LANCASTER COUNTY MPO

Traffic Safety Action Plan

A plan to significantly reduce the number of serious traffic crashes in Lancaster County.

Lancaster County, Pennsylvania

Adopted October 28, 2025

LANCASTER COUNTY PLANNING
Lancaster, Pennsylvania

01 ACKNOWLEDGMENTS

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Lancaster County Planning Department
Lancaster, Pennsylvania
Adopted October 28, 2025

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Lancaster County MPO

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County of Lancaster
Human Resources
ADA Coordinator
150 North Queen Street, Suite 312
Lancaster, PA 17603

Phone: (717) 299-8310
Relay Service TTY/TDD: 711 or (800) 654-5984
Fax: (717) 293-7269
Email: ADACoordinator@co.lancaster.pa.us

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County of Lancaster
Human Resources
ADA Coordinator
150 North Queen Street, Suite 312
Lancaster, PA 17603

Phone: (717) 299-8310
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Lancaster County Metropolitan Planning Organization

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Adopted 6/23/2014 | Updated 4/25/2022

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Any person who believes they have been aggrieved by an unlawful discriminatory practice under Title VI has a right to file a formal complaint with LCTCC. Any such complaint must be in writing, signed by the complaining person (s) or representative, and filed with the Lancaster County Transportation Coordinating Committee (LCTCC) Title VI Coordinator within one hundred eighty (180) days following the date of the alleged discriminatory occurrence. A copy of Title VI Discrimination Complaint Form can be obtained from the Lancaster County Planning Department (LCPD) office, by calling the office or by visiting LCPD's website at www.lancastercountyplanning.org. Additionally, for assistance completing the form or translation and interpretation services contact the LCPD office at 717-299-8333.

Language Access Taglines

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- ဘာသာပြန်ရန်တောင်းဆိုထားသော ဘာသာစကား
- စာပို့လိပ်စာ

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Українська мова (Ukrainian)

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कागजात अनुवादन गर्ने अनुरोध राख्न, तपाईंले अनिवार्य रूपमा निम्न जानकारी समावेश गर्नु पर्दछ:

- अनुवादन गर्नु पर्ने कागजातको नाम,
- अनुवादन अनुरोध गरिएको भाषा,
- र इमेल वा पत्राचार ठेगाना जहाँ हामी अनुवादन गरिएको कागजात पठाउन सक्छौं ।

तपाईंले आफ्नो अनुरोध पुष्टि गर्ने इमेल प्राप्त गर्नुहुनेछ । हामी तपाईंलाई यथाशीघ्र अनुरोध गरिएको कागजातको अनुवादित संस्करण प्रदान गर्नेछौं ।

한국인 (Korean)

안녕하세요! 현재 다양한 언어로 번역 및 통역 서비스를 제공하고 있습니다. 이 문서를 한국인 로 읽기 원하시면 717-299-8333번으로 전화 후 "7"을 눌러 요청을 남기시거나 planning@lancastercountypa.gov로 이메일을 보내주십시오.

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요청하신 문서의 번역본을 가능한 빨리 제공해 드리도록

Kinyarwanda (Kinyarwanda)

Muraho! Dutanga serivisi zo guhindura indimi no gusemura. Niba ushaka gusoma iyi inyandiko muri rurimi runaka, nyamuneka tugezeho icyifuzo uhamagara kuri 717-299-8333 maze ukande “7,” cyangwa utwohereereze imeri kuri planning@lancastercountypa.gov.

Igihe usaba guhindurirwa inyandiko mu rundi rurimi, ugomba gushyiramo:

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- ururimi wifuzamo inyandiko,
- na imeri cyangwa aderesi ya imeri aho dushobora kohereza inyandiko yahinduwe.

Uzakira imeri yemeza icyifuzo cyawe. Tuzaguha verisiyo yahinduwe y'inyandiko yasabwe vuba bishoboka.

Kiswahili (Swahili)

Hujambo! Tunatoa huduma za tafsiri na ukalimani. Iwapo ungependa kusoma hati hii katika Kiswahili, tafadhali wasilisha ombi kwa kupigia kisanduku pokezi chetu simu katika 717-299-8333 na kubonyeza "7," au ututumie barua pepe katika planning@lancastercountypa.gov

Kuomba tafsiri ya hati, lazima ujumuishe:

- jina la hati ambayo inapaswa kutafsiriwa,
- lugha iliyoombwa ya kutafsiri,
- na barua pepe au anwani ya kutuma barua ambapo tunaweza kutuma hati iliyotafsiriwa.

Utapokea barua pepe inayothibitisha ombi lako. Tutakupa toleo lililotafsiriwa la hati iliyoombwa kwa haraka iwezekanavyo.

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02 INTRODUCTION

a. PURPOSE

Safety is the purpose of this plan. The Traffic Safety Action Plan serves as a planning document to help develop projects that will have a significant impact towards eliminating fatal and serious injury crashes in Lancaster County. **Fatal and Serious Injury (FSI) crashes** are life-changing events. They cause pain and loss for the people involved and the community at large. These events can be prevented by increasing the safety of our roadway system. We need to be proactive and think big-picture to make that happen.

FSI crashes are caused by an impact from a moving motor vehicle. Car crashes often come to mind as being dangerous. However, it is much more dangerous to be hit by a motor vehicle without air bags, seat belts, and crumple zones. People who ride bikes, walk, take buggies, ride motorcycles, and use mobility aids such as wheelchairs are less protected in a crash. In this plan, we use the term **"Vulnerable Road Users"** for everyone in this group. By centering Vulnerable Road Users in our safety designs, we increase safety for those both inside and outside of motor vehicles.

The **Safe Streets and Roads for All (SS4A) Grant Program** is a federal program with $5 billion in funds to distribute over five years (from 2022 to 2026). Overseen by the Federal Highway Administration (FHWA), the program funds regional, local, and tribal initiatives through grants to prevent roadway deaths and serious injuries. SS4A supports USDOT's National Roadway Safety Strategy and the goal of zero roadway deaths using a Safe System approach. SS4A grants are available for safety planning, implementation, and demonstration activities.

This plan aims to meet the Safe Streets and Roads for All (SS4A) program requirements for a Comprehensive Safety Action Plan, while also addressing the unique mobility needs of historically disadvantaged or underserved communities in Lancaster County.

This plan is based on real world cases and data. Following other plans that have worked across the United States, this plan will be used to support projects that reduce FSI crashes. The Federal Highway Administration (FHWA) keeps a list of proven road design changes called **countermeasures**. These Proven Safety Countermeasures have a data-backed record of reducing FSI crashes. For example, bike lanes reduce bicycle-involved crashes by 30-50%, depending on the road they are placed on. This plan lists the countermeasures we will support at a project level.

An important part of this plan is selecting where we will support safety projects. We have data on which roads in the county have had the highest number of serious crashes in recent history. We call the sum of these roadways our High Injury Network (HIN). Addressing these places first will reduce the most FSI crashes over time. With this foundation, we aim to save as many lives as we can with the tools available to us.

b. BACKGROUND

Existing Plans and Documents

Lancaster County Planning is dedicated to making Lancaster County, Pennsylvania a better place to live, work, and visit. Our work is guided by the county comprehensive plan, *places2040*. It envisions more compact and efficient land use supported by a balanced multimodal transportation system, with most growth directed to designated areas. We're proud of this plan, which emphasizes a countywide and regional approach we call "thinking beyond boundaries". To implement *places2040* and related countywide plans and policies, we work with public, private, and nonprofit planning partners.

The Lancaster County Metropolitan Planning Organization (Lancaster County MPO) was created in 1965 through an agreement between the Pennsylvania Department of Transportation (PennDOT), City of Lancaster, and Lancaster County. It serves all sixty of Lancaster County's municipalities. The Lancaster County MPO is the federally designated decision-making body for all transportation projects and programs that utilize federal and state transportation formula funding in Lancaster County, Pennsylvania.

The Lancaster County MPO is staffed by the Lancaster County Planning Department (LCPD) and South Central Transit Authority, with support from PennDOT. The Metropolitan Transportation Plan, *connects2050*, examines how travel in Lancaster might change as we follow the land use ideas outlined in *places2040*. Therefore,

strategies recommended by *connects2050* are closely integrated with the land use concepts and planning tools in *places2040*.

This plan emphasizes active transportation, which is a local planning priority. The Lancaster County MPO has an Active Transportation Advisory Committee (ATAC), which is comprised of Lancaster County residents who bike, walk, and ride buses and trains. Members use their personal and professional experience to provide feedback to staff and the other MPO committees. The Lancaster County MPO adopted the Lancaster Active Transportation Plan (ATP) in 2019. The Lancaster ATP is a guide to increase the connectivity of communities through a countywide active transportation network, including mobility hubs, priority road corridors, and regional trail corridors. LCPD staff also encourage and support the development of local Active Transportation Plans. Currently, eight municipalities in Lancaster County have adopted local Active Transportation Plans.

Lancaster County has a significant Amish and Old Order Mennonite population, which relies on horse-drawn vehicles as their primary means of travel. Other Anabaptist or Plain Sect individuals, including school children, rely heavily on bicycles and scooters for transportation. There is an established Amish Safety Committee comprised of Anabaptist leaders and health system representatives that meet regularly to implement safety initiatives, such as free reflective vests to increase the visibility of people riding scooters. Lancaster County representatives, including LCPD staff and the Amish Safety Committee, contributed to the creation and publication of PennDOT's Horse and Buggy Driver's Manual.

The Traffic Safety Action Plan

In 2022, on behalf of the Lancaster County MPO, LCPD staff applied for an Action Plan grant through the United States Department of Transportation's Safe Streets and Roads for All (SS4A) Grant Program. The SS4A program funds initiatives that improve roadway safety by significantly reducing or eliminating fatalities and serious injuries. Action Plans focus on safety for all road users, including pedestrians, bicyclists, public transportation users, motorists, personal conveyance and micromobility users, and commercial vehicle operators.

In 2023, LCPD staff were notified that the Lancaster County MPO received a $200,000 SS4A grant to develop an Action Plan for Lancaster County, Pennsylvania. With that funding, we developed this Traffic Safety Action Plan, which is a comprehensive, data-driven strategy to significantly reduce or eliminate serious injuries and fatalities on roadways in Lancaster County, Pennsylvania. This traffic safety initiative is usually called Towards Zero Deaths at the regional level, or Vision Zero at the local level.

The SS4A funding award was used to hire consultants to assist with development of the Traffic Safety Action Plan. The selected consultant team included three firms: Bowman, Toole Design, and Connect the Dots. LCPD staff time spent on the development of this plan was the in-kind match for the SS4A award.

Additionally, by developing and adopting a Traffic Safety Action Plan for Lancaster County, the Lancaster County MPO and municipalities in Lancaster County will be eligible to apply for additional SS4A funding to implement projects and programs recommended in this plan.

Safe System Approach

We use the U.S. Department of Transportation's Safe System Approach as a framework for this plan. The Safe System Approach works to both prevent crashes from happening and minimize the harm caused to those involved in crashes. Unlike conventional safety approaches, this method focuses on human mistakes and vulnerability to design a system with redundancies in place to protect everyone. To implement this approach, there are five objectives:

Safer **People**	Encourage safe, responsible driving and behavior by people who use our roadways, and create conditions that allow them to reach their destination unharmed.	
Safer **Roads**	Design roads to mitigate human mistakes and account for injury tolerances, minimize crashes, encourage safer behaviors, and facilitate safe travel for the most vulnerable users.	
Safer **Vehicles**	Promote vehicle features that helps prevent crashes, or minimize the impact of crashes on occupants and non-occupants.	
Safer **Speeds**	Promote safer speeds on all roadways through an equitable, context-appropriate roadway design, policy, appropriate speed limit setting, targeted education, outreach campaigns, and enforcement.	
Post-Crash Care	Enhance the survivability of crashes through access to emergency medical care. Create a safe working environment for first responders and prevent secondary crashes through traffic incident management practices.	

03
DEFINING OUR GOALS

a. LEADERSHIP COMMITMENT AND GOAL SETTING

The Traffic Safety Action Plan is a regional plan led by the Lancaster County MPO, in coordination with Lancaster County municipalities, local and regional stakeholders, and PennDOT. With broad stakeholder engagement and countywide public input throughout the 18-month long plan development process, this plan establishes a foundation for future collaboration and success.

Vision

The Traffic Safety Action Plan vision is working together towards a future where zero people are killed or seriously injured in traffic crashes in Lancaster County, Pennsylvania.

*Our vision is a future where **zero** people are killed or seriously injured in traffic crashes in Lancaster County, Pennsylvania.*

Goal

The above vision represents our ultimate goal of eliminating all serious injuries and fatalities on roadways in Lancaster County. For the scope of this plan, we are setting our goal towards that aim by significantly reducing serious injuries and fatalities.

*Our goal is to **significantly reduce** serious injuries and fatalities on roadways in Lancaster County, Pennsylvania.*

b. TARGETS

The goal of this plan is to reduce the number of fatal and serious injury crashes. To make that happen, we set targets to reduce the number of fatal and serious injury crashes by a certain percentage in a specific timeframe. These targets inform our implementation strategy, help us measure the progress we're making, and keep us on track to achieve our goals.

Short-Term Target

By **2040**, achieve a **20%** reduction in the number of traffic crashes where people are killed or seriously injured.

Implementation Goals

- Complete construction of current transportation projects in Lancaster County.
- Fund and complete construction of current Priority High Injury Network project locations.
- Incorporate safety countermeasure in the TIP project selection process.

Long-Term Target

By **2050**, achieve a **50%** reduction in the number of traffic crashes where people are killed or seriously injured.

Implementation Goals

- Fund and complete construction of current Priority High Injury Network project locations.
- Encourage countywide investment in engineering, education, and enforcement strategies to wholistically address traffic safety.

The long-term target will be re-evaluated in 2040, when the short-term target is to be met. At that time, we'll reflect on the progress we've made – are we seeing a decrease of fatal and serious injury crashes annually, or in the five-year crash trend? We will continue or revise the implementation strategy accordingly, and if needed, commit to a new long-term target in 2040.

			SHORT-TERM TARGET		LONG-TERM TARGET	
2025	2030	2035	2040	2045	2050	2055
Adopt plan	Review HIN	Update plan	Review HIN	Update plan	Review HIN	Update plan

04 OUTREACH & ENGAGEMENT

Public outreach and engagement was a key component in developing this plan. Through our outreach, we identified locations with well-known issues, pinpointed the specific issues vulnerable road users face, and listened to the stories of those who were impacted by a serious or fatal crash. The things we heard from our outreach were incorporated into our project recommendations. Public feedback also helped us produce a map of known concerns for future reference.

In development of this plan, LCPD strengthened its approach to engage and connect with the public. We improved the kit we use to table at events, increased outreach to Plain Sect communities, and translated ads and activities into Spanish and Vietnamese for the first time (for more information on how these language groups were identified, see the Limited English Proficiency Plan). By focusing on the tactics that give us the strongest results, we were able to achieve the engagement goals established before developing this plan.

11 Public Events

900+ Interactions

4 Plain Sect Events

7 Interviews

3 Languages Covered

35+ Organizations Represented




a. TASK FORCE

The Lancaster County MPO created the Traffic Safety Action Plan Task Force to provide direction on the plan's progress. Task Force members represented a variety of organizations and groups that have a stake in roadway safety, including:

- Lancaster County MPO
- Pennsylvania Department of Transportation (PennDOT)
- Federal Highway Administration (FHWA)
- Lancaster County municipalities with a large percentage of high injury crashes
- Users of different modes of transportation (for example, bicyclists or those who use mobility aids)
- Vulnerable Populations (such as households without cars or low income households)
- Education partners
- Law enforcement agencies
- Emergency management organizations
- Emergency medical services providers

In 2024 and 2025, the Task Force met six times. Meetings were held in-person at the Lancaster County Government Center and virtually via Zoom. Task Force members determined how to prioritize projects for the High Injury Network and set the short- and long-term safety targets. Additionally, Task Force members shared the survey and public events with their personal and professional networks to reach more Lancaster County residents concerned about traffic safety.

After reviewing possible goals for the plan, the Task Force agreed upon the more aggressive target. To achieve a 50% reduction in the number of traffic crashes where people are killed or seriously injured by 2050, we will need to seek additional funding sources to implement roadway safety projects. In the future, LCPD will consider increasing staff involvement to identify additional funding sources that will increase the funding available for safety projects.

While the Lancaster County MPO led development of the Traffic Safety Action Plan, responsibility for traffic safety in Lancaster County is shared. Many Task Force members did not know about the MPO before being invited to be a part of the Traffic Safety Action Plan. Other Task Force members were already working to improve traffic safety in Lancaster County through engineering, education, and enforcement. We will continue to work with Task Force members in the community to help implement the goals of this plan.

b. EVENTS

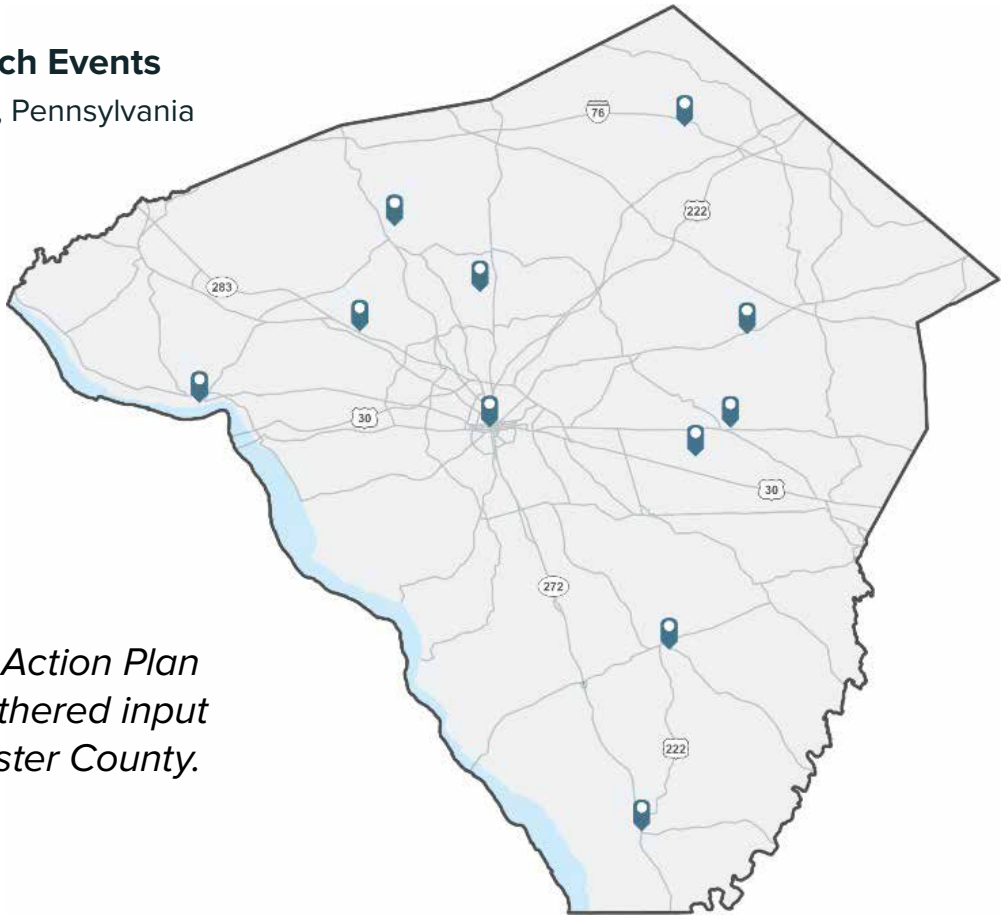
We set up a table at 11 events for the Traffic Safety Action Plan. We held these events to hear about local safety issues and to get feedback on the ideas in this plan. In the Fall 2024, we tabled at five events where we heard from people about what roads they found dangerous. We also heard concerns from people based on how they got around. In Spring 2025, we had four events where we asked people about our High Injury Network maps and our list of countermeasures.

Because this plan is for the whole county, we focused on going to a variety of locations. Agricultural fairs are held annually in many towns across the county, which became the core of our event plan. Most of our events were in the towns or rural areas of the county. We also made sure to table at a popular event in Lancaster City, Lancaster Open Streets.

We tabled existing community events to meet people where they were, such as town fairs and mud sales.

Map of Outreach Events

Lancaster County, Pennsylvania



The Traffic Safety Action Plan outreach team gathered input throughout Lancaster County.

c. TRAFFIC SAFETY SURVEY

The public survey was made available online from September 24, 2024 to November 19, 2024. Paper versions of the survey were provided at all of the events we attended. We advertised the survey through social media, press releases, handouts, e- mails to partners (like libraries and schools), the Lancaster County Planning website, and word of mouth. We received 787 responses to the survey, providing a statistically significant representation of the county population as a whole.

What We Heard

In general, participants felt safer driving than walking or biking, reinforcing what we heard during our sticker activity. However, survey participants felt walking was much safer than traveling by bike, horse & buggy, or wheelchair. Wheelchairs and other mobility aids scored the lowest for overall safety. The number of older sidewalks and buildings throughout Lancaster County may contribute to accessibility issues for these road users. Trains and buses scored the highest for safety.

How safe do you feel when using the following modes of transportation in Lancaster County?

Rate your answers on a scale of 1 to 5, with 5 being "Very Safe" and 1 being "Very Unsafe."

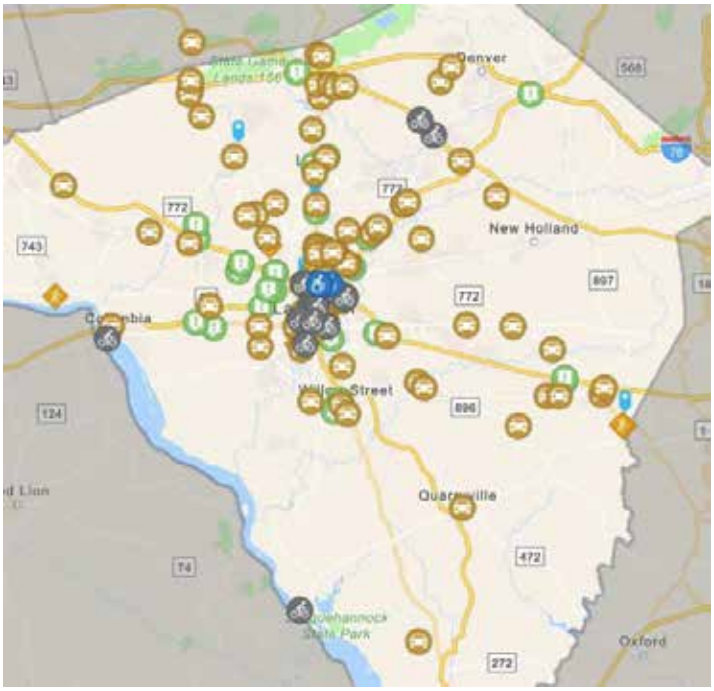
Mode	Train	Bus	Car	Walking	Bike	Horse	Wheelchair*
Average Score	4.42	3.56	3.33	3.14	2.48	2.29	2.11

** Includes wheelchairs and other mobility devices.*

In addition to our outreach and online survey, we provided an online map to gather location-specific comments. The map was available on our website (and linked in the survey) from October 15, 2024 to October 31, 2024, and received a total of 184 comments. Sidewalk infrastructure was mentioned frequently, as sidewalks are often in poor condition or incomplete. We also identified some locations where little to no bicycle infrastructure is available, but participants traveled anyway.

LCPD staff will reference the responses to this map when addressing nearby land development projects, or when identifying future road projects for potential funding

Input Type	# of Responses
Driving Concerns	89
Pedestrian Concern	39
Safety Improvement Idea	32
Bicycle Concern	16
Key Destination	5
Accessibility Concern	3



d. STAKEHOLDER INTERVIEWS & FOCUS GROUPS

To gather input from local organizations, we conducted seven interviews. Connect the Dots, a subcontractor specializing in outreach, spoke with staff from Lancaster Downtowners, Lancaster Asian Americans and Pacific Islanders, Disability Empowerment Center, Ephrata Area Social Services, Lancaster Association of Hispanic Pastors, and Church World Services. The organizations that participated in the interviews represent the following demographic subgroups:

- Individuals whose primary language is not English;
- Older adults without access to a private vehicle, or the ability to operate a vehicle;
- Asian American and Pacific Islander individuals;
- Hispanic and Latino individuals;
- Individuals living with a cognitive and/or physical disability; and
- Refugees that have resettled in Lancaster County.

What We Heard

Sidewalks throughout the county are uneven and disconnected. Individuals using sidewalks are often forced to navigate shoulder lanes and dangerous intersections to reach their destination.

Cyclists and those using mobility aids deal with lacking infrastructure, dangerous motorist behaviors, and blocked bike lanes.

Drivers find it difficult to safely pass Amish buggies and scooters, see pedestrians who are waiting to cross streets, and avoid the type of traffic congestion that increases frustration and encourages dangerous driving behaviors.

Public transit riders experience uncomfortable or unsafe conditions waiting for the bus, infrequent bus stops, difficulty understanding how and where the bus operates, and limited access to destinations outside of Lancaster City.

These community members typically receive information from local news outlets including WGAL, WITF, and LNP; social interactions through Facebook, WhatsApp, and word of mouth; or at local places of worship.

Our municipal partners reviewed data presented in the plan and provided feedback on how to implement the plan in their local area.

e. MUNICIPAL ROUND TABLE

In February, we held a municipal round table to discuss the plan with local governments. We invited municipal engineers, planners, public works staff, and roadmasters to attend. At the event, we introduced the purpose of the plan and presented the High Injury Network maps. We also broke into smaller groups to hold focused discussions on different aspects of the plan and its data.

In general, attendees agreed that the safety data and High Injury Network (HIN) reflected what they've heard at the municipal level. Through this discussion, we learned a few key takeaways:

What We Heard

- GPS is changing the routes people choose to take. More people are taking alternate routes to avoid congested roads. By directing faster through traffic to slower, local roads, navigation companies inadvertently increase the danger of their suggested detours.
- It's difficult to reduce speeds as a single municipality. Sharing countywide speed data may help municipalities make more informed decisions. Sometimes road ownership is a barrier to reducing speeds, as many roads in Lancaster County are owned and controlled by the state.
- Coordinating longer crossing times and implementing signal detection technology for bikes could improve intersection safety.
- Education and enforcement is key in improving safety, but we must work together to make it happen.

The county plays an important role in helping municipalities achieve safer roads. Some proven safety solutions are not popular locally or allowed by state road design codes, so neither agency has the power to implement them alone. When Lancaster County Planning participates in traffic impact studies or scoping meetings for regionally significant (multi-municipal) land use projects, it can lend more credence to these solutions. The county also connects local governments with resources to help carry out safety projects, such as PennDOT's Local Technical Assistance Program (LTAP).

05
EQUITY CONSIDERATIONS

Background

Disadvantaged populations are disproportionately impacted by traffic fatalities and serious injuries.[1] In urban areas, pedestrian deaths are more common in poor neighborhoods than wealthier ones.[2] Additionally, disadvantaged populations can be difficult to reach using traditional public outreach efforts. This plan incorporates equity considerations into our stakeholder engagement and the project prioritization process. By examining equity data, we can support the unique needs of underrepresented communities in Lancaster County.

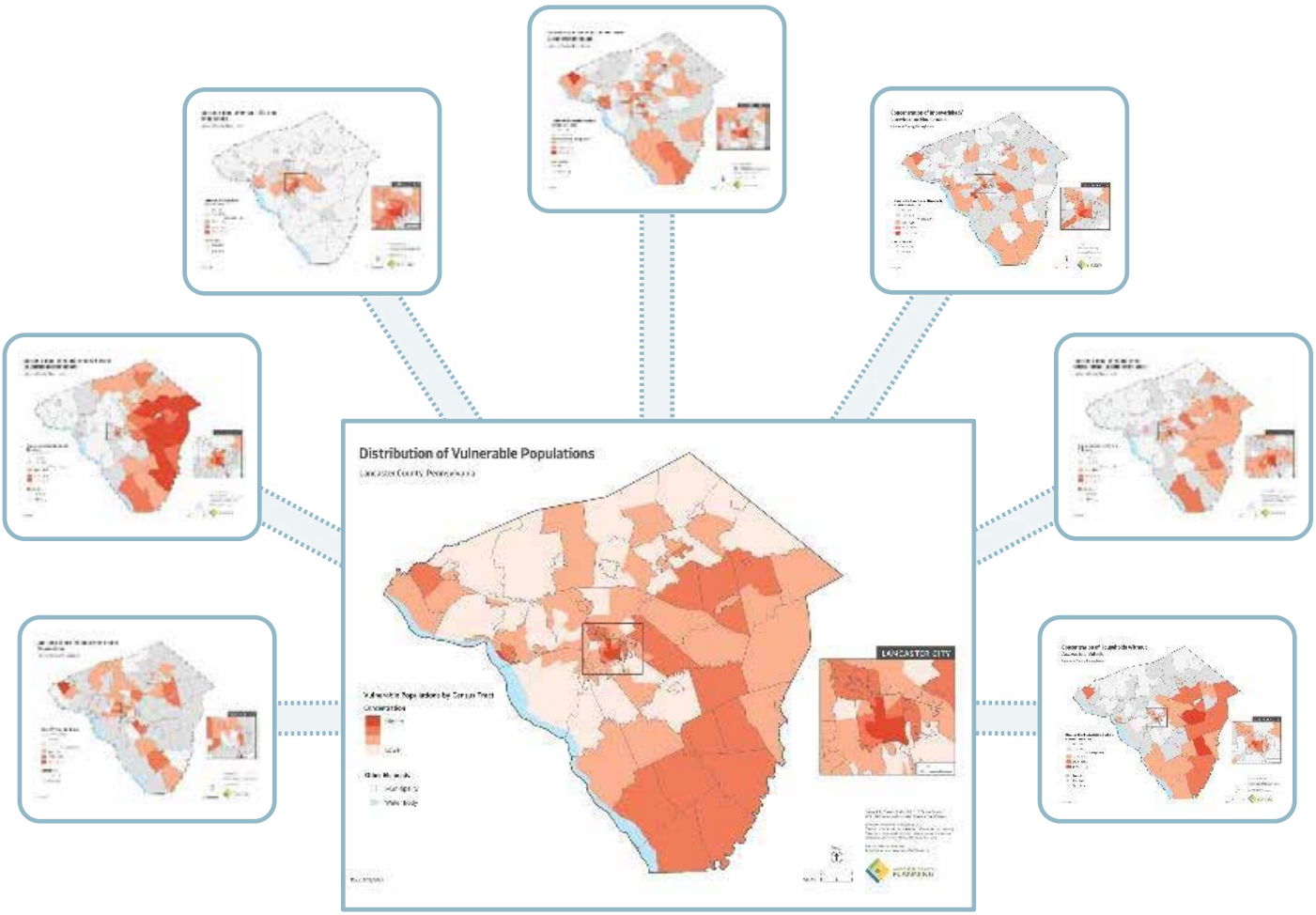
In 2023, Lancaster County MPO adopted the Public Participation Plan and Limited English Proficiency Plan, which analyzed Lancaster County's demographics and identified its most vulnerable populations. For consistency, the vulnerable populations identified in the Public Participation Plan are also included in this plan.

