



**BOROUGH OF**  
**Greenville Pedestrian Circulation Study**  
 Borough of Greenville, PA  
**Final Report**  
 2019.07.29

In association with:



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## EXECUTIVE SUMMARY

The Borough of Greenville Pedestrian Circulation Study inventories pedestrian amenities and gaps in infrastructure in the vicinity of Greenville, and makes specific recommendations to improve connections from residential neighborhoods and Thiel College to local amenities.

The Study has been developed in cooperation with Hempfield Township, the perspectives of stakeholders and residents of Greenville, PennDOT, Mercer County Regional Planning Commission (MCRPC), and Shenango Valley Area Transportation Study Metropolitan Planning Organization (SVATS MPO). The goals and objectives of the Study are to enhance economic vitality, improve quality of life, and preserve and enhance existing transportation infrastructure.

The 2016 Mercer County Long Range Transportation Plan recommended that the Greenville Pedestrian Circulation Study be conducted and noted several routes in Greenville as key bicycle and pedestrian corridors in need of improvement. That Plan also discussed the importance of promoting Mercer County as a recreational tourist destination while improving quality of life through developing multi-use trails and improving access to recreational amenities.

Meetings with stakeholders, property owners and the public over 10 months, plus a paper and online public survey, field observations, sidewalk inventory and automated pedestrian counters informed the Study's project recommendations. A Steering Committee comprised of representatives from Greenville Borough, PennDOT, Thiel College and MCRPC led the study, selected the final recommendations, and determined their priorities.

Project recommendations include new sidewalks, bike lanes, trail signs, bike racks, multi-use trails, streetscaping, crosswalks and pedestrian signals, and intersection improvements. The Study includes detailed implementation information that will allow Greenville Borough and Hempfield Township to apply for state and federal funding whenever possible in order to make the projects a reality.



## ACKNOWLEDGEMENTS

### *Steering Committee*

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### *Municipal & Stakeholder Participation*

Greenville Area Chamber of Commerce

Greenville Area Economic Development Corporation

Greenville Area School District

Greenville Area Soccer Association

Greenville Borough

Greenville Little League Association

Greenville Public Library

Hempfield Township

Mercer County Area Agency on Aging

Mercer County Regional Planning Commission

Mercer County Trails Association

PennDOT District 1-0

PennDOT Central Office

Rotary Club of Greenville, PA

Shenango River Watchers

Shenango Valley Transportation Study

Metropolitan Planning Organization

Thiel College

## 1.0 STUDY INTRODUCTION

During the preparation for the *Mercer County Long Range Transportation Plan (LRTP)*, a community meeting in Greenville was held to discuss multimodal transportation needs in Northwest Mercer County. During the meeting, active transportation needs both within Greenville Borough and connecting the Borough to the surrounding community were discussed at length. Based upon this meeting, a recommendation was included in the *2016 Mercer County LRTP* to conduct a Pedestrian Circulation Study for the Borough of Greenville.

The Study was intended to result in implementable projects that improve the overall quality of life for residents of the community and ensure the long term sustainability of the area by improving access for residents to downtown, Thiel College, Riverside Park, Shenango Trail, schools, and local retail and shopping destinations. Overall, these connections will improve the health of the community by offering additional recreational opportunities, providing active transportation alternatives to access jobs, and improving the economic vitality of the region through tourism by making Greenville a more attractive stop.

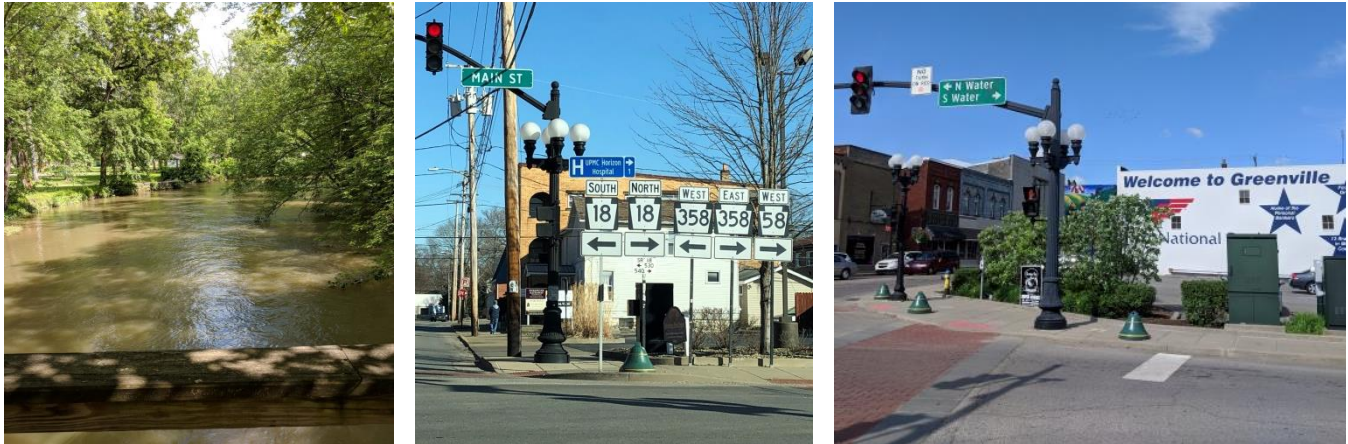
These discussions, as well as meetings for economic development and tourism, unveiled one of the most exciting elements of the LRTP: the understanding that improving the quality of life for residents and opportunities for visitors through better mode choice and recreational opportunities was a key to the long term viability of Mercer County.

The Borough of Greenville Pedestrian Circulation Study aims to further that objective. The goals and objectives of the Study are to enhance economic vitality, improve quality of life, and preserve and enhance existing transportation infrastructure. A Steering Committee comprised of representatives from Greenville Borough, PennDOT, Thiel College and MCRPC led the study, selected the final recommendations, and determined their priorities.



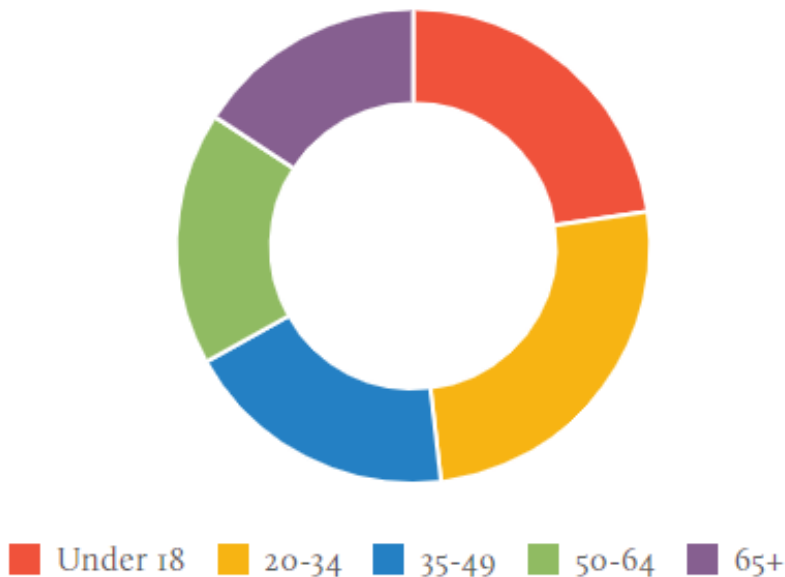
### 1.1 Background

The Borough of Greenville is located in Mercer County, northwest of interstates 80 and 79, and served by State Routes 358, 18 and 58 (Figure 1). The Shenango River flows south through the town, fed by the Pymatuning Reservoir located about 10 miles north in Crawford County.



The population of Greenville was 5,794 in 2016, which was a slight decline from the 2010 Census population of 5,919. The median age of 29.8 is lower than the statewide median age of 40.6, and the Borough has more residents under the age of 18 than over the age of 65 (Figure 2).<sup>1</sup>

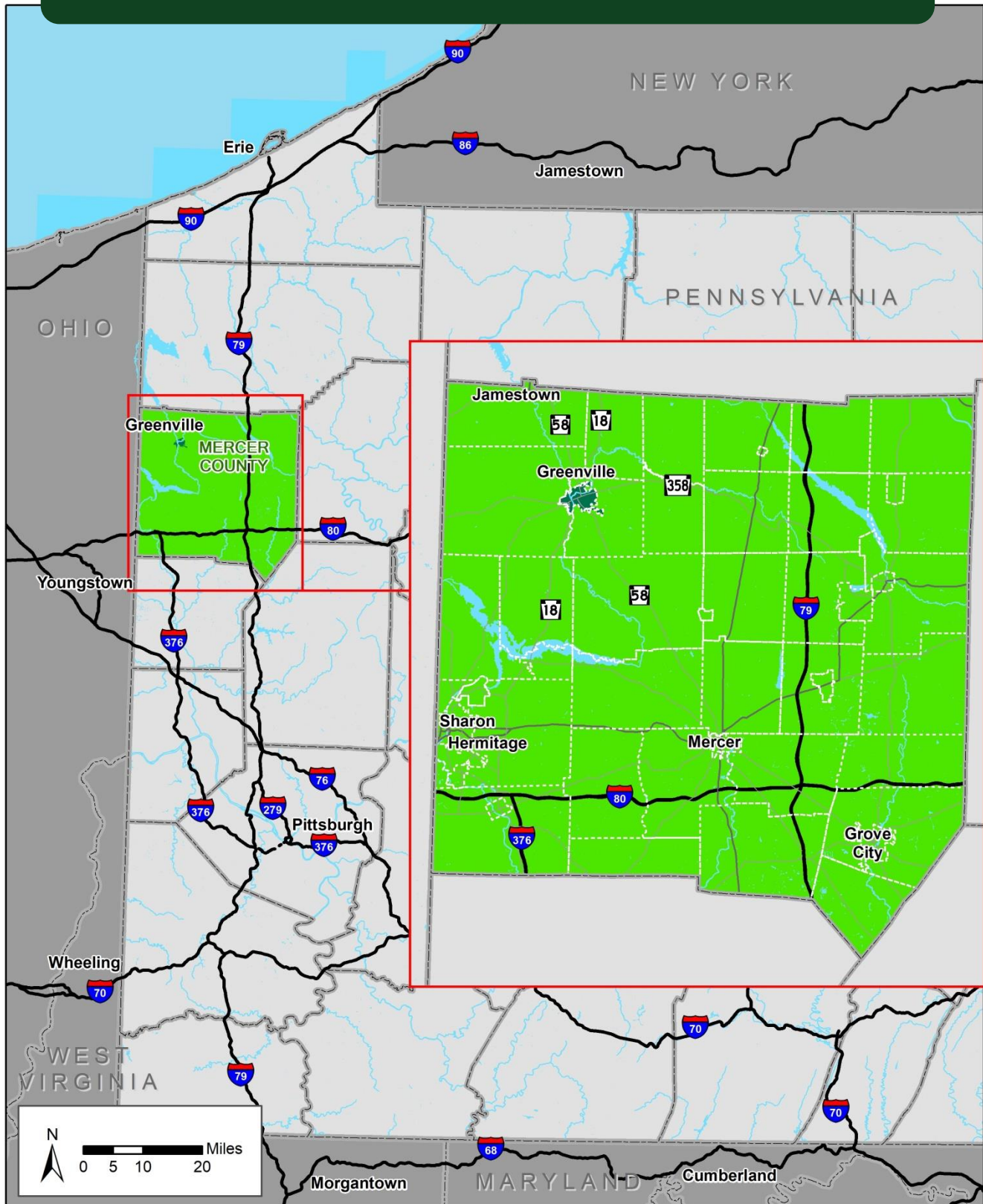
Figure 2: Population Age in Greenville Borough



<sup>1</sup> Sources: American Community Survey; <https://greenvilleborough.com/demographics> and <https://datausa.io/profile/geo/greenville-pa/?compare=pennsylvania>. Accessed February 27, 2019.



# Figure 1: Borough of Greenville Location



## 1.2 Community Features



Community assets, many of which are popular pedestrian destinations and tourist attractions, were identified (Figure 3). The numbered list below corresponds to the numbers on the map.

Greenville is home to Thiel College, a 135-acre private liberal arts college with about 800 students founded in 1866. It is located on the north side of the Borough, connecting to downtown Greenville via College Avenue and Alan Avenue.

Riverside Park, located just north of downtown adjacent to the Shenango River, is a key community asset for recreation. The park offers trails, baseball and softball fields, and is located adjacent to the Greenville Canal Museum and Greenville Senior Community Center.

The Greenville Area Sports Complex, located at State Route 58 and Porter Road north of Greenville Borough, was constructed in 2000 and offers numerous soccer fields and baseball fields.

There are two main areas for shopping – downtown Greenville, and the retail area east of town on Hadley Road. Downtown Greenville is a vibrant business district with many small shops and a beautiful pedestrian setting. The retail area on Hadley Road is home to “big-box” stores as well as local businesses such as car dealerships.

The limited number of bridges over the river and streams limits the connectivity between areas north and west of downtown (including Thiel College and Riverside Park) and the rest of the town. Schools are located to the east, somewhat removed from the rest of the town.

**Figure 3: Community Features Index**

*Institutions*

1. Greenville Elementary School
2. Greenville High School
3. Thiel College
4. UPMC Horizon – Greenville Hospital
5. Post Office
6. Greenville Canal Museum
7. Greenville Railroad Museum Park
8. Greenville Area Public Library
9. Greenville Senior Community Center

*Recreation*

10. Riverside Park
11. Central Park
12. Hempfield Park
13. Shenango Trail
14. Greenville Area Sports Complex

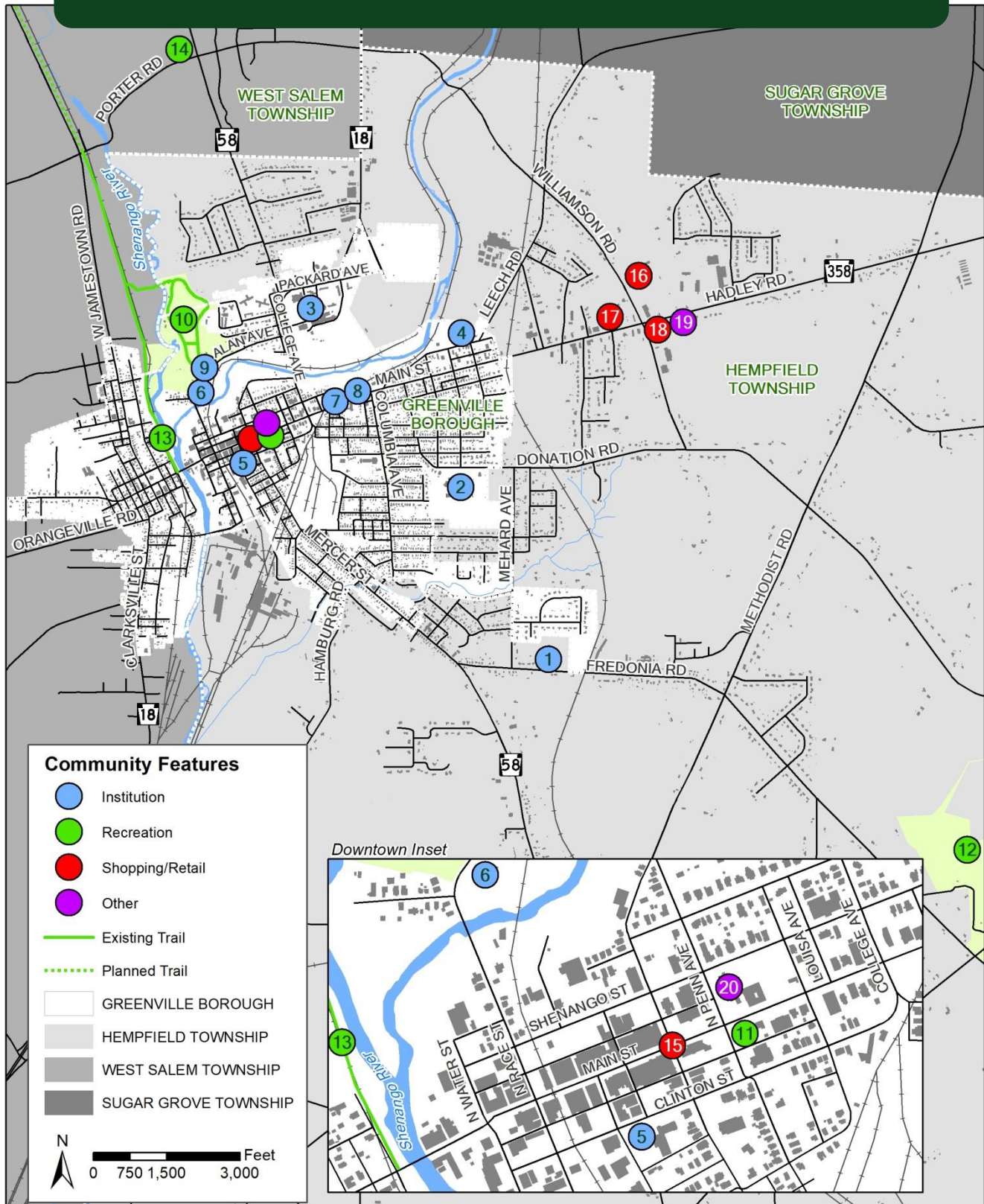
*Shopping/Retail*

15. Downtown Greenville
16. Walmart
17. Giant Eagle
18. Aldi

*Other*

19. Cobblestone Hotel
20. Greenville House

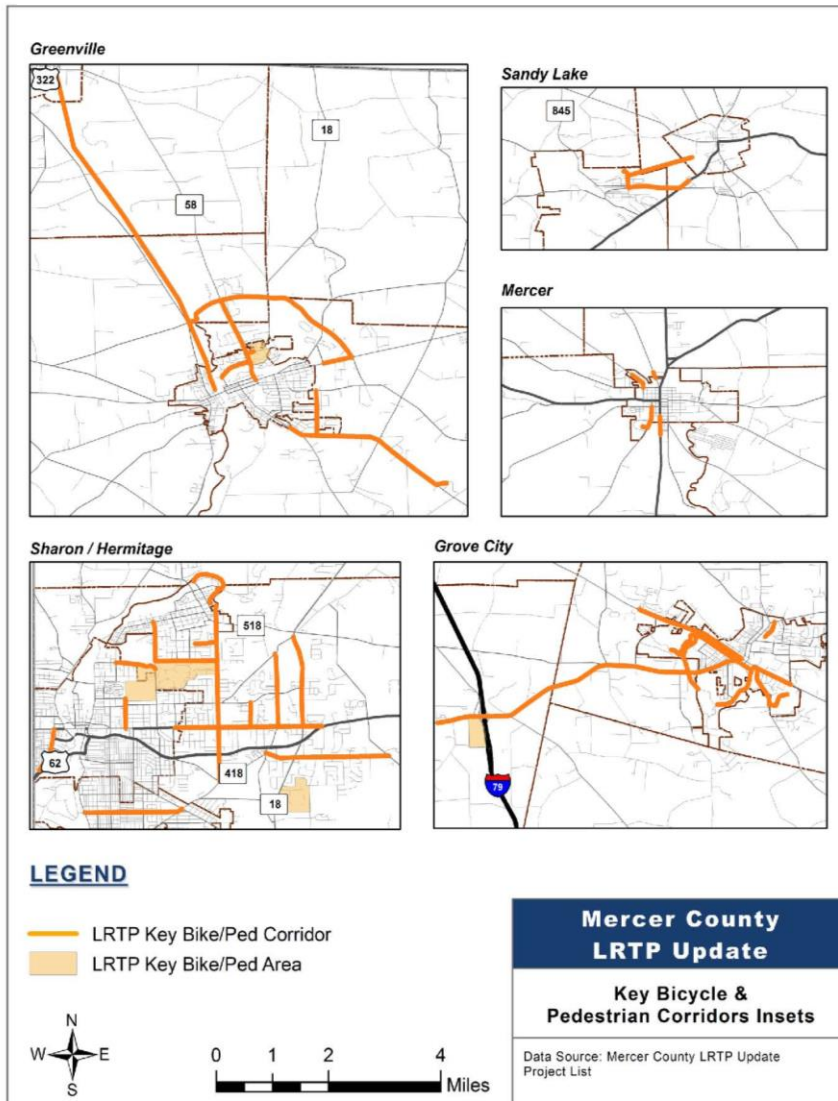
# Figure 3: Community Features



### 1.3 Existing Plans and Recent Developments

Several existing plans and recent events have shaped the purpose and outreach of the Pedestrian Study. As discussed previously, this Study builds on outreach and recommendations from the recently adopted 2016 Mercer County LRTP. That Plan designated a set of Key Bicycle and Pedestrian Corridors, which include several routes in Greenville: Shenango Trail, Porter Road, Alan Avenue, College Avenue / State Route 58, Williamson Road, Hadley Road / State Route 358, Mehard Avenue, and Fredonia Road (Figure 4). The purpose of the corridor map in the LRTP was to highlight critical bicycle and pedestrian routes so that amenities can be considered for upgrades or new construction when scoping future roadway betterments along State Routes or for alternative funding sources for non-State routes. Those routes became the starting point for this Study.

**Figure 4: Key Bicycle & Pedestrian Corridors**



In addition to this Study, another product of the Mercer County LRTP is the sidewalk along Alan Avenue, which is currently in development. This critical connection between residential areas on the north side of Greenville, Thiel College, Riverside Park and downtown Greenville has no existing sidewalk. The new sidewalk will be along the north side only, in order to keep the project within the existing right-of-way and minimize impacts to adjacent properties. PennDOT Transportation Alternatives Program funding for the project has been secured. Construction will occur concurrently with a stormwater management project along Alan Avenue, and is expected to begin in 2020.

The *Shenango Trail Feasibility Study (2016)* details plans to create a paved rail-trail from Greenville to the Pymatuning Reservoir along an abandoned rail bed. The section from downtown Greenville to Porter Road was completed in 2017.

In the fall of 2018, students who previously attended East Elementary in

Greenville Borough began attending the former Hempfield Elementary, which is now a newly-expanded Greenville Elementary. The result of the school consolidation is that students who could previously walk to school are now bused because the lack of sidewalks around Greenville Elementary makes walking hazardous.

## 2.0 STAKEHOLDER AND COMMUNITY OUTREACH

### 2.1 Outreach Meetings

The initial outreach, conducted in spring/summer 2018, served to introduce the project to the public and stakeholders, gather input on the initial alternatives, and solicit new ideas. This phase of outreach included:

- Stakeholder meeting – Representatives of key stakeholder groups were invited to hear a presentation about the Study and generate ideas for improvements.
- Pop-up meetings – Held at the Rotary Club of Greenville and Thiel College. The focus of pop-up meetings was on one-on-one interaction with interested members of the public at locations where they already are rather than asking them to attend a separate meeting.



The second outreach phase was conducted in fall/winter 2018-19 after the preliminary project alternatives had been selected by the Steering Committee. This outreach phase summarized the study to date and preliminary projects in order to provide an opportunity for feedback and to gain public support.

- Property owners meeting – For locations where new sidewalks were being considered, impacted property owners were identified from the parcel database and invited by mail to meet with the Steering Committee. Property owners were given an introduction to the Study and were provided with a forum to communicate their ideas and concerns in person, or via phone call, letter, or email.
- Hempfield Township meeting – Since several of the preliminary projects were located in Hempfield Township, a one-on-one meeting was held to gather insights from the Township manager and discuss how state and federal funding could be leveraged by the Township to assist in paying for the proposed improvements.
- Greenville Area School District meeting – Similarly, several potential projects are directly related to Greenville schools, so a meeting was held with key personnel from the district and the school board to get feedback on the projects and how they could provide benefits to school students.



### 2.2 Public Meeting

The final outreach was a public meeting held in February 2019, with afternoon and evening open house sessions. Displays and maps detailed the purpose of the Study, public survey and data collection, and recommended projects. Steering Committee members were available to answer questions and discuss the Study.

Those who attended previous meetings or responded to the public survey and provided their email address were notified directly by email. Flyers were circulated electronically to stakeholder groups and on social media to promote the meeting.

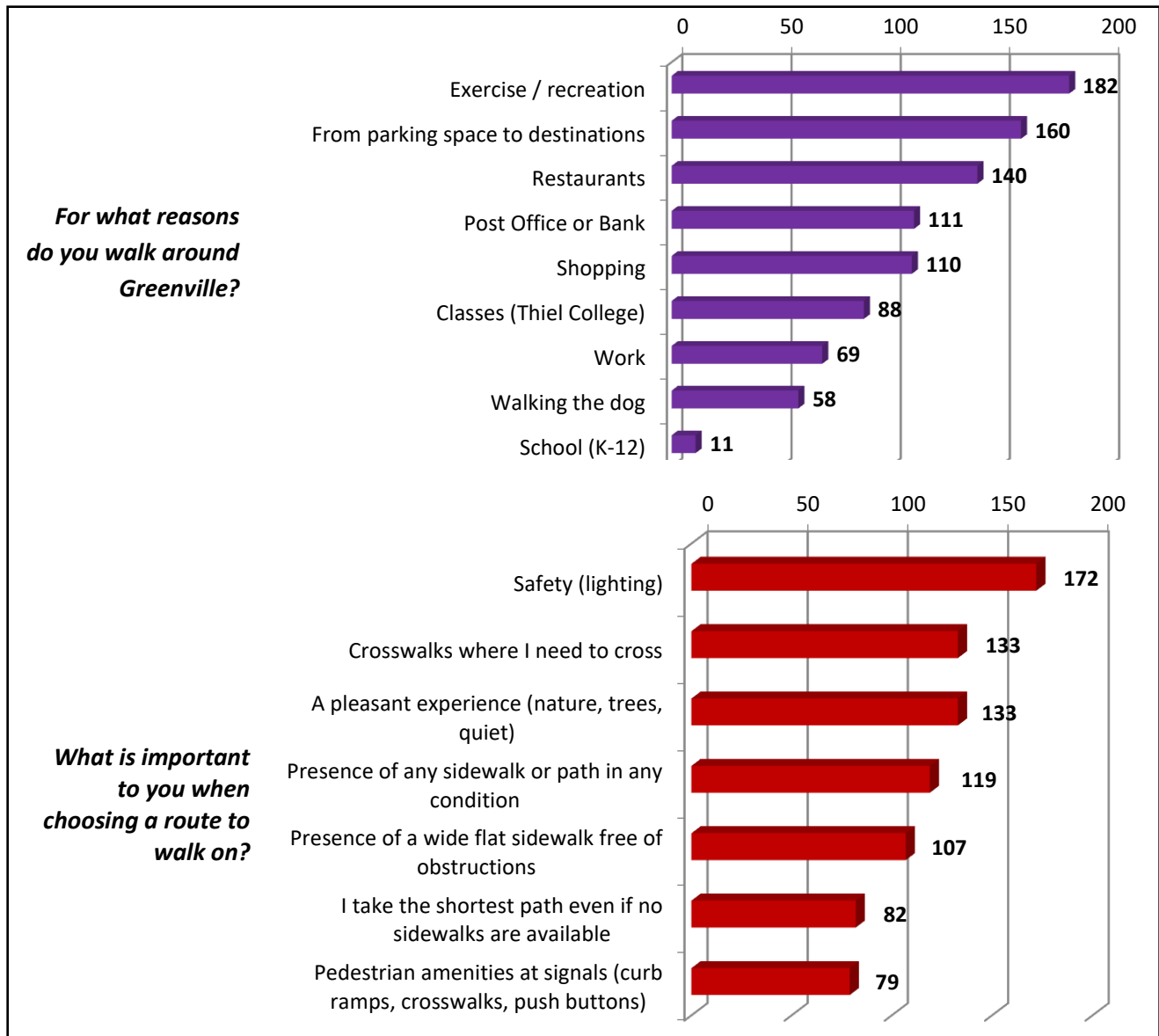


### 2.3 Public Survey

A public survey was conducted from April through June 2018, with both online and paper versions. Paper surveys were distributed on Thiel Campus and at the Senior Center, the Rotary Club meeting, and the Greenville Municipal Building. The online survey link was distributed through social media and stakeholder groups.

