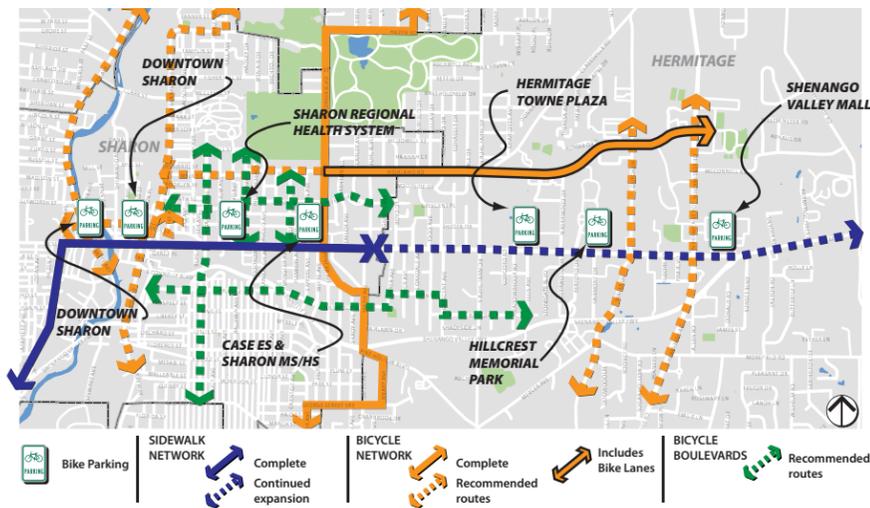
- Landscape Standards
- Detailed zoning assessment by character area
- The provisions of three adoption ready zoning districts
- Detailed streetscape design guidelines

# EXECUTIVE SUMMARY

## Pedestrian / Bicycle Safety - Linkage Action Plans

An important aspect of a high quality pedestrian and bicycling environment is the presence of sidewalks and bicycle facilities. Bicycle facilities may include bike lanes, shared roadways with bicycle signage, or a multi-use trail that is separated from the roadway network. Sidewalks are critical in allowing adults, children, and physically challenged individuals to travel along the transportation network. Bicyclists tend to prefer routes that have signage notifying drivers of their presence or separated lanes giving them their own space on the roadway.

Bicycle parking facilities should be installed at locations where land uses dictate higher trip generation levels of bicyclists. In addition, sidewalks should be installed along State Street throughout the City of Hermitage in areas that provide connection to activity generating land uses.



## Safe Routes to School

Safe Routes to School (SRTS) is a national program that helps create safe, convenient and fun opportunities for children to walk and bike to and from their schools. SRTS programs require collaborative partnerships amongst local stakeholders with interests to improve safety, promote healthy lifestyles, and improve environmental quality around schools. To accomplish this, a comprehensive program must be established to create an environment that enhances, supports and sustains walking and cycling as viable options for travel. With this in mind, SRTS emphasizes a holistic approach to create change that encompasses the five (5) E approach; Engineering, Enforcement, Encouragement, Education and Evaluation.

It is recommended that the City of Sharon pursue implementing Safe Routes to School plans for the schools of Case Elementary / Sharon Middle School and West Hill Elementary School. Such benefits could be: an increase in physical activity amongst students; improved test scores; a safer walking and bicycling environment; and a decrease in obesity rates.



## Hospital Zone Improvements

Both short and longer term pedestrian safety, traffic calming, operational and streetscape improvements are recommended for State Street, adjacent to the Sharon Regional Health System.

- The short term improvement strategy includes the following:
- Install high visibility decorative wheelchair-friendly crosswalks and flush contrasting asphalt medians
- Install landscape elements including plantings and low scrubbed landscaped areas
- Install street furniture including benches and bicycle racks
- Reconfigure the south leg of the Jefferson Avenue/State Street intersection to align with the north side of the intersection, for improved safety and efficiency for all modes using the intersection
- Coordinate all Jefferson Avenue/State Street intersection improvements with future hospital expansion/redevelopment plans, and/or pedestrian safety and circulation plans on hospital owned property, on both sides of State Street

The second, long term improvement phase includes the following:

- Convert approximately 350 feet of Ormond Street to one-way northbound traffic flow, from State Street north to its intersection with a potential new privately constructed east-west roadway
- Coordinate traffic control with a potential new privately constructed east-west road connection, situated approximately 350 feet north of State Street, between Jefferson Avenue and Elm Avenue
- Support potential infill development including office and mixed-use buildings
- Initiate development of a public “pocket” park at the corner of Ormond Avenue/State Street intersection

The recommendations seek to enhance the overall public realm adjacent to the hospital, particularly the pedestrian environment, through improved safety and streetscape enhancements. Conflicts between hospital destined pedestrians and State Street motorists are reduced with conversion of a small segment of Ormond Avenue to one-way northbound only travel. A new road, privately constructed on hospital owned parcels north of State Street is recommended between Elm Avenue and Jefferson Avenue. This roadway provides an alternate access and circulation route for hospital employees and visitors using the adjacent parking lots. With this connector road in place, traffic, especially parking lot traffic is diverted away from the main hospital entrance, beyond the

high pedestrian activity area in front of the hospital, thus significantly improving pedestrian safety.