Using U.S. Census Data at the census tract level, we determined where there were higher concentrations of potentially disadvantaged populations. Disadvantaged populations can include individuals and households with low educational attainment or limited English proficiency, people of color, seniors, or those living in poverty. The Lancaster County Public Participation Plan considered the following groups:

- Populations with limited English proficiency;
- Impoverished/low-income households;
- Hispanic/Latino populations;
- Elderly (75+ years) populations;
- Households with disabled individuals;
- Populations with low educational attainment; and
- Households without access to a vehicle.

1 National Highway Traffic Safety Administration. https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/809956

2 Governing Magazine. https://www.governing.com/archive/gov-pedestrian-deaths-analysis.html



The population groups mentioned above were calculated relative to each census tract, and then compared with the average percentage for all tracts in the county. Finally, a composite calculation was made that incorporated each metric and divided the county's census tracts into four tiers according to their distributions of potentially disadvantaged populations. The following maps show the results of this analysis.

In general, the tracts in and around Lancaster City have higher concentrations of disadvantaged populations, with the exception of the elderly (75+ years) population group. In the southern end of the county, there are higher concentrations of populations with limited English proficiency and low educational attainment, as well as households with individuals that are impoverished/low-income, disabled, or without access to a vehicle. In the east, there are higher concentrations of populations with limited English proficiency, low educational attainment, and households without access to a vehicle.

Implications

In Lancaster County, 16% of the population speaks a language other than English at home. A subset of this group (around 6% of the county population) speaks English "less than very well." The predominant non-English languages spoken in the county are Spanish, German or other West Germanic languages, and Vietnamese. For more information on how these language groups were identified, see the Limited English Proficiency Plan.

Spanish speakers overlap with the higher concentrations of Hispanic/Latino populations in and around Lancaster City, as well as Columbia Borough, East Lampeter Township, East Hempfield Township, and parts of Manor Township. The "German or other West Germanic languages" refers to the Pennsylvania Dutch language spoken by Amish communities, who predominantly live in the eastern portion of the county. Vietnamese speakers are generally concentrated in Lancaster City.

Our outreach efforts were guided by these observations, with a particular emphasis on overcoming language barriers. Public engagement materials were provided in English, Spanish, and Vietnamese. Since PA Dutch is not a written language, materials were not provided in this language. However, we engaged with this group through specialized outreach efforts, like a local mud sale. We also interviewed staff from various stakeholder organizations that serve or work with Spanish and Vietnamese language communities in Lancaster County.

06
SAFETY ANALYSIS

a. INTRODUCTION

This section consists of a crash analysis and High Injury Network (HIN), which help us identify potential patterns and the distribution of fatal and serious injury (FSI) crashes in Lancaster County. Essentially, the crash analysis reflects the current conditions we need to address, and the HIN is a planning tool than can be used to inform future transportation decisions.

b. CRASH ANALYSIS

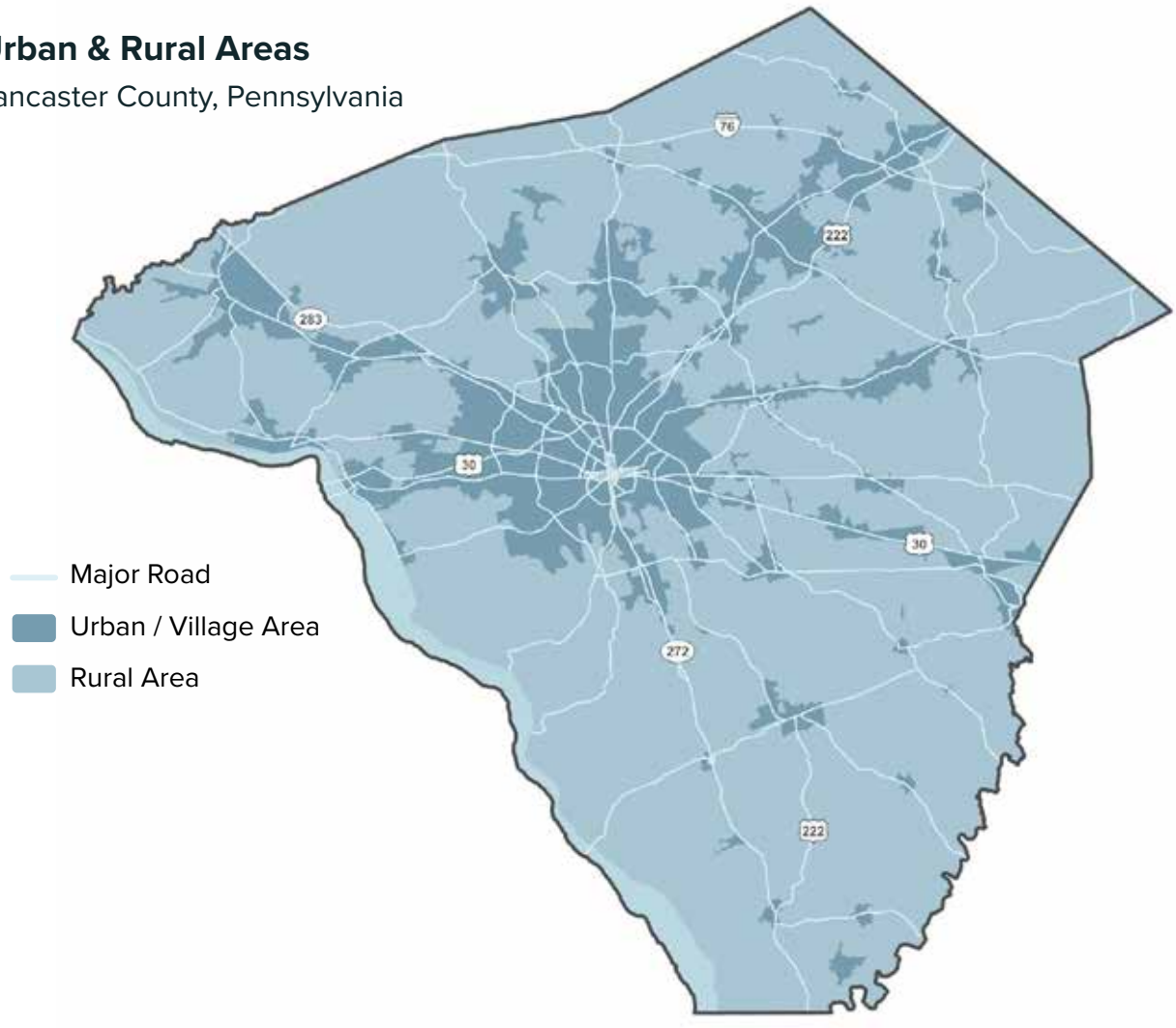
The crash analysis outlines the crash trends and patterns that reflect the current conditions in Lancaster County. Crash data used in this analysis was obtained from the Pennsylvania Crash Information Tool for the most recent five years available, 2019 through 2023. Trends are separated by rural and urban areas, as shown in the map on the following page.

General Trends

While the majority of crashes do not result in severe injuries, an average of 51 crashes per year resulted in death, and 196 crashes per year resulted in serious injury. In Lancaster County, FSI crash trends did not improve between 2019 and 2023. At best, the five-year trend is flat, and at worst, it's slowly rising. Of the years analyzed, FSI crashes peaked in 2021 with 271 crashes.

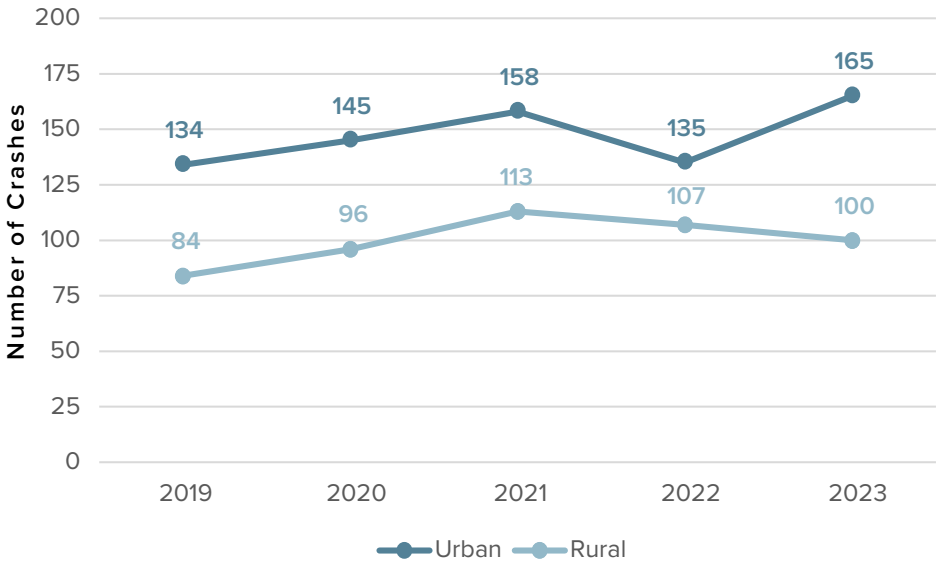
Urban & Rural Areas

Lancaster County, Pennsylvania



FSI Crashed Per Year (2019 – 2023)

Lancaster County, Pennsylvania



Mode of Transportation

93% of all crashes involved a motor vehicle. Of these crashes, 767 resulted in a fatality or serious injury, which is significantly higher than other modes of transportation.

Overall, motor vehicle crashes had significantly more serious injury and fatal crashes. However, bicycles, pedestrians, buggies, and motorcycles had a disproportionate rate

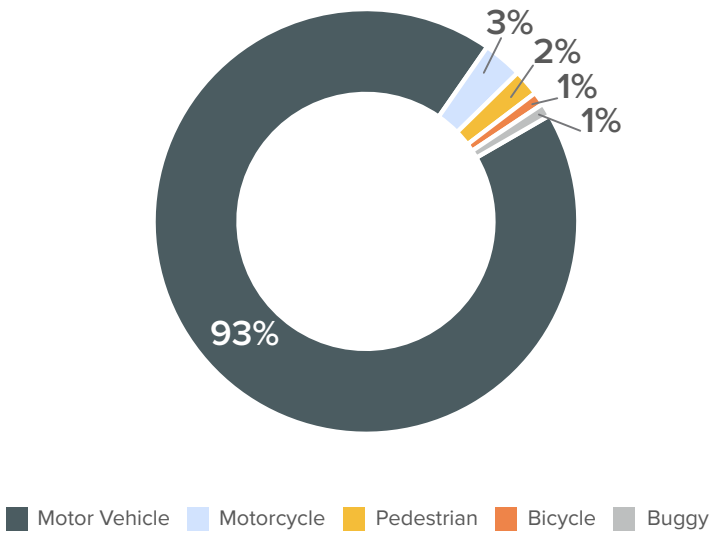
FSI Crashes by Mode (2019 - 2023)

Lancaster County, Pennsylvania

	Urban		*Rural*		*Countywide*	
	#	%	#	%	#	%
Motor Vehicle Only	424	57.5%	343	68.7%	767	62.1%
Motorcycle	157	21.3%	108	21.6%	265	21.4%
Pedestrian	113	15.3%	21	4.0%	134	10.8%
Bicycle	37	5.0%	13	2.6%	50	4.0%
Buggy	6	0.8%	14	2.8%	20	1.6%
Total	**737**	**—**	**499**	**—**	**1,236**	**—**

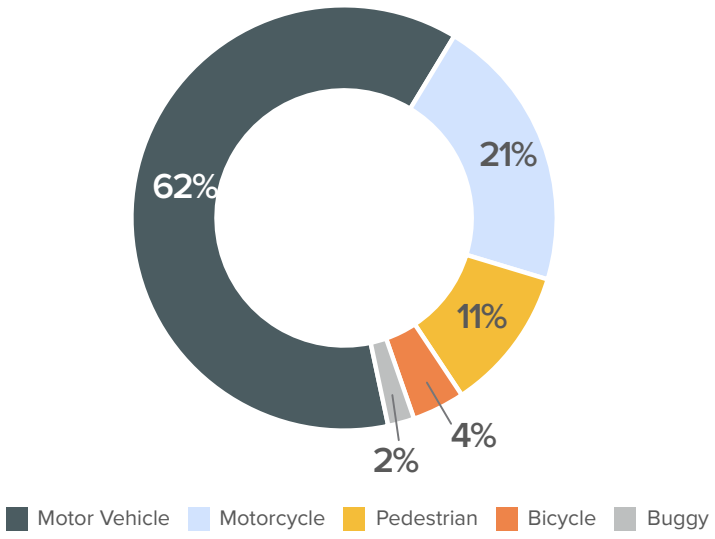
Total Crashes (2019 – 2023)

Lancaster County, Pennsylvania



Total FSI Crashes (2019 – 2023)

Lancaster County, Pennsylvania



FSI Crashes by Crash Type (2019 – 2023)

Lancaster County, Pennsylvania

	Urban		*Rural*		*Countywide*	
	#	%	#	%	#	%
Angle	244	42%	131	26%	375	36%
Hit Fixed Object	132	22%	159	32%	291	28%
Head-On	67	11%	47	9%	114	11%
Rear End	82	14%	35	7%	117	11%
Non-Collision	25	4%	49	10%	74	7%
Sideswipe	32	5%	22	4%	54	5%
Other	4	1%	5	1%	9	1%
Backing	1	0%	2	0%	3	0%

of FSI crashes compared to all crashes. There were 584 crashes involving a pedestrian and 134 of those crashes resulted in a fatality or serious injury. Therefore, crashes involving pedestrians composed only 2.1% of all crashes, but accounted for 10.8% of all FSI crashes. This reflects the tendency for crashes involving a vulnerable road user (VRU) to result in serious injury or death more than vehicle-only crashes (on average).

Causation

Crash Type

Angled and fixed object crashes, the top two crash types, account for 36% and 28% of all FSI crashes, respectively. Rear end crashes where a slowing or stopping motorist is hit by another motorist going straight is the third most common crash dynamic, accounting for 11% of all FSI crashes.

Contributing Factors

Contributing factors are additional variables that may cause a crash. In Lancaster County, speeding, curved roads, and drinking are the most common contributing factors in urban and rural areas. Between 2004 and 2023, crashes involving vulnerable road users (VRU) and distracted driving increased, while impaired driving and unrestrained occupant crashes declined.

Roadway Characteristics

Crash Location

In urban areas, 42% of FSI crashes are at intersections. In rural areas, 32% of FSI crashes are at intersections.

Functional Classification

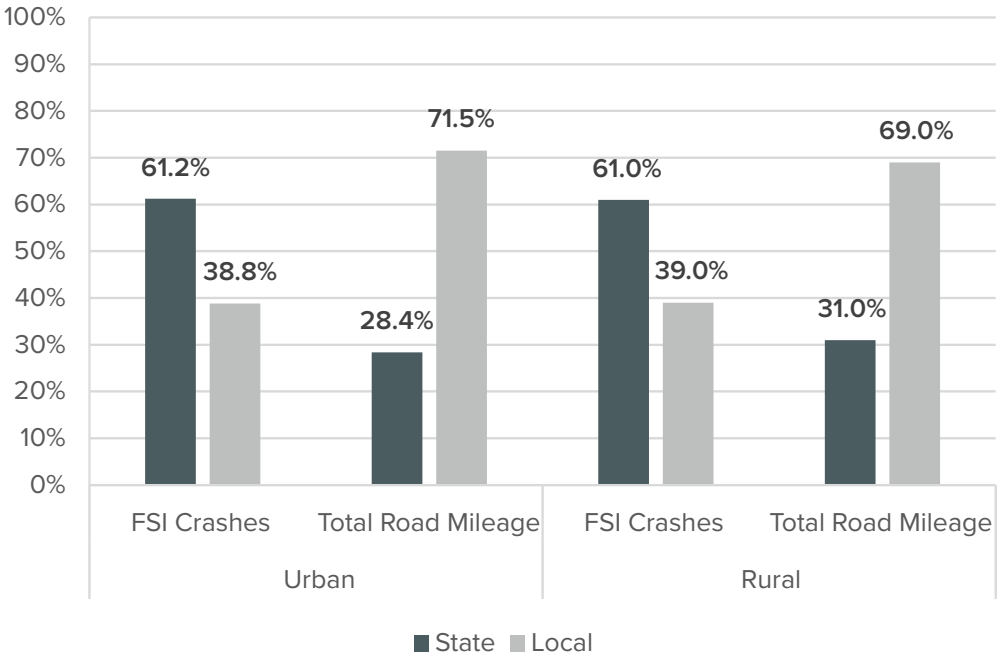
When normalizing by roadway length, ramps have the highest rate of crashes with 16.59 FSI crashes per mile. Interstate roads are second with 2.56 FSI crashes per mile. Without normalizing by roadway miles, major arterials have the highest share of FSI crashes in urban areas, and in rural areas, local roads have the highest share of FSI crashes.

State & Local Roads

State roads have the largest percentage of FSI crashes in urban and rural areas (around 61%), despite having jurisdiction over a lower proportion of the roads.

FSI Crashes by Roadway Jurisdiction (2019 – 2023)

Lancaster County, Pennsylvania



Posted Speed Limit

In urban areas, most FSI crashes occurred on roadways with speed limits of 35 mph. In rural areas, the largest share of FSI crashes happened on roads with speed limits of 45 mph.

Number of Travel Lanes

In both urban and rural areas, most FSI crashes happened on two-lane roads. In urban areas, the highest FSI density occurred on four-lane roads, while the highest FSI density in rural areas occurred on single-lane roads.

Environmental Characteristics of FSI Crashes (2019 – 2023)

Lancaster County, Pennsylvania

	Urban	*Rural*
Month	Crashes peaked in June & July	Crashes peaked in July & August
Weather	Majority of crashes occurred when the weather was clear	Majority of crashes occurred when the weather was clear
Lighting	Majority of crashes occurred during daylight hours	Majority of crashes occurred during daylight hours
Road Surface Condition	Majority of crashes occurred on dry road surfaces	Majority of crashes occurred on dry road surfaces

Environmental Characteristics

Other variables like the time of year, weather, amount of light, and road surface condition can also contribute to crashes and unsafe roadways. Most of these factors are the same across urban and rural areas, indicating a broader pattern in Lancaster County.

Age

While available crash data does not include the exact age of each person driving or involved in a crash, it does flag crashes when someone of a certain age group is involved as a driver. In both urban and rural areas, 50 to 64 was the leading age cohort with 31% of FSI crashes.

c. HIGH INJURY NETWORK

The High Injury Network (HIN) identifies street segments with the highest crash densities and weighs them based on crash severity. In this analysis, severe crashes are weighted more heavily than lower severity crashes, which provides a better understanding of crash density and severity on Lancaster County's roadways. The network consists of five maps, with one for each mode of transportation: motor vehicle, motorcycle, buggy, bicycle, and pedestrian. The HIN generally follows expected patterns, with higher scores in urban areas, especially for walking and biking. In contrast, motorcycle and buggy crashes tend to be more rural.

Considerations

Although the HIN is a useful planning tool, other considerations should be made when determining which projects to prioritize. Land use implications should be considered to define corridors; for example, US 222, US 30, New Holland Pike, Old Philadelphia Pike, and Columbia Avenue are included in the HIN, but there are also gaps along these roads when a stricter threshold is used.

Additionally, to get a representative sample of crashes, the past five years of crash history is used. However, road network data is static and does not reflect roadway design changes over the last five years. If a high-crash location during the initial years of data is addressed, the High Injury Network will still reflect higher crash densities, despite potentially meaningful changes to improve the safety of that location.

High Injury Network: Motor Vehicle

Threshold

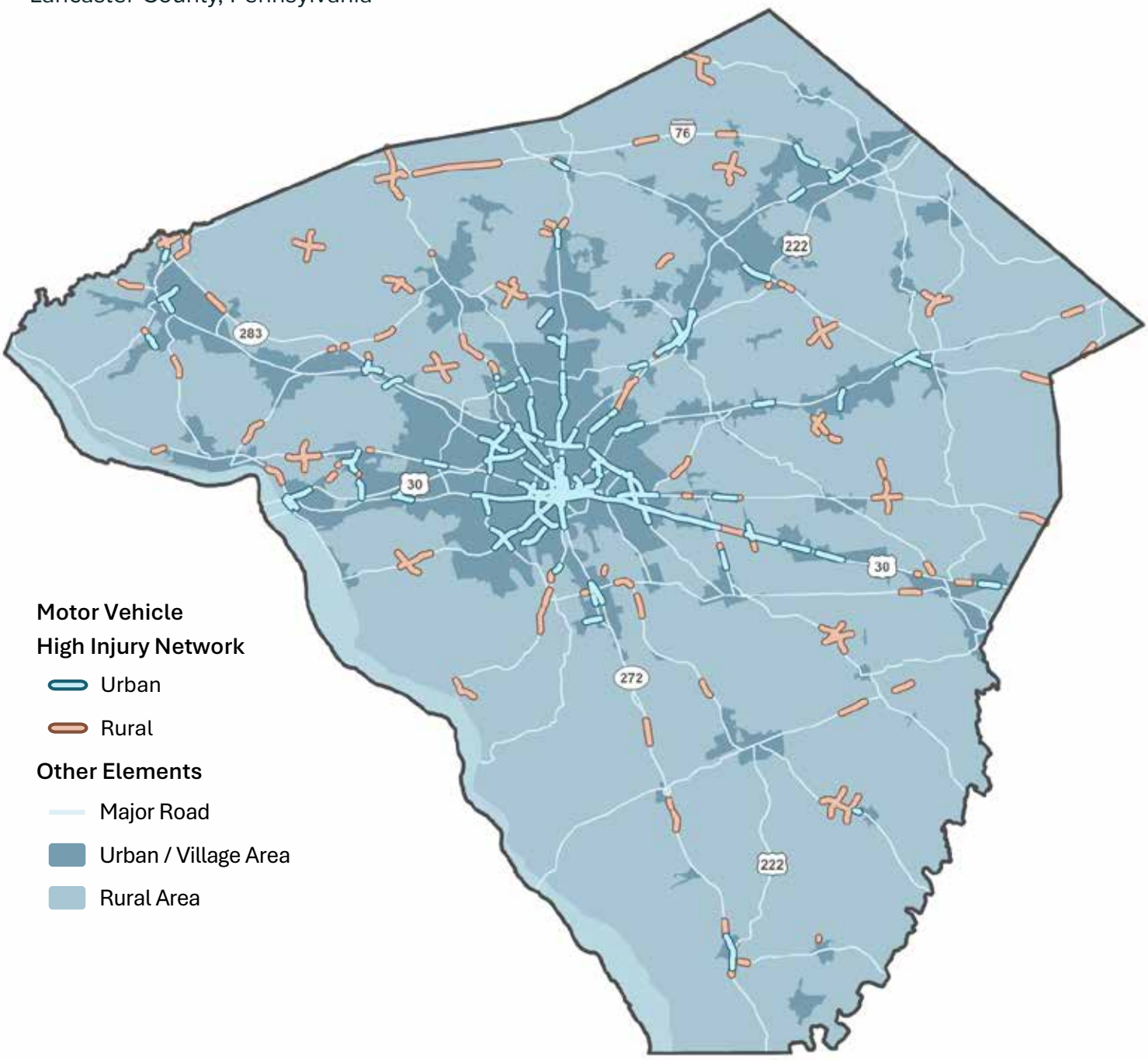
- Urban – Includes segments with a crash score greater than 14.
- Rural – Includes segments with a crash score greater than 8.

Takeaways

While most arterials leading into Lancaster City are part of the network, US 30 and PA 272 see frequent crashes. Although most downtown through streets are included in the network, crashes tend to occur on arterial streets towards the edge of town where speeds increase dramatically (like Harrisburg Pike and New Holland Pike). In rural areas, high injury segments are typically associated with intersections.

High Injury Network: Motor Vehicle

Lancaster County, Pennsylvania



High Injury Network: Motorcycle

Threshold

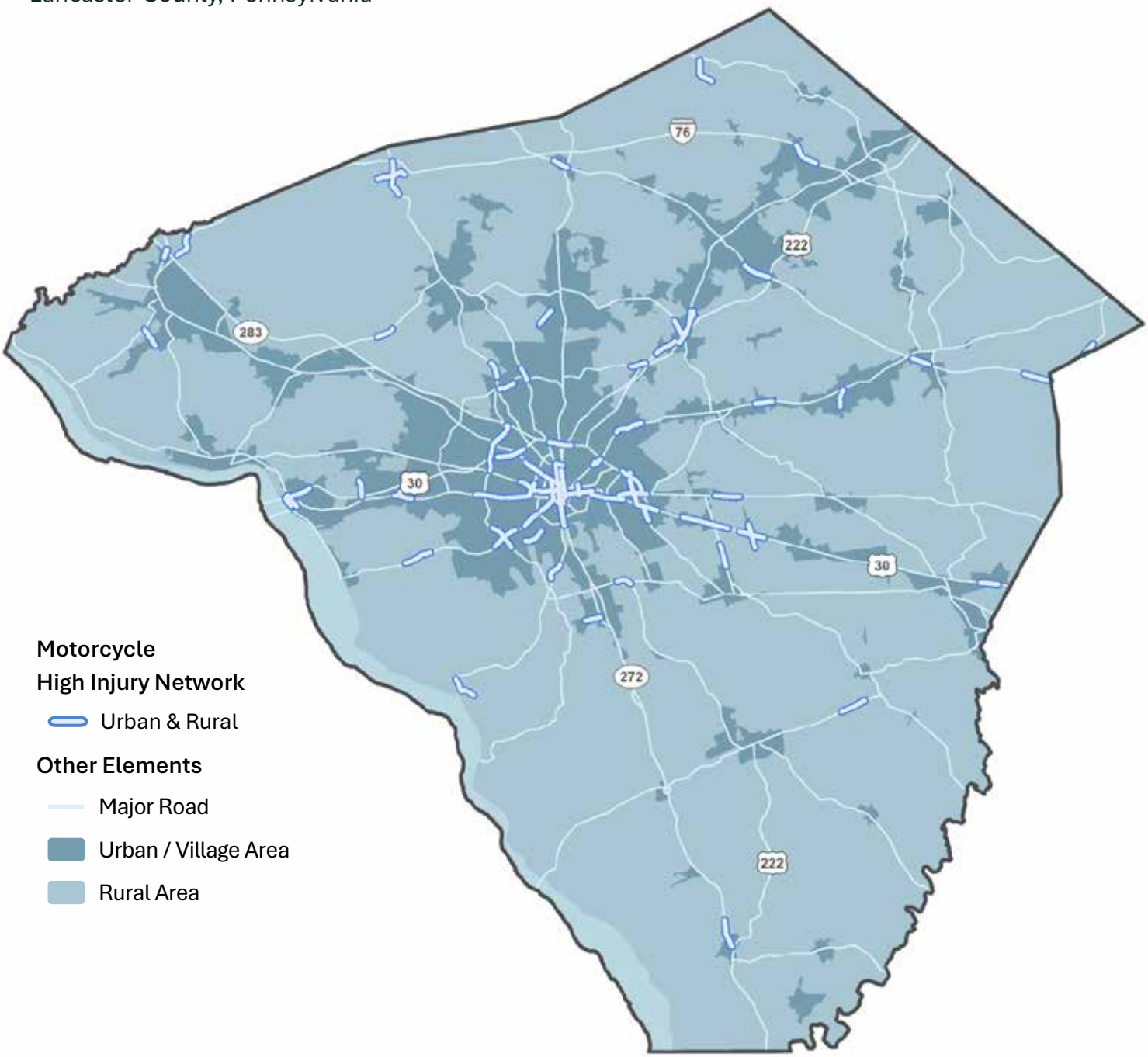
Includes segments with a crash score greater than three, requiring at least two FSI crashes or several minor injury crashes.

Takeaways

Motorcycle crashes occur throughout the county, in both urban and rural areas. Notably, the roads around Beaver Valley Pike (where Lancaster Harley Davidson is located) are not included in the High Injury Network. This may indicate that these roads are fairly safe for motorcyclists, handle higher motorcycle volume well, or that driver behavior is improved around areas with greater motorcycle presence.