The team collected 296 responses to the survey, covering why and where people walk in Greenville (Figure 5). Full survey results appear in Appendix 1. The public survey responses indicated that safety, crosswalks and a pleasant experience were the top priorities for those who would like to walk. Most respondents walk for exercise or recreation, while local destinations such as restaurants, post office or bank, and shopping are also popular destinations. Investments to improve pedestrian facilities to create a more pleasant experience could be expected to increase the pedestrian activity in town, to the benefit of residents’ health, as well as benefitting those who walk because they do not have access to a car.

**Figure 5: Public Survey Highlights**



## 3.0 EXISTING CONDITIONS

### 3.1 Sidewalk and Trail Inventory

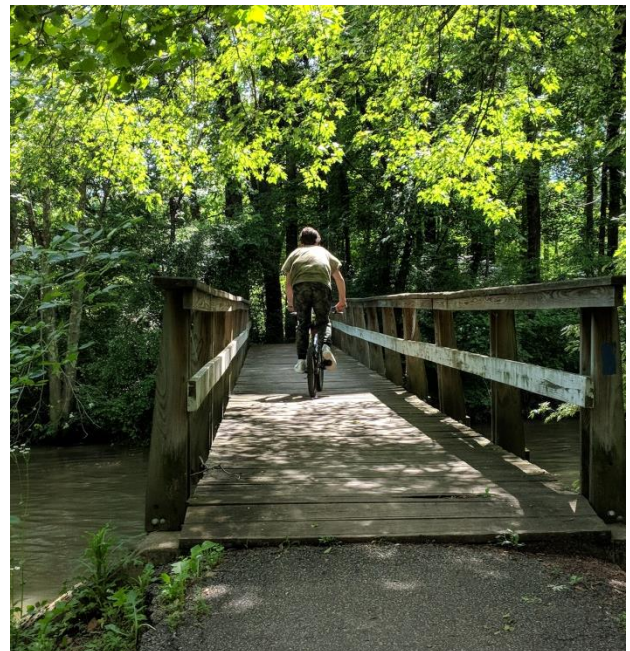
The presence and condition of sidewalks in the Borough was evaluated in summer 2018 (Figure 6). While sidewalks exist along most streets in the Borough, there are notable exceptions in the areas east of town near the elementary school and high school, north of town adjacent to Thiel College, and west of town.

There are almost 35 total miles of sidewalk in Greenville Borough, with 27% in good/very good condition, 57% in fair condition, and 16% in poor/very poor condition. Approximately 12 miles of roads in the Borough do not currently have sidewalk. There is generally no sidewalk present in Hempfield Township or West Salem Township.

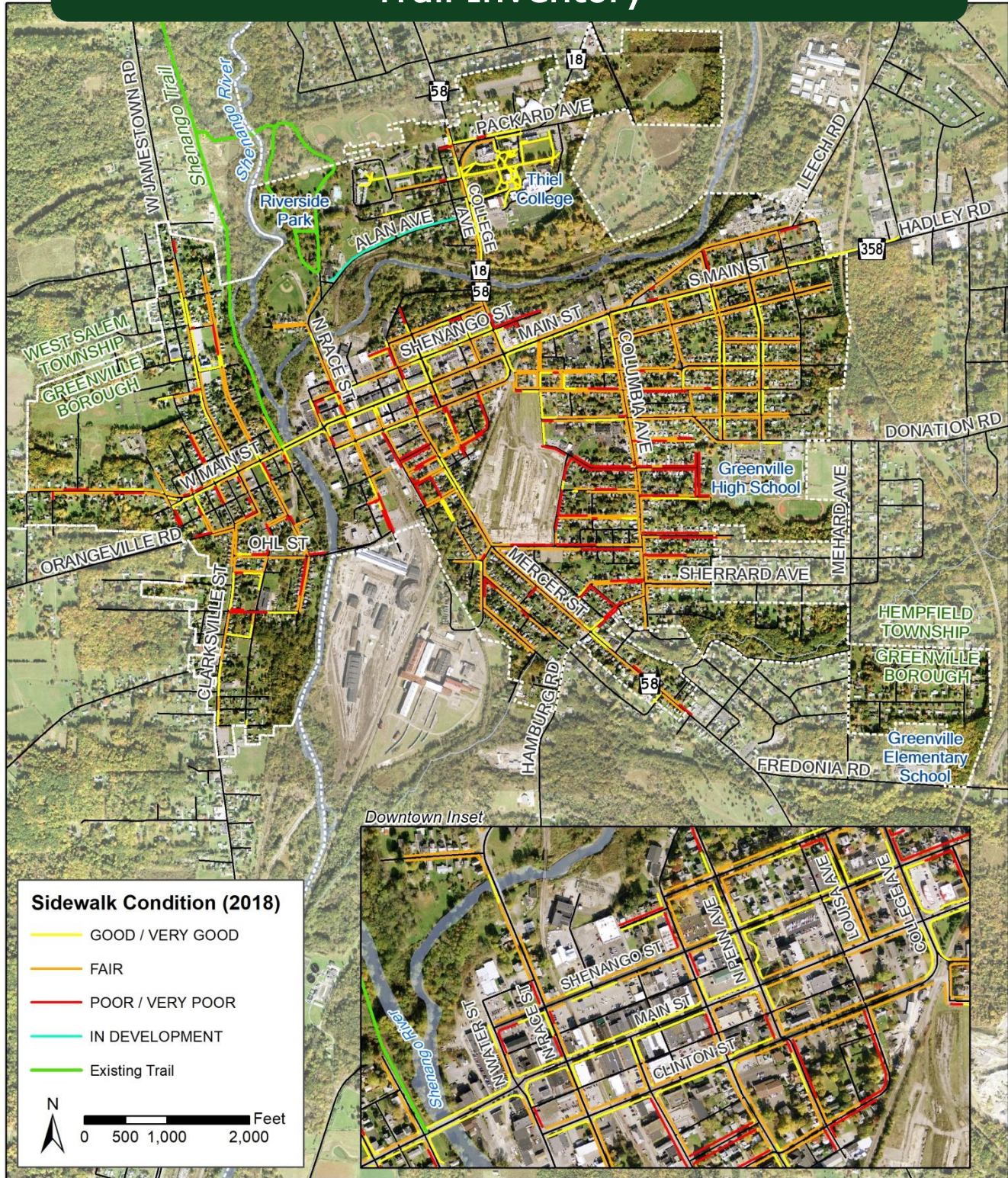
As discussed in Section 1.3, the Borough is currently in the process of adding sidewalk along the north side of Alan Avenue, from College Avenue to the Riverside Park entrance. Construction is expected to begin in 2020.

The Shenango Trail, which is an 8-foot-wide off-street hardened trail suitable for walking and biking, currently runs from the trailhead on the west side of the Shenango River following the abandoned Erie and Pittsburgh Branch of the Pennsylvania Railroad north to Porter Road. Future plans call for the trail to extend to Jamestown and the Pymatuning State Park area. Eventually the trail may extend southward on the former railroad grade to connect with the Trout Island Trail, thus linking two of Mercer County's major recreation areas – Jamestown/Pymatuning and Shenango Lake.

Riverside Park has a 1-mile interpretive nature trail which includes a foot bridge over the Shenango River connecting to the Shenango Trail. The trail is maintained by the Greenville Area Leisure Services Association.



# Figure 6: Existing Sidewalk and Trail Inventory





### 3.2 Pedestrian Counts

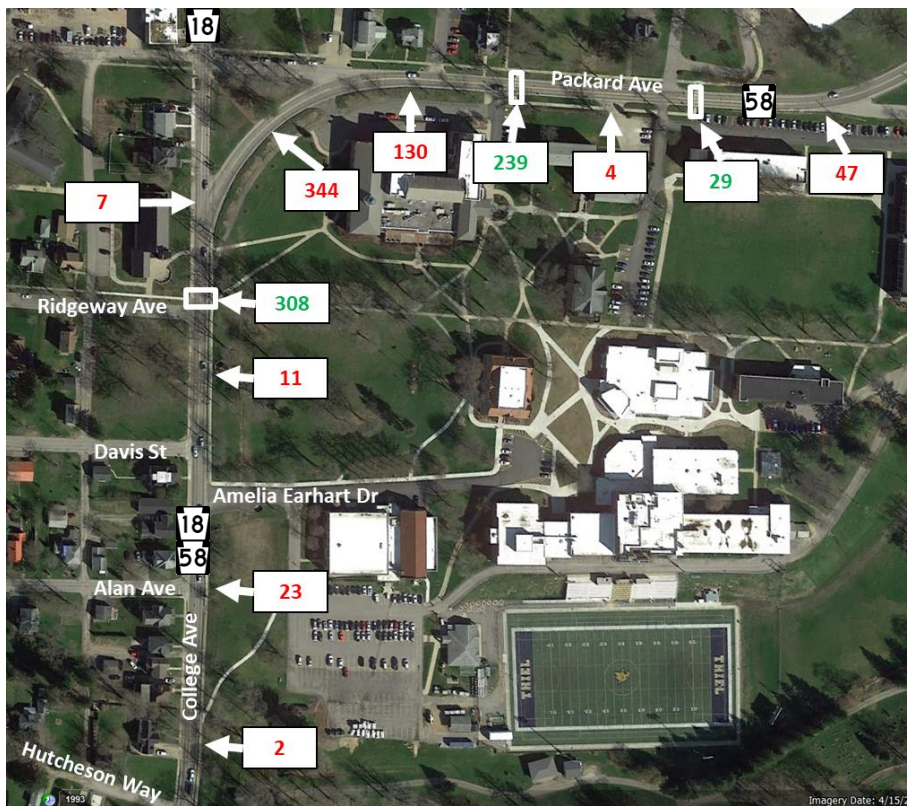
#### Thiel College

Miovision cameras were temporarily installed at six locations near the Thiel College campus to count the number of pedestrians jaywalking and crossing at crosswalks. The picture at right illustrates how the cameras were set up defining zones to capture pedestrians crossing at a crosswalk as well as illegally crossing mid-block.

The cameras recorded data from Thursday, April 26<sup>th</sup> through Friday, April 27<sup>th</sup>, 2018. Pedestrians were counted each day during three two-hour peak periods: 7:30-9:30am, 11am-1pm, and 4pm-6pm.



Figure 7: Pedestrian Counts near Thiel College

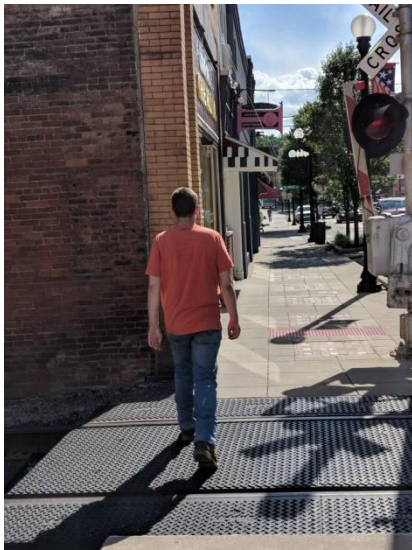


Since the counts were conducted during the last week of classes for the semester, pedestrian traffic may be underestimated. However, the relative information can still be used to understand pedestrian patterns and how many are using crosswalks vs. jaywalking, prioritize improvements, and serve as a baseline to determine if improvements are working. Understanding where the pedestrians are crossing makes it easier to identify improvements that can encourage them to cross at safer locations.

The vast majority of pedestrians crossed at or near the SR 18 / 58 split, based on the total number of crossings during the 12-hour observation period (Figure 7).

About half of the crossings counted were jaywalking: 568 people, with 344 people crossing illegally through the middle of the intersection. Complete count data appears in Appendix 3.

Downtown Greenville



Miovision cameras were temporarily installed at 14 locations in downtown Greenville to count the number of pedestrians and bicyclists. The cameras recorded data on Thursday, July 12<sup>th</sup> and Friday, July 13<sup>th</sup>, 2018. Pedestrians were counted each day during three two-hour peak periods: 7am-9am, 11am-1pm, and 4pm-6pm. Complete tables of the pedestrian and bicycle counts are included in Appendix 3.

The highest traffic area for pedestrians was concentrated on Main Street from Water Street to Penn Avenue, with significant traffic extending to the Railroad Museum, the Shenango River, Clinton Street and Riverside Park, based on the total number of pedestrians counted during the 12-hour observation period (Figure 8). For bicyclists, activity during the period was concentrated at Riverside Park and along North Race Street, with significant traffic along Shenango Street, College Avenue and Main Street near the Railroad Museum (Figure 9).

Since the counts were done during the summer break for Thiel College, some counts such as College Avenue likely reflect fewer pedestrians and bicyclists than would be present during the school year. Nevertheless, having a better understanding of frequently traveled routes can assist in prioritizing improvements and providing a baseline for future comparisons.

**Figure 8: Pedestrian Counts in Downtown Greenville**



**Figure 9: Bicyclist Counts in Downtown Greenville**



**3.3 Walking Tour and Field Observations**

A walking tour was held in July 2018 with members of the Steering Committee and Complete Streets experts to identify opportunities for improving bicycle and pedestrian facilities. In addition, engineers and staff conducted field observations several additional times over the course of the study to inventory sidewalks, crosswalks, pedestrian push buttons, shoulder widths, bike lanes, trails, and bike racks along critical routes.

Observations included notations of obstructions in the roadway right-of-way (such as utilities and stormwater drains) that would make sidewalk installation more costly, intersection crossing distances, lack of signage to clarify routes, missing and poor condition sidewalk sections, pedestrians jaywalking, and “desire lines” indicating places where people are walking alongside the road where no sidewalk exists.





### 3.4 *Crash History*

For the five-year period from 2013 through 2017, there were a total of one bicycle-involved and seven pedestrian-involved crashes in Greenville Borough and Hempfield Township. Six of the eight crashes occurred in downtown Greenville during daylight hours, and in only one was poor weather a factor. Two of those crashes, including the single pedestrian fatality, occurred at the intersection of Main Street and N Penn Avenue / Franklin Street.

## 4.0 PROJECT IMPLEMENTATION

### 4.1 Project Focus Areas

After considering the sidewalk inventory, pedestrian counts, walking tour, field observations, crash history, public survey and stakeholder outreach, five focus areas for project recommendations emerged (Figure 10). The needs and challenges faced in the five areas were determined, and specific project recommendations were developed for each area. Areas of the Borough not covered by a focus area are covered by several Borough-wide improvement projects detailed in Section 4.3.

#### A: Hadley Road / Williamson Road

This section of Hadley Road (State Route 358) and Williamson Road is home to many of the area's retail businesses, including Walmart and two grocery stores, so it is a frequent destination for residents. It is a busy, major roadway but currently has no sidewalks. People walk here regularly along the side of the road; even in mid-January there was so much foot traffic that the path had worn through the snow.

In the public survey and various public outreach meetings conducted, this area was the most often cited as needing improvement and being a high priority for residents.

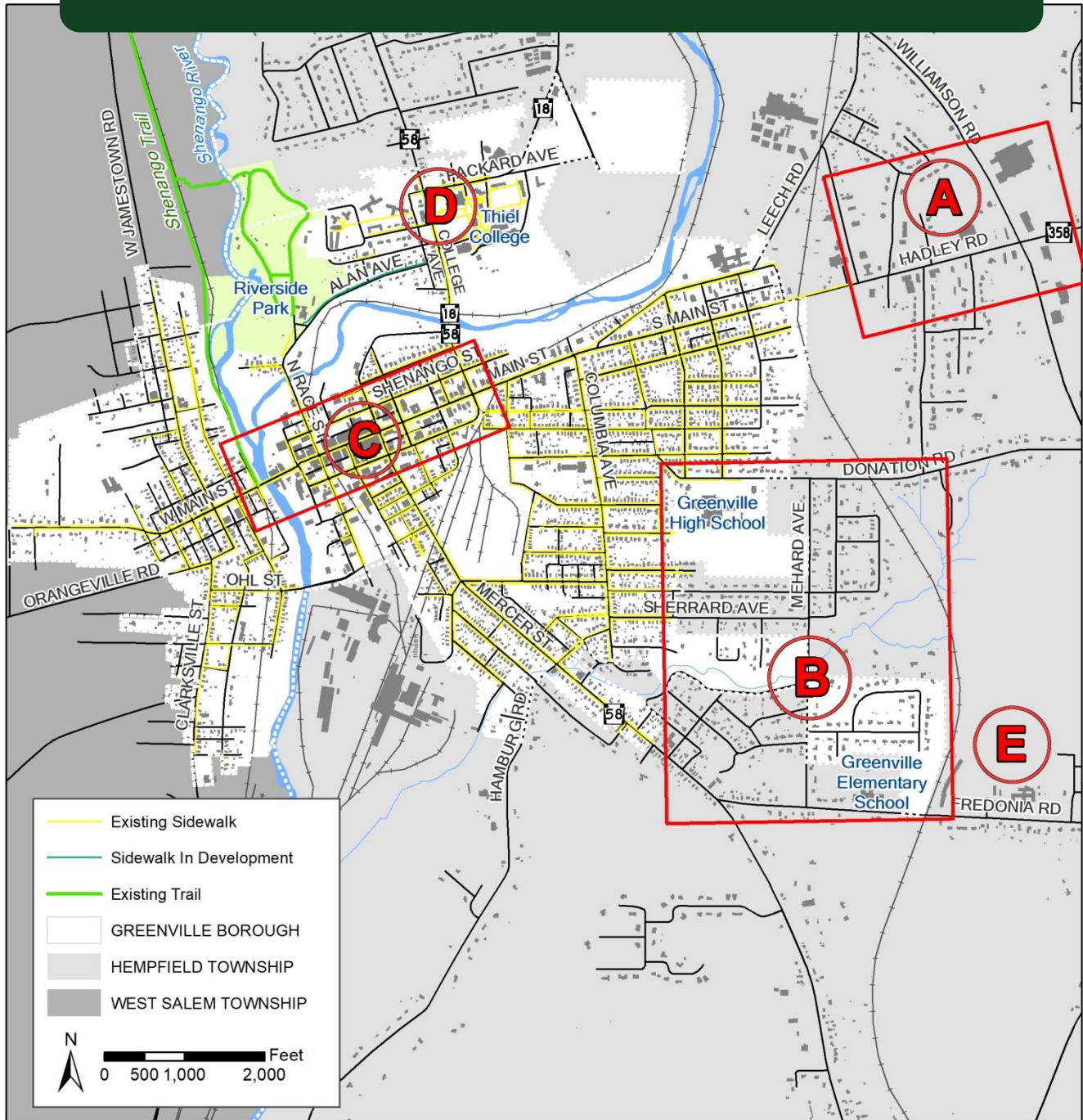
Along Hadley Road, there is limited space in the roadway right-of-way, so the proposed sidewalk would be located immediately adjacent to the road without a grass buffer. Moving existing utility poles and other obstructions and accounting for the slope away from the road add to the projected cost. The intersections of Hadley at Williamson and Williamson at the Walmart entrance already have pedestrian facilities including crosswalks, pedestrian signals, and ADA ramps, they only lack the sidewalk to connect to them.



#### B: Greenville Elementary and High School

The residential area in eastern Greenville near the elementary and high schools lacks sidewalks. The schools are community assets, even for residents without school-aged children, since they offer community events and access to fields and playgrounds when not in use by the schools. In addition, the area is largely residential, and having sidewalks would be beneficial for residents to walk to destinations in downtown Greenville as well as for general recreation and dog walking.

# Figure 10: Project Focus Areas



Although the elementary school students are all bused to and from school, students attending the high school have the option to walk. Having a sidewalk connecting the two schools would also enable elementary school students to take advantage of facilities located at the high school.

Moreover, having sidewalks in the area would be beneficial even to students who take a bus to school. Sidewalks offer the kids a safer place to wait for the bus, and may allow the buses to have less-frequent stops, because kids would have a way to safely walk to the corner for a consolidated bus stop.

Challenges in this area include speeding cars and limited sight distance along Mehard Avenue, existing drainage issues and the general topography along Mehard Avenue with a pronounced dip in the road where it crosses Saul Run creek. The roads in this area are generally narrow with no shoulder, and drainage ditches on one or both sides.



### C: Downtown Greenville

Downtown Greenville has existing sidewalk infrastructure, but pedestrian safety remains a concern, noted in public surveys and comments. Challenges identified by the public comments include wide crossing distances for pedestrians that make it difficult to cross in the permitted time, and drivers not yielding to pedestrians. Several proposed projects aim to calm traffic along Main Street, make it easier and safer for pedestrians to cross Main Street, and improve crosswalks and pedestrian signals borough-wide.

The proposed projects also include bicycle facilities to enhance connections for cyclists between Thiel College, Riverside Park, downtown and the Shenango Trail. Bicycle racks and signage to trail connections and downtown destinations for visitors will also enhance tourism opportunities from Shenango Trail visitors.



### D: College Avenue / Packard Avenue Intersection

The existing intersection of State Routes 58 and 18 is confusing for drivers, and pedestrian paths are indirect, leading to pedestrians crossing at unmarked and unsafe locations. Pedestrian counts showed that about half of pedestrians in this area cross illegally mid-block, with the most jaywalking occurring at this intersection. Realigning the intersection can simplify it for drivers and improve safety for pedestrians.

In addition, this intersection is the northern entrance to Thiel College and Greenville, and an opportunity exists to create a “gateway” treatment that will beautify the area, call drivers’ attention to the many pedestrians crossing College Avenue, and slow traffic.



### E: Trail to Hempfield Park

Hempfield Park is located east of Greenville, near the intersection of Fredonia Road and St. Glory Road, but it is not easily accessible to residents without a car. The proposed trail would connect Greenville Elementary School to the conservation area just east of the school, which could be utilized by the school for educational workshops. The trail would then continue east along Fredonia Road to Hempfield Park. Providing pedestrian access in this area would also be beneficial for residents who need to access Greenville without a car, such as visiting students with the American Scholars Group. The 10-foot-wide multi-use trail would accommodate both walking and biking.





## 4.2 Project Implementation Plan

Specific improvements were recommended by the Steering Committee to address the walking and biking needs of the Greenville community (Figures 11 and 12). ID numbers in the table (Figure 11) match those on the map (Figure 12) and those on the detailed implementation sheets in Section 4.5. Project prioritization is described in Section 4.3, and potential funding sources are described in Section 4.4.

A description of alternatives considered by the Steering Committee but not ultimately selected are included in Appendix 3. Estimated project costs are described in Appendix 4.

In addition to the listed recommendations, the Study recommends the following next steps to advance implementation that can be addressed immediately at little or no cost:

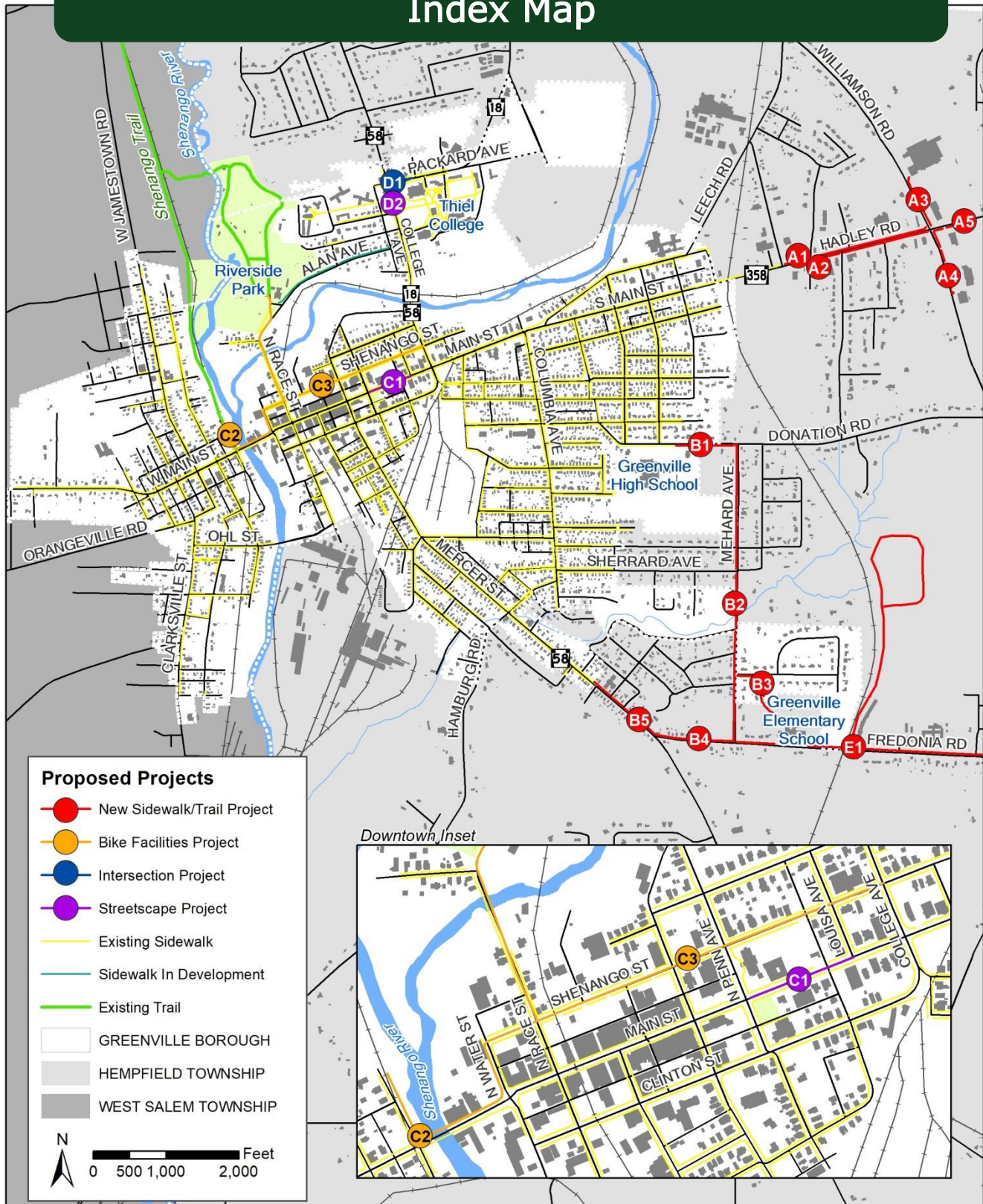
1. Greenville Borough Council should adopt this Study. Formal adoption gives more weight to the Study's recommendations and improves the possibility of securing funding for projects.
2. Request that the Mercer County Regional Planning Commission (MCRPC) include any Transportation Improvement Program (TIP)-eligible projects in its next round of prioritization.
3. Request that MCRPC include recommended projects in its overall PennDOT Connects map, which highlights desired bicycle and pedestrian facilities throughout Mercer County. This map is used as a means to streamline communication of multimodal priorities between municipalities, Mercer County, and PennDOT. The map can be used by PennDOT when they complete roadway betterments or TIP projects. As local priorities change over time, these priorities can be sent to MCRPC to be included in the next map update.
4. Adopt sidewalk ordinances for both Greenville Borough and Hempfield Township to require sidewalk installation for any new commercial or institutional development and require sidewalk maintenance by property owners. These ordinances can also establish areas where the municipality intends to assess existing commercial property owners for sidewalk installation, as described in Section 4.4.