Under both the near and longer term plans, pedestrians are encouraged to use enhanced crosswalks at intersections. Any physical features proposed that direct pedestrians to and from the hospital would be done in collaboration with hospital approval.



### Cost Estimates

The costs associated with many of the immediate to near term recommended improvements are relatively low and inexpensive. A number can be implemented with little or no cost, (e.g. signal timing modifications, enhanced crosswalk striping, signage, landscaping, furnishings), while other recommendations require a more significant infrastructure investment. The cost for these as well as for the more substantial improvements such as the recommended State Street/Shenango Valley Freeway roundabout were estimated based upon recent bid prices for comparable elements.

It should be noted that there is significant variability in the degree to which improvements can be implemented and the costs associated with the improvements. For example, the gateway treatments can include special features, decorative pavement treatments and significant landscaping, or other less expensive treatments with only plantings and less expensive pavement treatments. Other improvements in the transportation system, such as the new roadway connection between Elm Avenue and Jefferson Avenue, may likely evolve over an extended time through a combination of private/public partnerships.

RECOMMENDATIONS	PLANNING LEVEL COST ESTIMATE
Signal Coordination / Upgrades	no cost
Develop an organization to develop and lead the Revitalization Program for Downtown Sharon	\$ 10,000
Develop a Façade Improvement Program for Downtown Sharon	\$ 50,000
Develop a Wayfinding Sign program/system for Downtown Sharon	\$ 25,000
Hospital Zone Mill, Overlay and Re-striping	\$ 68,000
Hospital Zone Signage, Crosswalks, and Median	\$ 153,600
School Zone Crosswalks	\$ 67,000
School Zone Signage	\$ 1,400
SRTS Case/Sharon Signage and Crosswalks	\$ 1,700
SRTS West Hill Signage and Crosswalks	\$ 5,300
Improved Safety Transition / Road Diet	\$ 200,000
<b>Intersections*</b>	
Buhl Farm Drive	
Phase 1 (Textured Crosswalks)	\$ 70,100
Phase 2 (Geometric Design)	\$ 717,000
Stambaugh and Euclid Avenues	
Phase 1 (Textured Crosswalks, Landscaping)	\$ 48,300
Phase 2 (Geometric Design) <sup>1</sup>	\$ 469,000
Kerrwood Drive <sup>2</sup>	\$ 857,000
Kerrwood Dr to Ellis Ave Sidewalk Connection	\$ 53,000
Ellis Avenue <sup>2</sup>	\$ 978,000
Hermitage Road <sup>1</sup>	\$ 961,000
<b>Gateways</b>	
Irvine Avenue Gateway	\$ 934,000
Shenango Valley Roundabout	\$ 1,573,000

\* cost includes landscaping, milling and repaving the entire intersection

1. Includes signal modifications
2. Includes signal replacement

### Notes:

1. Schematic cost estimates have been prepared using a 40% contingency.
2. Costs include design, survey and construction inspection.
3. Costs are provided in 2012 dollars.
4. Costs do not include right-of-way.

### Implementation

Recommendations for implementation of the proposed improvements are outlined on the following pages. They are subdivided into three categories: Immediate to Near Term (0-5 years), Medium Term (5-10 years), and Long Term (10-20 years). Many of the Immediate to Near Term recommendations can be implemented as part of ongoing maintenance. Meanwhile, other items in this phase of implementation are either relatively low cost modifications or funding for these improvements may be more readily available. Medium Term recommendations require more planning and funding to implement and can likely be accomplished in the 5 to 10 year timeframe. The Long Term recommendations are generally more expensive and are likely to require significant planning to implement. It is noted that the longer timeframes may more closely align with typical PennDOT timeframes used for programming funding. Specific long term improvements may be made sooner if funding becomes available.

### Strategic Funding

Two alternatives for funding sources can be the use of Transportation Impact Fees and a Tax Increment Financing (TIF) Guarantee Program. The Impact Fees can be used to improve roadway capacity issues created by the increased traffic generated by a new development. Projects may include traffic signal upgrades and roadway improvements (i.e., auxiliary turn lanes, new roadways).

The TIF program allows for incremental increases in property tax within a defined project area to be used for public infrastructure improvements to encourage redevelopment and minimize investor risk. A guarantee of up to \$5 million can be used to fund a project for such an investment.



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