High Injury Network: Motorcycle

Lancaster County, Pennsylvania



High Injury Network: Buggy

Threshold

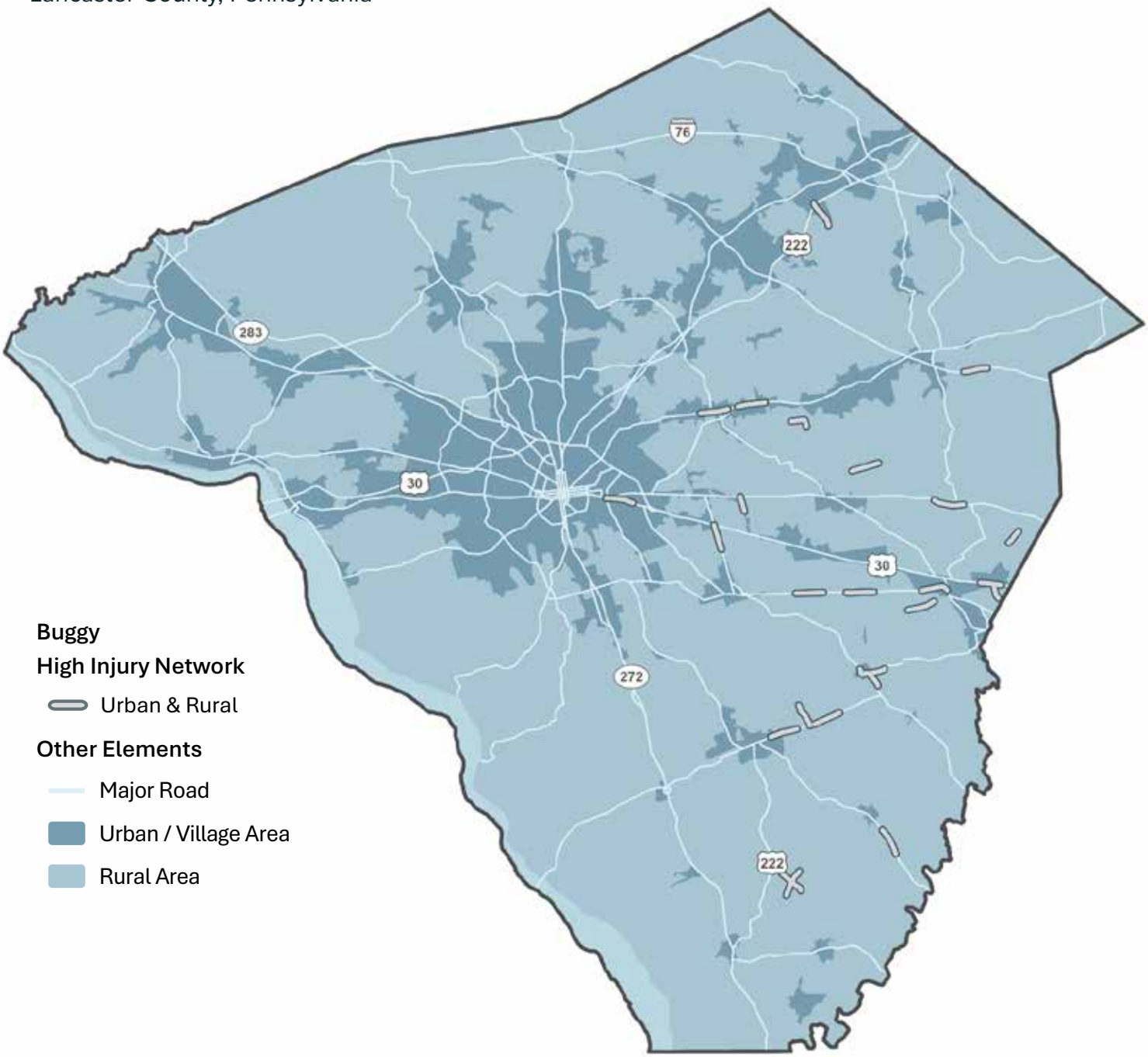
Includes segments with a crash score greater than one, requiring at least one FSI crash or multiple minor injury crashes.

Takeaways

Buggy crashes and associated HIN segments are only found in the eastern portion of the county, and primarily in the southern end. In particular, Strasburg Road, PA 23, and Valley Road have the longest segments for buggy crashes.

High Injury Network: Buggy

Lancaster County, Pennsylvania



High Injury Network: Bicycle

Threshold

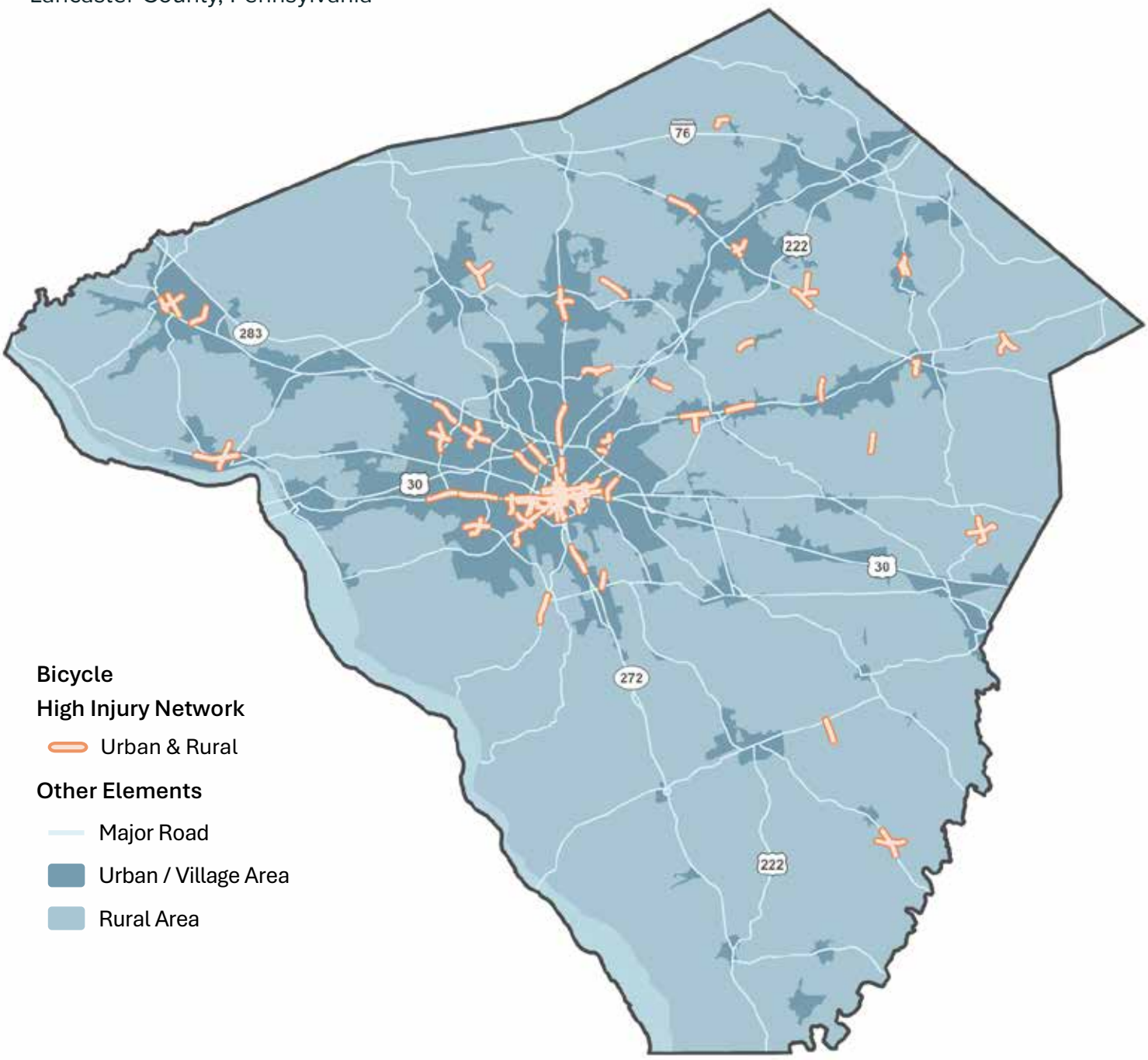
Includes segments with a crash score greater than one, requiring at least one FSI crash or multiple minor injury crashes.

Takeaways

Although bicycle crashes are concentrated in and around Lancaster City, segments were identified throughout the county. The four bicycle fatalities from the time period studied occurred in Lititz, near Elizabethtown, and on the eastern side of the county in rural areas, which reinforces that traffic safety is an issue both urban and rural areas should address.

High Injury Network: Bicycle

Lancaster County, Pennsylvania



High Injury Network: Pedestrian

Threshold

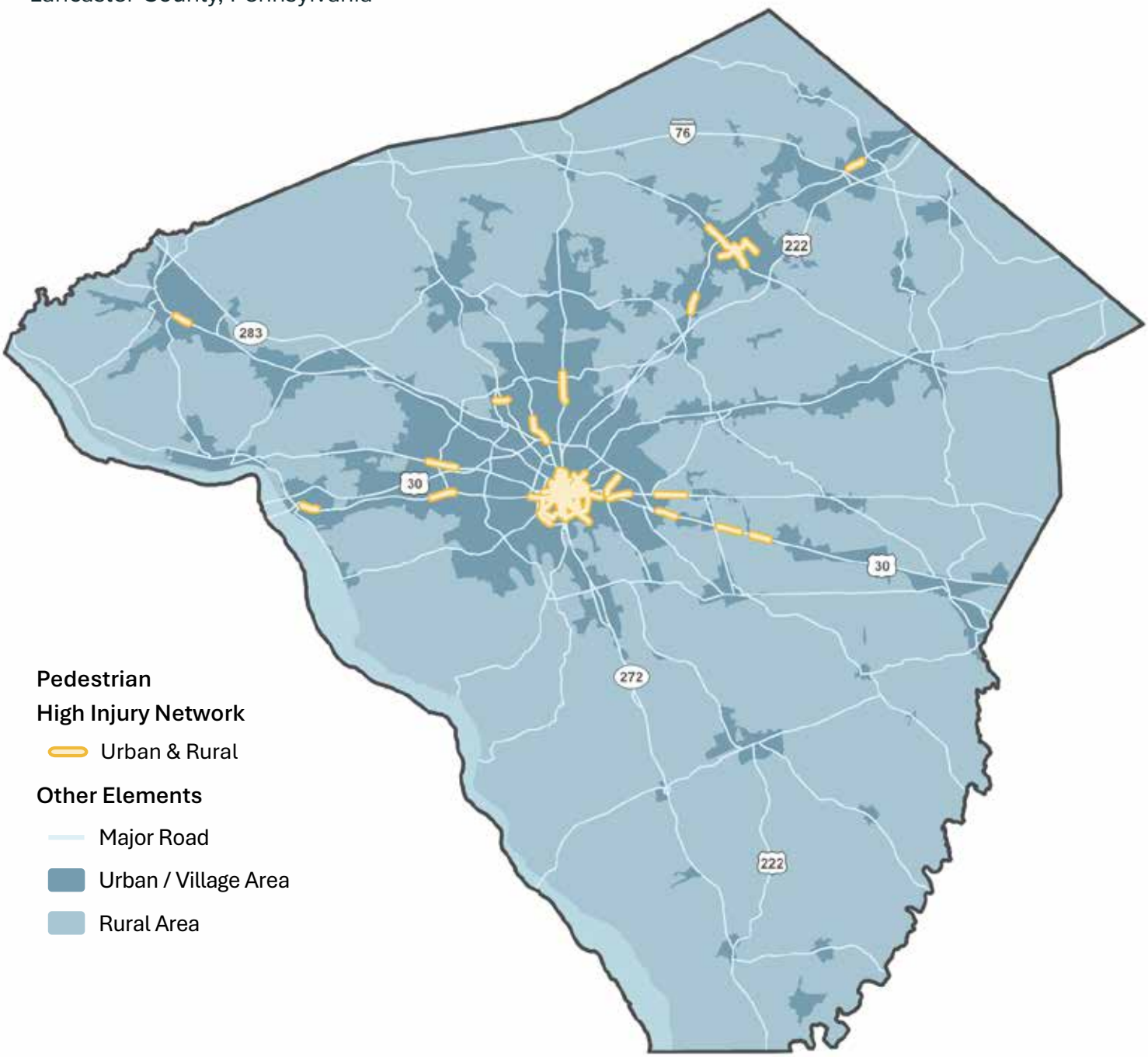
Includes segments with a crash score greater than three, requiring at least two FSI crashes or several minor injury crashes. In areas where pedestrian activity is present, higher crash densities are reported, unlike bicycle and buggy crashes which are seen throughout the county.

Takeaways

In general, pedestrian crashes were concentrated in and around Lancaster City. Elizabethtown had only one fatal and one serious injury pedestrian crash in the 5-year period observed – this could suggest that Elizabethtown is safe for pedestrians, or that it is so unsafe pedestrian activity is limited. While some pedestrian crashes are found in rural areas of the county, very few rural roads met the threshold for the pedestrian HIN. Although a separate threshold for rural roads is possible, rural pedestrian activity tends to be less concentrated, and is often for recreational purposes.

High Injury Network: Pedestrian

Lancaster County, Pennsylvania



07
REVIEW OF CURRENT PLANS, POLICIES, & PROGRAMS

Countywide

We reviewed seven Lancaster County MPO plans, policies, and programs to identify how we could potentially adopt more effective traffic safety strategies moving forward. Our review was based on the five Safe System Approach elements of safer people, safer roads, safer vehicles, safer speeds, and post-crash care. We also looked at the strategies mentioned in the Safe System Approach (engineering, education, enforcement, and evaluation) and how identified elements are to be implemented. For more information on the Safe System Approach, see p. 14 of this plan.

Safer people, safer vehicles, and safer roads were mentioned the most often in our current documents, while post-crash care was rarely mentioned. In general, the strategy utilized to address most issues was evaluation, and enforcement was mentioned the least. A summary of the reviewed documents are listed in the chart.

Traffic safety was not addressed in the following documents:

- 2025 TIP Air Quality Conformity Determination
- Congestion Management Process (CMP)
- Congestion Mitigation and Air Quality (CMAQ) Performance Plan
- Coordinated Human Services Transportation Plan

Document	*Identified Elements & Strategies*
Lancaster County MPO	
Transportation Improvement Program (TIP) Selection Process	• Engineering safer roads
Transit Asset Targets	• Evaluation for safer vehicles
2024 Safety Target Setting Plan	• Evaluation for safer people
Metropolitan Transportation Plan – *connects2050*	• Engineering safer roads • Education for safer speeds • Evaluation for safer roads
Lancaster Active Transportation Plan (ATP)	• Education for safer people • Encouragement for safer people and safer roads • Enforcement for safer people and safer speeds
Local Technical Assistance Program (LTAP)	• Education for safer roads
South Central Transit Authority (SCTA)	
Public Transportation Agency Safety Plan	• Enforcement for safer vehicles • Evaluation for safer people and safer vehicles
Transit Asset Targets / Proposed Performance Measure Targets	• Evaluation for safer vehicles

Regional

In addition to our own documents, we reviewed the work being done by some of our regional partners.

- The Center for Traffic Safety develops community traffic safety programs intended to reduce the number of traffic crashes, injuries, and deaths in Adams, York, Lancaster, and Lebanon Counties. They identified focus areas based on the trend of 5-year crash data, and prioritize education and enforcement to address conflicts. Their work encourages safer people, safer speeds, and post-crash care in Lancaster and surrounding counties.
- The Amish Safety Committee focuses extensively on education to create safer people, roads, and vehicles. They provide resources related to the use of reflective materials, pedestrian safety, road sharing, buggy manuals, and recent severe or fatal crashes. The Amish Safety Committee frequently attends community outreach events to inform the public about their resources and goals.
- Lancaster City's Vision Zero project includes many of the safety elements examined at the county-level. It includes street improvement projects, education initiatives, city programs, and proposed changes to policy. Their vision is a city with zero fatalities and serious injuries on its streets by 2030.

PennDOT

At the state-level, PennDOT also addresses the Safe System Approach elements and strategies. Pennsylvania's Strategic Highway Safety Plan is a strategic, data-driven plan and multi-agency effort to substantially reduce traffic-related fatalities and serious injuries in the state. The plan identifies statewide Priority Emphasis Areas and other Safety Focus Areas, as well as their associated strategies for implementation.

08 POLICY & PROCESS CHANGES

The adoption of revised or new plans, policies, and programs is necessary to support the Traffic Safety Action Plan vision and goals. This implementation focuses on the Lancaster County Metropolitan Planning Organization (MPO) plans, policies, and programs and associated documents reviewed in the prior section.

*Our vision is a future where **zero** people are killed or seriously injured in traffic crashes in Lancaster County, Pennsylvania.*

*Our goal is to **significantly reduce** serious injuries and fatalities on roadways in Lancaster County, Pennsylvania.*

Transportation Improvement Program (TIP)

The Highway and Bridge Transportation Improvement Program (TIP) is the regional list of priority transportation projects approved by the Lancaster County MPO. The TIP document must list all projects that: a) intend to use federal funds, or b) are regionally significant, but not federally funded. It also includes state-funded projects. These projects are multi-modal – bicycle, pedestrian, and freight-related projects – as well as more traditional highway and bridge projects. Although TIP projects may address safety concerns, other types of projects are also included on the TIP.

TIP Candidate Project Review and Evaluation

Potential project locations are added to a pool of candidate projects and scored on a variety of factors that help determine whether a project should be on the TIP. To maximize limited funding, only projects that are deemed significant are listed on the TIP.

Candidate projects are scored with the Project Evaluation Tool, or TIP Tool, using a TIP Selection Process adopted by the Lancaster County MPO. This tool incorporates data from Lancaster County's Geographic Information System (GIS). By layering system condition and planning data, the TIP Tool is used to objectively rank projects. The condition data relates to Federal Performance Measures required by law and the planning data ensures that the transportation and land use goals of *places2040* are supported by the project.

Candidate projects for the Highway and Bridge TIP are evaluated and scored in four categories:

Safety and Security	**Congestion Management**	**Multimodal Connectivity**	**Economic Benefit**	**Total Possible Score**
35 points	30 points	20 points	15 points	100 points

At 35 of 100 possible points, the safety and security category has the highest impact on candidate project scores of any category. With that said, it only amounts to one third of the total points. Candidate projects that score the best are projects that cover a larger geographic area, like road corridors that span miles. Historically, most safety candidate projects do not score competitively because traditional location-specific safety projects tend to be centered on smaller geographic areas, such as a single intersection. Generally, larger projects score better because they often include locations that generate more points towards scoring.

The MPO uses the scoring process as a tool, but the MPO may select projects regardless of score; for example, a lower scoring project may be selected if it is part of a larger project, or if it is part of an adopted study. When the Traffic Safety Action Plan is adopted by the MPO, improvements to the High Injury Network can be programmed on the TIP to support the goals of this plan.

Available TIP Funding

Funding transportation projects can be complicated. Funds are limited and projects need to be paired with the appropriate funding source – there is not a singular pool of funding that can be spent on any project. Funding for transportation projects is determined by US Congress and the Pennsylvania legislature, and most funds are tied to a specific category. There are separate funds for air quality, safety, and bridge projects. To make the best use of available resources, the MPO matches the eligible funding to the highest ranked candidate projects.

In some instances, candidate projects are skipped over for projects at a lower rank because the remaining funds are not permitted for that type of project. The TIP is also financially constrained, which means that the MPO is not allowed to include more projects than available funding. This requires some larger projects to be paid for over several years.

Funding for Safety Projects

The Highway Safety Improvement Program (HSIP) is a Federal funding program that is used specifically to fund projects that reduce traffic fatalities and serious injuries on public roads. PennDOT requires a screening process to ensure that HSIP funds are only spent on projects that address the most serious safety concerns with solutions that will make a difference. On average, HSIP funds are five percent of Lancaster County's total funding allocation. Since HSIP funds are such a small portion of the TIP budget, projects that are focused on safety are often funded using more flexible funding categories from the TIP allocation.

Incorporating Our Vision Into Future TIP Projects

In preparing for the development of future TIPs, the Lancaster County MPO should consider bundling or grouping smaller geographic area candidate projects into larger candidate projects for more competitive scores and desirable project scopes. The Lancaster County MPO should also try to identify systemic safety improvement projects or the same project type or scope at multiple locations throughout Lancaster County.

The Lancaster County MPO should review other TIP candidate projects on the High Injury Network (HIN) to identify opportunities to incorporate lower cost safety improvements in routine maintenance projects, such as road resurfacings. All TIP candidate projects – new construction, improvement, or maintenance – should consider the need and potential opportunities to improve road safety, not just "safety projects".

When developing future TIPs, the Lancaster County MPO should consider using funding sources beyond HSIP for safety candidate projects. Based on current funding levels, HSIP alone will never be enough funding to address locations of safety concern in Lancaster County. Many funding sources are flexible and can be applied to multiple project types.

Safety Performance Measure (PM-1)

Historically, the Lancaster County MPO has agreed to plan and program transportation projects in support of the PennDOT safety targets for the following federally required Safety Performance Measures:

- Number of fatalities
- Rate of fatalities per 100 million Vehicle Miles Traveled (VMT)
- Number of serious injuries
- Rate of serious injuries per 100 million Vehicle Miles Traveled (VMT)
- Number of non-motorized fatalities and serious injuries

MPOs can establish their own quantifiable targets for each performance measure, but the targets and methodology used to develop the targets must be provided to PennDOT. This independent option requires MPO notification to PennDOT to coordinate with Federal Highway Administration (FHWA) to ensure the targets established are not just aspirational, but achievable based on the projects that are programmed on the MPO's TIP.

In the future, the Lancaster County MPO may establish its own targets that reflect its policy commitment to significantly reduce the number of people killed and seriously injured in traffic crashes in Lancaster County, and not support the statewide target set by PennDOT. Lancaster County MPO staff should reach out to other MPOs in Pennsylvania with unique targets to learn about their target setting methodology and their experience with the development and approval process by PennDOT and FHWA.

Developing targets would require paid assistance from expert staff at engineering consultant firms with the proposed methodology and required documentation for PennDOT and FHWA. Lancaster County MPO staff should seek direction from the Lancaster County MPO before starting the process of developing and establishing its own quantifiable safety targets since it will take a significant amount of staff time and require funding for consultant assistance. This potential work task should be considered for inclusion in future Lancaster County MPO Unified Planning Work Program (UPWP) updates. The Lancaster County MPO must address PM-1 annually, so there are frequent opportunities to reconsider our approach.

Metropolitan Transportation Plan (MTP)

The current Metropolitan Transportation Plan, *connects2050*, has a section on roadway safety that addresses and reviews the Lancaster County MPO's safety performance measure (PM-1). The future MTP should note this Traffic Safety Action Plan and its significant impact on transportation planning and programming in Lancaster County.

Lancaster Active Transportation Plan (ATP)

The first Lancaster Active Transportation Plan (ATP) included an analysis of reportable crash data on pedestrian-involved crashes and bicyclist-involved crashes. The next Lancaster ATP should note the new Traffic Safety Action Plan and reference the modal High Injury Networks included in it. The bicycle High Injury Network and pedestrian High Injury Network may be useful planning tools for prioritization of the recommended Lancaster County Active Transportation Network, including priority corridors, mobility hubs, and shared use trails.

Other Plans, Policies, and Programs

There are several Lancaster County MPO documents that do not mention safety. Future Congestion Management Process (CMP) reports should consider safety in addition to the required congestion and reliability data analysis and planning.

09
PROJECT SELECTION

a. PRIORITY PROJECTS

High Injury Network Prioritization

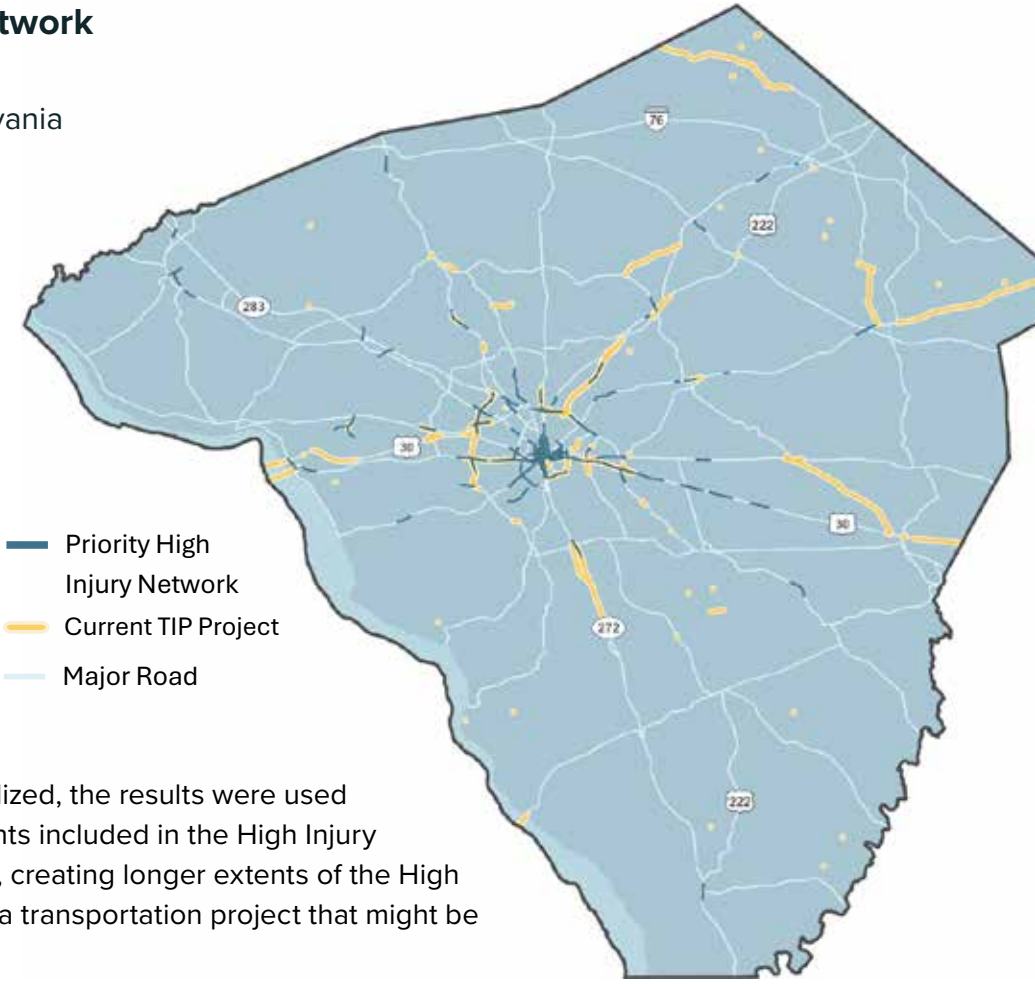
The High Injury Network is a crash-data based planning tool. It covers 260 miles of roadway, which is 7% of road miles in Lancaster County. The Lancaster County MPO is currently funding projects that will address transportation safety issues on 11 miles of roadway in the county.

Given the limited capacity of the Lancaster County MPO to fund and implement safety improvements – and in an effort to make significant progress to address the Traffic Safety Action Plan goal – High Injury Network roadways should be prioritized and potential project locations should be identified. Staff can then determine the appropriate engineering safety countermeasures and develop cost estimates for these priority project locations. This preliminary information on the project scope and cost allows the priority project locations to be considered as Transportation Improvement Program (TIP) candidate projects for Lancaster County MPO formula funding. Additional professional engineering work is needed to develop a competitive funding application for PennDOT or USDOT discretionary funding.

Addressing High Injury Network locations is a strategy to decrease the overall number of fatal and serious injury crashes, but it does not mean there will be zero fatal and serious injury crashes at these locations in the future. Crashes are variable. The current High Injury Network was developed in 2024 using the past 5 years of available reportable crash data from 2019 to 2023. The Lancaster County High Injury Network should be examined and recreated with new years of reportable crash data every 5 years to stay current with crash trends and remain relevant for the planning and programming of new priority project locations.

Priority High Injury Network & Current TIP Projects

Lancaster County, Pennsylvania



Methodology

Once the High Injury Network was finalized, the results were used to create project extents. Road segments included in the High Injury Network were dissolved by road name, creating longer extents of the High Injury Network, similar to the length of a transportation project that might be implemented.

Staff identified different factors to prioritize the High Injury Network into potential project locations: proximity to schools and parks, proximity to public transit, overlap with public comments, overlap with disadvantaged Census block groups, and crash density. Staff consulted the Traffic Safety Action Plan Task Force members for their preference on how to prioritize the High Injury Network.

The Task Force members preferred prioritizing the High Injury Network by crash density. These project locations considered only the density of crashes weighted by the severity of injury of the people involved. This is the total count of crashes by injury severity along road segments. Fatal and serious injury crashes are weighted '3' while minor injury crashes are weighted '1'. Crashes that only had property damage and no personal injury are not included.

A crash density (total weighted crash score divided by segment length) was calculated for each potential project extent. Initially, the top 60 segments based on crash density were identified as the Priority High Injury Network; however, after screening the segments against the list of projects on the Lancaster County MPO's current Transportation Improvement Program (TIP), we realized 16 segments already had a TIP project programmed for funding. Therefore, the list was expanded to 73 segments to identify more locations for potential projects.

Priority Projects

The Priority High Injury Network (HIN) covers 65 miles of roadway in Lancaster County, which is ~1.5% of road miles in Lancaster County. On these roadways, 17% of the total fatal and serious injury crashes from 2019 to 2023 occurred. Current Lancaster County MPO Transportation Improvement Program (TIP) projects address 20 miles of roadway on the Priority HIN. By constructing these projects, we will improve Priority HIN locations where 7% of the total fatal and serious injury crashes from 2019 to 2023 occurred.

The remaining 44.6 miles of roadway on the Priority HIN includes 18.7 miles in the City of Lancaster and 25.9 miles outside of the City of Lancaster. By identifying and implementing engineering safety countermeasures for these project locations, we could improve Priority HIN locations where 10% of the total fatal and serious injury crashes from 2019 to 2023 occurred.

Twenty municipalities, or a third of Lancaster County municipalities, have priority project locations based on the Priority HIN.

City of Lancaster

The City of Lancaster adopted a *Vision Zero Action Plan* in 2020. The Action Plan includes the City's own goal of zero fatalities and serious injuries on its streets by 2030. Also, the Action Plan includes the City's own High Injury Network that is currently being updated. The City of Lancaster has a Vision Zero Implementation Work Plan for 2022-2026 that provides staff with instructions to implement action items identified in the plan. Therefore, we did not identify priority project locations in the City of Lancaster. We will look to the City of Lancaster for their engineering designs and studies of the 18.7 miles of the County Priority High Injury Network in the City of Lancaster. Lancaster County MPO staff will coordinate with City staff on how the Lancaster County MPO can support implementation of the City of Lancaster's proposed Vision Zero projects on the County Priority High Injury Network through the Lancaster County MPO's Transportation Improvement Program (TIP).

Recommendation #1: The MPO will prioritize the City of Lancaster *Vision Zero Action Plan* implementation projects on the 18.7 miles of the County Priority High Injury Network in the City of Lancaster as candidate projects for future Transportation Improvement Program (TIP) funding.

The City of Lancaster has incorporated safety improvements into all road projects – bicycling, streetscape, traffic calming, or traffic signal. A list of current projects is available on the City's Vision Zero website: https://visionzerolancaster.com.

The City of Lancaster is strategically implementing systemic improvements, like daylighting intersections with flexible, vertical posts and pavement markings, high-visibility crosswalks, "No Turn on Red" restrictions for vehicles turning right at signalized intersections, and Leading Pedestrian Intervals for pedestrians to have a head start to cross the street at signalized intersections. These systemic improvements are focused on vulnerable road users. They are relatively low-cost improvements that can be implemented gradually with existing City funds.

As of March 1, 2025, the City of Lancaster has implemented:

- 76 intersections with daylighting
- 50% of traffic signals with Leading Pedestrian Intervals
- 17 miles of installed bicycle infrastructure
- 6 intersections with rapid flashing beacons

In addition to systemic improvement projects, the City of Lancaster is using implementation funding awarded by the SS4A program (see p. 11) to educate and reach out to the community about traffic safety and Vision Zero projects, perform supplemental studies like a restoration of current one-way traffic roads to two-way traffic roads, and implement long-term safety improvements on the City's High Injury Network.