**Figure 11: Project Implementation Plan**

ID	Project	Responsible Party	Project Partners	Conceptual Cost	Priority	Page
A1	New sidewalk along Hadley Rd (SR 358) north side, SR 4031 to Williamson Rd	Hempfield Township	Adjacent property owners, PennDOT, MCRPC	\$414,200	High	38
A2	New sidewalk along Hadley Rd (SR 358) south side, Woodfield Rd to Williamson Rd	Hempfield Township	Adjacent property owners, PennDOT, MCRPC	\$383,300	Low	40
A3	New sidewalk along Williamson Rd, north of Hadley Rd	Hempfield Township	Adjacent property owners, PennDOT, MCRPC	\$91,800	Medium	42
A4	New sidewalk along Williamson Rd, south of Hadley Rd	Hempfield Township	Adjacent property owners, PennDOT, MCRPC	\$87,700	Medium	44

ID	Project	Responsible Party	Project Partners	Conceptual Cost	Priority	Page
A5	New sidewalk along Hadley Rd south side, east of Williamson Rd	Hempfield Township	Adjacent property owners, PennDOT, MCRPC	\$212,300	Medium	46
B1	New sidewalk along Donation Rd south side, high school to Mehard Ave	Greenville Borough, Hempfield Township	Greenville Area School District, Adjacent property owners, MCRPC	\$121,000 - \$477,200	High	48
B2	New sidewalk along Mehard Ave west side, Donation Rd to Fredonia Rd	Greenville Borough, Hempfield Township	Greenville Area School District, Adjacent property owners, MCRPC	\$801,500	High	50
B3	New sidewalk along E Greenville Dr/Hempfield Dr	Greenville Borough, Hempfield Township	Greenville Area School District, Adjacent property owners, MCRPC	\$159,900	Low	52
B4	New sidewalk along Fredonia Rd north side, S Mercer St to Greenville Elementary	Hempfield Township	Greenville Area School District, Adjacent property owners, MCRPC	\$285,600	Low	54
B5	New sidewalk along S Mercer St east side, Borough line to Fredonia Rd	Hempfield Township	Adjacent property owners, PennDOT, MCRPC	\$187,100	Low	56
C1	Main Street Safety & Streetscape Improvements	Greenville Borough	PennDOT, MCRPC	\$266,100	Medium	58
C2	Shenango Trail Town Amenities	Greenville Borough	Mercer County Trails Assoc.	\$25,300	High	60
C3	Downtown Greenville Bike Facilities	Greenville Borough	Mercer County Trails Assoc., MCRPC	\$144,200	Medium	63
D1	College Ave / Packard Ave Intersection Improvements	PennDOT	Greenville Borough, Thiel College, Adjacent property owners	\$2.3 - \$3.6 million	High	66
D2	Thiel College Gateway Sign	Thiel College	Greenville Borough, PennDOT	\$75,000	Medium	69
E1	New multi-use trail from Greenville Elementary School to Hempfield Park	Hempfield Township	Mercer County Trails Assoc., Greenville Area School District, Adjacent property owners, MCRPC	\$2.6 million	Low	70
F1	Borough-wide pedestrian crosswalks and signals	Greenville Borough	PennDOT, MCRPC	\$1,000 per crosswalk, \$1,450 per pair of signals	High	72
F2	Borough-wide sidewalk improvement program	Greenville Borough	Adjacent property owners	\$50 per linear foot	Medium	74

**Figure 12: Recommended Projects Index Map**

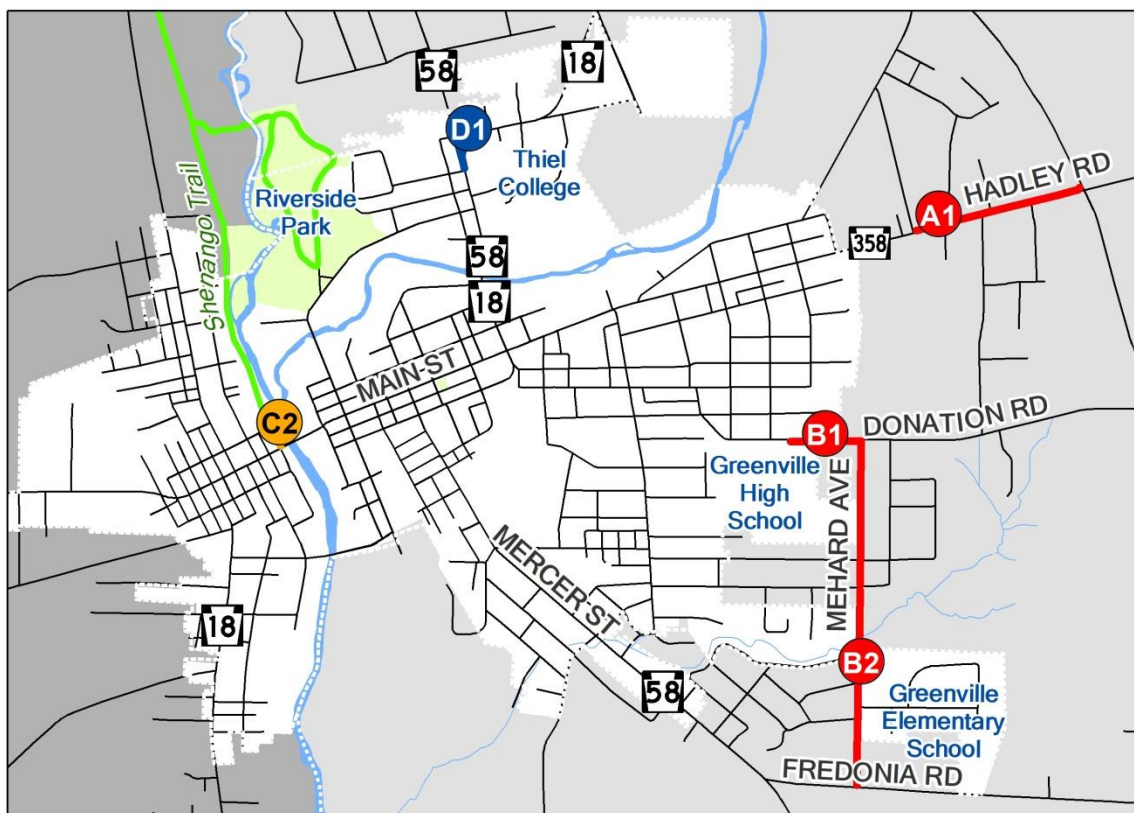


### 4.3 Project Prioritization

The projects recommended by the Steering Committee were prioritized into three categories: High, Medium and Low. High priority projects, shown in Figure 13, were selected based on their ability to improve safety and quality of life for more people, create critical connections between community assets, and support economic development in the area. Projects that would be beneficial but would serve fewer people were designated for Medium or Low priority.

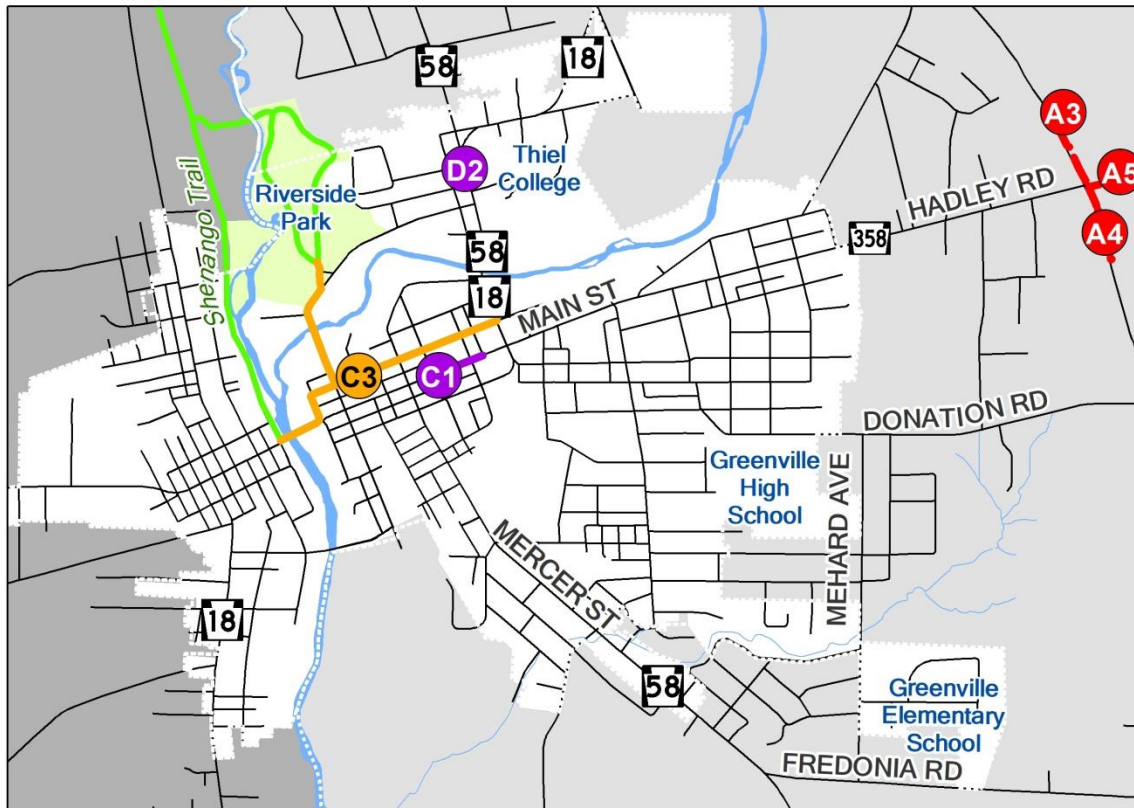
For example, the sidewalk along the north side of Hadley Road would provide a safer means of travel for customers and employees of the many businesses located along the very busy corridor. Adding a sidewalk would make it convenient for customers to shop at the businesses, supporting the local economy. This project was frequently suggested and enthusiastically supported by many participants during public outreach.

Figure 13: High Priority Projects



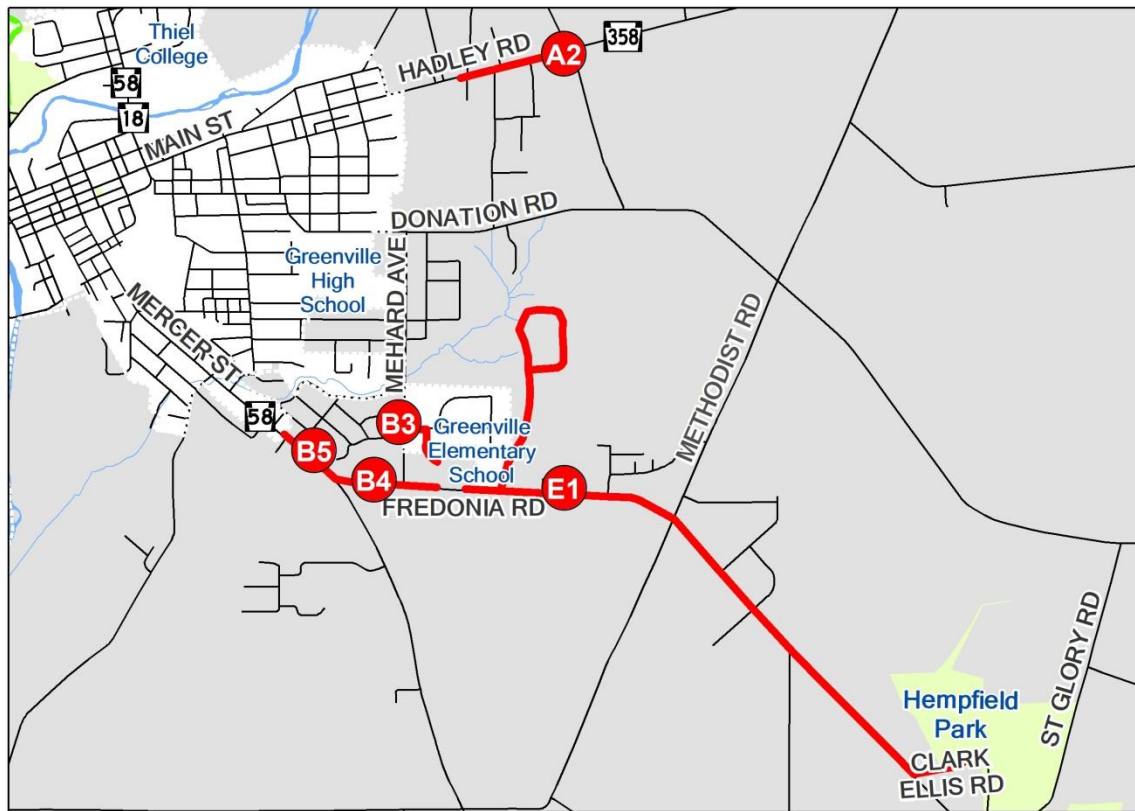
ID	Project	Page
A1	New sidewalk along Hadley Rd (SR 358) north side, SR 4031 to Williamson Rd	38
B1	New sidewalk along Donation Rd south side, high school to Mehard Ave	48
B2	New sidewalk along Mehard Ave west side, Donation Rd to Fredonia Rd	50
C2	Shenango Trail Town Amenities	60
D1	College Ave / Packard Ave Intersection Improvements	66
F1	Borough-wide pedestrian crosswalks and signals	72

Figure 14: Medium Priority Projects



ID	Project	Page
A3	New sidewalk along Williamson Rd, north of Hadley Rd	42
A4	New sidewalk along Williamson Rd, south of Hadley Rd	44
A5	New sidewalk along Hadley Rd south side, east of Williamson Rd	46
C1	Main Street Safety & Streetscape Improvements	58
C3	Downtown Greenville Bike Facilities	63
D2	Thiel College Gateway Sign	69
F2	Borough-wide sidewalk improvement program	74

Figure 15: Low Priority Projects



ID	Project	Page
A2	New sidewalk along Hadley Rd (SR 358) south side, Woodfield Rd to Williamson Rd	40
B3	New sidewalk along E Greenville Dr/Hempfield Dr	52
B4	New sidewalk along Fredonia Rd north side, S Mercer St to Greenville Elementary	54
B5	New sidewalk along S Mercer St east side, Borough line to Fredonia Rd	56
E1	New multi-use trail from Greenville Elementary School to Hempfield Park	70

#### 4.4 Potential Funding Sources

For any given project, many potential funding sources exist to assist the municipality in paying for the costs. Depending on the type of roadway and the type of project (intersection improvements, signage, sidewalk, etc), each project may be eligible for several different funding sources. Even when additional funding is secured, the municipality is typically required to contribute some “matching” funds, calculated as a percentage of the total project cost. For projects that are located partly in the Borough of Greenville and partly in Hempfield Township, any matching costs could be shared between the two municipalities.

Traditional funding sources provided by state and local agencies are described in Figure 16, and the implementation sheets in Section 4.5 detail which sources may be applicable to each project.

##### *Community Partnerships*

Additionally, community partnerships could be explored in order to implement the recommended projects. Strategic cooperation with local businesses and organizations could accomplish shared goals of improving public health, improving quality of life, and promoting economic development. For example, promoting public health through exercise opportunities may be of interest to UPMC Horizon – Greenville Hospital.

Several nontraditional funding sources are detailed in Figure 17, including notes on which projects may be best suited to each source. In addition, the Borough of Greenville or Hempfield Township could pursue community partnerships with the Greenville Area School District, Mercer County Trails Association, tourism and chamber of commerce groups, and adjacent business owners to provide funding for projects.

A nonprofit organization can be established to focus on project implementation and advocate for pedestrian and bicycle mobility and safety needs within the study area in general. The organization could pursue funding from private foundations not typically available to municipalities that would contribute to paying for the projects. For example, TAG grants for county tourism could be an option for some of the proposed projects. In addition, the organization can actively pursue grant funding from both the traditional and non-traditional sources.

##### *Commercial Property Owners*

As described in Section 4.2, the municipalities can each enact a sidewalk ordinance that requires new commercial and institutional development to install sidewalks during construction, at the developer’s expense. Sidewalks are typically much less expensive to install during general construction rather than added later as a separate project, and enacting such a policy would ensure that the municipality would not be responsible for their cost.

In commercial areas that have already been developed without sidewalks, municipalities have the option to install the sidewalk and assess property owners for the expense according to the proportion of their frontage.<sup>2</sup> In order to do so, the municipality would need to identify in the sidewalk ordinance the specific roadways and locations where they intend to install sidewalk at the property owner’s expense. Doing so would enable the cost to be shared by the property owners, who would benefit from the additional access to their businesses, rather than the municipality.

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<sup>2</sup> Pennsylvania Statutes Title 53, Section 67401(c). <https://codes.findlaw.com/pa/title-53-ps-municipal-and-quasimunicipal-corporations/pa-st-sect-53-67401.html>

**Figure 16: Potential Traditional Funding Sources**

<b>Name</b>	<b>Automated Red Light Enforcement (ARLE)</b>
<b>Link</b>	<a href="http://www.dot.state.pa.us/public/Bureaus/BOMO/Portal/ARLE%20Funding%20Program%20Policy_5-22-15.pdf">http://www.dot.state.pa.us/public/Bureaus/BOMO/Portal/ARLE%20Funding%20Program%20Policy_5-22-15.pdf</a>
<b>Eligible Projects</b>	Wide-range of projects that must consider highway safety or mobility. Projects primarily focus on traffic signal upgrades but do include pedestrian mobility/ safety projects.
<b>Eligible Parties</b>	<ul style="list-style-type: none"> <li>• Municipalities</li> <li>• Counties</li> <li>• County Planning Organizations</li> <li>• MPOs</li> <li>• RPOs</li> <li>• Commonwealth agencies</li> </ul>
<b>Local Match Requirement</b>	No matching funds are required but if provided, matching funds must be made available at the time of the application. Priority is given to projects with matching funds.
<b>Notes</b>	Intent is to award grants to projects that will be fully funded at the execution of the grant agreement date.

<b>Name</b>	<b>Community Development Block Grants (CDBG)</b>
<b>Link</b>	<a href="http://www.penndot.gov/TravelInPA/Safety/SchoolResourcesAndPrograms/SafeRoutesToSchool/Pages/Funding.aspx">http://www.penndot.gov/TravelInPA/Safety/SchoolResourcesAndPrograms/SafeRoutesToSchool/Pages/Funding.aspx</a>
<b>Eligible Projects</b>	<p>Eligible projects include:</p> <ul style="list-style-type: none"> <li>• Acquisition of property for public purposes</li> <li>• Construction or reconstruction of streets, water and sewer facilities, neighborhood centers, recreation facilities, and other public works</li> <li>• Demolition</li> <li>• Rehabilitation of public and private buildings</li> <li>• Public services</li> <li>• Planning activities</li> <li>• Assistance to nonprofit entities for community development activities</li> <li>• Assistance to private, for profit entities to carry out economic development activities (including assistance to microenterprises)</li> </ul>
<b>Eligible Parties</b>	<ul style="list-style-type: none"> <li>• Designated municipalities through the entitlement program</li> <li>• All non-federal entitlement municipalities and state Act 179 entitlement municipalities with &lt;10,000 Population</li> </ul>
<b>Local Match Requirement</b>	None
<b>Notes</b>	There are both formula grants and competitive funding cycles. Seventy percent of each entitlement grant must be used for activities that benefit low- and moderate-income persons.



<b>Name</b>	<b>Green-Light-Go</b>
<b>Link</b>	<a href="http://www.dot.state.pa.us/portal%20information/traffic%20signal%20portal/fundglg.html">http://www.dot.state.pa.us/portal%20information/traffic%20signal%20portal/fundglg.html</a>
<b>Eligible Projects</b>	The Green Light-Go: Pennsylvania’s Municipal Signal Partnership Program, also known as the “Green Light-Go Program”, provides state funds for the operation and maintenance of traffic signals along critical and designated corridors on state highways.
<b>Eligible Parties</b>	<ul style="list-style-type: none"> <li>• Municipalities</li> <li>• Planning Organizations</li> </ul>
<b>Local Match Requirement</b>	Local match is 20% of costs.
<b>Notes</b>	Act 89 of 2013 created Title 75, Section 9511(e.1) [Allocation to Municipalities for Traffic Signals] which is a new funding program for designated corridors. The Department developed a similar traffic signal modernization and improvement program for critical corridors designed to improve safety and mobility by reducing congestion and improving efficiency on key state highways.

<b>Name</b>	<b>Multimodal Transportation Fund</b>
<b>Link</b>	<a href="http://dced.pa.gov/programs/multimodaltransportationfund/#.WBejai1rhEY">http://dced.pa.gov/programs/multimodaltransportationfund/#.WBejai1rhEY</a>
<b>Eligible Projects</b>	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.
<b>Eligible Parties</b>	<ul style="list-style-type: none"> <li>• Municipalities</li> <li>• Councils of Government</li> <li>• Businesses</li> <li>• Economic Development Organizations</li> <li>• Public Transportation Agencies</li> <li>• Ports-Rail/Freight</li> </ul>
<b>Local Match Requirement</b>	Local match must be at least 30% of the federal share.
<b>Notes</b>	Grants are available for projects with a total cost of \$100,000 or more. Grants shall not exceed \$3,000,000 for any project.

<b>Name</b>	<b>PennDOT Betterments Program</b>
<b>Eligible Projects</b>	This program provides funding for projects along State Routes, but is not a traditional application-based funding source. A roadway betterment consists of surface treatments or corrections to the existing roadway, preferably within the existing right-of-way, to maintain and bring the infrastructure to the current design standards for that classification of highway. This may involve full-depth base repair, shoulder widening, increased lane widths, correction of super-elevation, as well as drainage improvements, guide rail updates, and sidewalks.
<b>Eligible Parties</b>	<ul style="list-style-type: none"> <li>• Municipalities</li> <li>• Metropolitan Planning Organizations</li> </ul>
<b>Local Match Requirement</b>	Local match is 20% of construction costs.
<b>Notes</b>	If a betterment has been identified as a local need, then PennDOT may include it when the roadway is considered for upgrades or new construction. While betterments are typically done to improve pavement and subgrade quality, they can also be used to bring bicycle and pedestrian facilities up to standards.

<b>Name</b>	<b>Pennsylvania Infrastructure Bank</b>
<b>Link</b>	<a href="http://www.penndot.gov/ProjectAndPrograms/Planning/Pages/PAInfrastructure-Bank.aspx">http://www.penndot.gov/ProjectAndPrograms/Planning/Pages/PAInfrastructure-Bank.aspx</a>
<b>Eligible Projects</b>	All transportation projects
<b>Eligible Parties</b>	<ul style="list-style-type: none"> <li>• Municipalities</li> <li>• Counties</li> <li>• Transportation authorities</li> <li>• Economic development agencies</li> </ul>
<b>Local Match Requirement</b>	None, but payment for interest on the loan would be required.
<b>Notes</b>	The Pennsylvania Infrastructure Bank (PIB) is a PennDOT program that provides <b>low-interest loans</b> to help fund transportation projects within the Commonwealth.

<b>Name</b>	<b>Surface Transportation Urban (STU) Funding</b>
<b>Link</b>	<a href="http://www.mcrpc.com/wp-content/uploads/MPO/STU-Funding-Application-Requirements-2018.pdf">http://www.mcrpc.com/wp-content/uploads/MPO/STU-Funding-Application-Requirements-2018.pdf</a>
<b>Eligible Projects</b>	The SVATS MPO receives currently about \$800,000 in STU funds per year by being a part of the Youngstown-Warren-Boardman, OH/PA Metropolitan Area. The MPO sets this money aside from traditional TIP-programming and allows for a competitive application process to fund various local improvements within Mercer County. Eligible uses are broad, but projects involving bike/ped improvements are incentivized through the project scoring process.
<b>Eligible Parties</b>	Municipalities in Mercer County
<b>Local Match Requirement</b>	20% non-Federal match, OR can be 100% construction-funded if all pre-construction phases (i.e. preliminary engineering, project design, right-of-way, utility clearance, environmental review)

<b>Name</b>	<b>Transportation Alternatives Program (TA Set-Aside)</b>
<b>Link</b>	<a href="https://sportal.dot.pa.gov/Planning/AppReg/TAP/Pages/default.aspx">https://sportal.dot.pa.gov/Planning/AppReg/TAP/Pages/default.aspx</a>
<b>Eligible Projects</b>	Provides funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation, trails that serve a transportation purpose, and safe routes to school projects.
<b>Eligible Parties</b>	<ul style="list-style-type: none"> <li>• local governments;</li> <li>• regional transportation authorities;</li> <li>• transit agencies;</li> <li>• natural resource or public land agencies, including Federal agencies;</li> <li>• school districts, local education agencies, or schools;</li> <li>• tribal governments;</li> <li>• a nonprofit entity responsible for the administration of local transportation safety programs; and</li> <li>• any other local or regional governmental entity with responsibility for oversight of transportation or recreational trails</li> </ul>
<b>Local Match Requirement</b>	Local match required is 100% of preconstruction costs (design, environmental, utilities and right-of-way). All construction costs are covered by the program.
<b>Notes</b>	Construction projects must have a construction cost of at least \$50,000, but may not exceed \$1 million unless deemed “exceptional”. Other selection criteria include, but are not limited to, consistency with local regional plans, collaboration with stakeholders, statewide or regional significance, and the sponsor’s demonstrated ability to successfully deliver the project.

**Figure 17: Potential Nontraditional Funding Sources**

<b>University of Pittsburgh Medical Center (UPMC)</b> <b>UPMC Horizon Community Health Foundation</b> 2200 Memorial Drive   Farrell, PA 16121   (724) 983-8875		<b>Project Candidate(s) for Potential Funding:</b> C2   Shenango Trail Town Amenities   Page 60 C3   Downtown Greenville Bike Facilities   Page 63
<b>Links</b>	<a href="https://www.upmc.com/locations/hospitals/horizon/about/giving/community-health-foundation">https://www.upmc.com/locations/hospitals/horizon/about/giving/community-health-foundation</a> <a href="https://www.upmc.com/about/community-commitment/inclusion/community/sponsorship-request">https://www.upmc.com/about/community-commitment/inclusion/community/sponsorship-request</a>	
<b>Local Connection</b>	UPMC operates UPMC Horizon hospital in Greenville. In 2016, UPMC Horizon conducted a federally-required <a href="#">Community Health Needs Assessment (CHNA)</a> update for their facilities in Mercer County. The resulting implementation plan included addressing chronic disease through collaborating with local community partners on prevention initiatives and wellness programs. While the majority of the plan specifics were focused on primary healthcare initiatives, services, and education offered at their facilities, UPMC may be interested in helping to fund a potential “health circuit” as described in the Greenville Pedestrian Circulation Study that would be relatively inexpensive to build but could provide excellent brand exposure and generate community good will.	
<b>Philanthropic Mission</b>	<p><i>UPMC is dedicated to the success of the communities in western Pennsylvania. That is why over the past 6 years we have given \$3.7 billion to community programs that provide support and opportunities for individuals throughout the region.</i></p> <p>UPMC is well known for conducting charitable/philanthropic work in the communities where they have healthcare facilities. For example, UPMC is the title sponsor of WalkPittsburgh and a co-sponsor of Let’s Move Pittsburgh, both initiatives promoting active transportation.</p>	
<b>Applying for Funding</b>	<ol style="list-style-type: none"> <li>Contact UPMC Horizon Greenville directly</li> <li>Request a Charitable Giving Sponsorship through the UPMC Center for Engagement and Inclusion by completing the online Charitable Giving Sponsorship Application, and including a letter on letterhead asking for funding, a brochure or document with details about the event, program, or organization, and a description of the sponsorship levels and the benefits that come with each level</li> <li>Email materials to: <a href="mailto:inclusion@upmc.edu">inclusion@upmc.edu</a></li> </ol>	
<b>Notes</b>	Partnership with or creation of a 501(c)3 non-profit group may be required to qualify for funding	

<b>Walmart</b> 45 Williamson Rd   Greenville, PA 16125   (724) 589-0211		<b>Project Candidate(s) for Potential Funding:</b> A1   Hadley Road North Side Sidewalk   Page 38 A3   Williamson Rd North of Hadley Sidewalk   Page 42
<b>Link</b>	<a href="https://walmart.org/how-we-give/local-community-grants">https://walmart.org/how-we-give/local-community-grants</a>	
<b>Local Connection</b>	Walmart has a store along the study corridor. Walmart provides small community grants for non-profit organizations. Walmart’s local community grants are awarded through an open application process and provide funding directly from Walmart and Sam’s Club facilities to local organizations.	
<b>Philanthropic Mission</b>	<p><i>We seek to create value in the communities around the world where we operate, strengthening them through local grants supporting programs that help them thrive.</i></p>	
<b>Applying for Funding</b>	<ul style="list-style-type: none"> <li>Local Community grants range from a minimum of \$250 to a maximum of \$5,000.</li> <li>Applicants must be a non-profit organization, a recognized government entity, a K-12 public or nonprofit private school, or a church or other faith-based organization.</li> <li>The 2019 grant cycle begins Feb. 15, 2019 and the application deadline is Dec. 31, 2019.</li> <li>Management at the facility to which you are applying will review the application and make initial funding recommendations on all submitted requests.</li> </ul>	

<b>First National Bank (FNB)</b>		<b>Project Candidate(s) for Potential Funding:</b>	
166 Main Street   Greenville, PA 16125   (724) 588-6770		A1   Hadley Road North Side Sidewalk   Page 38	
<b>Link</b>	<a href="https://www.fnb-online.com/about-us/community-involvement">https://www.fnb-online.com/about-us/community-involvement</a>		
<b>Local Connection</b>	FNB has a branch along Main Street in Greenville. FNB works closely with communities to ensure their efforts are effective. In addition to collaborating with economic development groups, FNB operates regional Community Bank Boards which are comprised of members of their local communities. To learn more about the Community Bank Boards and the roles they play in key regional initiatives, please review the <a href="#">Community Bank Board Charter</a> .		
<b>Philanthropic Mission</b>	<i>At FNB, we believe that doing the right thing for our customers starts with making our communities even better places to live and work - and that the best way to do that is to get involved.</i>		
<b>Applying for Funding</b>	With no contact listed for inquiring about or applying for project funding, the first step would be to contact the local branch.		
<b>Notes</b>	FNB may be able to help provide a local match for one or more projects. Partnership with or creation of a 501(c)3 non-profit group may be required to qualify for funding.		

<b>PNC Bank (PNC)</b>		<b>Project Candidate(s) for Potential Funding:</b>	
100 Hadley Road #1   Greenville, PA 16125 (724) 588-2413		A1   Hadley Road North Side Sidewalk   Page 38 C1   Main Street Safety & Streetscape Improvements   Page 58	
<b>Links</b>	<a href="https://www.pnc.com/en/about-pnc/corporate-responsibility/philanthropy.html?lnksrc=topnav">https://www.pnc.com/en/about-pnc/corporate-responsibility/philanthropy.html?lnksrc=topnav</a> <a href="https://www.pnc.com/en/about-pnc/corporate-responsibility/philanthropy/charitable-sponsorships.html">https://www.pnc.com/en/about-pnc/corporate-responsibility/philanthropy/charitable-sponsorships.html</a>		
<b>Local Connection</b>	PNC Bank has a branch near Walmart in Greenville. Through charitable sponsorships, PNC supports education and community and economic development, which includes the arts, culture and financial education. They sponsor activities and initiatives where their employee volunteers, community leaders, local clients and residents can together drive success.		
<b>Philanthropic Mission</b>	<i>We seek opportunities to enhance our communities.</i>		
<b>Applying for Funding</b>	Applicants first discuss the opportunity with the local PNC representative for their region, then the representative will provide a unique invitation code that is required to submit an application. Applicants may take PNC's <a href="#">Eligibility Quiz</a> to confirm that the project meets PNC's criteria.  PNC's Northwest Pennsylvania contact: Vickie Lampe ~ 901 State Street, Erie, PA ~ 16501, (814) 871-9586 ~ <a href="mailto:vickie.lampe@pnc.com">vickie.lampe@pnc.com</a>		
<b>Notes</b>	Partnership with or creation of a 501(c)3 non-profit group is required to qualify for a sponsorship or grant.		

<b>Sheetz</b>		<b>Project Candidate(s) for Potential Funding:</b>	
294 Main Street   Greenville, PA 16125   (724) 588-4236		C1   Main Street Safety & Streetscape Improvements   Page 58	
<b>Link</b>	<a href="https://sheetz.versaic.com/login">https://sheetz.versaic.com/login</a>		
<b>Local Connection</b>	Sheetz has a store (store #139) in the heart of the study corridor in Greenville. Their support of local communities and organizations takes a number of forms including financial contributions, volunteer hours, in-kind donations, and marketing sponsorships.		
<b>Philanthropic Mission</b>	<i>Sheetz believes in connecting with and giving back to the communities in which we operate.</i>		
<b>Applying for Funding</b>	Their website allows users to create an online proposal requesting a donation or sponsorship. Another option may be contacting the local branch. There are no submission deadlines and they review applications on an ongoing basis. However, once an application has been submitted, they require at least four weeks to make a decision.		
<b>Notes</b>	Partnership with or creation of a 501(c)3 non-profit group may be required to qualify for funding.		

<b>Thiel College</b>		<b>Project Candidate(s) for Potential Funding:</b>	
75 College Avenue   Greenville, PA 16125   (800) 248-4435		D2   Thiel College Gateway Sign   Page 69	
<b>Link</b>	<a href="https://www.thiel.edu/">https://www.thiel.edu/</a>		
<b>Local Connection</b>	Thiel College is an integral part of the Greenville community, and its representatives have been primary stakeholders and steering committee members of the Greenville Pedestrian Circulation Plan from the inception of the project.  Community Campus Connections is a group committed to fostering communication, coordination, and positive relationships between Thiel and Greenville area organizations, businesses and other groups. The 3Cs group aims to engage all those living, working, learning and playing in Greenville in collaboratively making our region a community of respect, opportunity and growth by focusing on the following areas for growth opportunities: fellowship, service, internships, academics and public relations.		
<b>Philanthropic Mission</b>	<i>Thiel College is proud to call Greenville, Pa. and the greater Mercer County area home. The Greenville area and Thiel are more than just neighbors. Thiel is committed to working with our area partners and organizations to make our community an even better place to live, work, learn and play.</i>		
<b>Applying for Funding</b>	There is no formal grant program or application process. Discussions with leadership at Thiel will determine their interest in supporting pedestrian projects.		

<b>The Dietrich Foundation</b> 600 Grant St #5360   Pittsburgh, PA 15219 (412) 261-2766		<b>Project Candidate(s) for Potential Funding:</b> B1   Donation Rd Sidewalk   Page 48 B2   Mehard Ave Sidewalk   Page 50 E1   Multiuse Trail to Hempfield Park   Page 70
<b>Links</b>	<a href="https://dietrichfoundation.net/">https://dietrichfoundation.net/</a> <a href="https://dietrichfoundation.net/organizations/the-dietrich-foundation-greenville-pa/">https://dietrichfoundation.net/organizations/the-dietrich-foundation-greenville-pa/</a>	
<b>Local Connection</b>	The Dietrich family spent many years living and enjoying the community of Greenville, a borough in Mercer County located in Western Pennsylvania. Per Bill Dietrich’s wishes, The Pittsburgh Foundation makes the final decision on the “particular purpose” to which annual distributions from The Dietrich Foundation’s Greenville, PA, Fund of The Pittsburgh Foundation will be directed, after considering the input of the designated Greenville community advisors.	
<b>Philanthropic Mission</b>	Based in Pittsburgh, The Dietrich Foundation is a Pennsylvania charitable trust created through the extraordinary charitable vision and generosity of William (Bill) S. Dietrich II. Mr. Dietrich’s charitable vision was clear and well-documented: he desired to support select institutions of higher education and certain cultural and civic organizations in perpetuity, primarily in Western Pennsylvania.	
<b>Applying for Funding</b>	Contact the Dietrich Foundation in order to begin the process of applying for funding.	

<b>Buhl Regional Health Foundation (BRHF)</b> 701 Pierce Avenue   Sharpsville, PA 16150   (724) 418-2750		<b>Project Candidate(s) for Potential Funding:</b> C2   Shenango Trail Town Amenities   Page 60 C3   Downtown Greenville Bike Facilities   Page 63
<b>Links</b>	<a href="http://buhlregionalhealthfoundation.org/grant-priorities/">http://buhlregionalhealthfoundation.org/grant-priorities/</a> <a href="http://buhlregionalhealthfoundation.org/grant-portal/">http://buhlregionalhealthfoundation.org/grant-portal/</a>	
<b>Local Connection</b>	BRHF serves the same communities as the former Sharon Regional Health System, including Greenville. The types of grants and programs funded vary each year, based on community input, but are focused on helping to meet the health needs of the community (mental and physical health needs as well as access to health care).	
<b>Philanthropic Mission</b>	<i>We believe that through partnerships, education, and grant making, we can creatively impact the quality of life in our communities.</i>	
<b>Applying for Funding</b>	BRHF uses an <a href="#">online grant system</a> and accepts Letters of Inquiry (LOI) twice per year. The Foundation reviews all LOIs received for that grant cycle, determines which programs or projects are good potential matches to the Foundation’s mission and funding priorities, and invites those to submit a full proposal. The LOI allows BRHF to understand the vision, goals, and plans for fund usage. It should provide an overview of the proposal, objectives, timeframe, and measurement criteria.	
<b>Notes</b>	The next grant cycle is expected to open in early December 2019 for grants to be awarded in March 2020. Partnership with or creation of a 501(c)3 non-profit group is required to qualify for a grant.	

#### 4.5 ***Project Implementation Sheets***

The recommended projects (locally preferred alternatives) are summarized on project implementation sheets on the following pages, which are based on the PennDOT Connects screening forms. These forms are tools to gather valuable information from the planning phase that will streamline implementation by providing the information needed to pursue project funding and environmental review. The project implementation sheets provide the following information:

- Project improvement ID (matches map in Figure 12)
- Conceptual cost estimate – assumed for further planning or engineering purposes
- Priority rating – High, Medium or Low
- Responsible party – Project champion; does not imply existing formal commitments or binding agreements
- Project partners – Cooperating agencies or organizations needed for project implementation/funding/approval; does not imply existing formal commitments or binding agreements
- Project description – Description of project location and what the project involves including physical construction details
- Funding sources – Identifies potential funding sources
- Purpose – Reason for a project or problem description
- Need – Needs that are not currently met by existing infrastructure
- Problem description / justification – Categories of problems addressed by the project
- Land use linkage to transportation – how land use ties into the transportation components of the corridor
- Land use / economic development opportunity – potential economic opportunities created from the improvement recommendations
- Public and agency improvement – Categories of improvements addressed by the project
- Alternative(s) studied – list of other improvement alternatives studied
- Environmental impact – identifies any potential impacts to environmentally sensitive areas (data sources at right)
- Potential challenges – identifies other physical or logistical challenges to implementing the project

#### ***Environmental Layers Reviewed:***

- ***Threatened and Endangered Species Critical Habitat***
- ***Designated Use High Quality and Exceptional Value Streams***
- ***Natural Reproduction Trout Streams***
- ***Scenic Rivers***
- ***State / County / Municipal Parks, State Forest, State Game Lands***
- ***Agricultural Easements***
- ***Agriculture Security Areas***
- ***Archeological Survey Sites***
- ***Important Bird Areas***
- ***National Wetlands Inventory***
- ***Integrated List Non-Attaining Streams***
- ***Natural Heritage Area Core Habitat***
- ***Natural Heritage Area Supporting Landscape***
- ***100-year and 500-year Floodplain***
- ***Hydric Soils***
- ***Prime Farmland***
- ***Soils of Statewide Importance***
- ***Archeological Survey Sites***

## A1: Hadley Road North Side Sidewalk

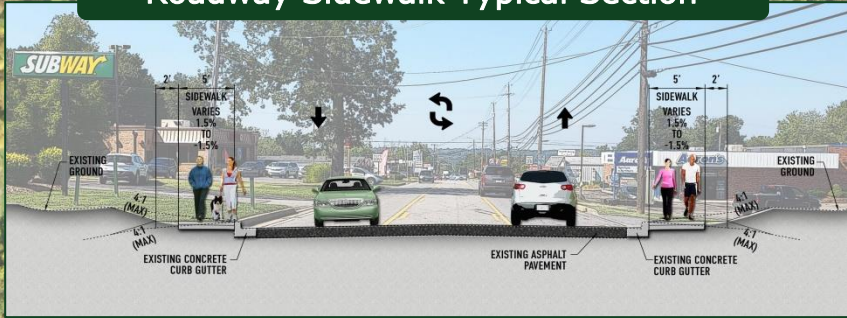
<b>ID</b>	A1
<b>Conceptual Cost Estimate</b>	\$414,200
<b>Priority Rating</b>	High
<b>Responsible Party</b>	Hempfield Township
<b>Project Partners</b>	Adjacent property owners, PennDOT, MCRPC
<b>Project Description</b>	Install new sidewalk along Hadley Rd (SR 358) north side, from existing sidewalk at SR 4031 to Williamson Rd. Add high-visibility crosswalks to the Hadley Rd / Williamson Rd intersection.
<b>Funding Sources</b>	Multimodal Transportation Fund, Transportation Alternatives Program, Municipal Funding, Community Development Block Grants, Surface Transportation Urban Funding, Walmart, First National Bank, PNC Bank, Adjacent property owners
<b>Purpose</b>	To improve pedestrian access and safety, and to encourage multimodal travel
<b>Need</b>	No sidewalk currently exists along this busy commercial corridor, leaving customers and employees who do not have access to a vehicle without a safe means of travel. Worn paths are evident along the roadway from people who walk there despite the lack of sidewalk.
<b>Problem Description and Justification</b>	Walking facilities are nonexistent, walking is not safe, ADA requirements not met
<b>Land Use Linkage to Transportation</b>	Suburban Corridor
<b>Land Use/Economic Development Opportunity</b>	Fosters sustainable businesses; infrastructure efficiency improvement; enhancement of recreational opportunity
<b>Public and Agency Improvement</b>	Improve connectivity on existing system; improve operational efficiency; improve system reliability; economic/community development needs
<b>Alternative(s) Studied</b>	Alternative sidewalk/path going north on Woodfield Drive, east through an undeveloped area, then connecting to Williamson Road
<b>Environmental Impact</b>	Minor impacts to stormwater due to changes in grading and impervious surface
<b>Potential Challenges</b>	Some re-grading next to the roadway and moving utility poles would be required



# A1: Hadley Road North Side Sidewalk



## Roadway Sidewalk Typical Section



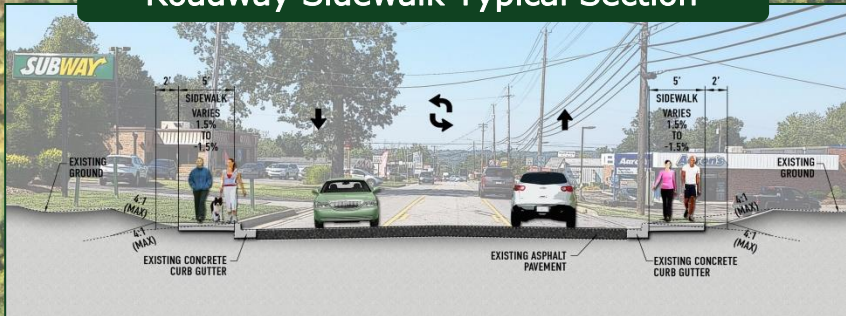
## A2: Hadley Road South Side Sidewalk

<b>ID</b>	A2
<b>Conceptual Cost Estimate</b>	\$383,300
<b>Priority Rating</b>	Low
<b>Responsible Party</b>	Hempfield Township
<b>Project Partners</b>	Adjacent property owners, PennDOT, MCRPC
<b>Project Description</b>	Install new sidewalk along Hadley Rd (SR 358) south side, from the end of the drainage ditch at the Autozone property (100 feet west of intersection with 8 <sup>th</sup> Avenue) to Williamson Rd.
<b>Funding Sources</b>	Multimodal Transportation Fund, Transportation Alternatives Program, Municipal Funding, Community Development Block Grants, PennDOT Betterments Program, Surface Transportation Urban Funding, Adjacent property owners
<b>Purpose</b>	To improve pedestrian access and safety, and to encourage multimodal travel
<b>Need</b>	No sidewalk currently exists along this busy commercial corridor, leaving customers and employees who do not have access to a vehicle without a safe means of travel. Worn paths are evident along the roadway from people who walk there despite the lack of sidewalk.
<b>Problem Description and Justification</b>	Walking facilities are nonexistent, walking is not safe, ADA requirements not met
<b>Land Use Linkage to Transportation</b>	Suburban Corridor
<b>Land Use/Economic Development Opportunity</b>	Fosters sustainable businesses; infrastructure efficiency improvement; enhancement of recreational opportunity
<b>Public and Agency Improvement</b>	Improve connectivity on existing system; improve operational efficiency; improve system reliability; economic/community development needs
<b>Alternative(s) Studied</b>	None
<b>Environmental Impact</b>	Minor impacts to stormwater due to changes in grading and impervious surface
<b>Potential Challenges</b>	Concerns were raised from business owners that the sidewalk may reduce the usable area of their property. Some re-grading next to the roadway and moving utility poles would be required.

# A2: Hadley Road South Side Sidewalk



## Roadway Sidewalk Typical Section



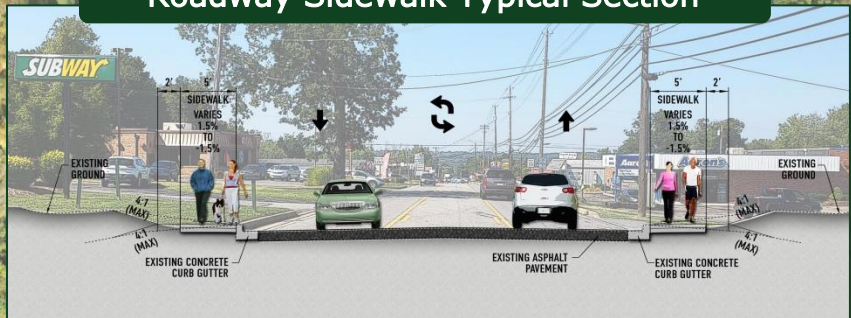
### A3: Williamson Road North of Hadley Road Sidewalk

<b>ID</b>	<b>A3</b>
<b>Conceptual Cost Estimate</b>	\$91,800
<b>Priority Rating</b>	Medium
<b>Responsible Party</b>	Hempfield Township
<b>Project Partners</b>	Adjacent property owners, PennDOT, MCRPC
<b>Project Description</b>	Install new sidewalk along Williamson Rd, from Hadley Rd north to Walmart.
<b>Funding Sources</b>	Transportation Alternatives Program, Municipal Funding, Community Development Block Grants, PennDOT Betterments Program, Surface Transportation Urban Funding, Walmart, Adjacent property owners
<b>Purpose</b>	To improve pedestrian access and safety, and to encourage multimodal travel
<b>Need</b>	This segment would connect the proposed new sidewalk along Hadley Road to Walmart, which is a major retail and employment destination. No sidewalk currently exists along this route, leaving customers and employees who do not have access to a vehicle without a safe means of travel. Crosswalks and curb ramps already exist at the intersections. Worn paths are evident along the roadway from people who walk there despite the lack of sidewalk.
<b>Problem Description and Justification</b>	Walking facilities are nonexistent, walking is not safe, ADA requirements not met
<b>Land Use Linkage to Transportation</b>	Suburban Corridor
<b>Land Use/Economic Development Opportunity</b>	Fosters sustainable businesses; infrastructure efficiency improvement; enhancement of recreational opportunity
<b>Public and Agency Improvement</b>	Improve connectivity on existing system; improve operational efficiency; improve system reliability; economic/community development needs
<b>Alternative(s) Studied</b>	None
<b>Environmental Impact</b>	None
<b>Potential Challenges</b>	None

# A3: Williamson Road North of Hadley Road Sidewalk



## Roadway Sidewalk Typical Section



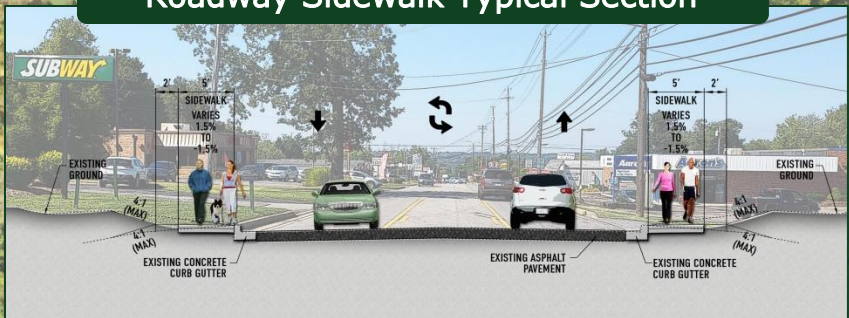
## A4: Williamson Road South of Hadley Road Sidewalk

<b>ID</b>	<b>A4</b>
<b>Conceptual Cost Estimate</b>	\$87,700
<b>Priority Rating</b>	Low
<b>Responsible Party</b>	Hempfield Township
<b>Project Partners</b>	Adjacent property owners, PennDOT, MCRPC
<b>Project Description</b>	Install new sidewalk along Williamson Rd, south of Hadley Rd to retail shopping center (Tractor Supply Co.)
<b>Funding Sources</b>	Transportation Alternatives Program, Municipal Funding, Community Development Block Grants, PennDOT Betterments Program, Surface Transportation Urban Funding, Adjacent property owners
<b>Purpose</b>	To improve pedestrian access and safety, and to encourage multimodal travel
<b>Need</b>	No sidewalk currently exists along this busy commercial corridor, leaving customers and employees who do not have access to a vehicle without a safe means of travel.
<b>Problem Description and Justification</b>	Walking facilities are nonexistent, walking is not safe, ADA requirements not met
<b>Land Use Linkage to Transportation</b>	Suburban Corridor
<b>Land Use/Economic Development Opportunity</b>	Fosters sustainable businesses; infrastructure efficiency improvement; enhancement of recreational opportunity
<b>Public and Agency Improvement</b>	Improve connectivity on existing system; improve operational efficiency; improve system reliability; economic/community development needs
<b>Alternative(s) Studied</b>	None
<b>Environmental Impact</b>	None
<b>Potential Challenges</b>	None

# A4: Williamson Road South of Hadley Road Sidewalk



## Roadway Sidewalk Typical Section



## A5: Hadley Road East of Williamson Road Sidewalk

<b>ID</b>	A5
<b>Conceptual Cost Estimate</b>	\$212,300
<b>Priority Rating</b>	Low
<b>Responsible Party</b>	Hempfield Township, PennDOT
<b>Project Partners</b>	Adjacent property owners, PennDOT, MCRPC
<b>Project Description</b>	Install new sidewalk along Hadley Rd south side, from Williamson Rd east to the Cobblestone Hotel development
<b>Funding Sources</b>	Multimodal Transportation Fund, Transportation Alternatives Program, Municipal Funding, Community Development Block Grants, PennDOT Betterments Program, Surface Transportation Urban Funding, Adjacent property owners
<b>Purpose</b>	To improve pedestrian access and safety, and to encourage multimodal travel
<b>Need</b>	No sidewalk currently exists along this busy commercial corridor, leaving customers and employees who do not have access to a vehicle without a safe means of travel. Providing safe access for hotel visitors would encourage them to patronize local businesses.
<b>Problem Description and Justification</b>	Walking facilities are nonexistent, walking is not safe, ADA requirements not met
<b>Land Use Linkage to Transportation</b>	Suburban Corridor
<b>Land Use/Economic Development Opportunity</b>	Fosters sustainable businesses; infrastructure efficiency improvement; enhancement of recreational opportunity
<b>Public and Agency Improvement</b>	Improve connectivity on existing system; improve operational efficiency; improve system reliability; economic/community development needs
<b>Alternative(s) Studied</b>	None
<b>Environmental Impact</b>	Minor impacts to stormwater due to changes in grading and impervious surface
<b>Potential Challenges</b>	The sidewalk would need to cross a culvert adjacent to a small pond on the south side of the roadway. The existing shoulder on the south side of the culvert is approximately six feet wide next to the pond. To accommodate a sidewalk, the structure would need to be widened by approximately five feet and the guiderail adjusted accordingly. Alternatively, if the structure cannot be widened, the shoulders on both sides of the roadway could be narrowed to place the sidewalk across the existing bridge, with the roadway approaches adjusted accordingly. Costs for structure modifications have been included in the conceptual cost estimate.