Outside of City of Lancaster

Using the Federal Highway Administration's Proven Safety Countermeasures, we identified appropriate engineering countermeasures for each of the Priority High Injury Network (HIN) segments that are a) outside the City of Lancaster and b) not already on the Lancaster County MPO's Transportation Improvement Program (TIP).

This process included a detailed review of crash data for each road segment, as well as a visual review of field conditions, to ensure systemic safety risks and vulnerable road users were addressed by identified countermeasures. For each Priority HIN segment, a prescriptive list of appropriate engineering countermeasures were identified. Next, we prepared cost estimates using PennDOT construction cost data from comparable projects. This approach ensured that the proposed improvements were evidence-based and financially grounded.

Priority Project Locations and Recommended Engineering Countermeasures and Costs

Lancaster County, Pennsylvania

Group	#	Name	Municipality	Estimate	Countermeasures								
					Signage or Striping	Signal Treatments	Signal Timing	Intersection Modifications	Sight Distance	Lighting	ADA Ramps	Sidewalk	Speed Limit
A	29	US 30 WB off-ramp to PA 23	Manheim Township	$11,000		●	●						
A	30	Rt 23 - Hershey	Upper Leacock Township	$14,000	●				●	●			
A	20	SR 222 & Peach Bottom	Fulton Township	$31,000	●					●			
A	8	Wabank & Rabbit	Lancaster Township	$40,000	●					●			
A	11	SR 23 & Willow	East Lampeter Township	$40,000	●				●				
A	21	Spooky Nook	East & West Hempfield Township	$41,000	●					●			
A	5	SR 896 & White Oak	Paradise & Bart Township	$45,000	●					●			
A	18	Hershey Rd & 283	Mount Joy Township	$53,000	●	●	●						
A	25	SR 441 & N 3rd	Columbia Borough	$62,000	●	●	●	●					
A	31	Pitney Rd	East Lampeter Township	$75,000	●				●	●			
A	22	SR 772 & SR 272	West Earl Township	$80,000	●	●	●			●			
A	6	Harrisburg Pk	East Hempfield Township	$81,000	●	●							
A	24	Spruce & College	Elizabethtown Borough	$82,000	●				●	●			
A	28	Blue Rock Rd	Manor Township	$96,000	●			●					
A	23	SR 72 & Pinch	Rapho Township	$102,000	●				●	●			
A	17	E High & Mt Joy	Elizabethtown Borough	$103,000	●	●		●					
A	9	Ebenshade / Strickler & PA 283	Rapho Township	$166,000	●	●	●	●					
A	10	SR 72 & Plaza	Manheim Township	$222,000	●	●	●	●					
B	27	SR 462 & 9th	Columbia Borough	$223,000	●			●		●	●		
B	13A	US 322 - Main St	Ephrata Borough	$225,000	●	●	●	●			●		
B	16	SR 272 & Church	East Cocalico Township	$278,000	●			●					
B	26	SR 230 & Carey	Mount Joy & West Donegal Township	$294,000	●	●					●	●	
B	14	SR 23 & 322	East Earl Township	$350,000				●		●			
B	2	Chester Rd	Manheim Township	$351,750	●	●	●						
B	15	Strasburg & Millport	East Lampeter Township	$356,000	●	●	●	●					
B	19	Oregon Pike	Manheim Township	$424,000	●	●	●	●			●	●	
C	3B	SR 340 (near Greenfield Rd)	East Lampeter Township	$560,000	●	●	●						
C	13B	PA 23 - Leola	Upper Leacock Township	$686,000	●	●	●	●		●	●		
C	3A	SR 340 (Bird-in-Hand)	East Lampeter Township	$863,000	●	●	●	●		●			
C	7	Fruitville Pk	Manheim Township	$891,000	●	●	●	●		●	●		
D	12	SR 283 EB (near PA 72)	Manheim Township	$779,000									●
D	1	30 WB	Manheim Township	$1,785,000									●
D	4	30 EB	Manheim Township	$3,565,000						●			●

Group A	Lowest intensity (lower cost) projects	$1,344,000
Group B	Medium intensity projects	$2,501,750
Group C	High intensity projects	$3,000,000
Group D	Expressways (higher cost) projects	$6,129,000
	Total	**$12,974,750**

Project Bundling

Outside of the City of Lancaster, we identified 33 Priority Project locations in 19 municipalities. Manheim Township has the most priority project locations with 8 out of 33. The 33 Priority Projects were grouped into four project "bundles", based on project type and each project's estimated construction cost.

The lowest intensity group, which amounts for a total length of 11.9 miles, includes 18 Priority Projects with an individual construction cost of less than $250,000. Engineering countermeasures for this lowest intensity bundle include treatments such as signage updates, pavement striping enhancements, traffic signal retiming, and lighting upgrades. The aggregate construction cost for this low intensity bundle is $1,344,000. For efficiency of project delivery, this bundle of improvements could be advanced as one project.

The medium intensity bundle includes projects with an individual construction cost between $250,000 and $500,000. This bundle includes 8 projects spanning 5.6 miles, with a combined estimated construction cost of $2,500,000. Again, this bundle of projects could be advanced as one project.

Similar bundles were developed for high intensity projects (above $500,000) and projects located on expressways. Projects from these two categories could be advanced individually, or as a group or bundle depending on available funding and other factors.

Recommendation #2: The MPO will consider the 33 Priority Projects individually and/or grouped into four project "bundles" based on project type and each project's estimated construction cost as candidate projects for future Transportation Improvement Program (TIP) funding.

Road Safety Audits (RSAs)

Some Priority High Injury Network locations may be more complex due to their crash history or land use context, so they are better suited for an individual, extended study to identify appropriate engineering safety countermeasures. A Road Safety Audit (RSA) is a proactive and formal safety performance examination of an existing road or intersection by an independent, multidisciplinary team. It considers all potential road users, not only motorized traffic, and accounts for road user capabilities and limitations. RSAs involve data collection and review, as well as a field view of the location. Stakeholders help document issues, propose countermeasures, and play a role in implementation of the RSA report recommendations.

The RSA process takes months and requires technical assistance from PennDOT staff and/or traffic engineering consultants to complete. The numbers of RSAs that can be completed by the Lancaster County MPO is limited. Therefore, RSA candidate locations should be prioritized. We may consider the following when prioritizing locations:

- Weighted crash density measure from the High Injury Network prioritization
- Multi-municipal, regionally significant locations
- Mixed or varied land uses (commercial, residential, etc.) with non-motorized road users present
- Municipal and property owner interest and support for RSA development
- TIP Selection Process scores

Final RSA locations will be confirmed after consultation with municipalities and other stakeholders, such as adjacent property owners, for their support. The Lancaster County MPO should consider creating a formal funding commitment from all parties upfront, so there is shared responsibility for relevant implementation of the RSA recommendations.

Recommendation #3: The MPO will identify, prioritize, and maintain a list of potential Road Safety Audit (RSA) candidate locations for future consideration by the MPO and PennDOT.

b. RECOMMENDED STRATEGIES

Consistent with the Safe System Approach (see p. 14), we developed a comprehensive approach to traffic safety that includes engineering, education, encouragement, enforcement, and evaluation strategies. These strategies were identified during the planning process and based on best practices. The Traffic Safety Action Plan Task Force reviewed and provided feedback on the proposed strategies. We also received specific and overall impressions on the proposed strategies from Lancaster County residents at various public outreach events.

Engineering strategies are listed first in this section – this strategy is the most relevant to the Lancaster County MPO and its work program, so we have the most to say about it. However, fatal and serious injury crashes cannot be eliminated with engineering countermeasures alone. Many local and regional stakeholder organizations that served on the Traffic Safety Action Plan address education and enforcement in Lancaster

County. Although encouragement and evaluation strategies are newer to Lancaster County, they need to be a part of our approach.

Engineering Strategies

Engineering strategies are physical interventions to change roadways in a way that prevents or mitigates crashes. The new roadway design should consider and provide safety benefits for all roadway users.

Proven Safety Countermeasures

The Federal Highway Administration has identified Proven Safety Countermeasures that are effective in reducing fatalities and serious injuries. We shared these engineering best practices as part of our engagement and outreach efforts.

The Proven Safety Countermeasures were reviewed by the Traffic Safety Action Plan Task Force. For the best results, Task Force members advocated for education and enforcement activities paired with implementation of the countermeasures.

Staff also sought feedback from municipalities during the Municipal Round Table held in February 2025. Municipal staff stressed the need for a variety of countermeasures across different municipalities, as some countermeasures may be successful in urban areas, but less so in rural areas. Therefore, countermeasures should be used where they make sense for the local community. The application of countermeasures should be context-sensitive to existing land uses and the transportation network.

Finally, staff sought feedback on the countermeasures from Lancaster County residents during our spring 2025 outreach. Residents noted that lowering posted speed limits alone was ineffective at reducing speeds; therefore, physical changes to the roadway should also be made to slow motorized traffic. Plain Sect community members were supportive of roundabouts because they slow motor vehicle traffic at intersections and reduce crashes.

Overall, the feedback we received was positive if the application of countermeasures is context-sensitive and not done in isolation. As a result, all identified countermeasures are in consideration for use in Lancaster County.

Lower Speed Limits

Overview

Speed control is one of the most important methods for reducing fatalities and serious injuries. A driver traveling at 30 miles per hour who hits a pedestrian has a 45% chance of killing or seriously injuring them. At 20 miles per hour, that percentage drops to 5%. Setting speed limits that are consistent and responsive to local conditions is critical for reducing crash severity.

Safety Benefits

Lower speed limits + other speed management strategies can reduce fatal and injury crashed by up to 40% on rural roads.

Median Barriers

Overview

Median barriers separate opposing traffic on a divided highway. They make it less likely that a vehicle will cross the median and crash into vehicles traveling in the opposite direction.

Safety Benefits

97% reduction in crashed across the median (on rural four-lane freeways).

Rumble Strips

Overview

Edge line and center line rumble strips and stripes (where the pavement marking is placed over the rumble strip) are milled or rolled-in corrugations in the pavement to alert inattentive drivers that they are leaving their lane.

Safety Benefits

Center line rumble strips on tow-lane roads can reduce head-on and opposite direction sideswipe fatal and injury crashes up to 44-64%.

Safer Roadside Design at Curves

Overview

Horizontal curves account for 27% if all fatal crashes and 80% of all fatal crashes at curves are roadway departure crashes. Roadside design improvements at curves is a strategy encompassing several treatments that target the high-risk roadside environment along the outside of horizontal curves.

Safety Benefits

- Flattening sideslope from 1V:4H to 1V:6H can result in 12% reduction for single-vehicle crashes.
- Increasing the distance to roadside features from 16.7 ft to 30 ft can result in 44% reduction for all crashes.

Paint and Signs for Road Curves

Overview

Enhanced delineation treatments can alert drivers to upcoming curves, the direction and sharpness of the curve, and appropriate operating speed. Enhanced delineation at horizontal curves includes a variety of potential strategies that can be implemented in advance of or within curves, in combination, or individually.

Safety Benefits

Use of chevron signs results in 25% reduction in nighttime crashes and a 16% reduction in non-intersection fatal and injury crashes.

High Friction Road Surface Treatment

Overview

Roadway pavement friction affects how vehicles interact with the roadway, including the frequency of crashes. Pavement friction can prevent many roadway departure, intersection, and pedestrian-related crashes.

Safety Benefits

High Friction Surface Treatments can reduce crashes up to:

- 63% for injury crashes at ramps.
- 48% for injury crashes at horizontal curves.
- 20% for total crashes at intersections.

Wider Edge Lines

Overview

Wider edge lines (6 inches) improve visibility of travel lane boundaries compared to traditional edge lines (4 inches) and can provide safety benefits to all facility types (e.g., freeways, multi-lane divided and undivided highways, two-lane highways.

Safety Benefits

- Can reduce non-intersection, fatal and injury crashes on rural, two-lane roads up to 37%.
- Can reduce fatal and injury crashes on rural freeways up to 22%.

Visible Traffic Signals

Overview

Backplates added to a traffic signal head improve the visibility of the illuminated face of the signal by introducing a controlled-contrast background. The improved visibility of a signal head with a backplate is made even more conspicuous by framing it with a 1- to 3-inch yellow retroreflective border. Signal heads that have backplates equipped with retroreflective borders are more visible and conspicuous in both daytime and nighttime conditions.

Safety Benefits

Can reduce total crashes in up to 15%.

Roundabouts

Overview

The modern roundabout is an intersection with a circular configuration that safely and efficiently moves traffic. The design of roundabouts minimizes conflict points, resulting in lower speeds and reduced conflicts. This not only reduces fatality and serious injury crashes but can also create a more suitable environment for walking and biking.

Safety Benefits

Two-Way Stop-Controlled Intersection to a Roundabout:

- Can reduce fatal and injury crashes by up to 82%.

Signalized Intersection to a Roundabout:

- Can reduce fatal and injury crashes by up to 78%.

Stop Sign Intersection Warnings

Overview

This systemic approach to intersection safety involves deploying a package of multiple low-cost countermeasures, including enhanced signing and pavement markings, at a large number of stop-controlled intersections within a jurisdiction.

Safety Benefits

- Can reduce fatal and injury crashes at rural intersections by up to 27%.
- Can reduce fatal and injury crashes at 2-lane by 2-lane intersections by up to 19%.
- Can reduce fatal and injury crashes at all locations/types/areas by up to 10%.

Turn Lanes at Intersections

Overview

Auxiliary turn lanes - either for left turns or right turns - provide physical separation between turning traffic that is slowing or stopped and adjacent through traffic at approaches to intersections. Turn lanes are particularly helpful at two-way stop-controlled intersections.

Safety Benefits

- Left-Turn Lane can reduce total crashes by: 28-48%.
- Positive Offset Left-Turn Lanes can reduce fatal and injury crashes by up to 36%.
- Right-Turn Lanes can reduce total crashes by up to: 14-26%.

Lane Redesigns

Overview

Lane redesigns or roadway reconfiguration can improve safety, calm traffic, provide better mobility and access for all road users. A lane redesign includes narrowing travel lanes. A road reconfiguration typically involves converting an existing four-lane roadway consisting of two through-lanes and a center two-way left-turn lane.

Safety Benefits

4-lane to 3-lane, road diet conversions can reduce total crashes up to 19-47%.

Bicycle Lanes

Overview

To make bicycling safer and more comfortable for most types of bicyclists, state and local agencies should consider installing bicycle lanes to provide greater separation between vehicles and bicyclists.

Safety Benefits

Converting traditional or flush buffered bicycle lanes to a separated bicycle lane with flexible deliminator posts can reduce crashes up to 53% for bicycle/ vehicle crashes.

Crosswalk Signs and Flashing Beacons

Overview

A marked crosswalk or pedestrian warning sign can improve safety for pedestrians crossing the road, but may not be sufficient for drivers to visibly locate crossing locations and yield to pedestrians. To enhance pedestrian visibility and increase driver awareness at uncontrolled marked crosswalks, transportation agencies can install a pedestrian actuated Rectangular Rapid Flashing Beacon (RRFB) to accompany a pedestrian warning sign.

Safety Benefits

- RRFBs can reduce crashes up to 47% for pedestrian crashes.
- RRFBs can increase motorist yielding rates up to 98% (varies by speed limit, number of lanes, crossing distance, and time of day).

Medians, Refuge Islands, and Curb Extensions / Bulb Outs

Overview

A median is the area between opposing lanes of traffic, excluding turn lanes. Medians in urban and suburban areas can be defined by pavement markings, raised medians, or islands to separate motorized and non-motorized road users. A pedestrian refuge island (or crossing area) is a median with a refuge area that is intended to help protect pedestrians who are crossing a road.

Safety Benefits

- Median with marked crosswalks can reduce pedestrian crashed up to 46%,
- Pedestrian refuge islands can reduce pedestrian crashes up to 56%.

Sidewalks / Trails

Overview

Sidewalks and trails are off-road transportation facilities for the use of pedestrians, those using a wheelchair, and, in the case of trails, bicyclists. Other non-motorized and lower-speed motorized modes (i.e. electric bicycles or scooters) may also be permitted depending on the facility context.

Safety Benefits

- Sidewalks can reduce crashed involving pedestrians walking along roadways by up to 65-89%.
- Paved Shoulders can reduce crashes involving pedestrians walking along roadways by up to 71%.

Leading Pedestrian Interval

Overview

A leading pedestrian interval (LPI) gives pedestrians the opportunity to enter the crosswalk at an intersection 3-7 seconds before vehicles are given a green indication. Pedestrians can better establish their presence in the crosswalk before vehicles have priority to turn right or left.

Safety Benefits

Can reduce pedestrian-vehicle crashes at intersections by up to 13%.

Lighting

Overview

At nighttime, vehicles traveling at higher speeds may not have the ability to stop once a hazard or change in the road ahead becomes visible by the headlights. Therefore, lighting can be applied continuously along segments and at spot locations such as intersections and pedestrian crossings in order to reduce the chances of a crash.

Safety Benefits

Lighting can reduce crashes up to:

- 42% for nighttime injury pedestrian crashes at intersections.
- 33-38% for nighttime crashes at rural and urban intersections.
- 28% for nighttime injury crashes on rural and urban intersections

What We Heard

Plain Sect Community

- Widen the shoulder area on roads with a) higher posted speed limits and b) more motor vehicle and Plain Sect traffic where people walk, scooter, and drive horse-drawn vehicles in the roadway shoulder.
- Maintain roadway shoulder pavement in good condition on roads with higher Plain Sect traffic volumes and where people walk, scooter, and drive horse-drawn vehicles in the roadway shoulder.
- Identify safety concerns regarding horse-drawn vehicles making turning movements, particularly at unsignalized intersections. A proposed engineering solution would require further discussion with the community and consultation with traffic engineers.

Recommendation #4: The MPO will coordinate with the Plain Sect Community and work with municipalities and PennDOT to widen roadway shoulders, maintain roadway shoulder pavement in good condition, and identify safety concerns and solutions for horse-drawn vehicles making turning movements, particularly at unsignalized intersections.

Municipal Round Table

- Upgrade traffic signal road user detection technology to radar or video detection at signalized intersections. This improves bicyclist visibility, decreases potential road user conflicts, and increases legal, visible turning movements.
- Increase the amount of time for pedestrian signal timings for older adults and mobility device users to comfortably and safely cross at signalized pedestrian crossings in urban areas, like the City of Lancaster and boroughs.
- Install, repair, and maintain sidewalk to provide a physically separated space from motor vehicles for pedestrians and other vulnerable road users to travel.
- Design and install gateway traffic calming treatments for non-local through-traffic on major roads through boroughs and villages in Lancaster County. A regional example of a gateway treatment is on PA 41 (Gap Newport Pike) at the Village of Chatham in London Grove Township, Chester County.

Recommendation #5: The MPO will work with Lancaster County municipalities and PennDOT to upgrade detection technology to radar or video at signalized intersections, increase the length of pedestrian signal timings, install and repair sidewalks, and design and install gateway traffic calming treatments for boroughs and villages.

Education Strategies

Education strategies are campaigns, events, and other focused efforts to share safety information with stakeholders and the public to prevent or mitigate roadway crashes.

What We Heard

Plain Sect Community

- Develop and promote horse-drawn vehicle driving safety education classroom and road courses like motor vehicle driver's education courses.
- Print and share the Horse and Buggy Driver's Manual (PennDOT Publication 632).

Recommendation #6: The MPO will coordinate with the Plain Sect Community and local stakeholder organizations to develop and promote horse-drawn vehicle driving safety education as well as print and share the existing Horse and Buggy Driver's Manual.

Municipal Round Table

- Facilitate future countywide or regional meetings of municipal engineering, planning, and public works staff to review traffic safety best practices with other relevant stakeholders.
- Educate Lancaster County residents about the benefits of traffic calming, particularly "road diets" or narrowing travel lanes, which have a negative perception.
- Create an inventory of available motor vehicle speed data sources and speed measuring equipment (portable radar speed feedback display signs or trailers, etc.) to share with municipalities and coordinate equipment sharing.
- Learn more about the current PennDOT process to study lower posted speed limits on state-owned roads. Partner with the Lancaster County Boroughs Association to meet with PennDOT staff to share the local importance of lowering posted speed limits and discuss how we can improve the study process for more approvals.

Recommendation #7: The MPO will coordinate with Lancaster County municipalities to facilitate future countywide or regional meetings of municipal engineering, planning, and public works staff on traffic safety best practices, educate Lancaster County residents about the benefits of traffic calming, create an inventory of available motor vehicle speed data sources and speed measuring equipment, and learn more about the current PennDOT process to study lower posted speed limits on state-owned roads.

Traffic Safety Action Plan Task Force

- Increase the density of speed limit signs, particularly on the High Injury Network.
- Procure portable speed feedback signs or trailers and deploy them where speeding is a known issue (based on reportable crash data or traffic speed data).
- Promote motor vehicle driver's education courses for all ages.

Recommendation #8: The MPO will work with Lancaster County municipalities and PennDOT to increase the density of speed limit signs, procure portable speed feedback signs or trailers and deploy them, and promote motor vehicle driver's education.

Encouragement Strategies

By supporting or working with stakeholders to identify opportunities in established or new processes, we can shift thoughts and actions to consider traffic safety and prioritize resources to prevent or mitigate roadway crashes.

Regional Strategies

Sober Ride Home Pilot Program

- Developed by HATS, the Harrisburg area MPO, as a pilot program with SS4A funding.
- Partnership with Uber to offer on-demand transportation services at no cost during certain times to target individuals who are unfit to drive and decrease impaired driving crashes.

Recommendation #9: The MPO will review the results of the Harrisburg area Sober Ride Home Pilot Program and participate in conversations about future regional or statewide programs that could include Lancaster County.

What We Heard

Municipal Round Table

- Identify funding sources to assist property owners and local governments with costs of sidewalk repair or installation. Most municipalities' ordinances require property owners to maintain sidewalks, but those who are unable or unwilling to pay can delay road projects and lead to court cases. Maintaining physically

separated pedestrian infrastructure in good condition is important for accessible and safe pedestrian travel in urban and suburban areas.

- Determine ways to help municipal public works staff interested in implementing proven safety countermeasures, but unable due to limited municipal funding or lack of local and state support, such as how to:
  - Fund and plan for additional maintenance costs;
  - Respond to complaints made to elected officials about pavement condition and markings; and
  - Receive state approval for proposed improvements through the Highway Occupancy Permits (HOP) process and other methods.
- Coordinate and fund multi-municipal grant writing for discretionary transportation funding for plans or projects.
- Lancaster County Planning staff will:
  - Participate in Traffic Impact Studies and scoping meetings for regionally significant development plans/projects to encourage municipal coordination (sometimes adjacent municipalities are not invited, but should be based on proximity and traffic impacts). Advocate for, or promote, countywide plans and policy priorities like active transportation, complete streets, and traffic safety.
  - Provide comments on subdivision and land development plans and zoning ordinance amendment reviews in coordination with the Traffic Safety Action Plan High Injury Network and recommended strategies.
- Reach out to Lancaster County municipalities where fatal or severe injury crashes occurred in the last 5 years and request the municipal governing body voluntarily complete a resolution to support the Lancaster County MPO and PennDOT in planning and programming projects to meet the safety performance measure (PM-1), which is based on a 5-year rolling average crash trend.

Recommendation #10: The MPO will coordinate with Lancaster County municipalities to identify funding sources for sidewalk repair and installation, support municipal public works staff in implementing proven safety countermeasures, coordinate and fund multi-municipal grant writing for transportation funding.

Recommendation #11: The MPO will support staff participation in Traffic Impact Studies and scoping meetings for regionally significant development plans/projects and subdivision and land development plans and zoning ordinance amendment reviews to provide comments based on the Traffic Safety Action Plan.

Recommendation #12: The MPO will request municipal governing bodies voluntarily complete a resolution to support the Lancaster County MPO and PennDOT in planning and programming transportation projects to meet the safety performance measure (PM-1).

Enforcement Strategies

Enforcement strategies are actions taken by agencies and employees responsible for enforcing laws, maintaining public order, and managing public safety to prevent or mitigate roadway crashes.

What We Heard

Municipal Round Table

- Through the Center for Traffic Safety, fund additional police department overtime for speed enforcement in targeted areas related to the Lancaster County High Injury Network.
- Support local police department's ability to use radar for speed enforcement on local roads – state legislation is needed.

Recommendation #13: The MPO will work with local stakeholder organizations to fund and support additional speed enforcement activities in Lancaster County.

Traffic Safety Action Plan Task Force

- Explore automated speed enforcement and automated red light running enforcement in areas where it is legally allowed and the enforcement can be tied to reportable crash data history and physical improvements to the roadway. Automated enforcement is currently limited in Pennsylvania by state legislation.
- Support the statewide Work Zone Speed Safety Cameras (WZSSC) program to reduce work zone speeds, change driver behavior, and improve work zone safety for workers and motorists. This program is run by the Pennsylvania Department of Transportation (PennDOT) and the Pennsylvania Turnpike Commission (PA Turnpike), in partnership with the Pennsylvania State Police (PSP).

Recommendation #14: The MPO will explore the implementation of automated enforcement activities in Lancaster County and support the statewide Work Zone Speed Safety Cameras (WZSSC) program.

Evaluation Strategies

Evaluation strategies inform stakeholders and the public on traffic safety topics using data-driven methods to analyze roadways. Through education and analysis, roadway crashes are mitigated or prevented.

What We Heard

Municipal Round Table

- PennDOT's *Local Technical Assistance Program* (LTAP) is a free resource frequently used by municipal staff. We highly recommend municipal staff utilize this program for specific locations with safety concerns to be evaluated, so LTAP engineers can provide recommendations for municipal staff to implement.
- Fund or share traffic speed data and related equipment in regions (or countywide). Some municipalities currently use radar-based speed display signs as traffic calming devices, and to collect data following road improvements. Right now, resources vary by municipality, but there is interest in regional or countywide coordination to share resources. To collect speed data, municipalities could: a) purchase and set up equipment with manual or remote data downloads, or b) purchase large datasets with data pertaining to the municipality.
- Identify rural "backroads" that are frequently used as cut-throughs or detours from GPS navigation systems that route passenger and commercial vehicles off high-volume roads to save time. Drivers who are unfamiliar with these rural areas may be more likely to speed or run stop signs. Evaluate if there should be coordinated efforts to reduce posted speed limits to create less attractive routes for GPS navigation systems and implement engineering countermeasures such as stop sign intersection warnings (signs and pavement markings). Work with PennDOT and Pennsylvania Motor Truck Association (PMTA) staff to understand passenger and commercial vehicle GPS navigation system data and usage.

Recommendation #15: The MPO will promote PennDOT's Local Technical Assistance Program (LTAP) to municipal staff, fund or share traffic speed data and related equipment in regions or countywide, and identify and evaluate rural "backroads" frequently used as cut-throughs or detours from GPS navigation systems that route passenger and commercial vehicles off high-volume roads to save time.

10 IMPLEMENTATION

WHO IS INVOLVED

The Traffic Safety Action Plan development is led by the Lancaster County MPO, and implementation will be led by the Lancaster County MPO as well. The Traffic Safety Action Plan Task Force was created by the Lancaster County MPO to guide development of the Traffic Safety Action Plan.

Therefore, Lancaster County Planning Department staff will guide the Lancaster County MPO's implementation of the Traffic Safety Action Plan. Traffic safety in Lancaster County is a shared responsibility. Staff will coordinate with Lancaster County municipalities, local and regional stakeholder organizations, and PennDOT to implement the comprehensive strategies and priority project selections recommended in the Traffic Safety Action Plan.

HOW TO IMPLEMENT

The following progress evaluation processes and performance measures will guide the Lancaster County MPO in successful implementation of the Traffic Safety Action Plan.

Progress Evaluation

As part of this plan's implementation, we will continue to evaluate our progress using the resources mentioned below.

Annual Progress Report	• Created by Lancaster County Planning Department staff • Determines if the Lancaster County MPO is on track to meet the plan's short-term target • Includes performance measures (outlined below) • Presented to the Lancaster County MPO • Shared with Traffic Safety Action Plan Task Force • Published on LCPD website
LCP Data Dashboard	• Add fatal and suspected serious injury crash data from PennDOT to existing LCPD Data Dashboard • Update annually with new crash data from PennDOT
Traffic Safety Action Plan	• Update High Injury Network • Identify new Priority High Injury Network and priority project locations every 5 years (starting in 2030) • Review and update crash data analysis and countermeasures every 10 years (starting in 2035

Performance Measures

Recommended data to compile for the Annual Progress Report may include:

Crash Data	
Five-Year Trend	• Five-year fatal and SSI crash trend on all roadways
Total Crashes	• Total number of fatal and SSI crashes on all roadways
Crashes by Mode	• Number of fatal and SSI crashes on all roadways by mode (including Vulnerable Road Users like pedestrians, bicyclists, buggies, and motorcyclists)

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Strategies	
New	• Number of new strategies implemented
Continued	• Number of strategies continued
Priority Projects	
Lancaster County MPO	• Number of priority project locations addressed by the Lancaster County MPO's TIP funding
Municipalities	• Number of priority project locations addressed by municipalities
PennDOT	• Number of priority project locations addressed by PennDOT through Lancaster County Maintenance Office operations
Collaboration & Outreach	
Municipalities	• Measure frequency of communication • Host annual municipal roundtable meeting
PennDOT – District 8-0 Safety Unit	• Measure frequency of communication • Organize at least one meeting per year
PennDOT – Lancaster County Maintenance	• Measure frequency of communication • Organize at least one meeting per year
Amish Safety Committee	• Measure frequency of communication • Attend at least one in-person meeting per year
Stakeholder Organizations	• Measure frequency of communication • Organize at least one meeting per year
Former Traffic Safety Task Force Members	• Measure frequency of communication • Hold meeting to review Annual Progress Report

APPENDIX A OUTREACH AND ENGAGEMENT

a. OUTREACH PLAN

Public Involvement Plan

Connect the Dots, a subcontractor to Bowman, developed a Public Involvement Plan to give all community members the opportunity to share and report roadway safety concerns, and engage in potential safety solutions.

Objectives

The key public involvement obj**ectives identified were:**

3. Allow community members to share and report roadway safety concerns
4. Engage under-represented populations in the planning process
5. Engage community members on potential safety solutions
6. Gather municipal and PennDOT feedback on countermeasures and priorities

Phases of Engagement

At the outset of the plan, staff from the Lancaster County Planning Department and the consultant firm agreed upon an engagement plan. This plan had three major phases: one for preparation, one for gathering data, and one for feedback. The main strategies from this plan were carried out – these include tabling at public events and hosting a web survey. However, some of the strategies, particularly for procuring community ambassadors and focus groups, did not work and had to be shifted. Staff talked with organizations connected to the Spanish and Vietnamese language communities, but they were unable to find people who wanted to participate for the offered stipend. We instead pivoted to conducting more in-depth interviews with professionals who work with these language communities. So, rather than having two community ambassadors, two language focus groups, and four interviews, we conducted 7 interviews.