# A5: Hadley Road East of Williamson Road Sidewalk



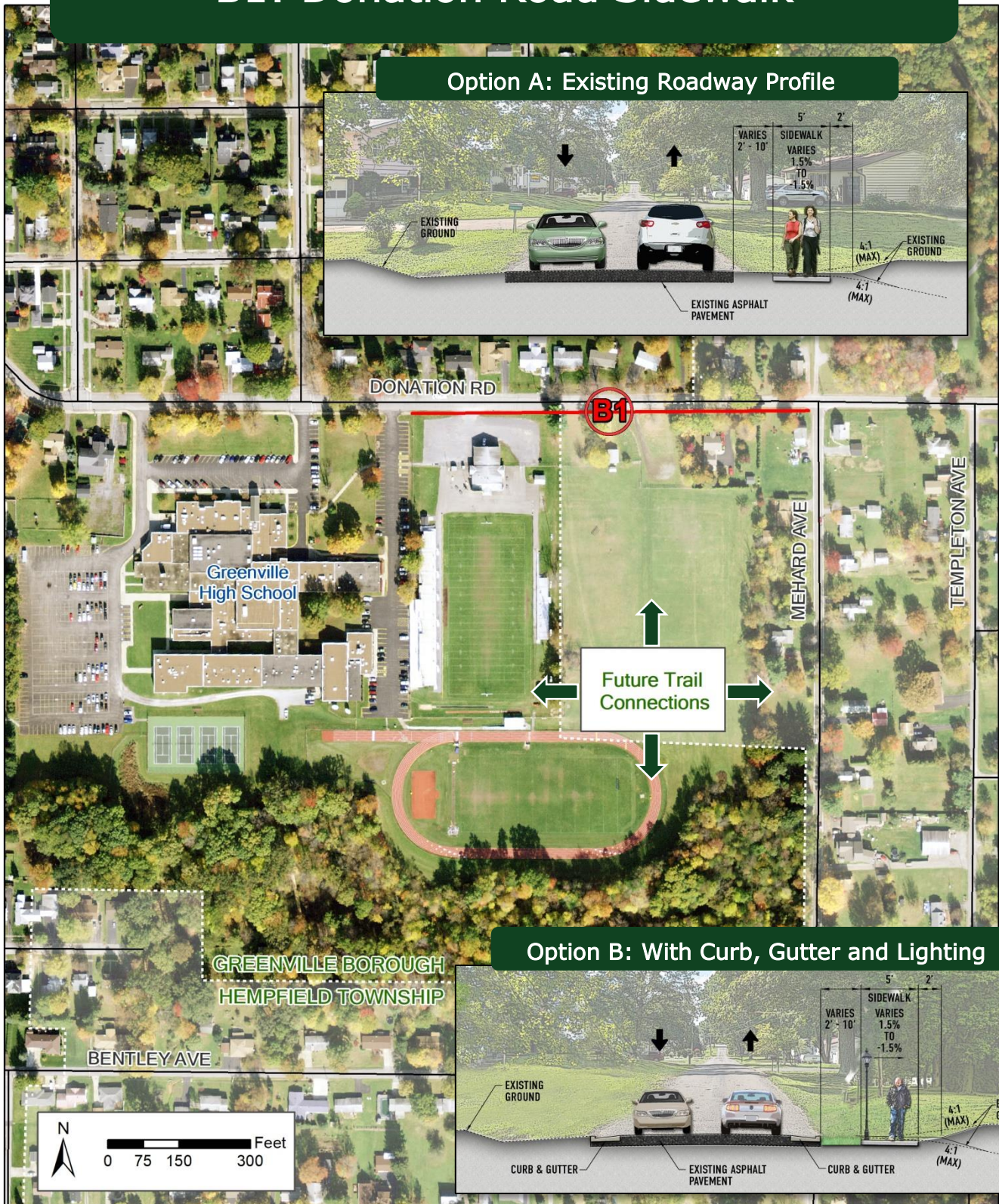
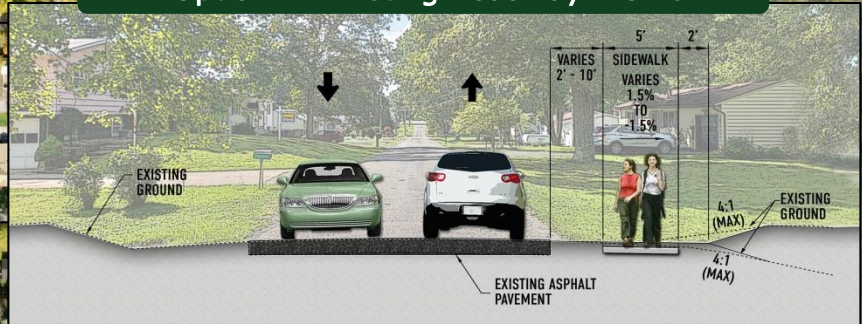
Roadway Sidewalk Typical Section

## B1: Donation Road Sidewalk

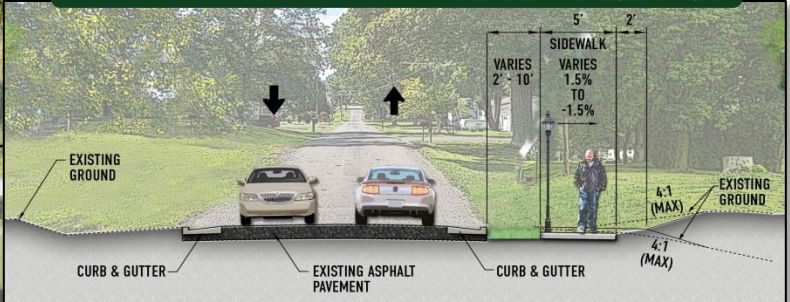
ID	B1
<b>Conceptual Cost Estimate</b>	\$121,000 (Option A) to \$477,200 (Option B)
<b>Priority Rating</b>	High
<b>Responsible Party</b>	Hempfield Township, Greenville Borough
<b>Project Partners</b>	Greenville Area School District, Adjacent property owners, MCRPC
<b>Project Description</b>	Install new sidewalk along Donation Rd south side, from existing sidewalk at the entrance to Greenville High School east to Mehard Ave. Two options exist: Option A would add sidewalk to the existing roadway profile; Option B would add curbs and lighting in addition to sidewalk.
<b>Funding Sources</b>	Multimodal Transportation Fund, Transportation Alternatives Program, Municipal Funding, Community Development Block Grants, PennDOT Betterments Program, Surface Transportation Urban Funding, The Dietrich Foundation
<b>Purpose</b>	To improve pedestrian access and safety, and to encourage multimodal travel
<b>Need</b>	No sidewalk currently exists along this roadway adjacent to a high school. Residents who would prefer to walk to school or sports events held at the school do not have a safe means of travel. Lighting and curbs in Option B would improve safety for those attending evening sports events at the school. Field views show that people walk here despite the lack of sidewalk.
<b>Problem Description and Justification</b>	Walking facilities are nonexistent, walking is not safe, ADA requirements not met
<b>Land Use Linkage to Transportation</b>	Town / Village Neighborhood
<b>Land Use/Economic Development Opportunity</b>	Infrastructure efficiency improvement; enhancement of recreational opportunity
<b>Public and Agency Improvement</b>	Improve connectivity on existing system; improve operational efficiency; improve system reliability.
<b>Alternative(s) Studied</b>	None
<b>Environmental Impact</b>	Minor impacts to stormwater due to changes in grading and impervious surface
<b>Potential Challenges</b>	Some re-grading next to the roadway would be required. Option B would require additional grading and drainage to install curbing.  Hempfield Township expressed concern that adequate off-street parking be provided for any school sports events as there is no parking allowed on Donation Rd.
<b>Additional Notes</b>	The location for this project is partly in both Greenville Borough and Hempfield Township, so project implementation would be shared by the municipalities. The Greenville Area School District plans to evaluate locations on its property to install a sidewalk/trail that would connect to the proposed Donation Rd sidewalk.

# B1: Donation Road Sidewalk

## Option A: Existing Roadway Profile



## Option B: With Curb, Gutter and Lighting



## B2: Mehard Avenue Sidewalk

ID	B2
<b>Conceptual Cost Estimate</b>	\$801,500 + \$15,000-\$50,000 for traffic calming
<b>Priority Rating</b>	High
<b>Responsible Party</b>	Hempfield Township, Greenville Borough
<b>Project Partners</b>	Greenville Area School District, Adjacent property owners, MCRPC
<b>Project Description</b>	Install new sidewalk along Mehard Ave west side, from Donation Rd to Fredonia Rd. Traffic calming measures including speed humps, pavement markings and signage, may also be added to improve safety on this corridor.
<b>Funding Sources</b>	Multimodal Transportation Fund, Transportation Alternatives Program, Municipal Funding, Community Development Block Grants, Surface Transportation Urban Funding, The Dietrich Foundation
<b>Purpose</b>	To improve pedestrian access and safety, and to encourage multimodal travel
<b>Need</b>	No sidewalk currently exists along this roadway in a residential area that connects an elementary school and high school. Residents who would prefer to walk to high school or sports events held at the high school do not have a safe means of travel. Having a safe means of travel would enable elementary school students to use facilities located at the high school.
<b>Problem Description and Justification</b>	Walking facilities are nonexistent, walking is not safe, ADA requirements not met
<b>Land Use Linkage to Transportation</b>	Town / Village Neighborhood
<b>Land Use/Economic Development Opportunity</b>	Infrastructure efficiency improvement; enhancement of recreational opportunity
<b>Public and Agency Improvement</b>	Improve connectivity on existing system; improve operational efficiency; improve system reliability
<b>Alternative(s) Studied</b>	Alternative along Bentley Ave west from Mehard Ave, connecting to a trail to the high school. Alternative along the east side of the roadway was not selected because existing drainage swales on that side of the road would increase costs and impacts.
<b>Environmental Impact</b>	This project crosses Saul Run, which is a designated "Exceptional Value" stream under Chapter 93 by the PA Department of Environmental Protection. Impact is expected to be minimal, as the sidewalk is expected to be accommodated on the existing structure of Mehard Avenue over Saul Run.
<b>Potential Challenges</b>	Public concerns of speeding along Mehard Ave and poor sight distance at the intersection with Sherrard Ave could be addressed by traffic calming measures such as speed humps, pavement markings and signage.  Hempfield Township expressed concern that adequate off-street parking be provided for any school sports events as there is no parking allowed on Mehard Ave.
<b>Additional Notes</b>	The location for this project is partly in both Greenville Borough and Hempfield Township, so project implementation would be shared by the municipalities. The Greenville Area School District plans to evaluate locations on its property to install a sidewalk/trail that would connect to the proposed Mehard Ave sidewalk and provide more direct access to the high school from the south and east.

# B2: Mehard Avenue Sidewalk



**Roadway Sidewalk Typical Section**

### B3: East Greenville Drive / Hempfield Drive Sidewalk Connector

ID	B3
<b>Conceptual Cost Estimate</b>	\$159,900
<b>Priority Rating</b>	Low
<b>Responsible Party</b>	Hempfield Township, Greenville Borough
<b>Project Partners</b>	Greenville Area School District, Adjacent property owners, MCRPC
<b>Project Description</b>	Install new sidewalk along E Greenville Dr/Hempfield Dr
<b>Funding Sources</b>	Multimodal Transportation Fund, Transportation Alternatives Program, Municipal Funding, Community Development Block Grants
<b>Purpose</b>	To improve pedestrian access and safety, and to encourage multimodal travel
<b>Need</b>	This sidewalk project would provide a direct connection to Greenville Elementary school from residential areas to the north and west, where only an informal trail currently exists.
<b>Problem Description and Justification</b>	Walking facilities are nonexistent, walking is not safe, ADA requirements not met
<b>Land Use Linkage to Transportation</b>	Town / Village Neighborhood
<b>Land Use/Economic Development Opportunity</b>	Infrastructure efficiency improvement; enhancement of recreational opportunity
<b>Public and Agency Improvement</b>	Improve connectivity on existing system; improve operational efficiency; improve system reliability
<b>Alternative(s) Studied</b>	Projects B2 and B4 create alternative access to the front entrance to the elementary school
<b>Environmental Impact</b>	Minor impacts to stormwater due to changes in grading and impervious surface
<b>Potential Challenges</b>	<p>Drainage swales exist along the proposed connector route. Some re-grading next to the roadway and addressing drainage would be required. Public comments included concerns about this project exacerbating existing drainage issues in the area.</p> <p>Additional right-of-way would need to be secured for the portion of trail that is neither on a roadway right-of-way nor part of the school property.</p>
<b>Additional Notes</b>	The location for this project is partly in both Greenville Borough and Hempfield Township, so project implementation would be shared by the municipalities.

# B3: East Greenville Drive / Hempfield Drive Sidewalk Connector



## B4: Fredonia Road Sidewalk

ID	B4
<b>Conceptual Cost Estimate</b>	\$286,500
<b>Priority Rating</b>	Medium
<b>Responsible Party</b>	Hempfield Township
<b>Project Partners</b>	Greenville Area School District, Adjacent property owners, MCRPC
<b>Project Description</b>	Install new sidewalk along Fredonia Rd north side, from S Mercer St to Greenville Elementary
<b>Funding Sources</b>	Multimodal Transportation Fund, Transportation Alternatives Program, Municipal Funding, Community Development Block Grants, PennDOT Betterments Program, Surface Transportation Urban Funding
<b>Purpose</b>	To improve pedestrian access and safety, and to encourage multimodal travel
<b>Need</b>	No sidewalk currently exists along this roadway leading to Greenville Elementary School. Residents who would prefer to walk to the school do not have a safe means of travel.
<b>Problem Description and Justification</b>	Walking facilities are nonexistent, walking is not safe, ADA requirements not met
<b>Land Use Linkage to Transportation</b>	Town / Village Neighborhood
<b>Land Use/Economic Development Opportunity</b>	Infrastructure efficiency improvement; enhancement of recreational opportunity
<b>Public and Agency Improvement</b>	Improve connectivity on existing system; improve operational efficiency; improve system reliability
<b>Alternative(s) Studied</b>	Project B3 creates alternative access to the back of the elementary school
<b>Environmental Impact</b>	Minor impacts to stormwater due to changes in grading and impervious surface
<b>Potential Challenges</b>	Drainage swales exist along the proposed connector route. Some re-grading next to the roadway and addressing drainage would be required.



# B4: Fredonia Road Sidewalk



## B5: South Mercer Street Sidewalk

ID	B5
<b>Conceptual Cost Estimate</b>	\$187,100
<b>Priority Rating</b>	Medium
<b>Responsible Party</b>	Hempfield Township
<b>Project Partners</b>	Adjacent property owners, PennDOT, MCRPC
<b>Project Description</b>	Install new sidewalk along S Mercer St east side, from existing sidewalk at the Borough line to Fredonia Rd
<b>Funding Sources</b>	Multimodal Transportation Fund, Transportation Alternatives Program, Municipal Funding, Community Development Block Grants, PennDOT Betterments Program, Surface Transportation Urban Funding
<b>Purpose</b>	To improve pedestrian access and safety, and to encourage multimodal travel
<b>Need</b>	No sidewalk currently exists along this roadway near Greenville Elementary School. In conjunction with Project B4, this project would provide pedestrian access to the school to nearby residents.
<b>Problem Description and Justification</b>	Walking facilities are nonexistent, walking is not safe, ADA requirements not met
<b>Land Use Linkage to Transportation</b>	Town / Village Neighborhood
<b>Land Use/Economic Development Opportunity</b>	Infrastructure efficiency improvement; enhancement of recreational opportunity
<b>Public and Agency Improvement</b>	Improve connectivity on existing system; improve operational efficiency; improve system reliability
<b>Alternative(s) Studied</b>	None
<b>Environmental Impact</b>	None
<b>Potential Challenges</b>	None

# B5: South Mercer Street Sidewalk



## C1: Main Street Safety & Streetscape Improvements

ID	C1
<b>Conceptual Cost Estimate</b>	\$266,100
<b>Priority Rating</b>	Medium
<b>Responsible Party</b>	Greenville Borough
<b>Project Partners</b>	PennDOT, MCRPC
<b>Project Description</b>	Main Street safety & streetscape improvements from Penn Avenue to Louisa Avenue. The project would create curb bump outs similar to those in the section of Main Street west of Mercer Street, narrowing the crossing width to 30 feet. A mid-block crossing in front of Zion Community Preschool / Family Dollar would be added as well, with a crossing distance of 25 feet.
<b>Funding Sources</b>	Transportation Improvement Program, Multimodal Transportation Fund, Transportation Alternatives Program, Municipal Funding, Community Development Block Grants, PennDOT Betterments Program, Surface Transportation Urban Funding, PNC Bank, Sheetz, Community Partnerships (see Section 4.4)
<b>Purpose</b>	To improve pedestrian access and safety, and to encourage multimodal travel
<b>Need</b>	The wide crossing width (38-40 feet) in this area makes it difficult for pedestrians to cross, and many cross illegally in the middle of the block.
<b>Problem Description and Justification</b>	Walking is not safe, pedestrians choose to cross illegally
<b>Land Use Linkage to Transportation</b>	Town Center
<b>Land Use/Economic Development Opportunity</b>	Fosters sustainable businesses; infrastructure efficiency improvement; enhancement of recreational opportunity
<b>Public and Agency Improvement</b>	Improve connectivity on existing system; economic/community development needs; serious injury/fatal crash reduction
<b>Alternative(s) Studied</b>	None
<b>Environmental Impact</b>	Project location is within Core Habitat, as designated by the County Natural Heritage Inventory. Impacts are expected to be minimal because existing impervious surface will not be changed.
<b>Potential Challenges</b>	None

# C1: Main Street Safety & Streetscape Improvements



<span style="color: yellow;">—</span>	Proposed Mid-Block Crossing 25 feet
<span style="color: purple;">—</span>	Proposed Crossing 30 feet with bump outs
<span style="color: blue;">—</span>	Existing Crossing 38-40 feet
<span style="color: orange;">—</span>	Proposed Curb Bump Outs
<span style="color: green;">—</span>	Proposed Grass Buffer
<span style="border: 1px solid red; display: inline-block; width: 15px; height: 10px;"></span>	Project Area

N

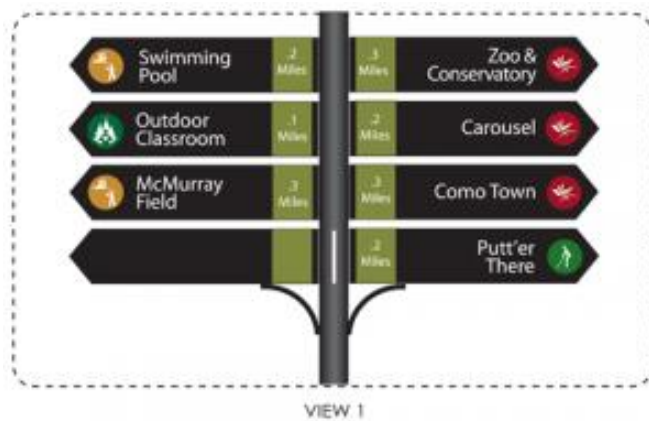
0 50 100 200 Feet



## C2: Shenango Trail Town Bike Amenities

ID	C2
<b>Conceptual Cost Estimate</b>	\$25,300
<b>Priority Rating</b>	High
<b>Responsible Party</b>	Greenville Borough
<b>Project Partners</b>	Mercer County Trails Association
<b>Project Description</b>	Shenango Trail Town Amenities will include signage, bike racks, and marketing to raise awareness of the trail's location and connections. The wayfinding signs will direct Greenville residents to the trail as well as direct trail visitors to attractions in Greenville. Bike racks will be placed in strategic locations throughout the Borough to allow trail visitors convenient locations to store their bicycles while patronizing local businesses. Marketing campaign could include special events highlighting the trail, engagement with college and local school students, and partnerships with local businesses. Options to locate a small parking lot near the trailhead in Greenville will be investigated.
<b>Funding Sources</b>	Transportation Alternatives Program, Municipal Funding, Community Development Block Grants, UPMC, Buhl Regional Health Foundation, Community Partnerships (see Section 4.4)
<b>Purpose</b>	To improve pedestrian and bicyclist access to existing trails, to encourage tourism in Greenville via the Shenango Trail, and to encourage multimodal travel
<b>Need</b>	Lack of signage can create confusion among visitors to the Town, and result in missed opportunities for local residents to take advantage of trail amenities.
<b>Problem Description and Justification</b>	Lack of signage to existing trail and town amenities; lack of bike parking for visitors and residents
<b>Land Use Linkage to Transportation</b>	Town Center
<b>Land Use/Economic Development Opportunity</b>	Fosters sustainable businesses; infrastructure efficiency improvement; enhancement of recreational opportunity
<b>Public and Agency Improvement</b>	Improve connectivity on existing system; economic/community development needs
<b>Alternative(s) Studied</b>	None
<b>Environmental Impact</b>	The project location is within Core Habitat, as designated by the County Natural Heritage Inventory. In addition, the Shenango River has been designated as Critical Habitat for the Threatened species Rabbitsfoot mussel ( <i>Quadrula cylindrica cylindrica</i> ), and an "Exceptional Value" stream under Chapter 93 by the PA Department of Environmental Protection. The impact of signage and bike racks on these resources is expected to be minimal because existing impervious surface will not be changed.
<b>Potential Challenges</b>	None

Examples of Trail Signage:



# C2: Shenango Trail Town Bike Amenities



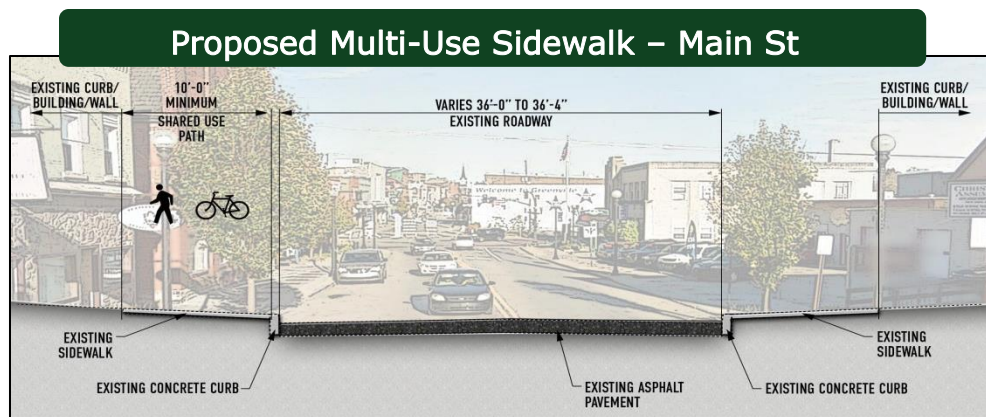
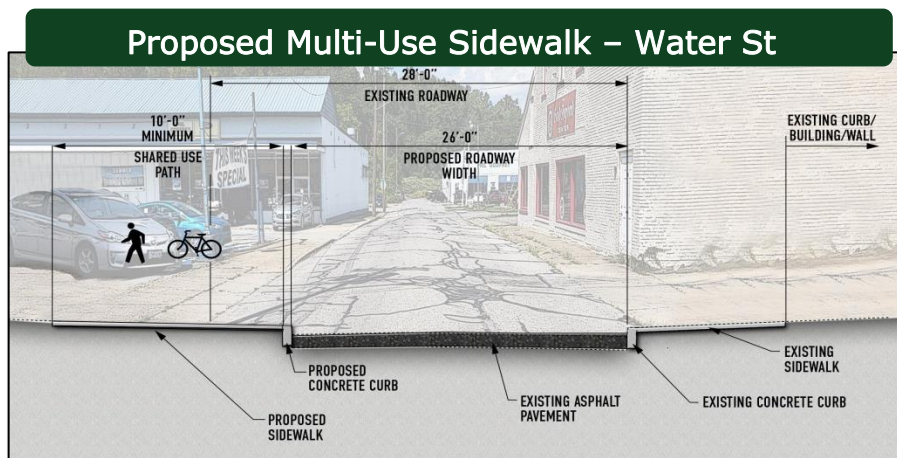
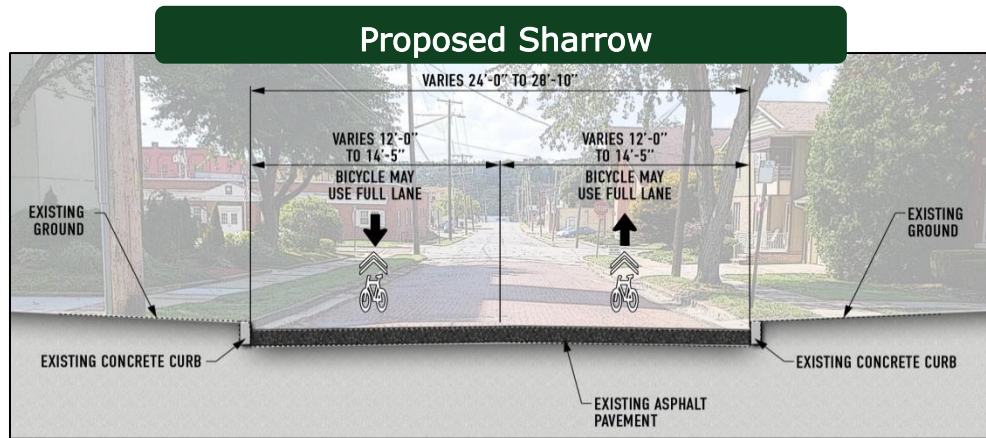
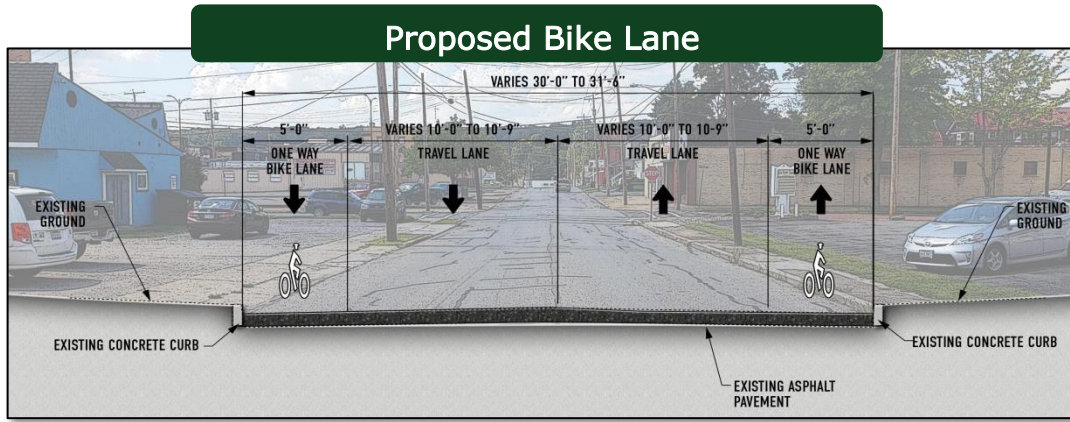


### C3: Downtown Greenville Bike Facilities

ID	C3
<b>Conceptual Cost Estimate</b>	\$144,200
<b>Priority Rating</b>	Medium
<b>Responsible Party</b>	Greenville Borough
<b>Project Partners</b>	Mercer County Trails Association, MCRPC
<b>Project Description</b>	Downtown bike lanes & sharrows will designate facilities for bicyclists along Main Street, N. Water Street, Shenango Street, and N. Race Street. These facilities will include multi-use sidewalks, sharrows and bicycle lanes, depending on the existing roadway width (no expansion of roadway right-of-way is expected). Providing bicycle facilities will also encourage visiting cyclists from the Shenango Trail to visit attractions in the Borough. Options to designate State Route 58 north from Greenville as a bike route will be investigated.
<b>Funding Sources</b>	Transportation Alternatives Program, Municipal Funding, Community Development Block Grants, Surface Transportation Urban Funding, UPMC, Buhl Regional Health Foundation, Community Partnerships (see Section 4.4)
<b>Purpose</b>	To improve bicyclist access and safety, and to encourage multimodal travel
<b>Need</b>	Existing roadways do not designate bicycle use, resulting in confusion for drivers and cyclists. Designating appropriate facilities for cyclists will enhance safety.
<b>Problem Description and Justification</b>	Lack of bicycle facilities and signage
<b>Land Use Linkage to Transportation</b>	Town Center
<b>Land Use/Economic Development Opportunity</b>	Fosters sustainable businesses; infrastructure efficiency improvement; enhancement of recreational opportunity
<b>Public and Agency Improvement</b>	Improve connectivity on existing system; improve operational efficiency; improve system reliability
<b>Alternative(s) Studied</b>	Alternative with bike lanes east of Penn Ave instead of sharrows
<b>Environmental Impact</b>	Project location is within Core Habitat, as designated by the County Natural Heritage Inventory. In addition, the project crosses the Shenango River, which has been designated as Critical Habitat for the Threatened species Rabbitsfoot mussel ( <i>Quadrula cylindrica cylindrical</i> ), and an "Exceptional Value" stream under Chapter 93 by the PA Department of Environmental Protection. Impacts are expected to be minimal because existing impervious surface and bridge structure will not be changed.
<b>Potential Challenges</b>	None

# C3: Downtown Greenville Bike Facilities





## D1: College Ave / Packard Ave Intersection Improvements

ID	D1
<b>Conceptual Cost Estimate</b>	\$2.3 - \$3.6 million
<b>Priority Rating</b>	High
<b>Responsible Party</b>	PennDOT
<b>Project Partners</b>	Greenville Borough, Thiel College, Adjacent property owners
<b>Project Description</b>	College Ave / Packard Ave Intersection Improvements will include realignment of the intersection to simplify pedestrian crossings and improve safety. The range of cost estimates reflects the three intersection options shown. The locally preferred alternative is the Roundabout, followed by the Plus, then the Angled T. The final intersection design will be selected by PennDOT later in the design process.
<b>Funding Sources</b>	Transportation Improvements Program (TIP), Multimodal Transportation Fund
<b>Purpose</b>	To improve safety and traffic flow for all users of the intersection while enhancing connections to community assets
<b>Need</b>	The existing intersection is confusing for drivers, and pedestrian paths are indirect, leading to pedestrians crossing at unmarked and unsafe locations.
<b>Problem Description and Justification</b>	Pedestrian facilities are insufficient; walking is not safe, ADA requirements not met; pedestrian interaction with vehicles is unsafe
<b>Land Use Linkage to Transportation</b>	Town / Village Neighborhood
<b>Land Use/Economic Development Opportunity</b>	Infrastructure efficiency improvement
<b>Public and Agency Improvement</b>	Improve connectivity on existing system; improve operational efficiency; improve system reliability
<b>Alternative(s) Studied</b>	Three intersection realignment options are considered
<b>Environmental Impact</b>	Minor impacts to stormwater due to changes in grading and impervious surface
<b>Potential Challenges</b>	<p>During the outreach for this Study, the adjacent property owners and members of the public expressed support for the Roundabout option, but that is the most expensive option.</p> <p>Concern was expressed about keeping the intersection at a pedestrian scale considering the substantial pedestrian activity. During the final design process, PennDOT will request an evaluation for a Design Exception and truck study to see if a smaller radius can be accommodated to make it easier for pedestrians to cross safely.</p>