Public Engagement Process

0	1	2
Pre-Launch	**Discovery**	**Discussion**
Identify goals and objectives, develop relationships with key community connectors.	Understand the needs, challenges, and desires of the community.	Obtain more information on the needs, challenges, and desires of the community.
Phase Zero	**Phase One**	**Phase Two**
• Stakeholder Interviews • On/Off the Table Workshop • Equity Needs Assessment • Advisory Committee Meetings	• Community Survey • Pop-ups • Community Workshops • Advisory Committee Meetings	• Focus Groups • Pop-ups • Community Workshops • Advisory Committee Meetings
Spring-Summer 2024	**Fall 2024**	**Spring-Summer 2025**

The planned phases of public engagement, which were altered in practice as some tactics proved more successful than others.

Modified Phases of Engagement

Engagement occurred according to the following phases:

Phase 0

- Create Public Involvement Plan
- Create Style Guide
- Convene TSAP Task Force

Phase 1

- Public Events Tabling – Fairs and Mud Sales
- Traffic Safety Experiences Sticker Activity
- Fall Open House
- Web Survey
- Map Activity

Phase 1.5

- Stakeholder Interviews

Phase 2

- Public Events Tabling – Streets Fairs and Plain Sect Community
- Spring Open House
- Countermeasure Review
- Municipal Roundtable

Public Review of Draft Plan

Advertising and Providing Notice

The following chart documents the outreach strategies taken to promote pieces of our outreach and engagement.

Advertising Channel	*Fall Outreach Events*	*Web Survey and Map Activity*	*Spring Outreach Events*	*Draft Document Public Review*
Web Page Update	X	X	X	X
Social Media Campaign	X	X	X	X
Mention in Public Meeting	X	X	X	X
Email Partners for Place	X	X		X
Email Libraries	X	X		X
Email Schools	X	X		X
Email Municipalities	X	X		X
Email MPO committees	X	X		X
Email TSAP Task Force	X	X		X
Contact LNP News	X	X		X
Contact OneUnited News	X	X		

Style Guide

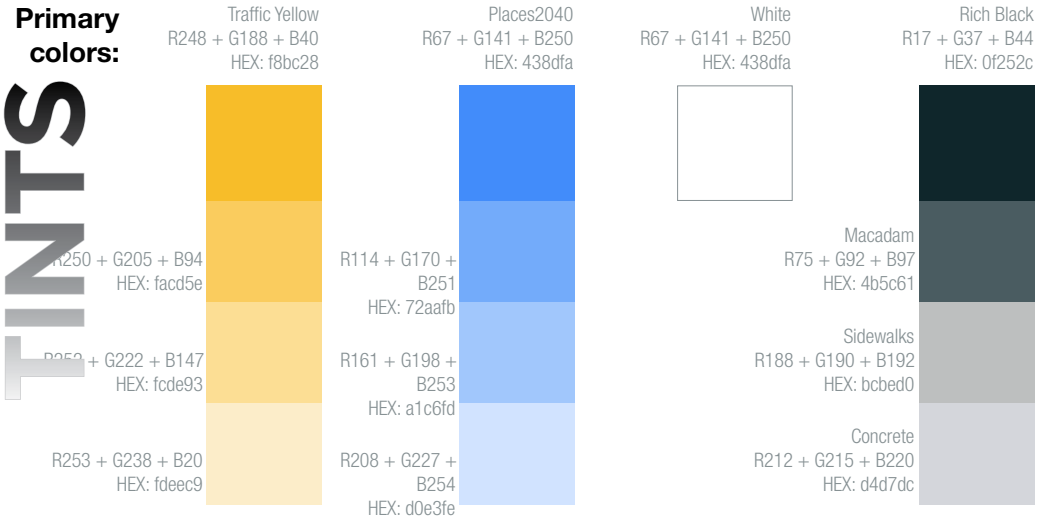
We created a Style Guide for both out outreach materials and plan documents.

Visual Communication

The visual language for outreach materials and the Traffic Safety Action Plan were developed for clarity and communication. Our primary colors, traffic yellow and places2040 blue, carry across a theme of roadway safety while connecting to our comprehensive plan. Typography was chosen for clarity, and we compiled chart designs that focused on readability over technicality. Do not panic – you can still find plenty of technical details in these appendices!

Color Palettes

The color palette draws from the county's transportation and comprehensive plan logos and adds a few more fun colors to liven up social media posts to engage the public.



Our style guide focused on Blue and Yellow to evoke roadway safety.

Walking Snail

Parent Bicycle Snail

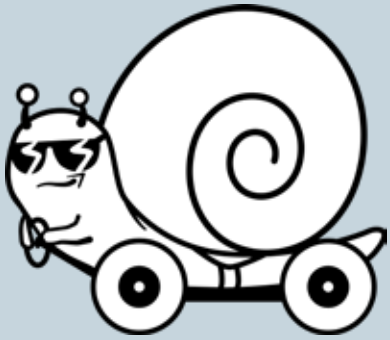
Wheelchair User Snail

Logo and Safety Snail

One problem we immediately wanted to address with the Traffic Safety Action Plan was that traffic safety is, for the most part, a dry and morose topic. We knew for our outreach efforts that we wanted to be able to engage all age ranges and make the materials family-friendly. It was critical for us to stay within a range of tones that made the conversation lighter without cheapening the seriousness of the topic. Our aim was to lighten the initial tone of the conversation from morbid crash data to a more PSA-style safety advert. The TSAP logo was created with a comic-hero style, usually associated with taking action and the safety of the public. A yellow and black caution banner was included to connect to visual cues of traffic construction and safety.

We also created a mascot for the plan to help widen the audience of our plan to a more casual target demographic. Taking inspiration from city mascots in Japan, Baxter the Safety Bug (a mascot we ran into at Farm and Family Safety Day 2024), and PSA posters, we created the Safety Snail. We created 5 versions of the snail to represent different modes of transportation, including a scooter snail to better reflect Plain Sect travel. The Safety Snail, while fun, also functions to send out the messages of “Slow Your Roll” and “Slower Streets are Safer Streets.”

Scooter Snail



Car Driver Snail

Plan Logo

Reflection

Below we will review how we did at accomplishing each of our outreach objectives.

1. Allow community members to share and report roadway safety concerns

   We succeeded in both providing the opportunity for input and in gathering input. The main driver of this success was meeting people where they are – town fairs, mud sales, street fairs, and other community events. Our open houses were the least successful of our outreach events for this reason.

2. Engage under-represented populations in the planning process

   Our ability to engage with under-represented populations has proven to be mixed. We did well in providing materials in multiple languages. We also succeeded in engaging the plain sect community. However, we failed to find paid community ambassadors and focus group participants for the Spanish and Vietnamese LEP language communities. Increasing the number of interviews with our contacts in these communities was a good pivot within the scope of this plan. Our survey had respondents whose median income was higher than the county's median and it also failed to reach a balanced proportion of members from the Black/African American and Latino/Latina/Hispanic communities. Overall, a more robust overall process for engaging with under-represented populations is needed if the MPO is to meet this goal for future plans.

   From our consultants, Connect the Dots:

Strategy Pivot

Connect the Dots conducted interviews with organizations that represented diverse stakeholder groups including older adults without vehicle access, Asian American and Pacific Islander community members, individuals with cognitive and/or physical disabilities, non-English speakers, and newly-immigrated refugees who have resettled in the County. In addition to learning participants' perspectives of traffic safety issues in their communities, Connect the Dots introduced the option for further involvement through virtual focus groups with eight to twelve community members whose primary language is not English. Ultimately, the focus groups were unable to be conducted, and instead, two additional stakeholder interviews were conducted to collect additional insight.

Connect the Dots spoke with staff from Lancaster Downtowners, Lancaster Asian Americans and Pacific Islanders, Disability Empowerment Center, Ephrata Area Social Services, Lancaster Association of Hispanic Pastors, and Church World Services. The community members represented by each stakeholder organization included non-English speakers and non-English readers. The interviews revealed that these community members maintain close-knit bonds within their groups and approach interactions with outside entities cautiously. In moving forward with planning the focus groups, outreach was limited to digital communication methods, including email, phone, and social media messaging. The language barriers and close community dynamics proved incompatible with the digital-only outreach approach, resulting in insufficient response rates and interest within the project timeline to successfully implement the planned focus groups. Face-to-face outreach fostering personal connections would likely have established stronger trust with these communities, as interviews indicated that deeper relationships were necessary to be established to achieve the desired participation levels.

3. Engage community members on potential safety solutions

   We were successful in engaging the public on potential safety solutions through our Phase 2 Spring outreach period.

4. Gather municipal and PennDOT feedback on countermeasures and priorities

   We were successful in engaging PennDOT, municipalities, and other relevant stakeholders through the TSAP Task Force, Municipal Roundtable, and public draft review process.

b. PHASE 1 OUTREACH

For the initial round of outreach, we attended several community fairs and a local mud sale. At these events, individuals could provide input on the plan by:

- Taking our online survey (or filling out a printed copy);
- Participating in a sticker activity; or
- Identifying locations in Lancaster County with known safety issues.

SEPTEMBER 10 – 11 2024	**Denver Fair** Northeastern Lancaster County
SEPTEMBER 18 – 19 2024	**Solanco Fair** Southern Lancaster County
SEPTEMBER 21 2024	**Gordonville Fall Mud Sale** Plain Sect Community
OCTOBER 2 – 3 2024	**New Holland Fair** Eastern Lancaster County
OCTOBER 10 2024	**Manheim Farm Show** Northwestern Lancaster County

In the fall, we provided a map of the surrounding area for people to point out places with safety concerns.

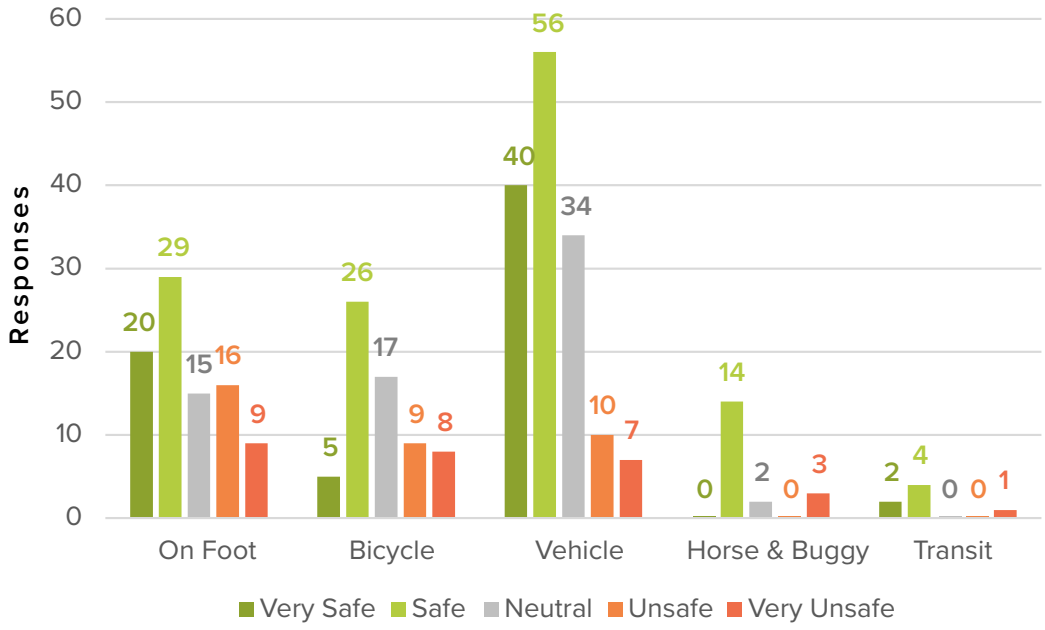
At these five events, we spoke to 583 people, representing 1 person for every 1,000 people who live in the county.

Traffic Safety Experiences Activity

At the tabling events, we did a sticker activity to learn about the level of safety participants felt while using various modes of transportation. Stickers were provided for five different modes of transportation: on foot, bicycle, vehicle, horse & buggy, and transit. Participants were instructed to rate their regular mode(s) of transportation on a scale of 1 to 5 (from very unsafe to very safe). In the end, we had a better understanding of the unique safety issues each region and mode of transportation experiences.

Through this activity, we heard stories from people who have been personally affected by the safety of our roadways. Some individuals experienced a life-changing crash, while others adjusted their habits to avoid particularly dangerous areas. Several participants mentioned that they primarily travel with small electric vehicles, which are often unaccounted for. The use of these vehicles is growing in Lancaster County, especially in Plain Sect communities.

When asked how safe they feel using different types of transportation in Lancaster County, participants said they felt...



Although this data isn't statistically significant, it gives us a sense of how safe participants feel on our roadways.

41% of participants responded that they feel less than safe while traveling in Lancaster County. Individuals in vehicles or taking transit were more likely to feel safe (or very safe) when compared to those traveling on foot or by bicycle. Without airbags or crumple zones, Vulnerable Road Users are at a higher risk to be involved in a life-changing crash.

We attended the Gordonville Mud Sale to learn more about Plain Sect travel in particular. Compared to the fairs we attended, participants at the mud sale generally felt safer while traveling. Many of these individuals primarily travel by horse & buggy, which may contribute to the safety they feel on roadways (compared to those on foot or using a bicycle/scooter).

Fall Open House

In the fall, we hosted a public open house where we shared the countermeasures for this plan. We took comments on the countermeasures and provided an opportunity to participate in the public survey or comment on a countywide road map. Through these activities, LCPD staff facilitated many conversations with the public about traffic safety needs in Lancaster County.

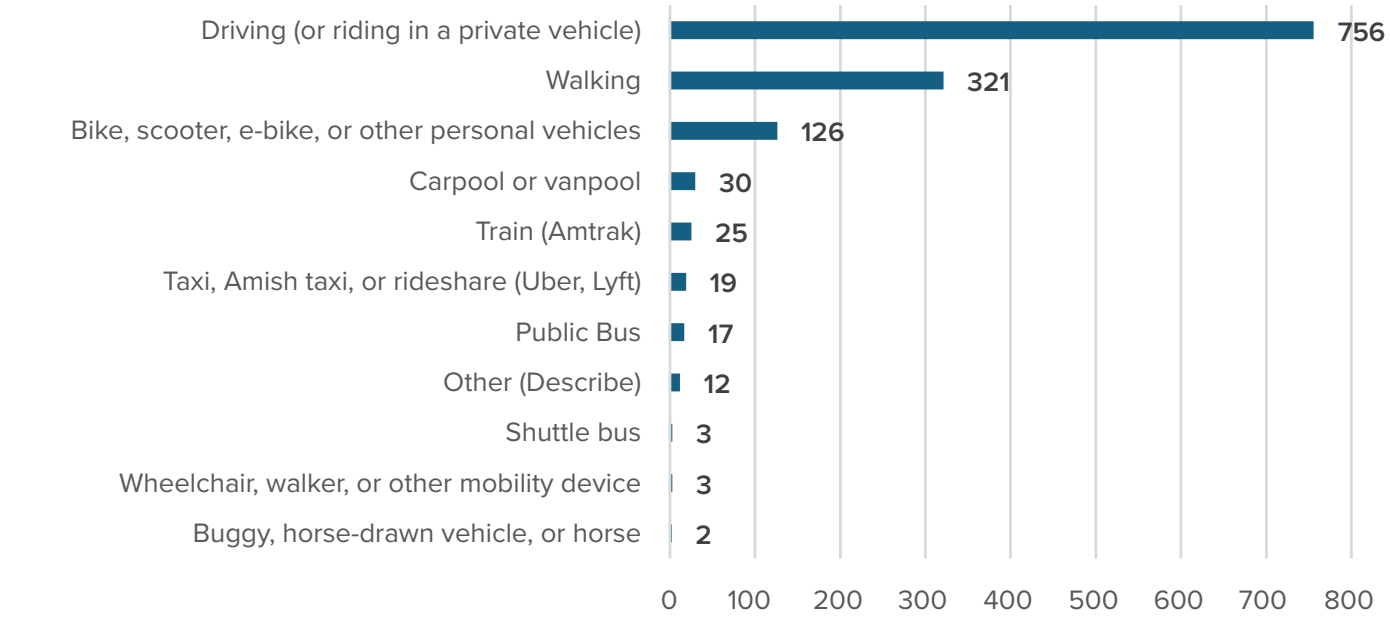
At the open house, LCPD staff provided an overview of the data that supports our countermeasures and High Injury Network. Attendees wanted to learn more about what contributes to crashes, how road improvements are made, and how a road goes from unsafe to safe. Through this discussion, we were able to touch on implementation and the community partners who will help us achieve our goals.

Survey

Through the survey, we also learned more about the perceptions people have of traffic safety. Although driver behavior was seen as a bigger contributor to safety than road design, many participants noted locations that had serious, recurring safety issues. Drivers changed their behavior to feel safer by avoiding certain roads, traveling at specific times, or skipping certain destinations. Other road users, like bicyclists, only traveled on trails due to safety concerns on roadways.

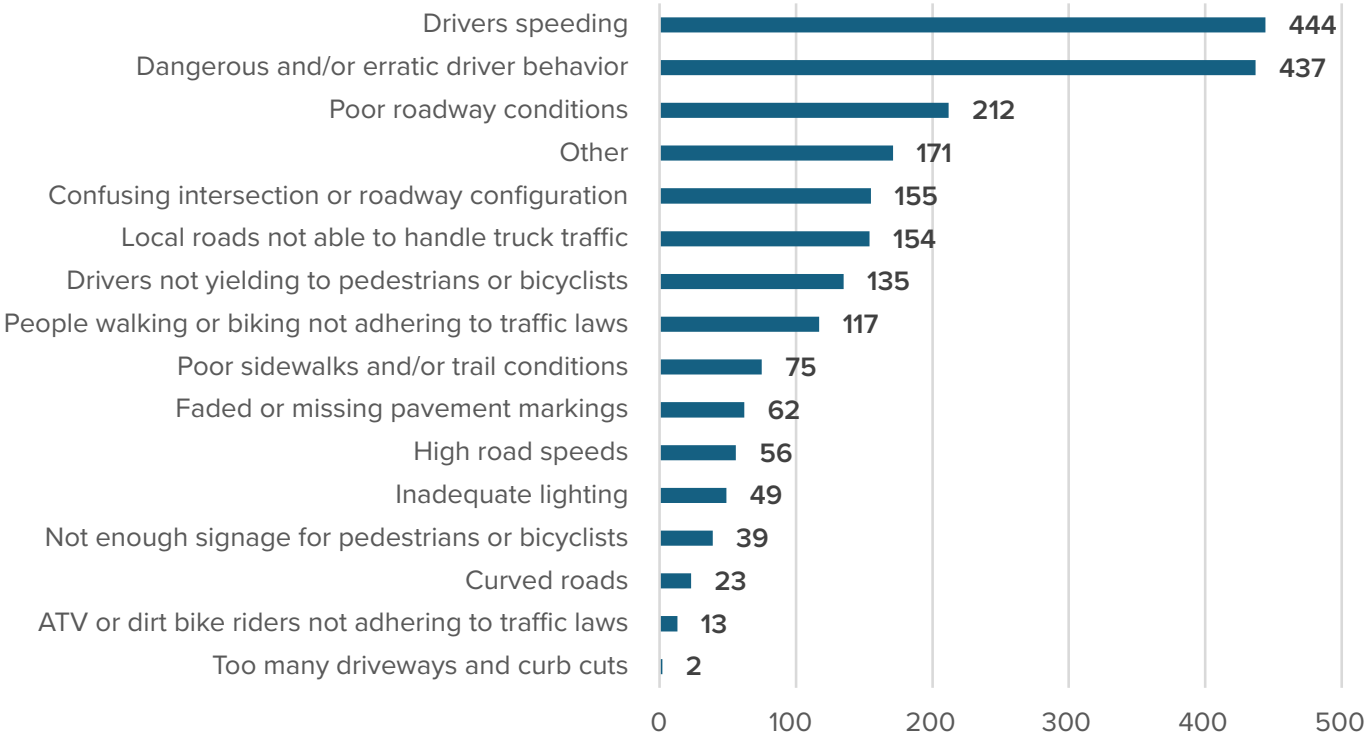
1 in 7 participants had a friend or family member injured or killed in a crash, and about half as many were personally injured. Traffic safety issues also caused financial pain, with several people mentioning they've had their property damaged by drivers.

How do you usually get around Lancaster County? Choose up to 3.



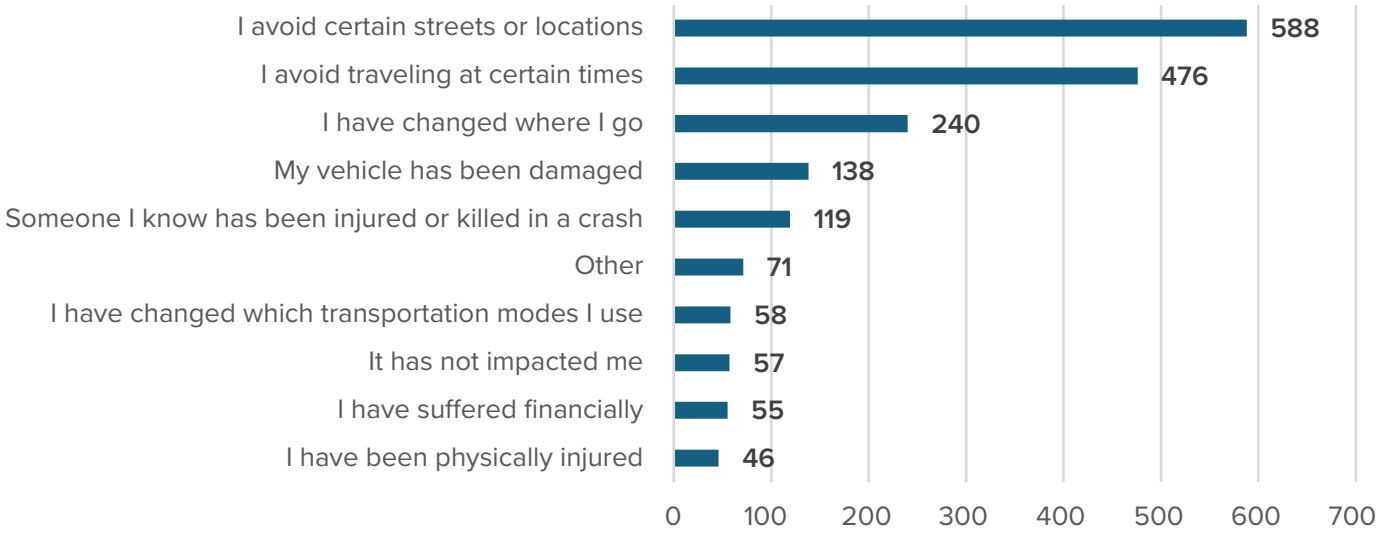
Driving is a more common way to get around than walking and biking combined.

What are the most significant transportation safety issues facing Lancaster County? Choose up to 3.

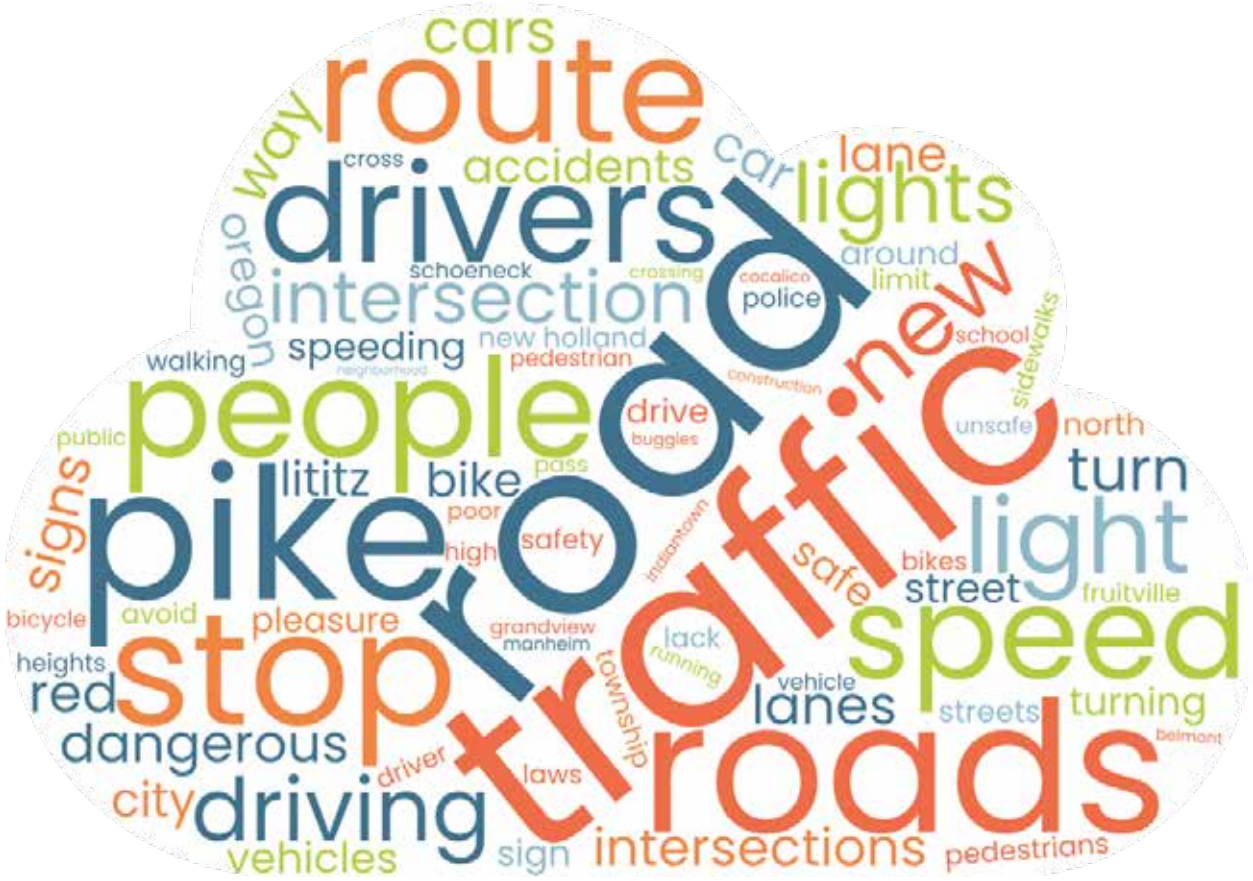


Participants saw driver behavior, including speed and unpredictability, as the biggest transportation issue in the county. By comparison, high road speeds (one of the most important factors in crash severity), ranked much lower.

How have traffic safety issues impacted you? *Select all that apply.*



Many participants are personally impacted by traffic safety. A smaller number have been hurt, or know someone who was injured in a crash.

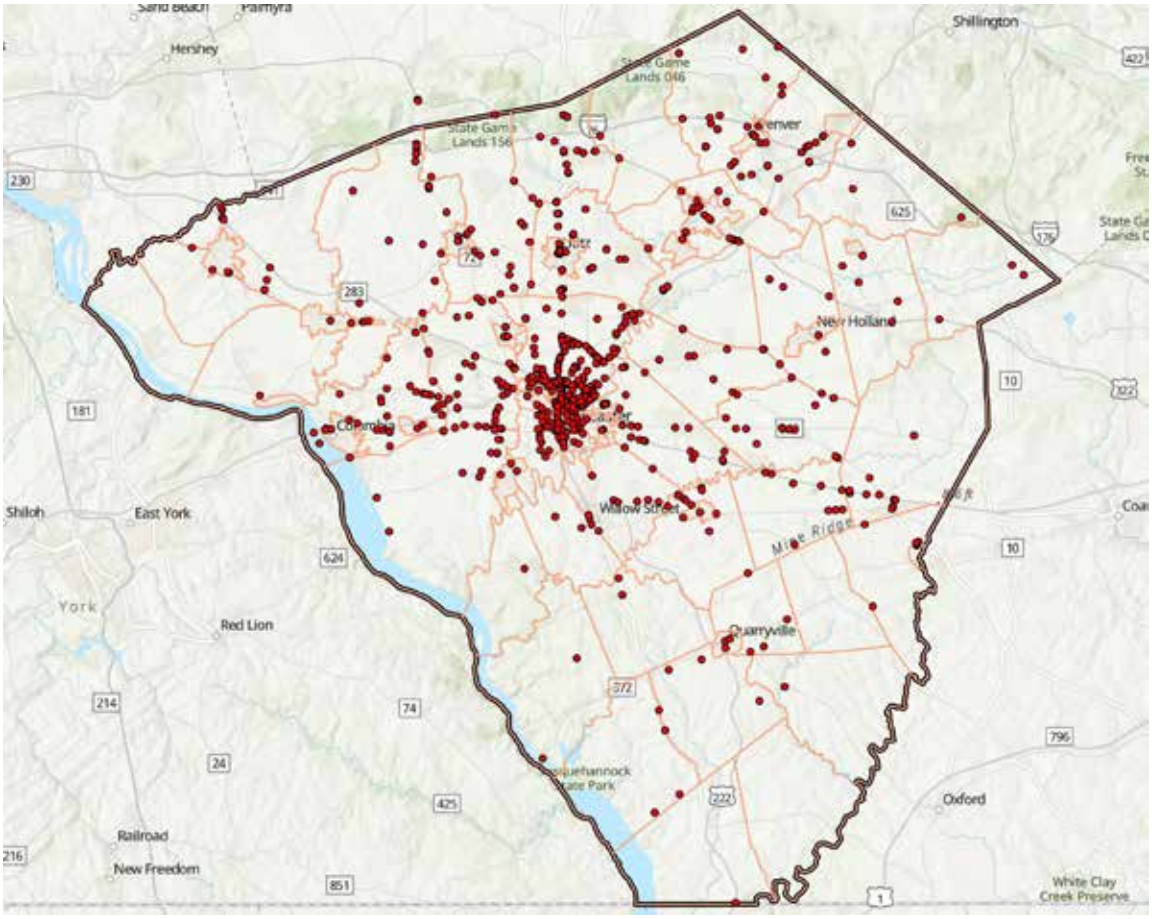


The most common words received via comment, with a larger size indicating more responses.

Summary of Comments

Through the survey and outreach events, we received 1,053 total comments. The following topics were frequently mentioned:

- "Drivers" was the most common word describing the cause of an issue, with 200 mentions.
- 95 comments mentioned speeding as an issue. Some identified areas where road design, such as curves and lane widths, made speeding and passing quickly more dangerous.
- 64 comments mentioned congestion, which creates hazards if vehicles are forced to slow down quickly.
- 55 comments provided specific intersections where stop signs and traffic signals would be helpful to prevent crashes.
- Other comments frequently mentioned high truck traffic and the lack of speed limit enforcement.



Many comments mentioned specific road locations where people feel unsafe traveling. We reviewed the comments received, and this is what we heard from people:

US 30 / Lincoln Highway – 66 mentions

- Merging lanes are dangerous due to the speed of oncoming vehicles.
- Cars consistently go 70 mph, regardless of the speed limit.

Grandview Heights / Pleasure Road / New Holland Avenue – 56 mentions

- Intersection at Pleasure Road and New Holland Avenue could use better turning lanes and signals.
- Drivers speed through residential areas.

Schoeneck Road and Indiantown Road Intersection – 44 mentions

- The intersection of Schoeneck Road and Indiantown Road – just outside the town of Schoeneck – needs a traffic light or 4-way stop, as there are several crashes a month.
- Drivers on Schoeneck Road regularly speed, and are often going 10+ mph over the limit when approaching the intersection.
- On Indiantown Road, drivers often miscalculate the speed of drivers on Schoeneck Road and pull out without enough space or time
- Indiantown Road also has sight issues, with crops, a tree, and a house blocking the view to turn.

PA 501 / Lititz Pike – 39 mentions

- PA 501 in Manheim Township is one lane traffic each way with a narrow shoulder, so there is no safe place for bicyclists.
- Car volume is too high for the current road widths.

US 222 – 33 mentions

- Speeding and aggressive lane changing when reaching US 30 (currently under construction at US 30).

Lancaster City – 30 mentions

- Drivers speed and lanes are too narrow in some places.

c. PHASE 1.5 OUTREACH

Stakeholder Interviews

Connect the Dots conducted seven stakeholder interviews with members of key stakeholder organizations representing a variety of stakeholder groups in Lancaster County, Pennsylvania.

The purpose of the interviews was to (1) understand how community members typically travel around Lancaster County, (2) understand the challenges people face when traveling around the county, and (3) learn how the project team can stay connected with the community regarding this project.

Additionally, the interviews served to initiate a point of contact between the project team and each stakeholder organization, ensuring that communication can be maintained as the project moves forward. Stakeholders will be updated on engagement opportunities, including focus groups, pop-ups, and community meetings, and will receive project information they can share with their communities.

Connect the Dots spoke with staff from Lancaster Downtowners, Lancaster Asian Americans and Pacific Islanders, Disability Empowerment Center, Ephrata Area Social Services, Lancaster Association of Hispanic Pastors, and Church World Services. The

organizations that participated in the interviews represented the following stakeholder identities and demographic subgroups:

- Older adults without access to a private vehicle or the ability to operate a vehicle
- Asian American and Pacific Islander community members
- Hispanic and Latino community members
- Those living with a cognitive and/or physical disability
- Community members whose primary language is not English
- Newly-immigrated refugees from multiple countries that have resettled in the County

Interview Questions and Guide

Each interview lasted up to 45 minutes and was held virtually via Google Meet or over the phone. Each interview was recorded for maintaining the accuracy of the notes taken. Two Connect the Dots staff attended each interview; one staff member facilitated the interview while another staff member took notes.

Participants were initially briefed on the intent and purpose of the interview and the Lancaster County Traffic Safety Action Plan. While each conversation was fluid and fluctuated around particular questions and was guided by topics brought up by the interviewee, the general questions of this session included:

Each question was followed by an open space for conversation and discussion. Interviewees responded verbally and offered a plethora of thoughts, questions, and feedback. Connect the Dots reviewed and aggregated the gathered information into key takeaways.

Key Takeaways

- Community members travel around Lancaster County to access **everyday essential services** that are standard components of life.
- People using sidewalks while walking or rolling are faced with **uneven sidewalks, missing sidewalks,** navigating shoulder lanes, and dangerous conditions when crossing the street.
- Cyclists and those using mobility devices are faced with a **lack of continuous infrastructure,** dangerous motorist behaviors, and blocked bike lanes.
- Drivers operating private vehicles experience difficulty safely passing Amish buggies and scooters, having enough **visibility to see pedestrians** waiting to cross the street, and traffic congestion that increases frustration and encourages dangerous driving behaviors.
- Public transit riders experience uncomfortable or unsafe conditions waiting for the bus, infrequent bus pickup times, **difficulty understanding how and where the bus operates,** and limited access to destinations outside of the City via public transit.
- Community members **receive information through local news outlets** including WGAL, WITF, and LNP; they hear about happenings through Facebook, WhatsApp, word of mouth, and at their local places of worship.

d. PHASE 2 OUTREACH

In the spring, we attended four community events and held one open house. Two of the events were related to Plain Sect transportation, and the other two were open street fairs. Since these events occurred later in the plan development, our goal was to gather input on the HIN and the suggested countermeasures. At each event, we based the HIN activity on the local area. During this round of outreach, we engaged with 280 people.

APRIL 5, 2025	**Farm & Family Safety Day** Eastern Lancaster County **HIN Locations Reviewed** • PA 340 in Bird-in-Hand • PA 340 in White Horse • PA 897 at Buena Vista Road
APRIL 26, 2025	**Robert Fulton Fire Co. Horse & Book Sale** Southern Lancaster County **HIN Locations Reviewed** • US 272 (Lancaster Pike) • US 222 (Robert Fulton Highway) • Little Britain Road & Black Road
APRIL 30, 2025	**Open House (Lititz)** Northeast Lancaster County **HIN Locations Reviewed** • Lincoln Highway East • Columbia Avenue • Chester Road
MAY 10, 2025	**Lancaster Open Street** Metro **HIN Locations Reviewed** • PA 23 (East Chestnut Street) • Harrisburg Pike • Marietta Avenue
MAY 17, 2025	**Marietta Day** Northwest Lancaster County **HIN Locations Reviewed** • PA 441 (River Road) and North Bridge Street/ Old Colebrook Road • PA 23 (Marietta Avenue) and Kinderhook Road • PA 772 (Anderson Ferry Road)

High Injury Network Activity

During this round of outreach, we gathered feedback on how to address safety issues at different locations on our HIN. At each event, we featured three nearby HIN locations, and provided crash data and maps for context. Participants were provided cards with profiles of the countermeasures and instructed to place them in envelopes identifying whether they thought they "would work well" or "would not work well". In the end, we received feedback on 15 HIN locations.

The data collected from this activity provides insight into the public's perception of countermeasure effectiveness for the locations identified, as well as similar locations. Although different countermeasures were identified as the most effective at each location, a few trends arose:

- Roundabouts, signage for upcoming stop signs, and crosswalks are popular ways to reduce speeds at locations with high crashes, even in the Plain Sect communities we talked to.
- Speed limit is seen as ineffective at reducing speeds on its own. Physical changes, such as medians and curb bump outs, are needed to support speed limit changes.

Participants were shown a local road from the HIN with crash data from the last five years for context. Profile cards of countermeasures were used by participants to identify the safety issues that may be most effective in these locations.

Limited English Proficiency (LEP)

Lancaster County Planning and the Lancaster County MPO have an adopted LEP plan that guides the application of translation and interpretation of planning materials. The Traffic Safety Action Plan was used as an opportunity to create a new standard for the implementation of this plan. According to the plan, we are required to provide access to translations of public engagement materials in Spanish and Vietnamese. It also requires additional intentional outreach to the Plain Sect community as a result of the amount of PA German/PA Dutch speakers in the county.

Spanish and Vietnamese Language Engagement

Outreach to Spanish and Vietnamese language communities was planned to occur through three strategies:

1. Hiring Community Ambassadors to do outreach to these language communities using stipends.
2. Holding a focus group in each language to discuss the unique transportation issues of these language communities.
3. Translating Public Engagement materials into Spanish and Vietnamese.

We were unable to complete the first two of these strategies after running into dead ends with our professional contact in these language communities, the Spanish American Civic Association and Lancaster AAPI. However, we were able to engage in in-depth professional interviews to learn more about these communities.

Posters for the Spring Open House in Spanish and Vietnamese

Translation was completed through the consultant, a practice that we use to manage irregular translation costs. The following list of materials was translated into both Spanish and Vietnamese:

- Advertising materials, such as social media posts, graphics, and posters
- Activity boards used in engagement activities
- Web pages, graphics, and updates

The public input period for the draft document did not have translations available, as our consultants were on a budget freeze as a consultancy-hours managing practice.

The Executive Summary, to be published in 2026, will be released in English, Spanish, and Vietnamese.

SEPTEMBER 21, 2024	**Gordonville Fall Mud Sale** A general auction for farm equipment, quilts, lumber, and plants. We held a one-time activity asking about people's experiences driving horse & buggies.
JANUARY 23, 2025	**Amish Safety Committee Meeting** Organized by Penn Medicine Lancaster General Health, local Plain Sect leaders meet to discuss safety issues related to the farm, maternal care, and roads. We reviewed the comments we received during the mud sale with the committee, including conversations about shoulder widths and reflectors.
APRIL 5, 2025	**Farm and Family Safety Day** An annual, educational event held by the Amish Safety Committee. We received feedback on suggested countermeasures and discussed the Horse & Buggy High Injury Network Map.
APRIL 26, 2025	**Robert Fulton Fire Company Horse & Book Sale** The place to be to buy a horse for the upcoming farming season! We chatted at length about our suggested countermeasures with attendees.

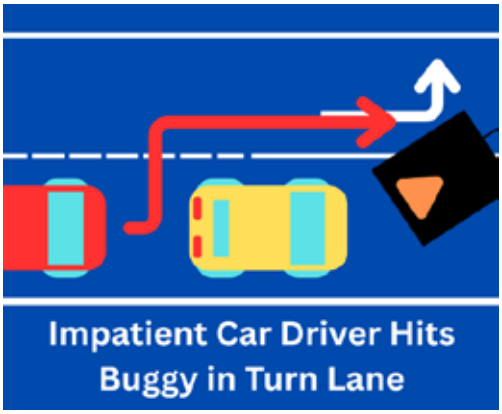
Plain Sect Engagement

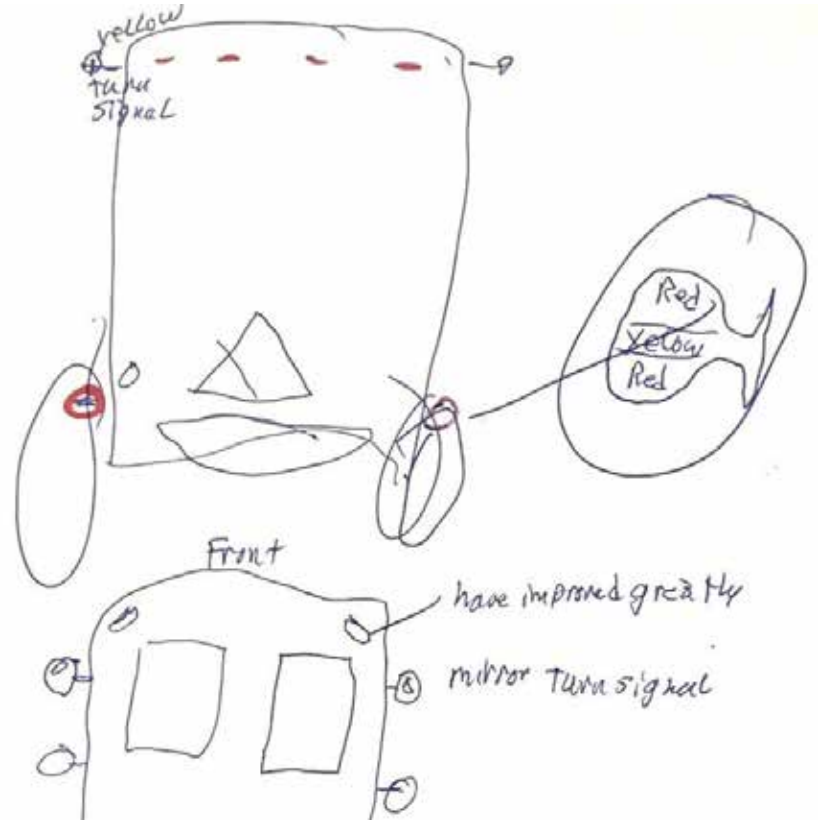
As part of our outreach for this plan, we wanted to identify the unique safety needs of the Plain Sect community in Lancaster County. Individuals in these communities often commute in uncommon ways, relying on horse & buggy, scooters, or carpooling in the form of Amish taxis. To gather input from this unique demographic, we attended four events between September 2024 and April 2025.

At these events, we learned about the travel habits of the Plain Sect community in Lancaster County. Many individuals travel across the county by buggy, sometimes taking hours-long trips. Traveling at night is fairly common, and Sunday nights are the busiest for buggy travel. Scooters are a common alternative – electric scooters with high speeds are becoming more popular. Commercial travel by motor vehicle is also common, depending on the church district.

Some of the key takeaways from our Plain Sect outreach were:

- Road design plays a major role in the safety of buggy travel. Vehicles traveling at high speeds are dangerous for buggies.
- Roundabouts are seen as a good solution to high-speed intersections, which are often a barrier for buggy drivers.
- Buggies are typically forced to travel on shoulders, which are especially dangerous. Vehicles using the shoulder to pass other vehicles may hit buggies from the rear at high speeds.
- Wider shoulders accommodate buggies better, but they also encourage vehicles to use the shoulder when passing other vehicles.
- Shoulders are also often maintained less than road lanes and can have pits or drop-offs. Shoulder quality should be higher in areas with frequent buggy travel.
- Visibility is also critical for the safety of buggies. The horses are set far ahead of the carriage, leading drivers to see them later than the front of a vehicle. This is particularly dangerous at night, around corners, or under bridges.
- Reflectors on the horse's brow band and the back and sides of the carriage can help make a buggy more visible to vehicle drivers.
- Reflective or flashing turning signals can also help reduce crashes in turning lanes, which face similar conditions as shoulder crashes.





We received a lot of feedback on how to make buggies and horses more visible to drivers, including this drawing of an extended lefthand turn signal.

e. ADDITIONAL RESOURCES

This plan was written with additional resources in mind, created by our partners to engage the community on transportation safety.

- **Lancaster Vision Zero Action Plan – City of Lancaster**
  https://visionzerolancaster.com/
  A sibling plan to this plan, the City of Lancaster's *Vision Zero Action Plan* aims to have zero traffic deaths and serious injuries in the city by 2030.

- **New Neighbors Comprehensive Plan – Church World Service Lancaster**
  Based on a series of community meetings, this plan outlines feedback gathered from various immigrant communities about the city's comprehensive plan, including discussion on transportation.

- **Engage Lancaster – City of Lancaster**
  https://engage.cityoflancasterpa.gov/
  The City of Lancaster's official public participation platform.

APPENDIX B
PUBLIC FEEDBACK ON DRAFT DOCUMENT

Overview

The first draft of the Traffic Safety Action Plan was available for review from August 1, 2025 to August 31, 2025. The public review was advertised through social media, website updates, and a press release.

Comments were received via email, via a form available on the website, and via the comments section of social media posts. The response to these comments lead to a major overhaul of the plan for its current and final draft.

Responses to Received Comments

ID	Source	Text	Response
1	Site	An additional design intervention: narrow overly wide travel lanes. NACTO guidebooks make clear that 10 feet is sufficient lane width in urban environments. Lime St at Grant St (PA 272) handles truck and bus traffic with only 9 foot wide travel lanes! We know that excess lane width in urban environments encourages speeding. Public input addressed driver speeding as the #1 concern, and enforcement tools are limited in PA. It is so important to narrow the overly wide travel lanes in our urban environments. A cheap way to narrow overly wide travel lanes is by painting conventional bike lanes. For instance, painting bike lanes is a clear solution for New Holland Ave at N Reservoir St. Though the posted speed limit is 25 mph, the 15 ft wide travel lanes permit speeding.	Thank you for the comment! Yes, the plan includes potential traffic calming treatments, such as bicycle lanes. We clarified "Lane Redesigns" could include narrowing travel lanes, not only reducing the number of travel lanes.
2	Site (FHWA)	Bill Houpt, FHWA: I agree, it would be necessary to meet the requirements of the SS4A program, but I think the primary goal or purpose of the plan would be to serve as a planning document to help develop projects that will have a significant impact on eliminating fatal and serious injury crashes. Maybe consider working something like that into your purpose statement. Nothing is wrong the way it is though, just a suggestion.	Purpose section rewritten to focus on impact on fatal and serious injury crashes.
3	Site	Page 45 has a highlight referencing a page # in the Appendix, but the page number is missing.	Corrected with publication of this Appendix.
4	Site	If the city decides to turn major one way streets into two way streets, please consider the safety of pedestrians crossing those streets when traffic is coming both ways. May need to install push buttons for walk and don't walk.	Taken into consideration. No change in plan details.
5	Site	Trail crossings, specifically in Warwick, Ephrata, and Lititz. I don't know who thought flashing lights was a good idea. They confuse drivers (who have the right of way) and many stop in the middle of travel to allow bikes and pedestrians to cross. This is DANGEROUS. Pedestrians and cyclists now EXPECT traffic to stop (yes, I know signs say otherwise, but I've run across a few people who gave me the finger for not stopping). When I'm on the trail, I try to wave motorists along because I don't want to be in front of a stopped vehicle when the guy behind him rear-ends him, this pushing him into be.	Flashing light crossings have a proven record of increasing safety, but we will keep our eye on the data related to this countermeasure as well as new design recommendations. No change in plan details.

ID	Source	Text	Response
6	Site	Very disappointed that Lancaster County is not establishing a more aggressive Vision Zero Goal. One traffic fatality or serious injury is one too many. A 20% reduction by 2040 is too conservative and not enough. It is essentially saying you are OK that some people are killed on the roadway. I do hope the projects that are implemented will promote safer and more accessible biking/walking throughout the County.	Vision Zero is an important aspect of this plan. These safety targets were established with review and input from the Traffic Safety Action Plan Task Force in the context of existing transportation funding structures, in which road projects are rotated and can take decades to be completed. The goal we set is the ambitious option within this context, and will require an increase to staff hours dedicated to this plan as well as applying for additional grant funding.
7	Site	Variable speed limit signs on US 30 and PA 283 through “the weave” basically from PA 741 to PA 23 seem like a sensible and relatively low cost improvement. Speed limit on US 30 should be raised to 65 mph from PA 24 in York County to PA 741 and then strictly enforced. Almost nobody drives 55-65 in that section and the artificially lower speed limit just creates contempt for ALL speed limits. A raised speed limit MUST be accompanied by strict enforcement.	Enforcement preference noted. No change in plan details.
8	Site	Variable speed limit signs on US 30 and PA 283 through “the weave” basically from PA 741 to PA 23 seem like a sensible and relatively low cost improvement. Speed limit on US 30 should be raised to 65 mph from PA 24 in York County to PA 741 and then strictly enforced. Almost nobody drives 55-65 in that section and the artificially lower speed limit just creates contempt for ALL speed limits. A raised speed limit MUST be accompanied by strict enforcement.	Enforcement preference noted. No change in plan details.
9	Site	I think you should speak to the National Motorists Association. I have seen many anti-driving ideas spreading locally. Many people seem to be going the wrong way on these things.	Not safety related. No change in plan details.
10	Site	The largest problem is speed. Petition the States legislators to allow local law enforcement officers the use of radar. It does not matter how, or at what speed, you post a speed limit as long as it is not enforced!! Drivers today seem to realize they can drive as fast as they please without consequences as they know State police presence is very limited.	Enforcement preference noted. No change in plan details.

ID	Source	Text	Response
11	Site	PDF WAS VERY WELL PUT TOGETHER! Do not change the speed limit to lower it based on conditions. This will automatically increase traffic all throughout the highways. The reduction will cause more confusion. The 30 intersection under construction is dangerous because of all the exits and construction. Not enough lanes and time to switch during heavy traffic time.	Thank you for the comment! Our consultant engineering staff recommended variable speed limits as a potential countermeasure for the three Priority Project locations on limited access highways where there are a significant number of rear-end crashes with people are killed, seriously injured, or injured. Variable speed limits are a Federal Highway Administration Proven Safety Countermeasure, which means they have been researched and found to be effective at reducing serious injuries and fatalities, which is the goal of the Traffic Safety Action Plan. https://highways.dot.gov/safety/prov en-safety-countermeasures/variable-speed-limits Any Priority Project locations and proposed countermeasures would require further engineering design and study.
12	Site	The biggest problem is NOT using radar to ticket speeders, all the time (not just occasionally). This would not add any additional cost but would increase income.	Enforcement preference noted. No change in plan details.
13	Site	The curb extension at these The curb extension at these intersections makes it impossible for a car to turn without going into the on coming traffic lane. That is not safe; it makes a car stop to allow the on coming car to clear the intersection first. I was almost rear ended! i.e. turning right from N Duke onto E Ross is very bad. The curb extension is too far out and not even rounded. What can be done about the persistent excessive speeding on Rt 30 especially between Rt 741 and Rt 222? Have been cut off twice and had to slam on my brakes to prevent an accident. Aren't there overhead speed traps that could be used?	For the first half, curb extensions have a proven record of increasing safety, but we will keep our eye on the data related to this countermeasure as well as new design recommendations. For the second half, we have adopted Speed Safety Cameras as a countermeasure. See: https://highways.dot.gov/safety/prov en-safety-countermeasures/speedsafety-cameras. No change in pla n details.
14	Site	It is not signage that is needed it is enforcement!!! I travel these roads constantly and the way people drive is insane. The posted speed limits mean nothing without enforcement.	Enforcement preference noted. No change in plan details.

ID	Source	Text	Response
15	Site	In my opinion, it is a complete waste of money to install variable speed limit signs. The problem is very few people currently observe the posted speed limits on any of our roads and they will not observe these either. Any future money would be much better spent on SPEED ENFORCEMENT. When I drive on Rt. 222 and go the speed limit, I am passed by virtually every car on the highway. When I walk in our and surrounding neighborhoods with a 25 mph speed limit, many cars are exceeding it. When I drive on nearby two lane roads with a 35 mph speed limit, the car behind me is right on my bumper because I am going to slow for them. Who is responsible for not allowing our local police departments to use radar? Why can we not have active speed cameras on our highways? PaDOT uses them in active construction zones on the PA Turnpike but they are only in use intermittently. Maryland has full time active speed enforcement cameras on I-695. Who is behind preventing better enforcement of our current speed limits?	Enforcement preference noted. No change in plan details.
16	Email (former staff)	• p.16 - line 6, “was” to “were”. • p.16 - next paragraph, is “tabling supplies” plain language enough without any explanation? However, it appears later in a more understandable context. • p 21 - first line under Fall Open House introduces the term “countermeasures”. Is it defined before this? • p.22 - word missing in the last sentence before Traffic Safety Survey section. • p.24 - “Some” I know should be “Someone” in the second list. • p.29 - Municipal Round Table, line 4, “group” should be “groups”. • p.36 - “Elderly” (75+) - OUCH!! Hah! • p.59 - last line before section on Available TIP Funding. I believe in this context, the preferred spelling of “programed” is with two m’s. • p.61 - Are we actually aware that other MPOs have set their own targets? Wait.....I know, Will did it in York, right? • p.64 - Map; does the different weighting of the blue and yellow lines create any confusion? • p.65 - Under Priority Projects, the 10% is cumulative? • p.67 - Some of the project costs don’t exactly match the category they’re in. Does it matter or need to be explained? • p.68 - line 6, “RSAs involve” rather than “involves”. • p.68 - line 11, Should it be “amount” or “number”? • p.68 - next to last line under RSAs, “MPO should consider creating” rather than “consider a creating”. • p.71 - Visible Traffic Signal graphic, typo under Safety Benefits; also a typo under Lane Redesigns, Safety Benefits. • p.73 - Municipal Roundtable - How about “install, repair, and maintain.....”	Most concerns directly changed. No graphics were changed per scope of draft revision.

ID	Source	Text	Response
17	Email (Penn-DOT)	Pg. 60: In preparing for the development of future TIPs, the Lancaster County MPO should consider bundling or grouping smaller geographic area candidate projects into larger candidate projects for more competitive scores and desirable project scopes. The Lancaster County MPO should also try to identify systemic safety improvement projects or the same project type or scope at multiple locations throughout Lancaster County. o Comment: District Staff support the creation of more systemic-style projects. This would help to streamline project scoping and programming for placement onto the Regional TIP/TYP. This approach would also help to increase the number of safety improvements being made throughout Lancaster County. • Pg. 60: The Lancaster County MPO should review other TIP candidate projects on the High Injury Network (HIN) to identify opportunities to incorporate lower cost safety improvements in routine maintenance projects, such as road resurfacings. All TIP candidate projects – new construction, improvement, or maintenance – should consider the need and potential opportunities to improve road safety, not just "safety projects". • *Comment:* The District would support the opportunity to incorporate more safety improvements into projects, where feasible.	Thank you for the comments! We appreciate your support for recommended changes to the Transportation Improvement Program (TIP) project selection and programming to prioritize safety. We did not change the plan implementation proposed performance measures because the intent is still collaboration and outreach with others, even if we go through the PennDOT District 8-0 Planning and Programming Unit. Also, we would like to discuss and explore the opportunity to address High Injury Network locations through County Maintenance projects with minor scope changes, as noted.
18	Email (City)	Number each section/chapter.	Each chapter has been assigned a number and each section has a letter within that number.
19	Email (City)	Number/letter/uniquely identify each recommendation for ease of reference.	Recommendations have been numbered.
20	Email (City)	Will there be an executive summary?	Yes! To be published as a Story Map in early 2026.
21	Email (City)	Introduction/Background/3rd paragraph - states that the MPO is staffed by both LCPD and SCTA - I was not aware that SCTA staffs the MPO, though they participate as members on it. Just double-checking that this is accurate?	Thank you for the comment! Yes, the MPO is staffed by both the Lancaster County Planning Department (LCPD) and South Central Transit Authority (SCTA). The MPO's work program called the Unified Planning Work Program (UPWP) includes transit planning tasks that are performed by SCTA staff. You can view the current UPWP on our website here: https://lancastercountyplanning.org/DocumentCenter/View/6325/Lancaster-County-MPO-2025-2027-UPWP-January-2025

ID	Source	Text	Response
22	Email (City)	the Safe System Approach it minimizes crashes and minimizes the impact of crashes (as opposed to prevent crashes).	Thank you for the comment! Yes, according to the USDOT website, "the Safe System Approach prevents crashes from happening in the first place and minimizes the https://www.transportation.gov/safe-system-approach.
23	Email (City)	While meeting the regulatory requirements is important, we believe the stated purpose should be to save lives & This section should identify the magnitude of traffic safety issues in the county at a high level, and explain why this is an important issue for our county.	Purpose section was rewritten and this paragraph was grouped with SS4A grant details as a more appropriate context.
24	Email (City)	Two out of four paragraphs address the Plain Sect - this section almost makes it seem as if it's a Plain Sect safety document, when really in reality it's broader and all-inclusive.	This section was condensed and recontextualized.
25	Email (City)	This section should describe and define "Vulnerable Road Users" (the term does not appear to be defined until you get to the Performance Measures on pg. 79).	The term is now defined in this section.
26	Email (City)	Short-term (2040) - add something about incorporating safety countermeasures into road construction projects.	Added the following to the short term goals: "Incorporate safety countermeasure in the TIP project selection process."
27	Email (City)	Engagement section is important, but could probably be shortened/condensed to highlight key findings or new information - with remaining details to go in an Appendix.	Section significantly shortened. See Outreach and Engagement Appendix for additional details.
28	Email (City)	difficult to see these important maps, even when I'm zooming in on my screen - please enlarge.	These maps will be made more legible and explorable in the Executive Summary Story Map
29	Email (City)	Safety Analysis - It might be helpful to mention that urban areas cover many of the major highways and see substantially more VMT (higher AADT) than rural areas (talk about rate/VMT). And that Urban Areas are not only the city and boroughs and villages, it is the area between along highways.	Thank you for the comment! The Traffic Safety Action Plan does not enter into this level of detail.
30	Email (City)	may also be worth noting differences in modal distribution between urban/rural areas - urban areas tend to have more pedestrians & bikes, thus it makes sense they would have more crashes involving those modes. (Recognizing it's hard to get clear data on this!)	Thank you for the comment! The Traffic Safety Action Plan does not enter into this level of detail.

ID	Source	Text	Response
31	Email (City)	Causation - Crash Type – the first sentence - Angled and fixed object crashes, the top two crash types, account for 36% and 28% of all FSI crashes, respectively.	Thank you for the comment! This change was made in the Traffic Safety Action Plan!
32	Email (City)	Any relationship between roadway speed limit & # of FSI crashes?	Not in the scope of this plan to analyze – could be a future analysis.
33	Email (City)	interesting that in rural areas high injury segments tend to be associated with intersections, even though on page 42 we see that only 32% of rural FSI crashes are at intersections (42% in urban areas). Why is this?	Thank you for the comment! The statement "in rural areas, 32% of FSI crashes are at intersections" on p. 32 refers to all crashes in rural areas, while the statement on p. 36, "In rural areas, high injury segments are associated with intersections"refers to crashes in rural areas within the high injury network segments, not all rural crashes.
34	Email (City)	the purpose of Takeaways is not exactly clear, and a couple are very subjective.	Recommendations have been numbered and distinguished from "what we heard" – "takeaways" language removed.
35	Email (City)	Bike Club & Lancaster Bikes! efforts around bicycle education?	Thank you for the comment! The Traffic Safety Action Plan does not enter into this level of detail.
36	Email (City)	Recognizing there could be some politics at play here...we encourage the goal on pg. 58 to be "eliminate" rather than "significantly reduce or eliminate."	Language of plan changed to "significantly reduce towards the goal of eliminating"
37	Email (City)	TIP Funding Eligibility - First sentence is sort of a negative way to phrase this - wouldn't it just be "Federal funding must be spent on projects that meet the program requirements" or something similar? Any more information that can be provided about TIP eligibility requirements?	The section was changed to be more direct.
38	Email (City)	Lancaster ATP – the next SAP should recognize this plan as well as other municipal safety plans (City of Lancaster's *Vision Zero Action Plan*).	Thank you for the comment! Yes, the next Lancaster County Traffic Safety Action Plan will recognize any relevant Lancaster Active Transportation Plan (ATP) updates as well as any municipal safety plans, such as the City of Lancaster's *Vision Zero Action Plan*.