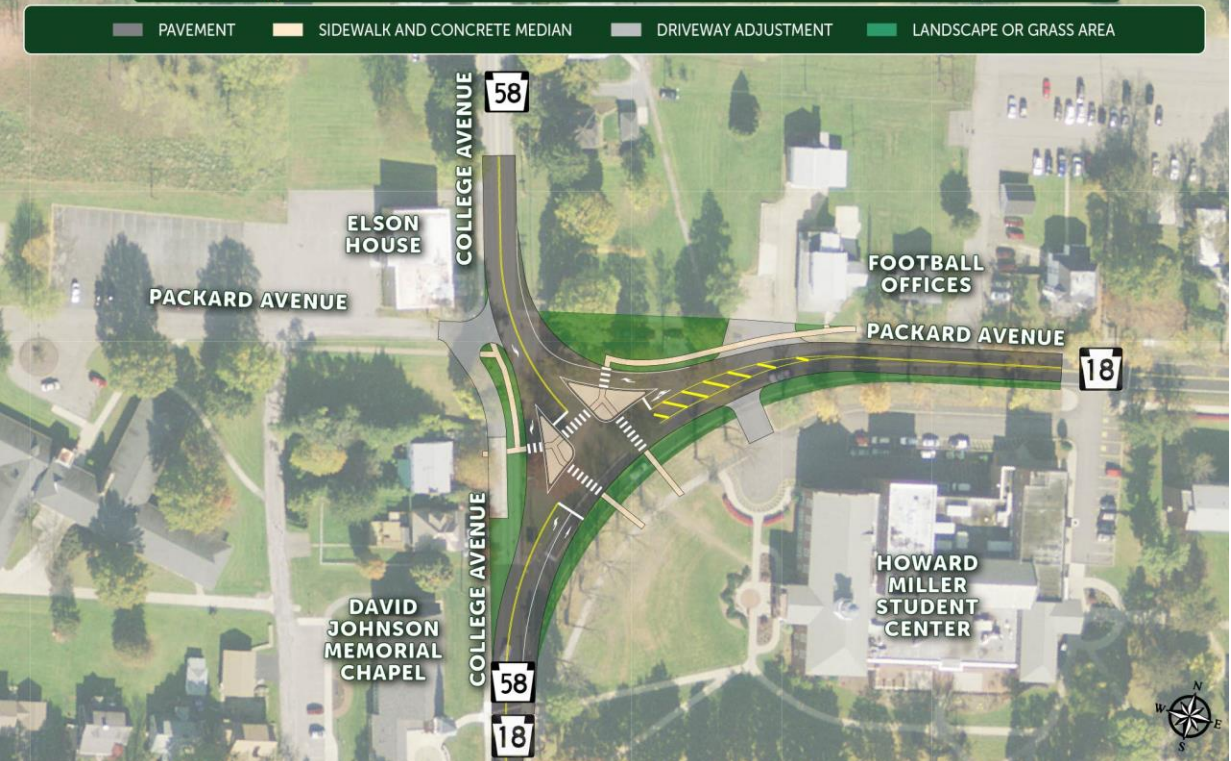
D1

### College Ave / Packard Ave Existing Intersection



D1

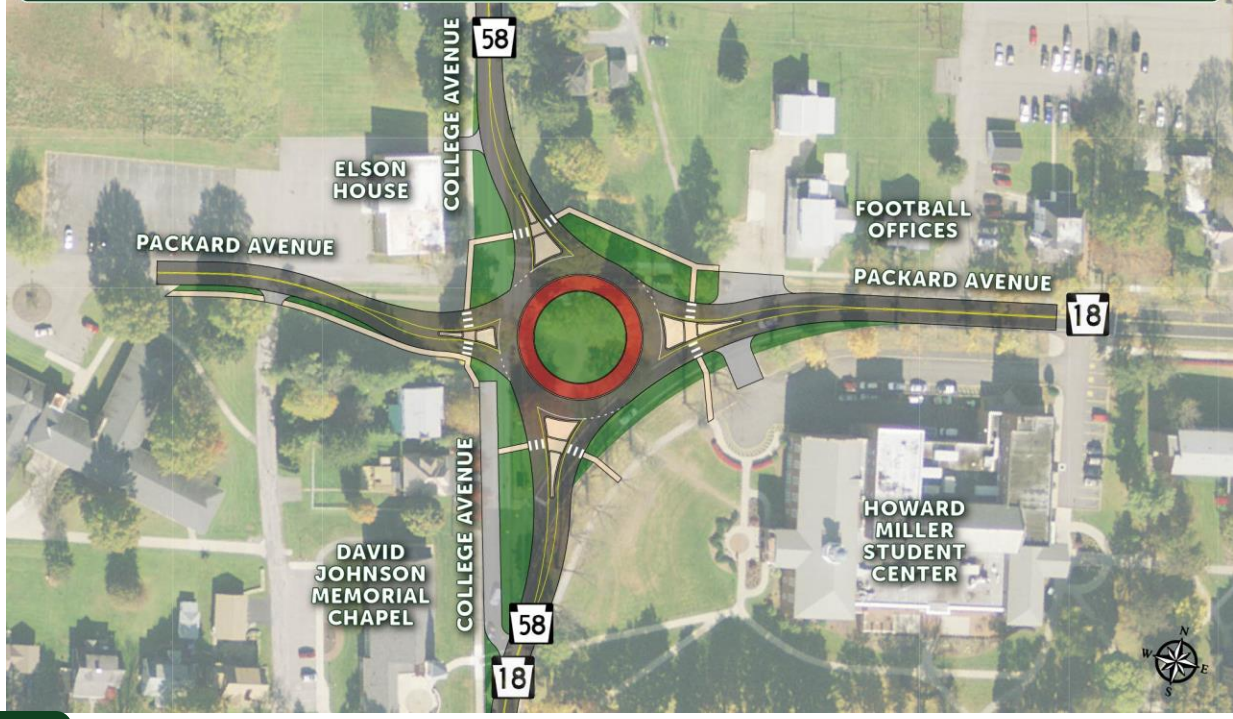
### College Ave / Packard Ave Intersection Alternative 1 - Angled T



D1

### College Ave / Packard Ave Intersection Alternative 2 - Roundabout

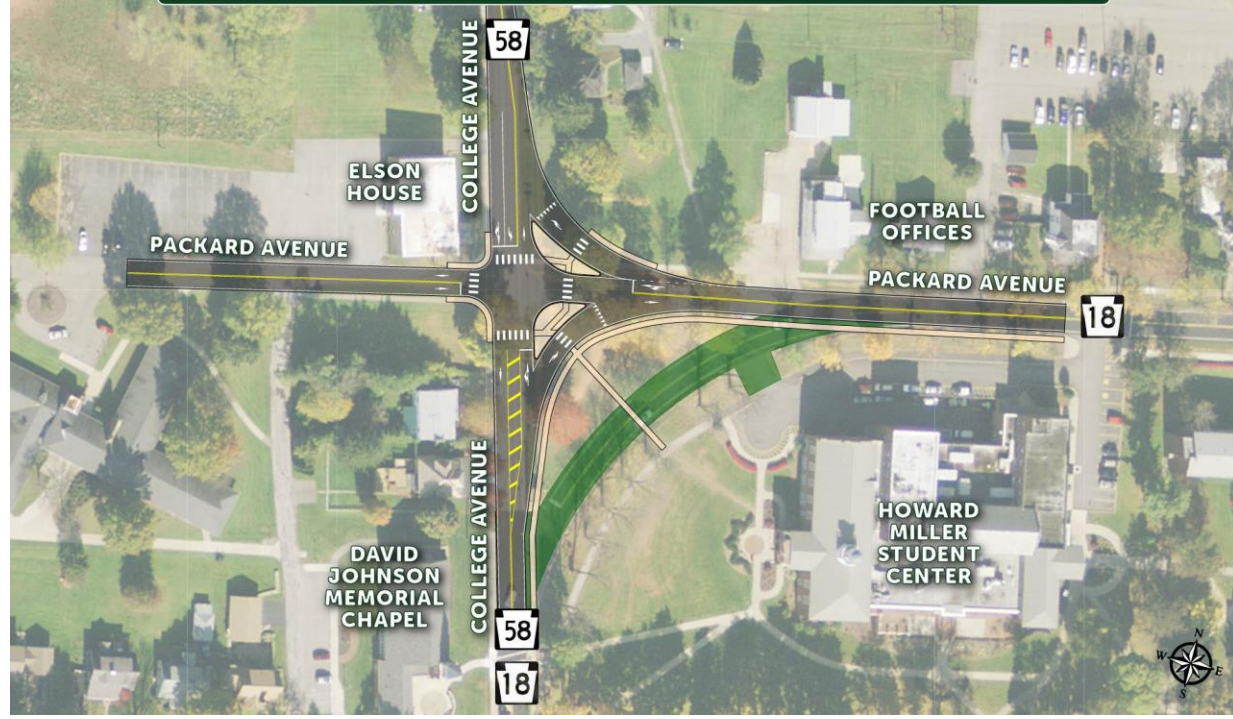
PAVEMENT    SIDEWALK AND CONCRETE MEDIAN    DRIVEWAY ADJUSTMENT    LANDSCAPE OR GRASS AREA    TRUCK APRON



D1

### College Ave / Packard Ave Intersection Alternative 3 - Plus (+)

PAVEMENT    SIDEWALK AND CONCRETE MEDIAN    LANDSCAPE OR GRASS AREA



## D2: Thiel College Gateway Sign

ID	D2
Conceptual Cost Estimate	\$75,000
Priority Rating	Medium
Responsible Party	Thiel College
Project Partners	Greenville Borough, PennDOT
Project Description	Install an overhead gateway sign at the northern end of campus near the College Ave / Packard Ave intersection
Funding Sources	Thiel College, Community Partnerships (see Section 4.4)
Purpose	Improve pedestrian safety by increasing driver awareness of pedestrian activity and decreasing vehicle speeds along College Avenue through Thiel College
Need	Hundreds of pedestrian crossings occur across College Avenue daily, and high vehicle traffic increases the potential for crashes
Problem Description and Justification	Traffic congestion from pedestrian-vehicle interactions, pedestrian safety, some pedestrian facilities are inadequate
Land Use Linkage to Transportation	Town / Village Neighborhood
Land Use/Economic Development Opportunity	Infrastructure efficiency improvement
Public and Agency Improvement	Improve connectivity on existing system; improve operational efficiency; improve system reliability
Alternative(s) Studied	None
Environmental Impact	None
Potential Challenges	None

Gateway Sign Examples (<http://designworkshopinc.com/project/architectural-signage/>):

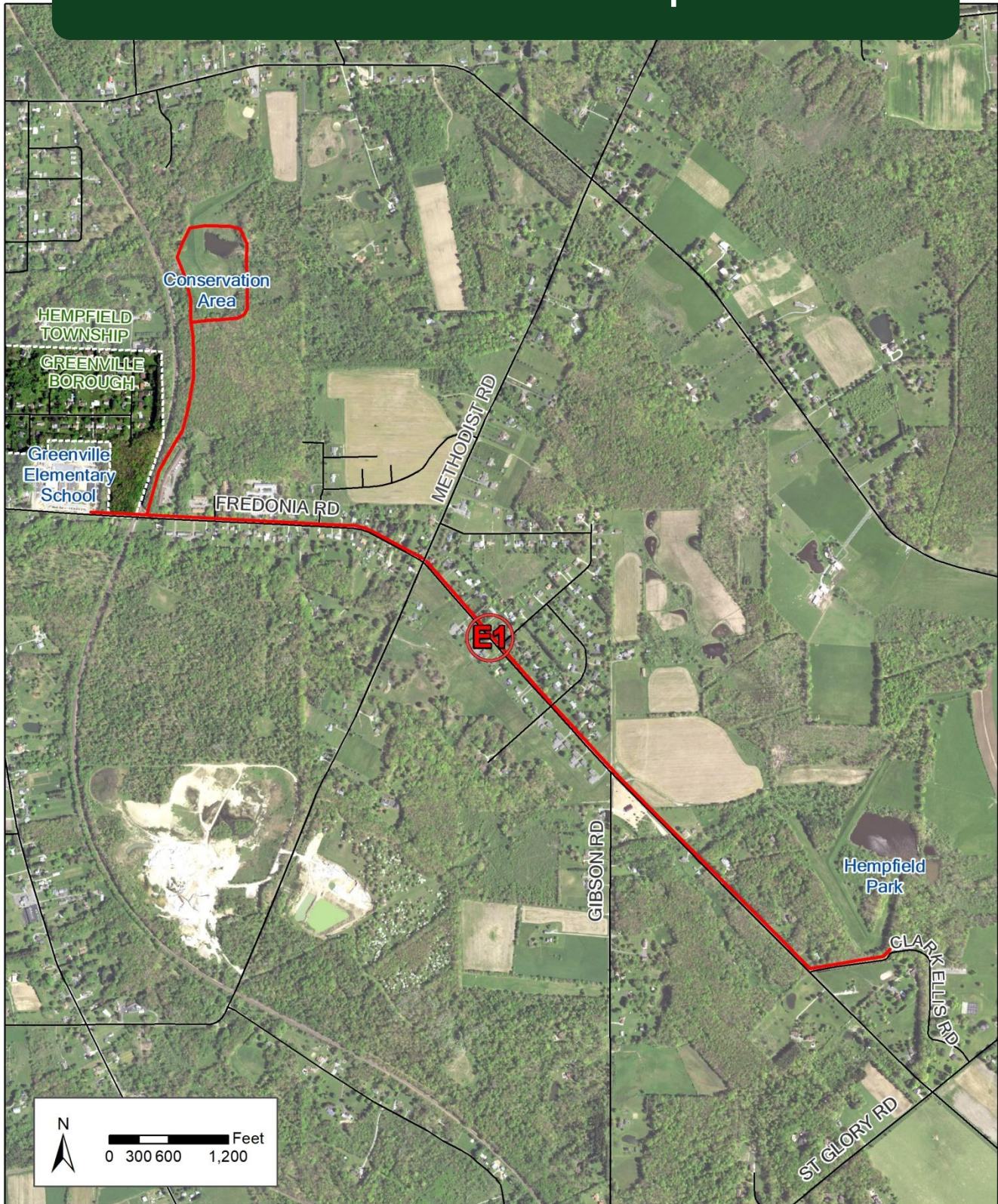


## E1: Multi-Use Trail to Hempfield Park

ID	E1
<b>Conceptual Cost Estimate</b>	\$2,648,000
<b>Priority Rating</b>	Low
<b>Responsible Party</b>	Hempfield Township
<b>Project Partners</b>	Mercer County Trails Assoc., Greenville Area School District, Adjacent property owners, MCRPC
<b>Project Description</b>	New multi-use trail from Greenville Elementary School to Hempfield Park. The proposed 8-foot-wide trail would accommodate walking and biking. The route would head east from Greenville Elementary, providing access to the conservation area northeast of the school, then continue along Fredonia Road to Hempfield Park at the intersection with St. Glory Rd (Township Route 564)
<b>Funding Sources</b>	Multimodal Transportation Fund, Transportation Alternatives Program, Municipal Funding, Community Development Block Grants, Surface Transportation Urban Funding, The Dietrich Foundation, Community Partnerships (see Section 4.4)
<b>Purpose</b>	To improve pedestrian and bicyclist access and safety, and to encourage multimodal travel
<b>Need</b>	No sidewalk currently exists along this rural corridor, limiting access for residents to community assets and recreational opportunities. The proposed trail would also provide safe means of travel for those living along Fredonia Road without access to a car, such as visiting students in the American Scholars program.
<b>Problem Description and Justification</b>	Walking facilities are nonexistent, walking is not safe, ADA requirements not met
<b>Land Use Linkage to Transportation</b>	Rural Corridor
<b>Land Use/Economic Development Opportunity</b>	Infrastructure efficiency improvement; enhancement of recreational opportunity
<b>Public and Agency Improvement</b>	Improve connectivity on existing system; improve operational efficiency; improve system reliability
<b>Alternative(s) Studied</b>	None
<b>Environmental Impact</b>	There may be impacts to stormwater and vegetation due to changes in grading and impervious surface. Impacts could be better estimated after the specific route is determined.
<b>Potential Challenges</b>	Additional right-of-way for the trail would need to be acquired. Approval for the trail to cross the railroad right-of-way would need to be secured. Some re-grading next to the roadway may be required.



# E1: Multi-Use Trail to Hempfield Park



## F1: Crosswalk and Pedestrian Signal Improvement Program

ID	F1
<b>Conceptual Cost Estimate</b>	\$1,000 per high-visibility crosswalk (including signs); \$1,450 per pair of pedestrian countdown signals
<b>Priority Rating</b>	High
<b>Responsible Party</b>	Greenville Borough
<b>Project Partners</b>	PennDOT, MCRPC
<b>Project Description</b>	Install or replace missing or deficient crosswalk markings with high-visibility crosswalks throughout the Borough when regular roadway maintenance is performed. Identify, prioritize and install LED countdown pedestrian signal heads, accessible pedestrian push-buttons (APS), and related signage throughout the Borough.
<b>Funding Sources</b>	Green-Light-Go, PennDOT Betterments Program, Municipal Funds, Automated Red Light Enforcement, Surface Transportation Urban Funding
<b>Purpose</b>	To improve pedestrian access and safety, and to encourage multimodal travel
<b>Need</b>	Existing crosswalk markings are noncompliant with current MUTCD standards, faded or nonexistent at many intersections throughout Greenville Borough/ Outdated or nonexistent pedestrian signals, push buttons, and related safety and maintenance concerns are an impediment for pedestrians and restrict accessibility and mobility
<b>Problem Description and Justification</b>	Paint lines are not clearly visible; pedestrian facilities are insufficient; pedestrian interaction with vehicles is not safe; ADA requirements not met
<b>Land Use Linkage to Transportation</b>	Town / Village Neighborhood, Town Center
<b>Land Use/Economic Development Opportunity</b>	Infrastructure efficiency improvement; enhancement of recreational opportunity
<b>Public and Agency Improvement</b>	Improve connectivity on existing system; improve operational efficiency; improve system reliability
<b>Alternative(s) Studied</b>	None
<b>Environmental Impact</b>	None
<b>Potential Challenges</b>	None

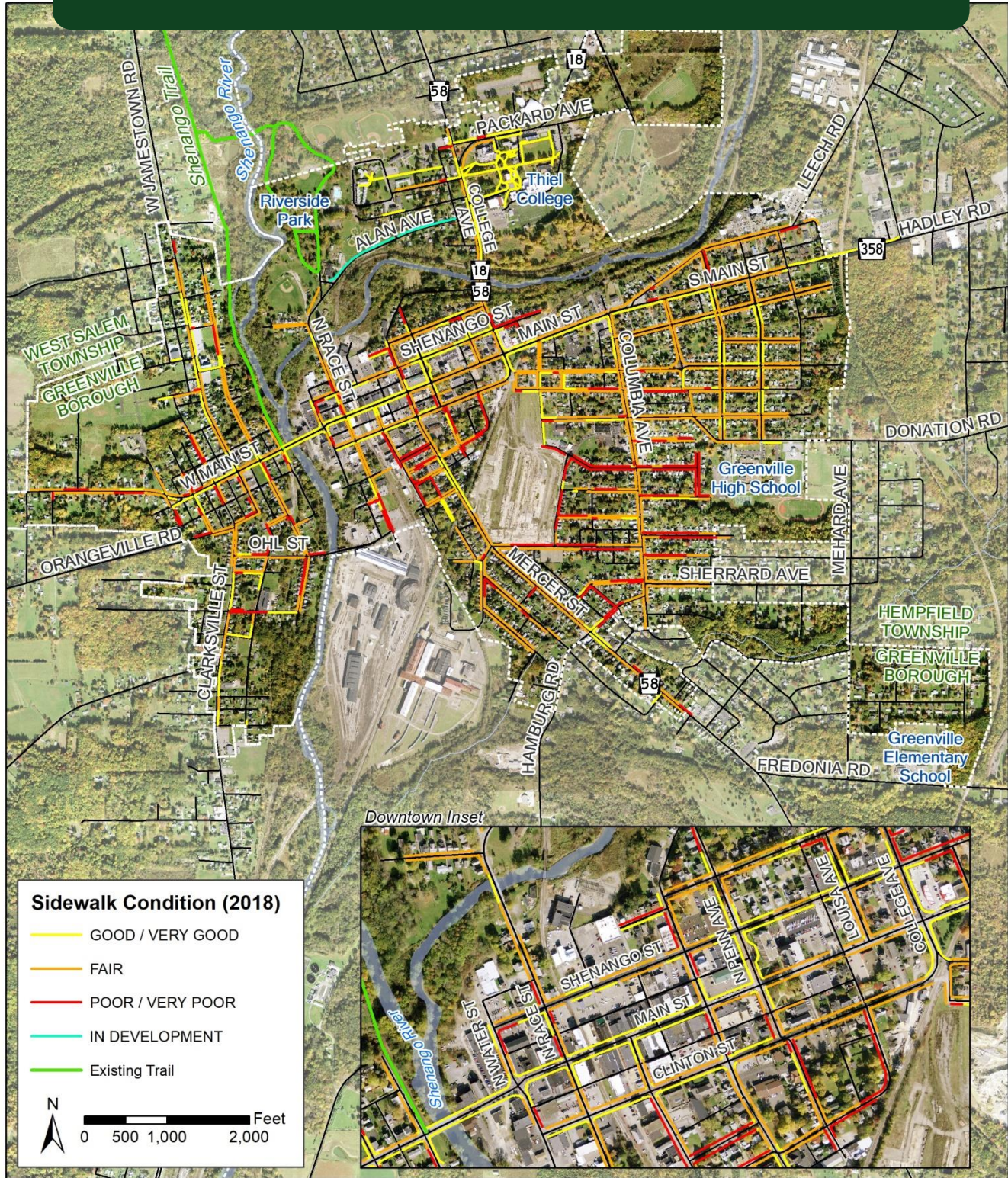
Examples of high visibility crosswalks and pedestrian countdown signals:



## F2: Sidewalk Improvement Program

ID	F3
<b>Conceptual Cost Estimate</b>	\$50 per linear foot
<b>Priority Rating</b>	Medium
<b>Responsible Party</b>	Greenville Borough
<b>Project Partners</b>	Adjacent property owners
<b>Project Description</b>	Prioritize missing sidewalk sections and repair or replace deficient sidewalk segments identified as “Poor” or “Very Poor” in the Sidewalk Inventory conducted in 2018 (5.5 miles).
<b>Funding Sources</b>	Transportation Alternatives Program, Property Owners, Municipal Funds
<b>Purpose</b>	To improve pedestrian access and safety, and to encourage multimodal travel
<b>Need</b>	Existing sidewalk conditions are deficient throughout Greenville Borough which creates a lack of connectivity for pedestrians and limits mobility.
<b>Problem Description and Justification</b>	Pedestrian facilities are insufficient; walking is not safe; ADA requirements not met
<b>Land Use Linkage to Transportation</b>	Town / Village Neighborhood, Town Center
<b>Land Use/Economic Development Opportunity</b>	Infrastructure efficiency improvement; enhancement of recreational opportunity
<b>Public and Agency Improvement</b>	Improve connectivity on existing system; improve operational efficiency; improve system reliability
<b>Alternative(s) Studied</b>	None
<b>Environmental Impact</b>	None
<b>Potential Challenges</b>	None

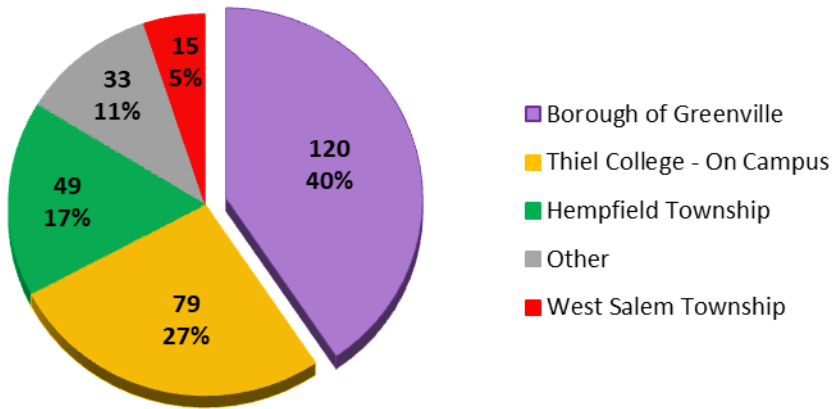
# F2: Sidewalk Improvement Program



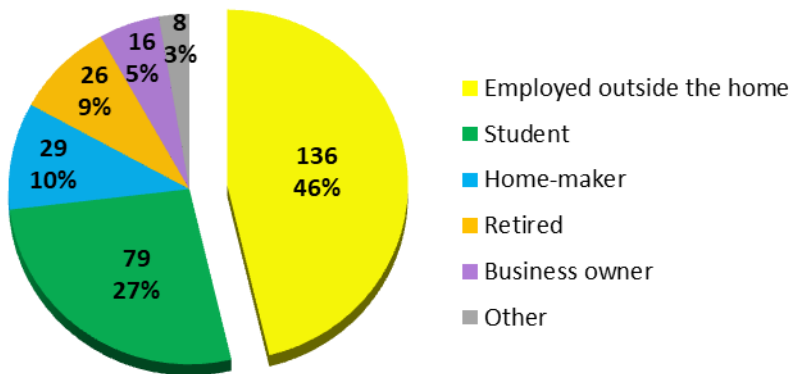
Appendix 1: Public Survey Results

Following are the results of the public survey conducted from April to June, 2018. The survey was conducted online and via hard copies, with a total of 296 responses.