ID	Source	Text	Response
39	Email (City)	For the purposes of the HIN, Prioritization would the County identified City corridors or Cityidentified corridors be used?	Thank you for the comment! The High Injury Network prioritization discussed here refers to prioritization of the County identified High Injury Network, which included corridors in the City of Lancaster. We did not refer to the City of Lancaster *Vision Zero Action Plan* High Injury Network.
40	Email (City)	3rd paragraph - I do not understand how we got from 60 segments, to 16 segments with projects, and then somehow up to 73 segments? Can this be explained more?	Thank you for the comment! We identified more locations for potential projects after we realized 16 of the 60 segments already had projects. We added text to clarify.
41	Email (City)	mention that we have a city-specific HIN that is currently in the process of being updated? Also, does this mean that City-identified projects on the HIN will have priority on the TIP?	Thank you for the comment! We edited the text to mention the City of Lancaster has a High Injury Network that is being updated and implementation of City-identified projects on the County High Injury Network through the Transportation Improvement Program (TIP).
42	Email (City)	The second paragraph makes it sound like the City of Lancaster is a very dangerous place to drive, walk and bike. If you look at the data 17% of FSI crashes occurred in the City 20192023, yet almost 30% of County HIN is in the City. The 17% is disproportionately high, we would have to consider the unique situation the City of Lancaster has in Lancaster County. But the 30% of HIN miles seems way high.	Thank you for the comment! We hear your concern. However, we are not modifying the High Injury Network and methodology used at this point in the plan development process. This is something we can keep in mind and make sure we consult with City staff during the next County High Injury Network expected in 2030.
43	Email (City)	Priority Projects – “65 miles of roadway in Lancaster County” is what percent of total roadway miles in Lancaster County? The “17% of the total fatal and serious injury crashes’ occurred on what % of roadways.	Thank you for the comment! Sixty-five miles is 1.67% of total roadway miles in Lancaster County. We added that rounded figure to the text to add context and be consistent with the earlier High Injury Network section.
44	Email (City)	by calling these sections “what we heard”, it’s less clear that these are actually the plan recommendations. Also not clear why the recommendations are divided into plain sect vs. municipal (I understand that was how folks were engaged, but that probably belongs in the engagement section, rather than the recommendations section). Should these be called strategies or implementation items and numbered/letter for easier reference?	Recommendations have been numbered and distinguished from “what we heard.”

APPENDIX C
PRIORITY PROJECT LOCATIONS COST ESTIMATES

Projects Outside of the City of Lancaster

Countermeasures + Probable Cost Estimate -- Projects outside of City of Lancaster

					Countermeasures									
#	Name	Municipality	Estimate	Project Description	Signage / Striping	Signal Treatments	Signal Timing	Intersection Modifications	Sight Distance	Lighting	ADA Ramps	Sidewalk	ITS / Var. Speed Limit	Bundle
1	30 WB	Manheim Township	$ 1,785,000	ITS / Variable Speed Limit									X	D
2	Chester Rd	Manheim Township	$ 351,750	Dilemma radar at signals; backplates, red ahead flashers	X	X	X							B
3A	SR 340 (Bird-in-Hand)	East Lampeter Township	$ 863,000	Signal study at Beechdale Rd (RR) and left turn lanes at Ronks Rd	X	X	X	X		X				C
3B	SR 340 (near Greenfield Rd)	East Lampeter Township	$ 560,000	Pedestrian pushbuttons, crosswalks, backplates, int. improvements	X	X	X							C
4	30 EB	Manheim Township	$ 3,565,000	ITS / Variable Speed Limit						X			X	D
5	SR 896 & White Oak	Paradise Township, Bart Township	$ 45,000	Lighting, signage, speed study	X					X				A
6	Harrisburg Pk	East Hempfield Township	$ 81,000	Backplates, LPI, crosswalk restriping	X	X								A
7	Fruitville Pk	Manheim Township	$ 891,000	Full intersection update at Delp Road; left turns on Fruitville Pk	X	X	X	X		X	X			C
8	Wabank & Rabbit	Lancaster Township	$ 40,000	Lighting, signage, stop bar	X					X				A
9	Ebenshade / Strickler & PA 283	Rapho Township	$ 166,000	Backplates, study protected lefts at Strickler Rd; SB right turn widen/curb	X	X	X	X						A
10	SR 72 & Plaza	Manheim Township	$ 222,000	Backplates, NB PA 72 at Arconic	X	X	X	X						A
11	SR 23 & Willow	East Lampeter Township	$ 40,000	Signage upgrades, stop bars, lighting	X				X					A
12	SR 283 EB (near PA 72)	Manheim Township	$ 779,000	ITS / Variable Speed Limit									X	D
13A	US 322 - Main St	Ephrata Borough	$ 225,000	Pedestrian crossing/ADA at Hunter/Rose	X	X	X	X			X			B
13B	PA 23 - Leola	Upper Leacock Township	$ 686,000	Full signal upgrade at Newport (PA 772) / PA 23	X	X	X	X		X	X			C
14	SR 23 & 322	East Earl Township	$ 350,000	Pedestrian / traffic calming study; lighting, PA 23 EB approach widening				X		X				B
15	Strasburg & Millport	East Lampeter Township	$ 356,000	Add left turn NB Strasburg; dilemma zone radar	X	X	X	X						B
16	SR 272 & Church	East Cocalico Township	$ 278,000	Add PA 272 left turn/center turn at Quick Shop	X			X						B
17	E High & Mt Joy	Elizabethtown Borough	$ 103,000	Upgrade ped signal/pushbuttons, backplates, study signal at Mt. Joy St. / left turn at Spruce	X	X		X						A
18	Hershey Rd & 283	Mount Joy Township	$ 53,000	Add dilemma zone radar for signal, backplates, striping	X	X	X							A
19	Oregon Pike	Manheim Township	$ 424,000	Add left turn lane at Murry Hill Road; ped. improvements at Roseville Rd	X	X	X	X			X	X		B
20	SR 222 & Peach Bottom	Fulton Township	$ 31,000	Lighting, intersection ahead signage, chevrons, stop bars	X					X				A
21	Spooky Nook	East Hempfield Township, West Hempfield Township	$ 41,000	Lighting, intersection ahead signage, stop bars	X					X				A
22	SR 772 & SR 272	West Earl Township	$ 80,000	Add dilemma zone radar for signal, study protected lefts, center island	X	X	X			X				A
23	SR 72 & Pinch	Rapho Township	$ 102,000	Signage upgrades, stop bars, sight distance clearing, utl. relocation	X				X	X				A
24	Spruce & College	Elizabethtown Borough	$ 82,000	Study speed limit reduction, lighting, crosswalk upgrade, sight distance	X				X	X				A
25	SR 441 & N 3rd	Columbia Borough	$ 62,000	Protected NB left turn lane/phase at PA 441 / US 30 WB ramp signal	X	X	X	X						A
26	SR 230 & Carey	Mount Joy Township, West Donegal Township	$ 294,000	Add sidewalk/drainage; signal backplates; striping/signage	X	X					X	X		B
27	SR 462 & 9th	Columbia Borough	$ 223,000	Future TIP; ADA ramps, RRFB at 9th Street, study no left - Union St to PA 462	X			X		X	X			B
28	Blue Rock Rd	Manor Township	$ 96,000	Close off Old Blue Rock at Supervisor Rd; striping	X			X						A
29	US 30 WB off-ramp to PA 23 (N. Holland Pk)	Manheim Township	$ 11,000	Signal re-timing/check, reflective backplates		X	X							A
30	Rt 23 - Hershey	Upper Leacock Township	$ 14,000	Lighting, intersection ahead signage, add stop bars, veg. trimming	X				X	X				A
31	Pitney Rd	East Lampeter Township	$ 75,000	Lighting, brush removal, signage upgrades, guiderail end treatments	X				X	X				A
	Total		**$ 12,974,750**											

A	Low Cost	$ 1,344,000
B	Medium Intensity	$ 2,501,750
C	High Intensity	$ 3,000,000
D	Expressways	$ 6,129,000
ALL		**$ 12,974,750**

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01 US 30WB @ PA 23

1 - US 30WB @ PA 23

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00			$ -
Concrete for Curb Extension	SY	$ 400.00			$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00			$ -
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00			$ -
Widening (shoulder)	SY	$ 300.00			$ -
Rumble Strips	LF	$ 2.00	**4000**	EB between ramps - white line	**$ 8,000.00**
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00			$ -
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00			$ -
Timing Changes	Each	$3,000			$ -
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00			$ -
New Signal	Each	$ 250,000.00			$ -
Ped Detection (pushbutton)	Each	$ 500.00			$ -
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			$ -
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00			
Pavement Marking Removal	LF	$ 1.50		6" white	$ -
Legends	Each	$ 500.00		8' legend	$ -
Raised Pvt Marker	Each	$ 50.00	**100**	80' spa exc 20'@ transitions	**$ 5,000.00**
Traffic Calming					
Curb Extension	Each	$ 13,000.00			$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00			$ -
Lighting	Each	$ 5,000.00	**4**	at 2 entrance ramps	**$ 20,000.00**
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
ITS solutions	Ea	$ 1,000,000.00	**1**	DMS or var speed - congestion	**$ 1,000,000.00**
					$ -
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	**$ 1,033,000.00**
B. Design Contingency	**25%**	**$ 258,250.00**
C. Construction Contingencies	**25%**	**$ 258,250.00**
D. Traffic Control	**5%**	**$ 51,650.00**
E. Construction Engineering	**Enter if Applicable**	**$ -**
F. Utility Relocation	**8%**	**$ 82,640.00**
G. Total Construction Cost with 6% Escalation	**6%**	**$ 1,784,817.40**
H. Consulting Planning/Design	**Enter if Applicable**	**$ -**
I.Project Development Costs	**Enter if Applicable**	**$ -**
J. Right-of-way	**Enter if Applicable**	**$ -**
K. Total Project Costs (Rounded up to nearest $1,000)		**$ 1,785,000.00**

02 Chester Road

2 - Chester Road

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00			$ -
Concrete for Curb Extension	SY	$ 400.00			$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00			$ -
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00			$ -
Widening (shoulder)	SY	$ 300.00			$ -
Rumble Strips	LF	$ 2.00			
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00			$ -
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00			$ -
Timing Changes	Each	$3,000			$ -
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00			$ -
Overhead Red Sig Ahead	Each	$ 40,000.00	**3**	advance - 3 intersections	$ **120,000.00**
Ped Detection (pushbutton)	Each	$ 500.00			$ -
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Reflective backplates	Each	$ 500.00	**16**	2 intersections	$ **8,000.00**
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			$ -
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00			
Pavement Marking Removal	LF	$ 1.50			$ -
Legends	Each	$ 500.00	**18**	Signal ahead - 3 lanes x 3 intersect	$ **9,000.00**
Raised Pvt Marker	Each	$ 50.00			$ -
Traffic Calming					
Curb Extension	Each	$ 13,000.00			$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00			$ -
Lighting	Each	$ 5,000.00			$ -
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
4 way dilemma zone radar	Ea	$ 35,000.00	**3**	3 intersections	$ **105,000.00**
Signal clearance study	Ea	$ 2,000.00	**1**	check yellow and red clearance times	$ **2,000.00**
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	$ **244,000.00**
B. Design Contingency	**15%**	$ **36,600.00**
C. Construction Contingencies	**10%**	$ **24,400.00**
D. Traffic Control	**5%**	$ **12,200.00**
E. Construction Engineering	**Enter if Applicable**	$ -
F. Utility Relocation	**6%**	$ **14,640.00**
G. Total Construction Cost with 6% Escalation	**6%**	$ **351,750.40**
H. Consulting Planning/Design	**Enter if Applicable**	$ -
I.Project Development Costs	**Enter if Applicable**	$ -
J. Right-of-way	**Enter if Applicable**	$ -

03A
PA 340 (West)

3A - PA 340 (West)

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00		incl removal, pavemt restoration	$ -
Concrete for Curb Extension	SY	$ 250.00	**250**	includes excavation/roadside development - 600' along S side to close gaps	$ **62,500.00**
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00		lump sum - if not broken out per above	$ -
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00		excav, wrg, base, binder, tack, subbase	$ -
Widening (shoulder)	SY	$ 300.00			$ -
Rumble Strips	LF	$ 2.00			
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00			$ -
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00			$ -
Timing Changes	Each	$3,000			$ -
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00	**2**	incl wire - new crossing at Greenfield	$ **3,000.00**
New Signal	Each	$ 250,000.00		4 mast arms/signals/electrical	$ -
Ped Detection (pushbutton)	Each	$ 500.00	**2**		$ **1,000.00**
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Reflective backplates	Each	$ 500.00	**6**	ramp intersection	$ **3,000.00**
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			$ -
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00	**700**	crosswalk marking - Greenfield+Horseshoe	$ **14,000.00**
Pavement Marking Removal	LF	$ 1.50		6" white	$ -
Legends	Each	$ 500.00	**16**	Bike Route legends	$ **8,000.00**
Raised Pvt Marker	Each	$ 50.00		80' spa exc 20'@ transitions	$ -
Traffic Calming					
Curb Extension	Each	$ 13,000.00		if not broken down per above	$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00	**10**	bike route signage	$ **4,000.00**
Lighting	Each	$ 5,000.00			$ -
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
High Friction Surface Trtmt	SY	$ 75.00	**3000**	2 legs out to 300'@Greenfield; 1 leg at ramp	$ **225,000.00**
Left turn study	Ea	$ 3,500.00	**1**	Greenfield WB	$ **3,500.00**
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	$ **324,000.00**
B. Design Contingency	**25%**	$ **81,000.00**
C. Construction Contingencies	**25%**	$ **81,000.00**
D. Traffic Control	**5%**	$ **16,200.00**
E. Construction Engineering	**Enter if Applicable**	$ -
F. Utility Relocation	**8%**	$ **25,920.00**
G. Total Construction Cost with 6% Escalation	**6%**	$ **559,807.20**
H. Consulting Planning/Design	**Enter if Applicable**	$ -
I.Project Development Costs	**Enter if Applicable**	$ -
J. Right-of-way	**Enter if Applicable**	$ -
K. Total Project Costs (Rounded up to nearest $1,000)		$ **560,000.00**

03B
PA 340 (East)

3B - PA 340 (East)

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00			$ -
Concrete for Curb Extension	SY	$ 250.00			$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00			$ -
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
				0	
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00		excav, wrg, base, binder, tack, subbase	$ -
Widening (left turns)	SY	$ 300.00	**250**	Ronks	$ **75,000.00**
Rumble Strips	LF	$ 2.00			
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00			$ -
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00			$ -
Timing Changes	Each	$3,000	**1**	for left turns - Ronks	$ **3,000.00**
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00	**2**	incl wire - new crossing at Greenfield	$ **3,000.00**
New Signal Heads	Each	$ 1,500.00	**4**	left turns - Ronks	$ **6,000.00**
Ped Detection (pushbutton)	Each	$ 500.00	**2**		$ **1,000.00**
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Reflective backplates	Each	$ 500.00	**6**	ramp intersection	$ **3,000.00**
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			$ -
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00	**30**	stop bars - Lynwood & Beechdale	$ **600.00**
Pavement Marking Removal	LF	$ 1.50	**400**	left turns - Ronks	$ **600.00**
Legends	Each	$ 500.00	**4**	left turns - Ronks	$ **2,000.00**
Raised Pvt Marker	Each	$ 50.00		80' spa exc 20'@ transitions	$ -
Traffic Calming					
Curb Extension	Each	$ 13,000.00		if not broken down per above	$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00	**14**	intersection warnings (6) + speed (4) + left turns (Ronks)	$ **5,600.00**
Lighting	Each	$ 5,000.00	**1**	improve lighting at Beechdale	$ **5,000.00**
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
High Friction Surface Trtmt	SY	$ 75.00	**5000**	1500' underpass	$ **375,000.00**
Speed Study	Ea	$ 3,500.00	**1**	reduction from 40mph Lynwood to Ronks	$ **3,500.00**
Left turn study	Ea	$ 3,500.00	**1**	340 & Ronks, lanes + signalization	$ **3,500.00**
Signal study	Ea	$ 12,500.00	**1**	Beechdale	$ **12,500.00**

A. Office Estimate (construction items)	**From itemized list above**	$ **499,300.00**
B. Design Contingency	**25%**	$ **124,825.00**
C. Construction Contingencies	**25%**	$ **124,825.00**
D. Traffic Control	**5%**	$ **24,965.00**
E. Construction Engineering	**Enter if Applicable**	$ -
F. Utility Relocation	**8%**	$ **39,944.00**
G. Total Construction Cost with 6% Escalation	**6%**	$ **862,690.54**
H. Consulting Planning/Design	**Enter if Applicable**	$ -
I.Project Development Costs	**Enter if Applicable**	$ -
J. Right-of-way	**Enter if Applicable**	$ -
K. Total Project Costs (Rounded up to nearest $1,000)		$ **863,000.00**

04
US 30 EB

4 - US 30 EB

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00			$ -
Concrete for Curb Extension	SY	$ 400.00			$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00			$ -
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00			$ -
Widening (shoulder)	SY	$ 300.00			$ -
Rumble Strips	LF	$ 2.00	**4000**	EB between ramps - shoulder	$ **8,000.00**
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00			$ -
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00			$ -
Timing Changes	Each	$3,000			$ -
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00			$ -
New Signal	Each	$ 250,000.00			$ -
Ped Detection (pushbutton)	Each	$ 500.00			$ -
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			$ -
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00			
Pavement Marking Removal	LF	$ 1.50		6" white	$ -
Legends	Each	$ 500.00		8' legend	$ -
Raised Pvt Marker	Each	$ 50.00	**100**	80' spa exc 20'@ transitions	$ **5,000.00**
Traffic Calming					
Curb Extension	Each	$ 13,000.00			$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00			$ -
Lighting	Each	$ 5,000.00	**10**	extend between ramps - EB	$ **50,000.00**
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
ITS solutions	Ea	$ 1,000,000.00	**2**	DMS or var speed signage - congestion 283 & 30 approaches	$ **2,000,000.00**
					$ -
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	$ **2,063,000.00**
B. Design Contingency	**25%**	$ **515,750.00**
C. Construction Contingencies	**25%**	$ **515,750.00**
D. Traffic Control	**5%**	$ **103,150.00**
E. Construction Engineering	**Enter if Applicable**	$ -
F. Utility Relocation	**8%**	$ **165,040.00**
G. Total Construction Cost with 6% Escalation	**6%**	$ **3,564,451.40**
H. Consulting Planning/Design	**Enter if Applicable**	$ -
I.Project Development Costs	**Enter if Applicable**	$ -
J. Right-of-way	**Enter if Applicable**	$ -
K. Total Project Costs (Rounded up to nearest $1,000)		$ **3,565,000.00**

05 PA 896 & White Oak

5 - PA 896 & White Oak

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00			$ -
Concrete for Curb Extension	SY	$ 400.00			$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00			$ -
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00			$ -
Widening (shoulder)	SY	$ 300.00			$ -
Rumble Strips	LF	$ 2.00	**2500**	center	**$ 5,000.00**
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00			$ -
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00			$ -
Timing Changes	Each	$3,000			$ -
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00			$ -
New Signal	Each	$ 250,000.00			$ -
Ped Detection (pushbutton)	Each	$ 500.00			$ -
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			$ -
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00	**50**	stop bars - side streets	
Pavement Marking Removal	LF	$ 1.50		6" white	$ -
Legends	Each	$ 500.00	**4**	8' legend - curve + slow	**$ 2,000.00**
Raised Pvt Marker	Each	$ 50.00	**40**	80' spa exc 20'@ transitions	**$ 2,000.00**
Traffic Calming					
Curb Extension	Each	$ 13,000.00		if not broken down per above	$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00	**8**	curve warning, cross street adv, speed	**$ 3,200.00**
Lighting	Each	$ 5,000.00	**2**	2 intersections	**$ 10,000.00**
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
speed study	Ea	$ 3,500.00	**1**	for reduction to 35	**$ 3,500.00**
					$ -
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	**$ 25,700.00**
B. Design Contingency	**25%**	**$ 6,425.00**
C. Construction Contingencies	**25%**	**$ 6,425.00**
D. Traffic Control	**5%**	**$ 1,285.00**
E. Construction Engineering	**Enter if Applicable**	**$ -**
F. Utility Relocation	**8%**	**$ 2,056.00**
G. Total Construction Cost with 6% Escalation	**6%**	**$ 44,404.46**
H. Consulting Planning/Design	**Enter if Applicable**	**$ -**
I.Project Development Costs	**Enter if Applicable**	**$ -**
J. Right-of-way	**Enter if Applicable**	**$ -**
K. Total Project Costs (Rounded up to nearest $1,000)		**$ 45,000.00**

06 Harrisburg Pike

6 - Harrisburg Pk

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00		incl removal, pavemt restoration	$ -
Concrete for Curb Extension	SY	$ 400.00		includes excavation/roadside development	$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00		lump sum - if not broken out per above	$ -
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00		excav, wrg, base, binder, tack, subbase	$ -
Widening (shoulder)	SY	$ 300.00			$ -
Rumble Strips	LF	$ 2.00			
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00			$ -
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00	**2**	EB between Wedel & Good - guy poles	$ **10,000.00**
Signals					
RRFB	Each	$ 20,000.00			$ -
Timing Changes	Each	$3,000			$ -
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00	**8**	incl wire - at 741	$ **12,000.00**
New Signal	Each	$ 250,000.00		4 mast arms/signals/electrical	$ -
Ped Detection (pushbutton)	Each	$ 500.00	**8**	at 741	$ **4,000.00**
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Reflective backplates	Each	$ 500.00	**15**	3 intersections	$ **7,500.00**
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			$ -
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00	**400**	crosswalks - 741	$ **8,000.00**
Pavement Marking Removal	LF	$ 1.50		6" white	$ -
Legends	Each	$ 500.00		8' legend	$ -
Raised Pvt Marker	Each	$ 50.00		80' spa exc 20'@ transitions	$ -
Traffic Calming					
Curb Extension	Each	$ 13,000.00		if not broken down per above	$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00	**8**	yield to ped - 2 intersections	$ **3,200.00**
Lighting	Each	$ 5,000.00			$ -
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
Add LPI - retiming	Ea	$ 2,000.00	**1**	at south intersection	$ **2,000.00**
					$ -
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	$ **46,700.00**
B. Design Contingency	**25%**	$ **11,675.00**
C. Construction Contingencies	**25%**	$ **11,675.00**
D. Traffic Control	**5%**	$ **2,335.00**
E. Construction Engineering	**Enter if Applicable**	$ -
F. Utility Relocation	**8%**	$ **3,736.00**
G. Total Construction Cost with 6% Escalation	**6%**	$ **80,688.26**
H. Consulting Planning/Design	**Enter if Applicable**	$ -
I.Project Development Costs	**Enter if Applicable**	$ -
J. Right-of-way	**Enter if Applicable**	$ -
K. Total Project Costs (Rounded up to nearest $1,000)		$ **81,000.00**

07 Fruitville Pike

7 - Fruitville Pk

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00		incl removal, pavemt restoration	$ -
Concrete for Curb Extension	SY	$ 400.00		includes excavation/roadside development	$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00	**4**	Delp - 2 crossings	$ **40,000.00**
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00		excav, wrg, base, binder, tack, subbase	$ -
Widening (left turns)	SY	$ 300.00	**500**	NB/SB	$ **150,000.00**
Rumble Strips	LF	$ 2.00	**6500**	center	$ **13,000.00**
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00			$ -
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00			$ -
Timing Changes	Each	$3,000			$ -
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each			incl wire - 2 crossings	$ -
New Signal	Each	$ 300,000.00	**1**	4 mast arms/signals/electrical - Delp	$ **300,000.00**
Ped Detection (pushbutton)	Each				$ -
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Reflective backplates	Each				$ -
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			$ -
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00	**200**	Delp - 2 crossings	
Pavement Marking Removal	LF	$ 1.50		6" white	$ -
Legends	Each	$ 500.00		8' legend	$ -
Raised Pvt Marker	Each	$ 50.00		80' spa exc 20'@ transitions	$ -
Traffic Calming					
Curb Extension	Each	$ 13,000.00			$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00			$ -
Lighting	Each	$ 5,000.00			$ -
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
Signal study	Ea	$ 12,500.00	**1**	full mod - Delp	$ **12,500.00**
					$ -
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	$ **515,500.00**
B. Design Contingency	**25%**	$ **128,875.00**
C. Construction Contingencies	**25%**	$ **128,875.00**
D. Traffic Control	**5%**	$ **25,775.00**
E. Construction Engineering	**Enter if Applicable**	$ -
F. Utility Relocation	**8%**	$ **41,240.00**
G. Total Construction Cost with 6% Escalation	**6%**	$ **890,680.90**
H. Consulting Planning/Design	**Enter if Applicable**	$ -
I.Project Development Costs	**Enter if Applicable**	$ -
J. Right-of-way	**Enter if Applicable**	$ -
K. Total Project Costs (Rounded up to nearest $1,000)		$ **891,000.00**

08 Wabank & Rabbit

8 - Wabank & Rabbit

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00			$ -
Concrete for Curb Extension	SY	$ 400.00			$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00			$ -
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00			$ -
Widening (shoulder)	SY	$ 300.00			$ -
Rumble Strips	LF	$ 2.00	**4000**	center	$ **8,000.00**
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00			$ -
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00			$ -
Timing Changes	Each	$ 3,000.00			$ -
APS	Each	$ 2,000.00			$ -
Ped Signal With Countdown	Each	$ 1,500.00		incl wire	$ -
New Signal	Each	$ 250,000.00		4 mast arms/signals/electrical	$ -
Ped Detection (pushbutton)	Each	$ 500.00			$ -
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			$ -
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00	**20**	stop bar - rabbit hill	$ **400.00**
Pavement Marking Removal	LF	$ 1.50		6" white	$ -
Legends	Each	$ 500.00		8' legend	$ -
Raised Pvt Marker	Each	$ 50.00	**50**	80' spa exc 20'@ transitions	$ **2,500.00**
Traffic Calming					
Curb Extension	Each	$ 13,000.00			$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00	**18**	curve, intersection, chevron	$ **7,200.00**
Lighting	Each	$ 5,000.00	**1**	at Rabbit Hill	$ **5,000.00**
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
					$ -
					$ -
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	$ **23,100.00**
B. Design Contingency	**25%**	$ **5,775.00**
C. Construction Contingencies	**25%**	$ **5,775.00**
D. Traffic Control	**5%**	$ **1,155.00**
E. Construction Engineering	**Enter if Applicable**	$ -
F. Utility Relocation	**8%**	$ **1,848.00**
G. Total Construction Cost with 6% Escalation	**6%**	$ **39,912.18**
H. Consulting Planning/Design	**Enter if Applicable**	$ -
I.Project Development Costs	**Enter if Applicable**	$ -
J. Right-of-way	**Enter if Applicable**	$ -
K. Total Project Costs (Rounded up to nearest $1,000)		$ **40,000.00**

09 Ebenshade & Strickler

9 - Ebenshade & Strickler

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 100.00	**400**	curb only - sb right turn lane	**$ 40,000.00**
Concrete for Curb Extension	SY	$ 400.00		includes excavation/roadside development	$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00		lump sum - if not broken out per above	$ -
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00		excav, wrg, base, binder, tack, subbase	$ -
Widening (shoulder)	SY	$ 300.00	**150**	SB right turn lane - widen 3' w/curb	**$ 45,000.00**
Rumble Strips	LF	$ 2.00			
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00			$ -
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00			$ -
Timing Changes	Each	$3,000			$ -
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00		incl wire	$ -
New Signal	Each	$ 250,000.00		4 mast arms/signals/electrical	$ -
Ped Detection (pushbutton)	Each	$ 500.00			$ -
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Reflective backplates	Each	$ 500.00	**6**		**$ 3,000.00**
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			$ -
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00	**200**	refresh crosswalk markings	**$ 4,000.00**
Pavement Marking Removal	LF	$ 1.50		6" white	$ -
Legends	Each	$ 500.00		8' legend	$ -
Raised Pvt Marker	Each	$ 50.00		80' spa exc 20'@ transitions	$ -
Traffic Calming					
Curb Extension	Each	$ 13,000.00		if not broken down per above	$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00			$ -
Lighting	Each	$ 5,000.00			$ -
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
Left turn study	Ea	$ 3,500.00	**1**	for possible protected lefts	**$ 3,500.00**
					$ -
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	**$ 95,500.00**
B. Design Contingency	**25%**	**$ 23,875.00**
C. Construction Contingencies	**25%**	**$ 23,875.00**
D. Traffic Control	**5%**	**$ 4,775.00**
E. Construction Engineering	**Enter if Applicable**	**$ -**
F. Utility Relocation	**8%**	**$ 7,640.00**
G. Total Construction Cost with 6% Escalation	**6%**	**$ 165,004.90**
H. Consulting Planning/Design	**Enter if Applicable**	**$ -**
I.Project Development Costs	**Enter if Applicable**	**$ -**
J. Right-of-way	**Enter if Applicable**	**$ -**
K. Total Project Costs (Rounded up to nearest $1,000)		**$ 166,000.00**

10
PA 72 & Plaza

10 - PA 72 & Plaza

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00		incl removal, pavemt restoration	$ -
Concrete for Curb Extension	SY	$ 400.00		includes excavation/roadside development	$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00		lump sum - if not broken out per above	$ -
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 5.00	**2000**	removal of portion of N. island	$ **10,000.00**
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00		excav, wrg, base, binder, tack, subbase	$ -
Widening (left turn lane)	SY	$ 300.00	**300**	N end intersection	$ **90,000.00**
Rumble Strips	LF	$ 2.00			
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00			$ -
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00			$ -
Timing Changes	Each	$3,000			$ -
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00		incl wire	$ -
New Signal Heads	Each	$ 1,500.00	**4**	at north intersection - left turns	$ **6,000.00**
Ped Detection (pushbutton)	Each	$ 500.00			$ -
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Reflective backplates	Each	$ 500.00	**32**	5 intersections	$ **16,000.00**
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50	**200**	N end - left turns	$ **500.00**
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00			
Pavement Marking Removal	LF	$ 1.50	**200**	6" white - N End left turns	$ **300.00**
Legends	Each	$ 500.00	**4**	8' legend - left turns	$ **2,000.00**
Raised Pvt Marker	Each	$ 50.00		80' spa exc 20'@ transitions	$ -
Traffic Calming					
Curb Extension	Each	$ 13,000.00		if not broken down per above	$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00			$ -
Lighting	Each	$ 5,000.00			$ -
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
Left Turn Study - N End	Ea	$3,500	**1**	Signal at Arconic	$ **3,500.00**
					$ -
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	$ **128,300.00**
B. Design Contingency	**25%**	$ **32,075.00**
C. Construction Contingencies	**25%**	$ **32,075.00**
D. Traffic Control	**5%**	$ **6,415.00**
E. Construction Engineering	**Enter if Applicable**	$ -
F. Utility Relocation	**8%**	$ **10,264.00**
G. Total Construction Cost with 6% Escalation	**6%**	$ **221,676.74**
H. Consulting Planning/Design	**Enter if Applicable**	$ -
I.Project Development Costs	**Enter if Applicable**	$ -
J. Right-of-way	**Enter if Applicable**	$ -
K. Total Project Costs (Rounded up to nearest $1,000)		$ **222,000.00**