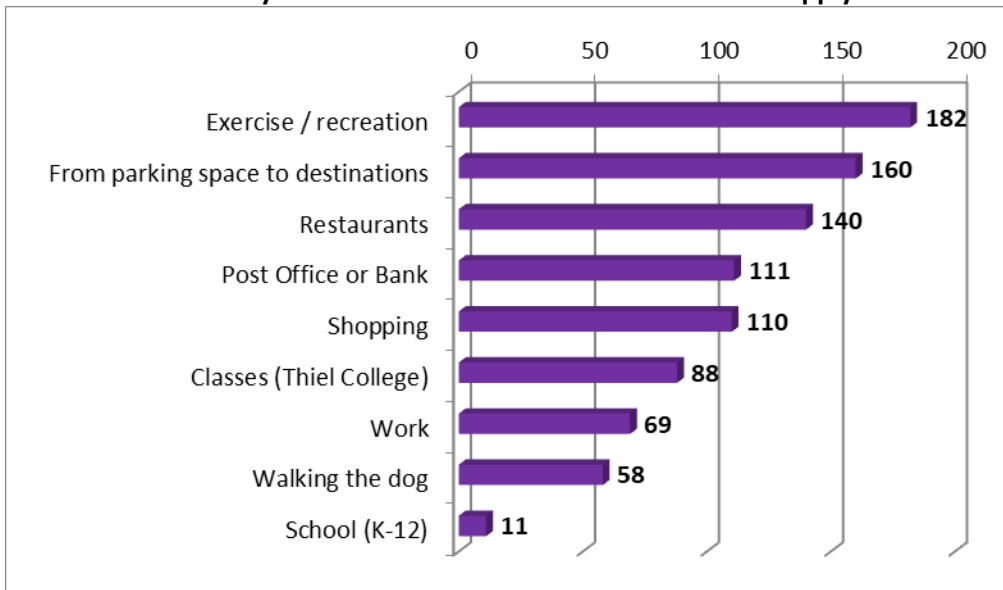
**Where do you live?**



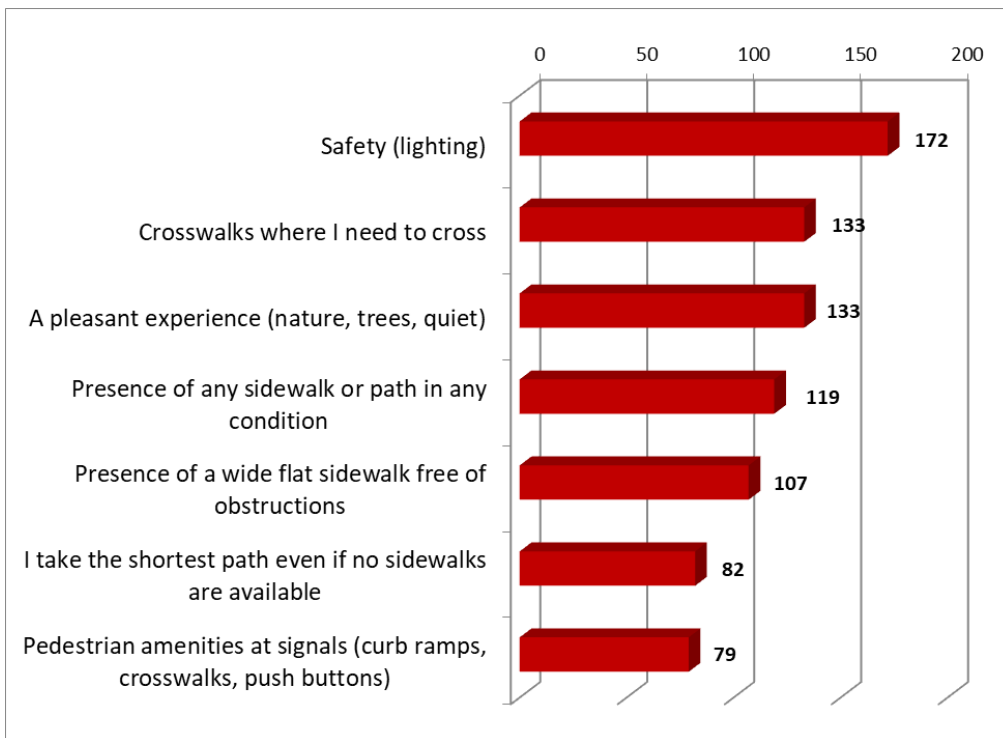
**How would you describe yourself?**



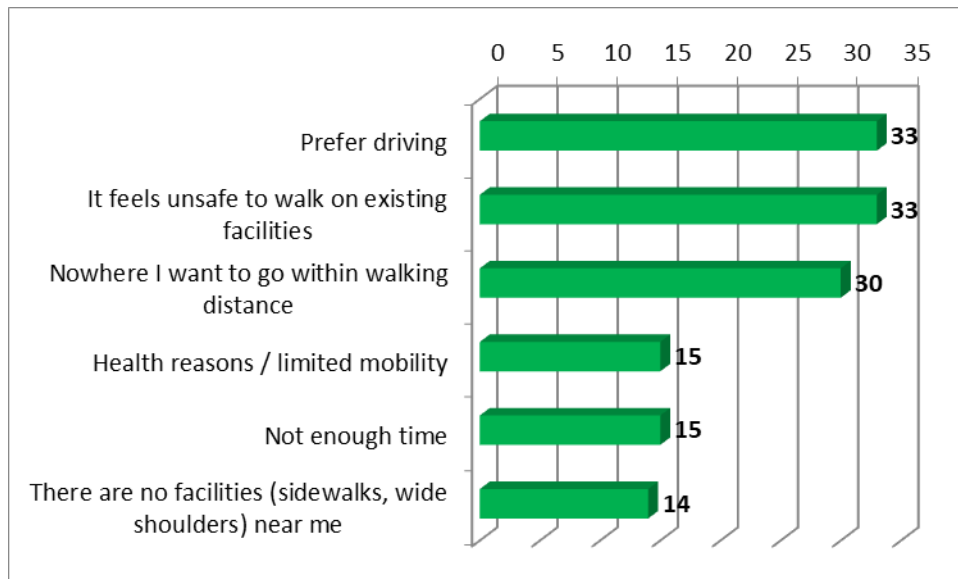
**For what reasons do you walk around Greenville? Select all that apply.**



**What is important to you when choosing a route to walk on? Check all that apply.**



**If you don't walk, what are some barriers to walking?**



**Are any improvements needed on these streets to improve your walking experience or safety? Please be specific.**

Location, Street, or Intersection	No. Comments	Main Concerns
<b>Main St</b>	40	Speeding vehicles do not yield to pedestrians; Uneven sidewalks; Restripe crosswalks; Potholes; Pedestrian signage needed; Heavy truck traffic
<b>College Ave (SR 58)</b>	40	Uneven/narrow sidewalks; Restripe crosswalks; Lighting between Thiel & Main St; Sidewalk on east side near Sheetz; Potholes; Dangerous to cross (especially at night); Pedestrian signage needed; Upgrade signals; Add crosswalk at Amelia Earhart Dr; Upgrades at signal in front of the chapel
<b>Riverside Park (Alan Ave)</b>	25	Sidewalk needed between Thiel & park
<b>Hadley Rd (to Walmart)</b>	24	Sidewalk needed to Walmart/Aldi/Busy Beaver
<b>Thiel College</b>	22	Repaint crosswalks; Lighting needed on lower campus; Improve signage; Add additional sidewalks; Pedestrian safety, especially crossing Packard and College Ave; Students cross on south leg (College Ave) without crosswalk to cut across triangle to Student Center; Path/crosswalk needed, or rope off area
<b>Clinton St</b>	11	Lighting; Vehicles do not yield to pedestrians; Restripe crosswalks; Needs to be smoother and have a bike lane
<b>Columbia Ave</b>	8	

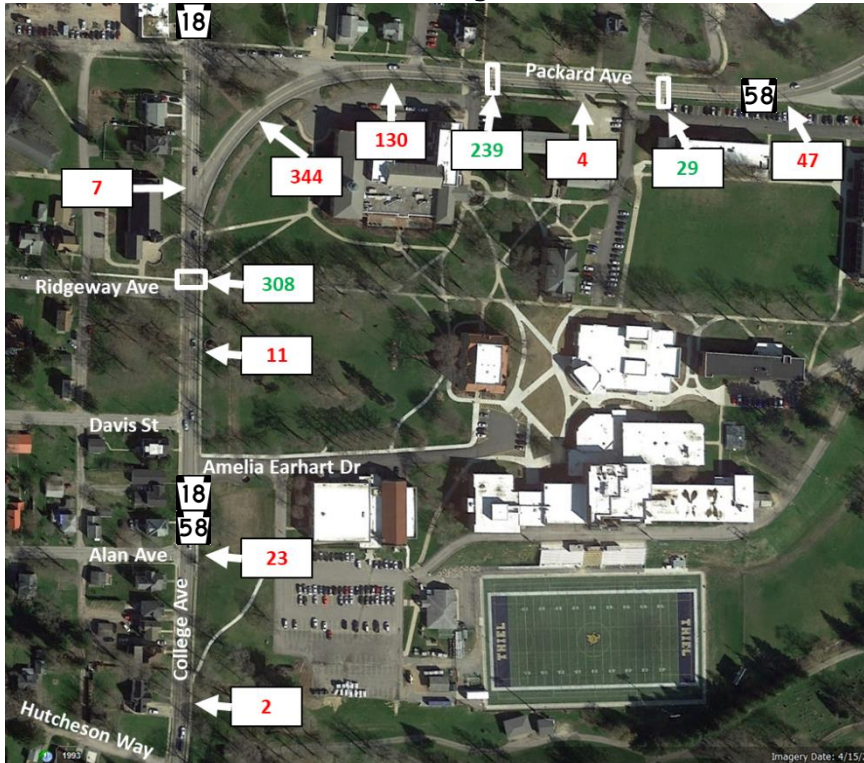


<b>Shenango St</b>	8	Improve sidewalks; Improve lighting; Improve crossing at Main St; Needs to be smoother and have a bike lane
<b>S Mercer St</b>	7	Narrow/uneven sidewalks; Infrequent crosswalks; Improve sidewalks and lighting
<b>Davis St</b>	5	Add sidewalk; Students cross at Davis & College Ave without crosswalk; Potholes; Lighting
<b>Main St &amp; Penn Ave intersection (Greenville House)</b>	4	Drivers do not yield to pedestrians
<b>Route 18</b>	4	Restripe crosswalks; Heavy Truck traffic
<b>Main St &amp; College Ave intersection</b>	4	Restripe crosswalks
<b>Post Office</b>	3	Improve sidewalks/crosswalks
<b>Ohl St Bridge</b>	2	Reopen to pedestrians so residents can access downtown
<b>Plum St</b>	2	
<b>Main St &amp; Columbia Ave intersection</b>	2	Restripe crosswalks
<b>Donation Rd</b>	2	
<b>Eagle St</b>	1	
<b>N Race St</b>	1	
<b>Vine Ave</b>	1	
<b>Hillside Presbyterian Church (alley)</b>	1	
<b>6th Ave</b>	1	
<b>East Elementary School</b>	1	Uneven sidewalk in front of school
<b>Mehard St</b>	1	Sidewalk needed
<b>Packard Ave</b>	1	Restripe crosswalks
<b>Mercer Ave &amp; York Rd intersection</b>	1	Unsafe for pedestrians because vehicles run red light
<b>Stewart St</b>	1	Improve sidewalk
<b>Ridgeway Ave</b>	1	Speeding vehicles do not yield to pedestrians
<b>Penn Ave</b>	1	
<b>Alley behind Greek houses</b>	1	
<b>Jamestown Rd (to Sports Complex)</b>	1	Add sidewalks

Appendix 2: Pedestrian Counts

Following are maps and associated tables for pedestrian and bicyclist counts conducted for this project at locations near Thiel College and in downtown Greenville.

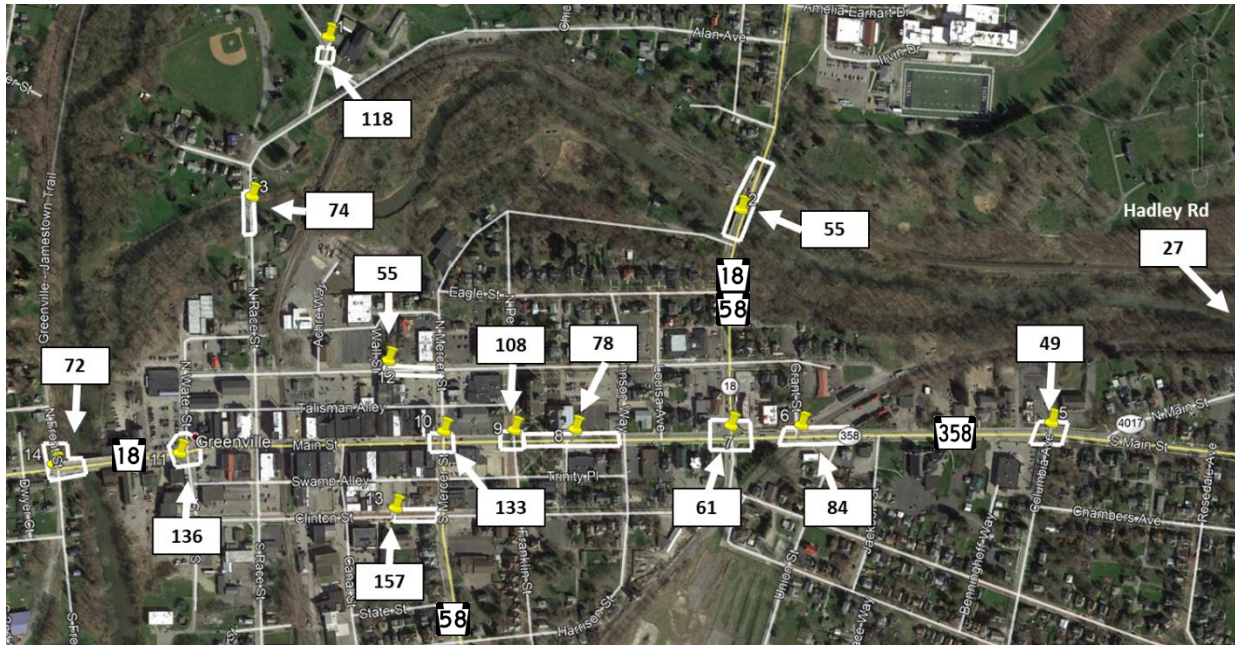
**Pedestrian Counts near Thiel College**



**Pedestrian Counts near Thiel College**

Location	Thursday 4/26/18			Friday 4/27/18			Total
	7:30-9:30AM	11AM-1PM	4PM-6PM	7:30-9:30AM	11AM-1PM	4PM-6PM	
Packard Mid-Block 3	2	15	15	1	9	5	47
Packard Crosswalk 2	1	9	12	1	5	1	29
Packard Mid-Block 2	0	3	1	0	0	0	4
Packard Crosswalk 1	29	33	39	41	33	64	239
Packard Mid-Block 1	9	27	13	17	25	39	130
SR 18 / 58 Curve Mid-Block	17	87	54	31	65	90	344
SR 18 / 58 Wall Crossing	0	0	2	1	0	4	7
Ridgeway Ave Crosswalk	75	59	20	87	45	22	308
Davis St Mid-Block	4	3	3	1	0	0	11
Alan Ave	7	2	4	3	1	6	23
Hutcheson Mid-block	0	0	1	1	0	0	2
<b>TOTAL Mid-Block Crossings</b>	<b>568</b>	<b>50%</b>					
<b>TOTAL Crosswalk Crossings</b>	<b>576</b>	<b>50%</b>					

**Pedestrian Counts in Downtown Greenville**



**Pedestrian Counts in Downtown Greenville**

Location	Thursday 7/12/18			Friday 7/13/18			TOTAL
	7AM-9AM	11AM-1PM	4PM-6PM	7AM-9AM	11AM-1PM	4PM-6PM	
<b>Riverside Park</b> (Along Alan Ave, Entering/Exiting Park)	17	18	19	15	34	15	118
<b>SR 18 College Avenue Bridge</b> (Anywhere)	9	14	13	7	7	5	55
<b>North Race Street Bridge</b> (Anywhere over the bridge)	7	17	17	9	8	16	74
<b>Hadley St / Williamson Rd</b> (Anywhere)	1	6	5	6	3	6	27
<b>Main St at Columbia Ave</b> (N-S crossings, E-W crossings)	5	7	19	4	8	6	49
<b>Main St at RR Xing East of Sheetz</b> (Crosswalk, jaywalk, along street)	10	20	15	8	15	16	84
<b>Main St at College near Sheetz</b> (N-S crossings, E-W crossings)	7	15	12	5	15	7	61
<b>Main St Mid-block near Family Dollar</b> (Crossing the street, along street)	8	15	24	4	14	13	78
<b>Main at Franklin St near Greenville House</b> (N-S crossings, E-W crossings)	14	32	19	5	20	18	108
<b>Main St at Mercer St</b> (N-S crossings, E-W crossings)	16	26	34	18	22	17	133
<b>Main at Water Street</b> (N-S crossings, E-W crossings)	11	32	33	13	21	26	136
<b>Shenango Street (Anywhere)</b>	7	9	11	6	7	15	55
<b>Clinton Street (Anywhere)</b>	12	22	29	16	40	38	157
<b>Main at Shenango River</b> (N-S crossings, E-W crossings, trail)	5	16	14	8	14	15	72

### Bicyclist Counts in Downtown Greenville

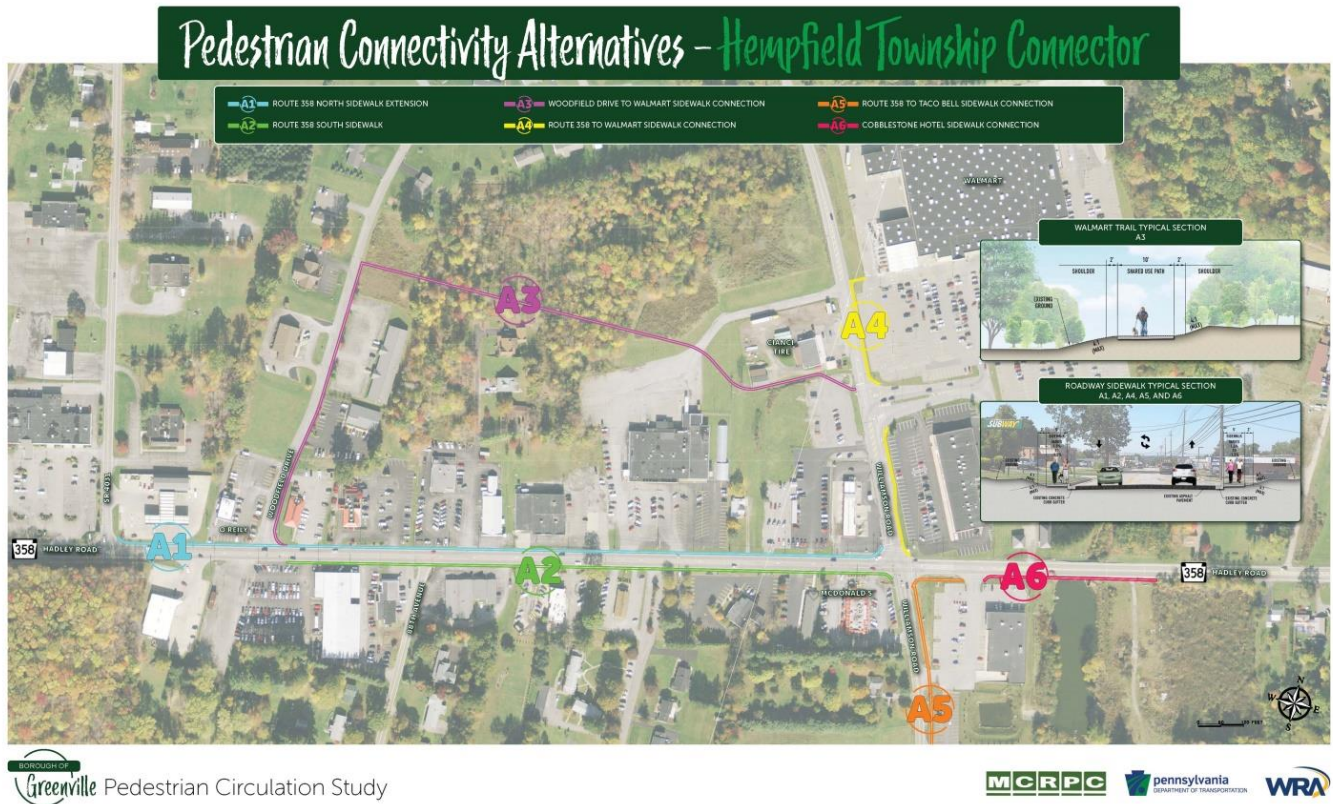


### Bicyclist Counts in Downtown Greenville

Location	Thursday 7/12/18			Friday 7/13/18			TOTAL
	7AM-9AM	11AM-1PM	4PM-6PM	7AM-9AM	11AM-1PM	4PM-6PM	
<b>Riverside Park</b> (Along Alan Ave, Entering/Exiting Park)	2	1	12	6	3	4	28
<b>SR 18 College Avenue Bridge</b> (Anywhere)	3	2	4	2	0	2	13
<b>North Race Street Bridge</b> (Anywhere over the bridge)	5	3	7	4	0	8	27
<b>Hadley St / Williamson Rd</b> (Anywhere)	0	2	1	1	0	1	5
<b>Main St at RR Xing East of Sheetz</b> (Crosswalk, jaywalk, along street)	0	1	9	2	1	2	15
<b>Main St Mid-block near Family Dollar</b> (Crossing the street, along street)	0	1	0	2	2	0	5
<b>Main St at Mercer St</b> (N-S crossings, E-W crossings)	1	2	5	2	0	0	10
<b>Shenango Street (Anywhere)</b>	2	6	2	0	0	2	12
<b>Clinton Street (Anywhere)</b>	1	0	1	1	1	0	4
<b>Main at Shenango River</b> (N-S crossings, E-W crossings, trail)	1	1	0	3	1	2	8

### Appendix 3: Alternatives Analysis

Through the course of the one-year planning process, several additional project alternatives were considered that did not become final recommendations. This section shows those alternatives and explains why the Steering Committee opted to eliminate them. Please note that the project numbering in this section does not match the final project recommendation numbers.

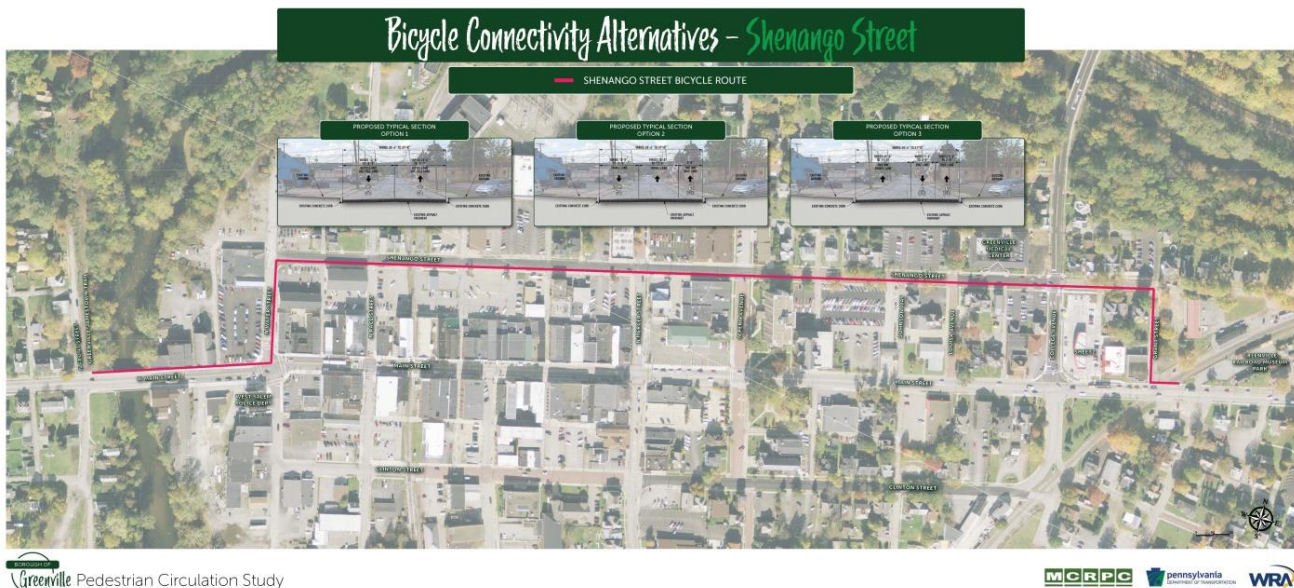


Alternative A3 on this map, which was provided as an alternative route to access the Walmart development without impacting properties on Hadley Road, was eliminated because it would be longer (and therefore less likely to be used by pedestrians), less obvious so fewer people would know it existed as an option, and would not serve pedestrians going to any businesses along Hadley Road.

Alternative B4 on this map was eliminated because the slope and drainage on Bentley Avenue would make it challenging to add a sidewalk. The B4/B6 route would also be longer for most pedestrians than a more direct route through the school property. B5 was eliminated from the maps because the school district requested that they retain the flexibility to choose the route after conducting some overall planning for the school property.



Greenville Pedestrian Circulation Study



Greenville Pedestrian Circulation Study



The section of bike facilities east of College Avenue was eliminated because those sections of roadway are not wide enough for bicycle connections. The Steering Committee considered adding bike lanes to the entire length of Shenango Street, but opted to use sharrows east of Penn Avenue instead in order to avoid eliminating existing on-street parking in that section. Similarly, the Committee opted for multi-use sidewalks on the sections of North Water Street and Main Street to the west in order to avoid changing the existing right-of-way and impacting properties. Existing wide sidewalks on those sections allow for a 10-foot wide sidewalk that can accommodate both bicycles and pedestrians.

**Appendix 4: Conceptual Cost Estimates**

A summary of estimated project costs is shown below, and detailed costs are included on the following pages.

These figures are conceptual cost estimates based on PennDOT costs for similar projects; projects funded from other sources may be more or less expensive depending on the funding requirements.

Index #	Description	Costs				
		\$ (Construct)	\$ (Construct w/ Escalation, Contingency, And Oversight)	\$ (ROW)	Engineering and Utilities	\$ Total
A1	Hadley Road (Northern Side)	\$229,722	\$382,222	\$6,500	\$25,400	\$414,200
A2	Hadley Road (Southern Side)	\$213,021	\$354,521	\$5,100	\$23,600	\$383,300
A3	Williamson Road (North of Hadley Road)	\$50,392	\$83,892	\$1,700	\$6,200	\$91,800
A4	Williamson Road (South of Hadley Road)	\$47,517	\$79,117	\$2,700	\$5,800	\$87,700
A5	Cobblestone Hotel Connection	\$118,383	\$197,183	\$1,100	\$14,000	\$212,300
<b>B</b>						
B1-1	Donation Road (Without Curb/Lighting)	\$66,461	\$110,761	\$2,100	\$8,100	\$121,000
B1-2	Donation Road (With Curb/Lighting)	\$272,617	\$453,817	\$2,100	\$21,200	\$477,200
B2	Mehard Avenue	\$446,892	\$743,592	\$13,500	\$44,400	\$801,500
B3	Greenville Drive/Elem Connection	\$86,951	\$144,851	\$4,400	\$10,600	\$159,900
B4	Fredonia Road	\$155,287	\$258,487	\$8,400	\$18,700	\$285,600
B5	South Mercer Street	\$103,746	\$172,846	\$1,500	\$12,700	\$187,100
<b>C</b>						
C1	Main Street Safety & Streetscape Improvements	\$154,194	\$256,594	\$0	\$9,500	\$266,100
C2	Shenango Trail Town Bike Amenities	\$14,423	\$24,123	\$0	\$1,100	\$25,300
C3	Downtown Greenville Bike Facilities	\$80,400	\$133,900	\$500	\$9,800	\$144,200
<b>D1 Thiel College Intersection Alternatives</b>						
Alt 1	Angled T Intersection	\$1,276,855	\$2,187,955	\$10,000	\$165,900	\$2,363,900
Alt 2	Roundabout	\$1,937,846	\$3,320,446	\$10,000	\$251,700	\$3,582,200
Alt 3	Plus (+) Intersection	\$1,373,885	\$2,354,185	\$10,000	\$178,500	\$2,542,700
<b>E</b>						
E1	Multi-Use Trail to Hempfield Park	\$1,452,869	\$2,416,969	\$61,500	\$169,500	\$2,648,000

**A1: Hadley Road (Northern Side)**

<i>Unit</i>	<i>Item Description</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Item Cost</i>
LS	CLEARING AND GRUBBING	1	\$4,000	\$4,000
CY	TOPSOIL FURNISH AND PLACE	88	\$50	\$4,394
SY	SEEDING AND MULCHING	791	\$5	\$3,954
CY	CLASS 1 EXCAVATION	1299	\$15	\$19,489
SY	CEMENT CONCRETE SIDEWALK	791	\$90	\$71,176
SY	DRIVEWAY	678	\$120	\$81,344
SY	CURB GUTTER	66	\$130	\$8,628
SF	DETECTABLE WARNING SURFACE	40	\$40	\$1,600
LS	MAINTENANCE AND PROTECTION OF TRAFFIC			\$3,900
LS	EROSION AND SEDIMENTATION CONTROLS			\$5,900
LS	DRAINAGE			\$19,500
LS	MOBILIZATION			\$5,838
	<b>Total</b>			\$229,722
	Escalation @	3%/year Through 2020		\$14,000.00
	<b>Subtotal</b>			<b>\$243,722.16</b>
	Contingency @	40%		\$97,500
	<b>Total Construction Cost</b>			<b>\$341,222</b>
	Construction Oversight @	12%		\$41,000
	<b>Subtotal</b>			<b>\$382,222</b>
	Engineering Design			\$15,600
	Utility Relocation			\$9,800
* - R/W Acquisition = \$10,000/Acre (\$500/Property Minimum)	Right-of-Way Acquisition*			\$6,500
	<b>Total Cost</b>			<b>\$414,200</b>



### A2: Hadley Road (Southern Side)

<i>Unit</i>	<i>Item Description</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Item Cost</i>
LS	CLEARING AND GRUBBING	1	\$3,200	\$3,200
CY	TOPSOIL FURNISH AND PLACE	49	\$50	\$2,466
SY	SEEDING AND MULCHING	444	\$5	\$2,219
CY	CLASS 1 EXCAVATION	1112	\$15	\$16,675
SY	CEMENT CONCRETE SIDEWALK	445	\$90	\$40,070
SY	DRIVEWAY	889	\$120	\$106,687
SY	CURB GUTTER	57	\$130	\$7,396
SF	DETECTABLE WARNING SURFACE	40	\$40	\$1,600
LS	MAINTENANCE AND PROTECTION OF TRAFFIC			\$3,700
LS	EROSION AND SEDIMENTATION CONTROLS			\$5,500
LS	DRAINAGE			\$18,100
LS	MOBILIZATION			\$5,409
	<b>Total</b>			<b>\$213,021</b>
	Escalation @	3%/year Through 2020		\$13,000.00
	<b>Subtotal</b>			<b>\$226,021.49</b>
	Contingency @	40%		\$90,500
	<b>Total Construction Cost</b>			<b>\$316,521</b>
	Construction Oversight @	12%		\$38,000
	<b>Subtotal</b>			<b>\$354,521</b>
	Engineering Design			\$14,500
	Utility Relocation			\$9,100
* - R/W Acquisition = \$10,000/Acre (\$500/Property Minimum)	Right-of-Way Acquisition*			\$5,100
	<b>Total Cost</b>			<b>\$383,300</b>

### A3: Williamson Road (North of Hadley Road)

<i>Unit</i>	<i>Item Description</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Item Cost</i>
LS	CLEARING AND GRUBBING	1	\$1,400	\$1,400
CY	TOPSOIL FURNISH AND PLACE	42	\$50	\$2,080
SY	SEEDING AND MULCHING	375	\$5	\$1,872
CY	CLASS 1 EXCAVATION	376	\$15	\$5,642
SY	CEMENT CONCRETE SIDEWALK	378	\$90	\$34,000
SF	DETECTABLE WARNING SURFACE	40	\$40	\$1,600
LS	MAINTENANCE AND PROTECTION OF TRAFFIC EROSION AND SEDIMENTATION CONTROLS			\$1,000
LS	DRAINAGE			\$1,400
LS	MOBILIZATION			\$1,398
Total				\$50,392
Escalation @		3%/year Through 2020		\$3,100.00
<b>Subtotal</b>				<b>\$53,491.96</b>
Contingency @		40%		\$21,400
<b>Total Construction Cost</b>				<b>\$74,892</b>
Construction Oversight @		12%		\$9,000
<b>Subtotal</b>				<b>\$83,892</b>
Engineering Design				\$3,800
Utility Relocation				\$2,400
* - R/W Acquisition = \$10,000/Acre (\$500/Property Minimum)				
Right-of-Way Acquisition*				\$1,700
<b>Total Cost</b>				<b>\$91,800</b>

**A4: Williamson Road (South of Hadley Road)**

<i>Unit</i>	<i>Item Description</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Item Cost</i>
LS	CLEARING AND GRUBBING	1	\$1,200	\$1,200
CY	TOPSOIL FURNISH AND PLACE	30	\$50	\$1,514
SY	SEEDING AND MULCHING	273	\$5	\$1,363
CY	CLASS 1 EXCAVATION	328	\$15	\$4,924
SY	CEMENT CONCRETE SIDEWALK	281	\$90	\$25,276
SY	DRIVEWAY	68	\$120	\$8,207
SY	CURB GUTTER	5	\$130	\$616
SF	DETECTABLE WARNING SURFACE	20	\$40	\$800
LS	MAINTENANCE AND PROTECTION OF TRAFFIC			\$900
LS	EROSION AND SEDIMENTATION CONTROLS			\$1,400
LS	DRAINAGE			
LS	MOBILIZATION			\$1,317
	Total			\$47,517
	Escalation @ 3%/year Through 2020			\$2,900.00
	<b>Subtotal</b>			<b>\$50,417.22</b>
	Contingency @ 40%			\$20,200
	<b>Total Construction Cost</b>			<b>\$70,617</b>
	Construction Oversight @ 12%			\$8,500
	<b>Subtotal</b>			<b>\$79,117</b>
	Engineering Design			\$3,600
	Utility Relocation			\$2,200
	Right-of-Way Acquisition*			\$2,700
	<b>Total Cost</b>			<b>\$87,700</b>

\* - R/W Acquisition = \$10,000/Acre (\$500/Property Minimum)

### A5: Cobblestone Hotel Connection

<i>Unit</i>	<i>Item Description</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Item Cost</i>
LS	CLEARING AND GRUBBING	1	\$1,200	\$1,200
CY	TOPSOIL FURNISH AND PLACE	339	\$50	\$16,931
SY	SEEDING AND MULCHING	320	\$5	\$1,599
CY	CLASS 1 EXCAVATION	339	\$15	\$5,079
SY	CEMENT CONCRETE SIDEWALK	318	\$90	\$28,589
SY	DRIVEWAY	27	\$120	\$3,187
LS	STRUCTURE MODIFICATION	1	\$50,000	\$50,000
LS	MAINTENANCE AND PROTECTION OF TRAFFIC			\$2,200
LS	EROSION AND SEDIMENTATION CONTROLS			\$3,200
LS	DRAINAGE			\$3,200
LS	MOBILIZATION			\$3,198
	<b>Total</b>			<b>\$118,383</b>
	Escalation @	3%/year Through 2020		\$7,300.00
	<b>Subtotal</b>			<b>\$125,682.64</b>
	Contingency @	40%		\$50,300
	<b>Total Construction Cost</b>			<b>\$175,983</b>
	Construction Oversight @	12%		\$21,200
	<b>Subtotal</b>			<b>\$197,183</b>
	Engineering Design			\$8,600
	Utility Relocation			\$5,400
* - R/W Acquisition = \$10,000/Acre (\$500/Property Minimum)	Right-of-Way Acquisition*			\$1,100
	<b>Total Cost</b>			<b>\$212,300</b>

**B1-1: Donation Road (Without Curb/Lighting)**

<i>Unit</i>	<i>Item Description</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Item Cost</i>
LS	CLEARING AND GRUBBING	1	\$2,000	\$2,000
CY	TOPSOIL FURNISH AND PLACE	59	\$50	\$2,951
SY	SEEDING AND MULCHING	531	\$5	\$2,656
CY	CLASS 1 EXCAVATION	522	\$15	\$7,829
SY	CEMENT CONCRETE SIDEWALK	439	\$90	\$39,473
SY	DRIVEWAY	51	\$120	\$6,125
SF	DETECTABLE WARNING SURFACE	10	\$40	\$400
LS	MAINTENANCE AND PROTECTION OF TRAFFIC			\$1,900
LS	EROSION AND SEDIMENTATION CONTROLS			\$1,900
LS	DRAINAGE			
LS	MOBILIZATION			\$1,229
<b>Total</b>				\$66,461
Escalation @ 3%/year Through 2020				\$4,100.00
<b>Subtotal</b>				<b>\$70,561.42</b>
Contingency @ 40%				\$28,300
<b>Total Construction Cost</b>				<b>\$98,861</b>
Construction Oversight @ 12%				\$11,900
<b>Subtotal</b>				<b>\$110,761</b>
Engineering Design				\$5,000
Utility Relocation				\$3,100
Right-of-Way Acquisition*				\$2,100
<b>Total Cost</b>				<b>\$121,000</b>

\* - R/W Acquisition = \$10,000/Acre (\$500/Property Minimum)

**B1-2: Donation Road (With Curb/Lighting)**

<i>Unit</i>	<i>Item Description</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Item Cost</i>
LS	CLEARING AND GRUBBING	1	\$2,000	\$2,000
CY	TOPSOIL FURNISH AND PLACE	59	\$50	\$2,951
SY	SEEDING AND MULCHING	531	\$5	\$2,656
CY	CLASS 1 EXCAVATION	522	\$15	\$7,829
SY	CEMENT CONCRETE SIDEWALK	439	\$90	\$39,473
SY	DRIVEWAY	51	\$120	\$6,125
SY	CURB GUTTER	252	\$130	\$32,741
LF	LIGHTING	850	\$80	\$68,000
SF	DETECTABLE WARNING SURFACE	10	\$40	\$400
LS	MAINTENANCE AND PROTECTION OF TRAFFIC			\$4,900
LS	EROSION AND SEDIMENTATION CONTROLS			\$4,900
LS	DRAINAGE			\$97,400
LS	MOBILIZATION			\$3,243
<b>Total</b>				\$272,617
Escalation @ 3%/year Through 2020				\$16,700.00
<b>Subtotal</b>				<b>\$289,316.98</b>
Contingency @ 40%				\$115,800
<b>Total Construction Cost</b>				<b>\$405,117</b>
Construction Oversight @ 12%				\$48,700
<b>Subtotal</b>				<b>\$453,817</b>
Engineering Design				\$13,000
Utility Relocation				\$8,200
Right-of-Way Acquisition*				\$2,100
<b>Total Cost</b>				<b>\$477,200</b>

\* - R/W Acquisition = \$10,000/Acre (\$500/Property Minimum)

**B2: Mehard Ave**

<i>Unit</i>	<i>Item Description</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Item Cost</i>
LS	CLEARING AND GRUBBING	1	\$10,000	\$10,000
CY	TOPSOIL FURNISH AND PLACE	314	\$50	\$15,703
SY	SEEDING AND MULCHING	2827	\$5	\$14,133
CY	CLASS 1 EXCAVATION	2711	\$15	\$40,671
SY	CEMENT CONCRETE SIDEWALK	2002	\$90	\$180,200
SY	DRIVEWAY	420	\$120	\$50,387
SY	CURB GUTTER	99	\$130	\$12,904
LF	GUIDE RAIL	200	\$18	\$3,600
SF	BLOCK WALL	375	\$25	\$9,375
SF	DETECTABLE WARNING SURFACE	100	\$40	\$4,000
LS	MAINTENANCE AND PROTECTION OF TRAFFIC			\$10,300
LS	EROSION AND SEDIMENTATION CONTROLS			\$10,300
LS	DRAINAGE			\$78,500
LS	MOBILIZATION			\$6,819
Total				\$446,892
Escalation @ 3%/year Through 2020				\$27,300.00
<b>Subtotal</b>				<b>\$474,192.33</b>
Contingency @ 40%				\$189,700
<b>Total Construction Cost</b>				<b>\$663,892</b>
Construction Oversight @ 12%				\$79,700
<b>Subtotal</b>				<b>\$743,592</b>
Engineering Design				\$27,300
Utility Relocation				\$17,100
Right-of-Way Acquisition*				\$13,500
<b>Total Cost</b>				<b>\$801,500</b>

\* - R/W Acquisition = \$10,000/Acre (\$500/Property Minimum)

### B3: Greenville Drive/Elem Connection

<i>Unit</i>	<i>Item Description</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Item Cost</i>
LS	CLEARING AND GRUBBING	1	\$2,500	\$2,500
CY	TOPSOIL FURNISH AND PLACE	60	\$50	\$3,005
SY	SEEDING AND MULCHING	541	\$5	\$2,704
CY	CLASS 1 EXCAVATION	627	\$15	\$9,407
SY	CEMENT CONCRETE SIDEWALK	413	\$90	\$37,195
SY	DRIVEWAY	210	\$120	\$25,133
SF	DETECTABLE WARNING SURFACE	10	\$40	\$400
LS	MAINTENANCE AND PROTECTION OF TRAFFIC			\$2,500
LS	EROSION AND SEDIMENTATION CONTROLS			\$2,500
LS	DRAINAGE			
LS	MOBILIZATION			\$1,607
<b>Total</b>				\$86,951
Escalation @ 3%/year Through 2020				\$5,300.00
<b>Subtotal</b>				<b>\$92,250.76</b>
Contingency @ 40%				\$37,000
<b>Total Construction Cost</b>				<b>\$129,251</b>
Construction Oversight @ 12%				\$15,600
<b>Subtotal</b>				<b>\$144,851</b>
Engineering Design				\$6,500
Utility Relocation				\$4,100
Right-of-Way Acquisition*				\$4,400
<b>Total Cost</b>				<b>\$159,900</b>

\* - R/W Acquisition = \$10,000/Acre (\$500/Property Minimum)



**B4: Fredonia Road**

<i>Unit</i>	<i>Item Description</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Item Cost</i>
LS	CLEARING AND GRUBBING	1	\$4,000	\$4,000
CY	TOPSOIL FURNISH AND PLACE	126	\$50	\$6,287
SY	SEEDING AND MULCHING	1132	\$5	\$5,658
CY	CLASS 1 EXCAVATION	1140	\$15	\$17,101
SY	CEMENT CONCRETE SIDEWALK	909	\$90	\$81,790
SY	DRIVEWAY	240	\$120	\$28,779
LS	MAINTENANCE AND PROTECTION OF TRAFFIC EROSION AND SEDIMENTATION CONTROLS DRAINAGE MOBILIZATION			\$4,400
				\$4,400
				\$2,872
				<hr/>
		Total		\$155,287
		Escalation @ 3%/year Through 2020		\$9,500.00
		<b>Subtotal</b>		<b>\$164,787.15</b>
				<hr/>
		Contingency @ 40%		\$66,000
		<b>Total Construction Cost</b>		<b>\$230,787</b>
				<hr/>
		Construction Oversight @ 12%		\$27,700
		<b>Subtotal</b>		<b>\$258,487</b>
				<hr/>
		Engineering Design		\$11,500
		Utility Relocation		\$7,200
		Right-of-Way Acquisition*		\$8,400
				<hr/> <hr/>
		<b>Total Cost</b>		<b>\$285,600</b>

\* - R/W Acquisition = \$10,000/Acre (\$500/Property Minimum)

**B5: South Mercer Street**

<i>Unit</i>	<i>Item Description</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Item Cost</i>
LS	CLEARING AND GRUBBING	1	\$2,500	\$2,500
CY	TOPSOIL FURNISH AND PLACE	72	\$50	\$3,582
SY	SEEDING AND MULCHING	645	\$5	\$3,224
CY	CLASS 1 EXCAVATION	757	\$15	\$11,359
SY	CEMENT CONCRETE SIDEWALK	456	\$90	\$41,033
SY	DRIVEWAY	293	\$120	\$35,112
LS	MAINTENANCE AND PROTECTION OF TRAFFIC EROSION AND SEDIMENTATION CONTROLS			\$2,000
LS	DRAINAGE			\$3,000
LS	MOBILIZATION			\$1,936
	Total			\$103,746
	Escalation @ 3%/year Through 2020			\$6,400.00
	<b>Subtotal</b>			<b>\$110,146.14</b>
	Contingency @ 40%			\$44,100
	<b>Total Construction Cost</b>			<b>\$154,246</b>
	Construction Oversight @ 12%			\$18,600
	<b>Subtotal</b>			<b>\$172,846</b>
	Engineering Design			\$7,800
	Utility Relocation			\$4,900
* - R/W Acquisition = \$10,000/Acre (\$500/Property Minimum)	Right-of-Way Acquisition*			\$1,500
	<b>Total Cost</b>			<b>\$187,100</b>

### C1: Main Street Safety & Streetscape Improvements

<i>Unit</i>	<i>Item Description</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Item Cost</i>
LS	CLEARING AND GRUBBING	1	\$2,000	\$2,000
CY	TOPSOIL FURNISH AND PLACE	198	\$50	\$9,889
SY	SEEDING AND MULCHING	593	\$5	\$2,967
CY	CLASS 1 EXCAVATION	447	\$15	\$6,698
SY	CEMENT CONCRETE SIDEWALK	109	\$90	\$9,810
SY	DRIVEWAY	191	\$120	\$22,880
LF	CONCRETE CURB	1160	\$50	\$58,000
LF	6" PAVEMENT MARKINGS	100	\$1	\$100
LF	24" PAVEMENT MARKINGS	80	\$15	\$1,200
SF	DETECTABLE WARNING SURFACE	100	\$40	\$4,000
LS	MAINTENANCE AND PROTECTION OF TRAFFIC			\$3,600
LS	EROSION AND SEDIMENTATION CONTROLS			\$3,600
LS	DRAINAGE			\$27,100
LS	MOBILIZATION			\$2,351
<b>Total</b>				<b>\$154,194</b>
Escalation @ 3%/year Through 2020				\$9,400.00
<b>Subtotal</b>				<b>\$163,593.92</b>
Contingency @ 40%				\$65,500
<b>Total Construction Cost</b>				<b>\$229,094</b>
Construction Oversight @ 12%				\$27,500
<b>Subtotal</b>				<b>\$256,594</b>
Engineering Design				\$9,500
Utility Relocation				---
Right-of-Way Acquisition*				---
<b>Total Cost</b>				<b>\$266,100</b>

\* - R/W Acquisition = \$10,000/Acre (\$500/Property Minimum)

### C2: Shenango Trail Town Bike Amenities

<i>Unit</i>	<i>Item Description</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Item Cost</i>
EA	BIKE RACK	9	\$350	\$3,150
EA	SIGNAGE	7	\$1,500	\$10,500
LS	MAINTENANCE AND PROTECTION OF TRAFFIC			\$500
LS	MOBILIZATION			\$273
Total				\$14,423
Escalation @		3%/year Through 2020		\$900.00
<b>Subtotal</b>				<b>\$15,323.00</b>
Contingency @		40%		\$6,200
<b>Total Construction Cost</b>				<b>\$21,523</b>
Construction Oversight @		12%		\$2,600
<b>Subtotal</b>				<b>\$24,123</b>
Engineering Design				\$1,100
Utility Relocation				---
* - R/W Acquisition = \$10,000/Acre (\$500/Property Minimum)				
Right-of-Way Acquisition*				---
<b>Total Cost</b>				<b>\$25,300</b>

### C3: Downtown Greenville Bike Facilities

<i>Unit</i>	<i>Item Description</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Item Cost</i>
LS	CLEARING AND GRUBBING	1	\$1,000	\$1,000
CY	CLASS 1 EXCAVATION	198	\$15	\$2,967
SY	CEMENT CONCRETE SIDEWALK	356	\$90	\$32,040
SY	DRIVEWAY	40	\$120	\$4,747
LF	CONCRETE CURB	380	\$49	\$18,620
LF	6" PAVEMENT MARKINGS	5400	\$0	\$1,080
LS	PLANTER BOX REMOVAL	1	\$1,000	\$1,000
EA	BICYCLE WITH RIDER LEGEND	16	\$135	\$2,160
EA	SHARED LANE LEGEND	34	\$250	\$8,500
LS	BICYCLE SIGNAGE	1	\$1,000	\$1,000
SF	DETECTABLE WARNING SURFACE	30	\$40	\$1,200
LS	MAINTENANCE AND PROTECTION OF TRAFFIC EROSION AND SEDIMENTATION CONTROLS			\$2,300
LS	MOBILIZATION			\$2,300
				<u>\$1,486</u>
	Total			\$80,400
	Escalation @	3%/year Through 2020		<u>\$4,900.00</u>
	<b>Subtotal</b>			<b>\$85,299.60</b>
	Contingency @	40%		<u>\$34,200</u>
	<b>Total Construction Cost</b>			<b>\$119,500</b>
	Construction Oversight @	12%		<u>\$14,400</u>
	<b>Subtotal</b>			<b>\$133,900</b>
	Engineering Design			\$6,000
	Utility Relocation			\$3,800
* - R/W Acquisition = \$10,000/Acre (\$500/Property Minimum)	Right-of-Way Acquisition*			<u>\$500</u>
	<b>Total Cost</b>			<b>\$144,200</b>

### D1: Thiel College Intersection Alternative 1: Angled T Intersection

<i>Unit</i>	<i>Item Description</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Item Cost</i>
LS	CLEARING AND GRUBBING	1	\$3,000	\$3,000
CY	TOPSOIL FURNISH AND PLACE	188	\$35	\$6,584
SY	SEEDING AND MULCHING	1693	\$5	\$8,466
CY	CLASS 1 EXCAVATION	4145	\$15	\$62,180
SY	FULL DEPTH COMPOSITE PAVEMENT	4471	\$110	\$491,822
SY	SUBBASE	4471	\$30	\$134,133
LS	PAVEMENT MARKINGS	1	\$12,000	\$12,000
EACH	TRAFFIC SIGNAL	1	\$250,000	\$250,000
LF	CEMENT CONCRETE CURB	2100	\$50	\$105,000
SY	CEMENT CONCRETE SIDEWALK	300	\$90	\$27,000
SF	DETECTABLE WARNING SURFACE	130	\$40	\$5,200
LS	MAINTENANCE AND PROTECTION OF TRAFFIC			\$44,300
LS	EROSION AND SEDIMENTATION CONTROLS			\$33,200
LS	DRAINAGE			\$38,700
LS	MOBILIZATION			\$55,269
<b>Total</b>				\$1,276,855
			3%/year	
			Escalation @ Through 2020	\$118,400.00
<b>Subtotal</b>				<b>\$1,395,254.70</b>
			Contingency @ 40%	\$558,200
<b>Total Construction Cost</b>				<b>\$1,953,455</b>
			Construction Oversight @ 12%	\$234,500
<b>Subtotal</b>				<b>\$2,187,955</b>
				Engineering Design \$110,600
				Utility Relocation \$55,300
				Right-of-Way Acquisition* \$10,000
<b>Total Cost</b>				<b>\$2,363,900</b>

\* - R/W Acquisition = \$10,000/Acre (\$500/Property Minimum)

### D1: Thiel College Intersection Alternative 2: Roundabout

<i>Unit</i>	<i>Item Description</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Item Cost</i>
LS	CLEARING AND GRUBBING	1	\$4,100	\$4,100
CY	TOPSOIL FURNISH AND PLACE	255	\$35	\$8,925
SY	SEEDING AND MULCHING	2295	\$5	\$11,475
CY	CLASS 1 EXCAVATION	4931	\$15	\$73,957
SY	FULL DEPTH COMPOSITE PAVEMENT	7222	\$110	\$794,444
SY	SUBBASE	7222	\$30	\$216,667
LS	PAVEMENT MARKINGS	1	\$10,000	\$10,000
LF	CEMENT CONCRETE CURB	3800	\$50	\$190,000
SY	CEMENT CONCRETE SIDEWALK	4000	\$90	\$360,000
SF	DETECTABLE WARNING SURFACE	200	\$40	\$8,000
LS	MAINTENANCE AND PROTECTION OF TRAFFIC			\$67,200
LS	EROSION AND SEDIMENTATION CONTROLS			\$50,400
LS	DRAINAGE			\$58,800
LS	MOBILIZATION			\$83,878
<b>Total</b>				<b>\$1,937,846</b>
Escalation @ 3%/year Through 2020				\$179,700.00
<b>Subtotal</b>				<b>\$2,117,546.17</b>
Contingency @ 40%				\$847,100
<b>Total Construction Cost</b>				<b>\$2,964,646</b>
Construction Oversight @ 12%				\$355,800
<b>Subtotal</b>				<b>\$3,320,446</b>
Engineering Design				\$167,800
Utility Relocation				\$83,900
Right-of-Way Acquisition*				\$10,000
<b>Total Cost</b>				<b>\$3,582,200</b>

\* - R/W Acquisition = \$10,000/Acre (\$500/Property Minimum)

### D1: Thiel College Intersection Alternative 3: Plus (+) Intersection

<i>Unit</i>	<i>Item Description</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Item Cost</i>
LS	CLEARING AND GRUBBING	1	\$2,200	\$2,200
CY	TOPSOIL FURNISH AND PLACE	136	\$35	\$4,753
SY	SEEDING AND MULCHING	1222	\$5	\$6,111
CY	CLASS 1 EXCAVATION	4004	\$15	\$60,064
SY	FULL DEPTH COMPOSITE PAVEMENT	4726	\$110	\$519,872
SY	SUBBASE	4726	\$30	\$141,783
LS	PAVEMENT MARKINGS	1	\$10,000	\$10,000
EACH	TRAFFIC SIGNAL	1	\$250,000	\$250,000
LF	CEMENT CONCRETE CURB	2770	\$50	\$138,500
SY	CEMENT CONCRETE SIDEWALK	588	\$90	\$52,930
SF	DETECTABLE WARNING SURFACE	80	\$40	\$3,200
LS	MAINTENANCE AND PROTECTION OF TRAFFIC			\$47,600
LS	EROSION AND SEDIMENTATION CONTROLS			\$35,700
LS	DRAINAGE			\$41,700
LS	MOBILIZATION			\$59,471
Total				\$1,373,885
Escalation @ 3%/year Through 2020				\$127,400.00
<b>Subtotal</b>				<b>\$1,501,284.91</b>
Contingency @ 40%				\$600,600
<b>Total Construction Cost</b>				<b>\$2,101,885</b>
Construction Oversight @ 12%				\$252,300
<b>Subtotal</b>				<b>\$2,354,185</b>
Engineering Design				\$119,000
Utility Relocation				\$59,500
* - R/W Acquisition = \$10,000/Acre (\$500/Property Minimum)				\$10,000
<b>Total Cost</b>				<b>\$2,542,700</b>



### E1: Multi-Use Trail to Hempfield Park

<i>Unit</i>	<i>Item Description</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Item Cost</i>
LS	CLEARING AND GRUBBING	1	\$55,000	\$55,000
CY	TOPSOIL FURNISH AND PLACE	1250	\$50	\$62,483
SY	SEEDING AND MULCHING	11247	\$5	\$56,234
CY	CLASS 1 EXCAVATION	14510	\$15	\$217,653
SY	ASPHALT TRAIL	16969	\$50	\$848,432
SY	DRIVEWAY	503	\$120	\$60,308
SF	DETECTABLE WARNING SURFACE	70	\$40	\$2,800
LS	MAINTENANCE AND PROTECTION OF TRAFFIC EROSION AND SEDIMENTATION CONTROLS			\$39,100
LS	DRAINAGE			\$39,100
LS	MOBILIZATION			\$45,700
				\$26,058
				<hr/>
		Total		\$1,452,869
		Escalation @ 3%/year Through 2020		\$88,500.00
		<b>Subtotal</b>		<b>\$1,541,368.53</b>
				<hr/>
		Contingency @ 40%		\$616,600
		<b>Total Construction Cost</b>		<b>\$2,157,969</b>
				<hr/>
		Construction Oversight @ 12%		\$259,000
		<b>Subtotal</b>		<b>\$2,416,969</b>
				<hr/>
		Engineering Design		\$104,300
		Utility Relocation		\$65,200
		Right-of-Way Acquisition*		\$61,500
				<hr/> <hr/>
		<b>Total Cost</b>		<b>\$2,648,000</b>

\* - R/W Acquisition = \$10,000/Acre (\$500/Property Minimum)