11
PA 23 & Willow

11 - PA 23 & Willow

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00			$ -
Concrete for Curb Extension	SY	$ 400.00			$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00			$ -
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00			$ -
Widening (shoulder)	SY	$ 300.00			$ -
Rumble Strips	LF	$ 2.00	**4000**	center	$ 8,000.00
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00	**0.05**	trim around sig ahead signs	$ 1,300.00
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00			$ -
Timing Changes	Each	$3,000			$ -
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00			$ -
New Signal	Each	$ 250,000.00		4 mast arms/signals/electrical	$ -
Ped Detection (pushbutton)	Each	$ 500.00			$ -
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			$ -
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00	**20**	stop bar - Willow	$ 400.00
Pavement Marking Removal	LF	$ 1.50		6" white	$ -
Legends	Each	$ 500.00		8' legend	$ -
Raised Pvt Marker	Each	$ 50.00	**60**	80' spa exc 20'@ transitions	$ 3,000.00
Traffic Calming					
Curb Extension	Each	$ 13,000.00		if not broken down per above	$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00	**13**	curve warning + chevrons + intersection	$ 5,200.00
Lighting	Each	$ 5,000.00	**1**	at Willow	$ 5,000.00
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
					$ -
					$ -
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	**$ 22,900.00**
B. Design Contingency	**25%**	**$ 5,725.00**
C. Construction Contingencies	**25%**	**$ 5,725.00**
D. Traffic Control	**5%**	**$ 1,145.00**
E. Construction Engineering	**Enter if Applicable**	**$ -**
F. Utility Relocation	**8%**	**$ 1,832.00**
G. Total Construction Cost with 6% Escalation	**6%**	**$ 39,566.62**
H. Consulting Planning/Design	**Enter if Applicable**	**$ -**
I.Project Development Costs	**Enter if Applicable**	**$ -**
J. Right-of-way	**Enter if Applicable**	**$ -**
K. Total Project Costs (Rounded up to nearest $1,000)		**$ 40,000.00**

12 PA 283 & PA 72

12 - PA 283 & PA 72

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00			$ -
Concrete for Curb Extension	SY	$ 400.00			$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00			$ -
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00			$ -
Widening (shoulder)	SY	$ 300.00			$ -
Rumble Strips	LF	$ 2.00			
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00			$ -
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00			$ -
Timing Changes	Each	$3,000			$ -
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00			$ -
New Signal	Each	$ 250,000.00			$ -
Ped Detection (pushbutton)	Each	$ 500.00			$ -
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Reflective Backplates	Each	$ 500.00			$ -
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			$ -
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00			
Pavement Marking Removal	LF	$ 1.50		6" white	$ -
Legends	Each	$ 500.00		8' legend	$ -
Raised Pvt Marker	Each	$ 50.00		80' spa exc 20'@ transitions	$ -
Traffic Calming					
Curb Extension	Each	$ 13,000.00			$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00	**2**	static congestion signs	$ **800.00**
Lighting	Each	$ 5,000.00			$ -
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
ITS solution	Ea	$ 450,000.00	**1**	DMS warning or var speed - congestion	$ **450,000.00**
					$ -
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	$ **450,800.00**
B. Design Contingency	**25%**	$ **112,700.00**
C. Construction Contingencies	**25%**	$ **112,700.00**
D. Traffic Control	**5%**	$ **22,540.00**
E. Construction Engineering	**Enter if Applicable**	$ -
F. Utility Relocation	**8%**	$ **36,064.00**
G. Total Construction Cost with 6% Escalation	**6%**	$ **778,892.24**
H. Consulting Planning/Design	**Enter if Applicable**	$ -
I.Project Development Costs	**Enter if Applicable**	$ -
J. Right-of-way	**Enter if Applicable**	$ -
K. Total Project Costs (Rounded up to nearest $1,000)		$ **779,000.00**

13A Ephrata Main St

13A - Ephrata Main St

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00			$ -
Concrete for Curb Extension	SY	$ 400.00			$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00	**4**	new crossings at Hunter, Rose	$ **40,000.00**
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00		excav, wrg, base, binder, tack, subbase	$ -
Widening (shoulder)	SY	$ 300.00			$ -
Rumble Strips	LF	$ 2.00			
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00			$ -
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00			$ -
Timing Changes	Each	$3,000	**1**	LPI at 3 signals	$ **3,000.00**
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00	**24**	incl wire - 3 intersections	$ **36,000.00**
New Signal	Each	$ 250,000.00			$ -
Ped Detection (pushbutton)	Each	$ 500.00			$ -
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			$ -
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00	**200**	new ped crossings - Hunter Al, Rose	$ **4,000.00**
Pavement Marking Removal	LF	$ 1.50		6" white	$ -
Legends	Each	$ 500.00		8' legend	$ -
Raised Pvt Marker	Each	$ 50.00		80' spa exc 20'@ transitions	$ -
Traffic Calming					
Curb Extension	Each	$ 13,000.00	**3**	at Hunter Alley and Rose	$ **39,000.00**
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00	**20**	5 ped crossings	$ **8,000.00**
Lighting	Each	$ 5,000.00			$ -
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
					$ -
					$ -
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	$ **130,000.00**
B. Design Contingency	**25%**	$ **32,500.00**
C. Construction Contingencies	**25%**	$ **32,500.00**
D. Traffic Control	**5%**	$ **6,500.00**
E. Construction Engineering	**Enter if Applicable**	$ -
F. Utility Relocation	**8%**	$ **10,400.00**
G. Total Construction Cost with 6% Escalation	**6%**	$ **224,614.00**
H. Consulting Planning/Design	**Enter if Applicable**	$ -
I.Project Development Costs	**Enter if Applicable**	$ -
J. Right-of-way	**Enter if Applicable**	$ -
K. Total Project Costs (Rounded up to nearest $1,000)		$ **225,000.00**

13B Leola

13B - Leola

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00			$ -
Concrete for Curb Extension	SY	$ 400.00			$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00	**6**	full mod at 772N	$ **60,000.00**
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00			$ -
Widening (shoulder)	SY	$ 300.00			$ -
Rumble Strips	LF	$ 2.00			
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00			$ -
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00			$ -
Timing Changes	Each	$3,000	**1**	LPI - 2 intersections	$ **3,000.00**
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00	**4**	incl wire - Newport 2 crossings	$ **6,000.00**
New Signal	Each	$ 300,000.00	**1**	Full mod at N. 772	$ **300,000.00**
Ped Detection (pushbutton)	Each	$ 500.00	**4**	Newport - 2 crossings	$ **2,000.00**
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			$ -
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00	**200**	crosswalk markings at Newport	$ **4,000.00**
Pavement Marking Removal	LF	$ 1.50	**100**	6" white - 1 crossing at Quarry	$ **150.00**
Legends	Each	$ 500.00	**2**	8' legend - ped xing at Quarry	$ **1,000.00**
Raised Pvt Marker	Each	$ 50.00		80' spa exc 20'@ transitions	$ -
Traffic Calming					
Curb Extension	Each	$ 13,000.00	**1**	at Quarry	$ **13,000.00**
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00	**10**	speed reduction + ped at quarry	$ **4,000.00**
Lighting	Each	$ 5,000.00			$ -
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
Speed Study	Ea	$ 3,500.00	**1**	25mph reduction	$ **3,500.00**
					$ -
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	$ **396,650.00**
B. Design Contingency	**25%**	$ **99,162.50**
C. Construction Contingencies	**25%**	$ **99,162.50**
D. Traffic Control	**5%**	$ **19,832.50**
E. Construction Engineering	**Enter if Applicable**	$ -
F. Utility Relocation	**8%**	$ **31,732.00**
G. Total Construction Cost with 6% Escalation	**6%**	$ **685,331.87**
H. Consulting Planning/Design	**Enter if Applicable**	$ -
I.Project Development Costs	**Enter if Applicable**	$ -
J. Right-of-way	**Enter if Applicable**	$ -
K. Total Project Costs (Rounded up to nearest $1,000)		$ **686,000.00**

14 PA 23 & PA 322

14 - PA 23 & PA 322

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00	**300**	EB before 322 - narrow shldr	**$ 75,000.00**
Concrete for Curb Extension	SY	$ 400.00			**$ -**
Asphalt for Curb Extension	SF	$ 30.00			**$ -**
ADA Ramp	Each	$ 10,000.00			**$ -**
Mod block Retaining Wall	SF	$ 75.00			**$ -**
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			**$ -**
Roadway					
Mill and Overlay	SY	$ 125.00			**$ -**
Reconstruction	SY	$ 500.00			**$ -**
Widening (shoulder)	SY	$ 300.00	**200**	300' x 6' EB 23 approach	**$ 60,000.00**
Rumble Strips	LF	$ 2.00			
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			**$ -**
Street Tree	Each	$ 700.00			**$ -**
Tree Removal	Each	$ 2,000.00			**$ -**
Clearing/Grubbing	Acre	$ 26,000.00			**$ -**
New inlet	Each	$ 7,000.00	**1**	EB SR 23 approach	**$ 7,000.00**
Adjusted Catch Basin	Each	$ 3,500.00			**$ -**
Utility Pole Relocation	Each	$ 5,000.00	**1**	EB SR 23 approach	**$ 5,000.00**
Signals					
RRFB	Each	$ 20,000.00			**$ -**
Hawk beacon	Each	$ 100,000.00			**$ -**
Timing Changes	Each	$3,000			**$ -**
APS	Each	$2,000			**$ -**
Ped Signal With Countdown	Each	$ 1,500.00			**$ -**
New Signal	Each	$ 250,000.00			**$ -**
Ped Detection (pushbutton)	Each	$ 500.00			**$ -**
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			**$ -**
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			**$ -**
12" Thermoplastic Pavement Markings	LF	$ 10.00			**$ -**
24" Thermoplastic Pvt Mrkg	LF	$ 20.00			**$ -**
Pavement Marking Removal	LF	$ 1.50		EB SR 23, 6" white	**$ -**
Legends	Each	$ 500.00			**$ -**
Raised Pvt Marker	Each	$ 50.00		EB SR 23, 80' spa exc 20'@ transitions	**$ -**
Traffic Calming					
Curb Extension	Each	$ 13,000.00			**$ -**
Raised Crossing	Each	$ 10,000.00			**$ -**
Raised Intersection	Each	$ 60,000.00			**$ -**
Mini Roundabout (rural)	Each	$ 1,000,000.00			**$ -**
Speed Hump/Table	Each	$ 2,500.00			**$ -**
Roundabout (minor arterial)	Each	$ 4,000,000.00			**$ -**
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			**$ -**
Pedestrian Railing	LF	$ 100.00			**$ -**
Sign and Post	Each	$ 400.00			**$ -**
Lighting	Each	$ 5,000.00	**1**	EB SR 23 approach	**$ 5,000.00**
Solar Speed Signage	Each	$ 7,500.00			**$ -**

Additional Items					
Corridor ped study	Ea	$ 50,000.00	**1**	study entire intersection - bad skew	**$ 50,000.00**
					$ -
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	**$ 202,000.00**
B. Design Contingency	**25%**	**$ 50,500.00**
C. Construction Contingencies	**25%**	**$ 50,500.00**
D. Traffic Control	**5%**	**$ 10,100.00**
E. Construction Engineering	**Enter if Applicable**	**$ -**
F. Utility Relocation	**8%**	**$ 16,160.00**
G. Total Construction Cost with 6% Escalation	**6%**	**$ 349,015.60**
H. Consulting Planning/Design	**Enter if Applicable**	**$ -**
I.Project Development Costs	**Enter if Applicable**	**$ -**
J. Right-of-way	**Enter if Applicable**	**$ -**
K. Total Project Costs (Rounded up to nearest $1,000)		**$ 350,000.00**

15 Strasburg & Millport

15 - Strasburg & Millport

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 100.00	**200**	for NB left turn	**$ 20,000.00**
Concrete for Curb Extension	SY	$ 400.00			**$ -**
Asphalt for Curb Extension	SF	$ 30.00			**$ -**
ADA Ramp	Each	$ 10,000.00	**2**	NW/SE	**$ 20,000.00**
Mod block Retaining Wall	SF	$ 75.00			**$ -**
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			**$ -**
Roadway					
Mill and Overlay	SY	$ 125.00			**$ -**
Reconstruction	SY	$ 500.00		excav, wrg, base, binder, tack, subbase	**$ -**
Widening (shoulder)	SY	$ 300.00	**300**	for NB left turn	**$ 90,000.00**
Rumble Strips	LF	$ 2.00			
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			**$ -**
Street Tree	Each	$ 700.00			**$ -**
Tree Removal	Each	$ 2,000.00			**$ -**
Clearing/Grubbing	Acre	$ 26,000.00			**$ -**
New Catch Basin	Each	$ 7,000.00			**$ -**
Adjusted Catch Basin	Each	$ 3,500.00			**$ -**
Utility Pole Relocation	Each	$ 5,000.00	**2**	for NB left turn	**$ 10,000.00**
Signals					
RRFB	Each	$ 20,000.00			**$ -**
Hawk beacon	Each	$ 100,000.00			**$ -**
Timing Changes	Each	$3,000			**$ -**
APS	Each	$2,000			**$ -**
Ped Signal With Countdown	Each	$ 1,500.00	**4**	incl wire	**$ 6,000.00**
New Signal	Each	$ 250,000.00		4 mast arms/signals/electrical	**$ -**
Ped Detection (pushbutton)	Each	$ 500.00	**4**		**$ 2,000.00**
Thermal Detection	Each	$ 10,000.00	**1**	new left turn detection	**$ 10,000.00**
Signal Post R&R	Each	$ 5,000.00	**2**	relocate NE mast arm and pedestal	**$ 10,000.00**
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50	**400**	for new NB left	**$ 1,000.00**
12" Thermoplastic Pavement Markings	LF	$ 10.00	**100**	gore	**$ 1,000.00**
24" Thermoplastic Pvt Mrkg	LF	$ 20.00	**30**	new stop bars	**$ 600.00**
Pavement Marking Removal	LF	$ 1.50	**400**	6" white	**$ 600.00**
Legends	Each	$ 500.00	**4**	8' legend	**$ 2,000.00**
Raised Pvt Marker	Each	$ 50.00	**125**	80' spa exc 20'@ transitions	**$ 6,250.00**
Traffic Calming					
Curb Extension	Each	$ 13,000.00		if not broken down per above	**$ -**
Raised Crossing	Each	$ 10,000.00			**$ -**
Raised Intersection	Each	$ 60,000.00			**$ -**
Mini Roundabout (rural)	Each	$ 1,000,000.00			**$ -**
Speed Hump/Table	Each	$ 2,500.00			**$ -**
Roundabout (minor arterial)	Each	$ 4,000,000.00			**$ -**
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			**$ -**
Pedestrian Railing	LF	$ 100.00			**$ -**
Sign and Post	Each	$ 400.00	**3**	left turn + relocate double arrow	**$ 1,200.00**
Lighting	Each	$ 5,000.00			**$ -**
Solar Speed Signage	Each	$ 7,500.00			**$ -**

Additional Items					
Dilemma zone radar	Ea	$ 25,000.00	**1**	2-way	**$ 25,000.00**
					$ -
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	**$ 205,650.00**
B. Design Contingency	**25%**	**$ 51,412.50**
C. Construction Contingencies	**25%**	**$ 51,412.50**
D. Traffic Control	**5%**	**$ 10,282.50**
E. Construction Engineering	**Enter if Applicable**	**$ -**
F. Utility Relocation	**8%**	**$ 16,452.00**
G. Total Construction Cost with 6% Escalation	**6%**	**$ 355,322.07**
H. Consulting Planning/Design	**Enter if Applicable**	**$ -**
I.Project Development Costs	**Enter if Applicable**	**$ -**
J. Right-of-way	**Enter if Applicable**	**$ -**
K. Total Project Costs (Rounded up to nearest $1,000)		**$ 356,000.00**

16 PA 272 & Church

16 - PA 272 & Church

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 100.00	**200**	new for NB left	**$ 20,000.00**
Concrete for Curb Extension	SY	$ 400.00		includes excavation/roadside development	**$ -**
Asphalt for Curb Extension	SF	$ 30.00			**$ -**
ADA Ramp	Each	$ 10,000.00		lump sum - if not broken out per above	**$ -**
Mod block Retaining Wall	SF	$ 75.00			**$ -**
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			**$ -**
Roadway					
Mill and Overlay	SY	$ 125.00			**$ -**
Reconstruction	SY	$ 500.00		excav, wrg, base, binder, tack, subbase	**$ -**
Widening (shoulder)	SY	$ 300.00	**300**	for NB left	**$ 90,000.00**
Rumble Strips	LF	$ 2.00			
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			**$ -**
Street Tree	Each	$ 700.00			**$ -**
Tree Removal	Each	$ 2,000.00			**$ -**
Clearing/Grubbing	Acre	$ 26,000.00			**$ -**
New Catch Basin	Each	$ 7,000.00			**$ -**
Adjusted Catch Basin	Each	$ 3,500.00			**$ -**
Utility Pole Relocation	Each	$ 5,000.00			**$ -**
Signals					
RRFB	Each	$ 20,000.00			**$ -**
Hawk beacon	Each	$ 100,000.00			**$ -**
Timing Changes	Each	$3,000			**$ -**
APS	Each	$2,000			**$ -**
Ped Signal With Countdown	Each	$ 1,500.00	**8**	incl wire	**$ 12,000.00**
New Signal heads	Each	$ 1,500.00	**4**	FYA + section x2	**$ 6,000.00**
Ped Detection (pushbutton)	Each	$ 500.00	**8**		**$ 4,000.00**
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			**$ -**
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50	**400**	NB left turn	**$ 1,000.00**
12" Thermoplastic Pavement Markings	LF	$ 10.00	**100**	gore markings	**$ 1,000.00**
24" Thermoplastic Pvt Mrkg	LF	$ 20.00	**430**	stop bars; crosswalk X4	**$ 8,600.00**
Pavement Marking Removal	LF	$ 1.50	**400**	for NB left	**$ 600.00**
Legends	Each	$ 500.00	**4**	8' legend - left only	**$ 2,000.00**
Raised Pvt Marker	Each	$ 50.00	**125**	80' spa exc 20'@ transitions	**$ 6,250.00**
Traffic Calming					
Curb Extension	Each	$ 13,000.00		if not broken down per above	**$ -**
Raised Crossing	Each	$ 10,000.00			**$ -**
Raised Intersection	Each	$ 60,000.00			**$ -**
Mini Roundabout (rural)	Each	$ 1,000,000.00			**$ -**
Speed Hump/Table	Each	$ 2,500.00			**$ -**
Roundabout (minor arterial)	Each	$ 4,000,000.00			**$ -**
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			**$ -**
Pedestrian Railing	LF	$ 100.00			**$ -**
Sign and Post	Each	$ 400.00	**2**	for left turn at quik stop	**$ 800.00**
Lighting	Each	$ 5,000.00	**1**	at quik stop	**$ 5,000.00**
Solar Speed Signage	Each	$ 7,500.00			**$ -**

Additional Items					
left turn study	Ea	$ 3,500.00	**1**	for prot/prohib	**$ 3,500.00**
					$ -
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	**$ 160,750.00**
B. Design Contingency	**25%**	**$ 40,187.50**
C. Construction Contingencies	**25%**	**$ 40,187.50**
D. Traffic Control	**5%**	**$ 8,037.50**
E. Construction Engineering	**Enter if Applicable**	**$ -**
F. Utility Relocation	**8%**	**$ 12,860.00**
G. Total Construction Cost with 6% Escalation	**6%**	**$ 277,743.85**
H. Consulting Planning/Design	**Enter if Applicable**	**$ -**
I.Project Development Costs	**Enter if Applicable**	**$ -**
J. Right-of-way	**Enter if Applicable**	**$ -**
K. Total Project Costs (Rounded up to nearest $1,000)		**$ 278,000.00**

17 E High St & Mt Joy

17 - E High St & Mt Joy					
	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00		incl removal, pavemt restoration	$ -
Concrete for Curb Extension	SY	$ 400.00		includes excavation/roadside development	$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00		lump sum - if not broken out per above	$ -
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00		excav, wrg, base, binder, tack, subbase	$ -
Widening (shoulder)	SY	$ 300.00			$ -
Rumble Strips	LF	$ 2.00			
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00			$ -
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00			$ -
Hawk beacon	Each	$ 100,000.00			$ -
Timing Changes	Each	$3,000			$ -
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00	**8**	incl wire - at Spruce	$ **12,000.00**
New Signal	Each	$ 250,000.00		4 mast arms/signals/electrical	$ -
Ped Detection (pushbutton)	Each	$ 500.00	**8**	at Spruce	$ **4,000.00**
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Reflective Backplates	Each	$ 500.00	**8**	at N Spruce signal	$ **4,000.00**
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50	**200**	left turn lanes	$ **500.00**
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00	**50**	new stop bars at Spruce	$ **1,000.00**
Pavement Marking Removal	LF	$ 1.50	**200**	6" white	$ **300.00**
Legends	Each	$ 500.00	**4**	8' legend - 2 left turns	$ **2,000.00**
Raised Pvt Marker	Each	$ 50.00		80' spa exc 20'@ transitions	$ -
Traffic Calming					
Curb Extension	Each	$ 13,000.00		if not broken down per above	$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00	**2**	left turn lanes	$ **800.00**
Lighting	Each	$ 5,000.00	**2**	1 at Mt Joy, 1 on mast arm at N Spruce	$ **15,000.00**
Solar Speed Signage	Each	$ 7,500.00			$ -
Additional Items					
Left turn studies	Ea	$ 3,500.00	**2**	2 intersections	$ **7,000.00**
Signal warrant	Ea	$ 12,500.00	**1**	at Mt Joy	$ **12,500.00**
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	$ **59,100.00**
B. Design Contingency	**25%**	$ **14,775.00**
C. Construction Contingencies	**25%**	$ **14,775.00**
D. Traffic Control	**5%**	$ **2,955.00**
E. Construction Engineering	**Enter if Applicable**	$ -
F. Utility Relocation	**8%**	$ **4,728.00**
G. Total Construction Cost with 6% Escalation	**6%**	$ **102,112.98**
H. Consulting Planning/Design	**Enter if Applicable**	$ -
I.Project Development Costs	**Enter if Applicable**	$ -
J. Right-of-way	**Enter if Applicable**	$ -
K. Total Project Costs (Rounded up to nearest $1,000)		$ **103,000.00**

18 Hershey Rd & PA 283

18 - Hershey Rd & PA 283

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00			$ -
Concrete for Curb Extension	SY	$ 400.00			$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00			$ -
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00			$ -
Widening (shoulder)	SY	$ 300.00			$ -
Rumble Strips	LF	$ 2.00			
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00			$ -
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00			$ -
Hawk beacon	Each	$ 100,000.00			$ -
Timing Changes	Each	$3,000			$ -
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00		incl wire	$ -
New Signal	Each	$ 250,000.00		4 mast arms/signals/electrical	$ -
Ped Detection (pushbutton)	Each	$ 500.00			$ -
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Reflective Backplates	Each	500	**9**		$ **4,500.00**
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50	**200**	realign NB merge	$ **500.00**
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00	**15**	refresh ramp stop bar	$ **300.00**
Pavement Marking Removal	LF	$ 1.50	**200**	6" white - NB merge lane	$ **300.00**
Legends	Each	$ 500.00		8' legend	$ -
Raised Pvt Marker	Each	$ 50.00		80' spa exc 20'@ transitions	$ -
Traffic Calming					
Curb Extension	Each	$ 13,000.00			$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00			$ -
Lighting	Each	$ 5,000.00			$ -
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
Dilemma Zone Radar		$ 25,000.00	**1**	2 way	$ **25,000.00**
					$ -
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	$ **30,600.00**
B. Design Contingency	**25%**	$ **7,650.00**
C. Construction Contingencies	**25%**	$ **7,650.00**
D. Traffic Control	**5%**	$ **1,530.00**
E. Construction Engineering	**Enter if Applicable**	$ -
F. Utility Relocation	**8%**	$ **2,448.00**
G. Total Construction Cost with 6% Escalation	**6%**	$ **52,870.68**
H. Consulting Planning/Design	**Enter if Applicable**	$ -
I.Project Development Costs	**Enter if Applicable**	$ -
J. Right-of-way	**Enter if Applicable**	$ -
K. Total Project Costs (Rounded up to nearest $1,000)		$ **53,000.00**

19 Oregon Pike

19 - Oregon Pike

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00	**300**	incl removal, pavemt restoration	**$ 75,000.00**
Concrete for Curb Extension	SY	$ 400.00		includes excavation/roadside development	**$ -**
Asphalt for Curb Extension	SF	$ 30.00			**$ -**
ADA Ramp	Each	$ 10,000.00	**2**	realign ped crossing at Roseville	**$ 20,000.00**
Mod block Retaining Wall	SF	$ 75.00			**$ -**
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			**$ -**
Roadway					
Mill and Overlay	SY	$ 125.00			**$ -**
Reconstruction	SY	$ 500.00			**$ -**
Widening (shoulder)	SY	$ 300.00	**400**	for NB left turn Murry Hill	**$ 120,000.00**
Rumble Strips	LF	$ 2.00			
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			**$ -**
Street Tree	Each	$ 700.00			**$ -**
Tree Removal	Each	$ 2,000.00			**$ -**
Clearing/Grubbing	Acre	$ 26,000.00			**$ -**
New Catch Basin	Each	$ 7,000.00			**$ -**
Adjusted Catch Basin	Each	$ 3,500.00			**$ -**
Utility Pole Relocation	Each	$ 5,000.00	**1**	nw corner	**$ 5,000.00**
Signals					
RRFB	Each	$ 20,000.00			**$ -**
Hawk beacon	Each	$ 100,000.00			**$ -**
Timing Changes	Each	$3,000			**$ -**
APS	Each	$2,000			**$ -**
Ped Signal With Countdown	Each	$ 5,000.00	**2**	incl wire and pedestal poles	**$ 10,000.00**
New Signal	Each	$ 250,000.00		4 mast arms/signals/electrical	**$ -**
Ped Detection (pushbutton)	Each	$ 500.00	**2**		**$ 1,000.00**
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			**$ -**
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50	**1000**	for NB left	**$ 2,500.00**
12" Thermoplastic Pavement Markings	LF	$ 10.00			**$ -**
24" Thermoplastic Pvt Mrkg	LF	$ 20.00	**200**	stop bars, ped crossing at Roseville	**$ 4,000.00**
Pavement Marking Removal	LF	$ 10.00	**30**	NB stop bars at Roseville	**$ 300.00**
Legends	Each	$ 500.00	**4**	8' legend - left only	**$ 2,000.00**
Raised Pvt Marker	Each	$ 50.00	**20**	80' spa exc 20'@ transitions	**$ 1,000.00**
Traffic Calming					
Curb Extension	Each	$ 13,000.00		if not broken down per above	**$ -**
Raised Crossing	Each	$ 10,000.00			**$ -**
Raised Intersection	Each	$ 60,000.00			**$ -**
Mini Roundabout (rural)	Each	$ 1,000,000.00			**$ -**
Speed Hump/Table	Each	$ 2,500.00			**$ -**
Roundabout (minor arterial)	Each	$ 4,000,000.00			**$ -**
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			**$ -**
Pedestrian Railing	LF	$ 100.00			**$ -**
Sign and Post	Each	$ 400.00	**2**	advance intersection	**$ 800.00**
Lighting	Each	$ 5,000.00			**$ -**
Solar Speed Signage	Each	$ 7,500.00			**$ -**

Additional Items					
left turn study	Ea	$ 3,500.00	**1**		**$ 3,500.00**
					$ -
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	**$ 245,100.00**
B. Design Contingency	**25%**	**$ 61,275.00**
C. Construction Contingencies	**25%**	**$ 61,275.00**
D. Traffic Control	**5%**	**$ 12,255.00**
E. Construction Engineering	**Enter if Applicable**	**$ -**
F. Utility Relocation	**8%**	**$ 19,608.00**
G. Total Construction Cost with 6% Escalation	**6%**	**$ 423,483.78**
H. Consulting Planning/Design	**Enter if Applicable**	**$ -**
I.Project Development Costs	**Enter if Applicable**	**$ -**
J. Right-of-way	**Enter if Applicable**	**$ -**
K. Total Project Costs (Rounded up to nearest $1,000)		**$ 424,000.00**

20 US 222 & Peach Bottom

20 - US 222 & Peach Bottom

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00			$ -
Concrete for Curb Extension	SY	$ 400.00			$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00			$ -
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00			$ -
Widening (shoulder)	SY	$ 300.00			$ -
Rumble Strips	LF	$ 2.00			
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00			$ -
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00	**1**	pull off pole on east side	**$ 5,000.00**
Signals					
RRFB	Each	$ 20,000.00			$ -
Hawk beacon	Each	$ 100,000.00			$ -
Timing Changes	Each	$3,000			$ -
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00			$ -
New Signal	Each	$ 250,000.00			$ -
Ped Detection (pushbutton)	Each	$ 500.00			$ -
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			$ -
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00	**40**	stop bars	
Pavement Marking Removal	LF	$ 1.50		6" white	$ -
Legends	Each	$ 500.00	**4**	8' legend - curve	**$ 2,000.00**
Raised Pvt Marker	Each	$ 50.00	**30**	80' spa exc 20'@ transitions	**$ 1,500.00**
Traffic Calming					
Curb Extension	Each	$ 13,000.00		if not broken down per above	$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00	**11**	2 curve + advance intersection (south); chevrons (north)	**$ 4,400.00**
Lighting	Each	$ 5,000.00	**1**	intersection	**$ 5,000.00**
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
					$ -
					$ -
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	**$ 17,900.00**
B. Design Contingency	**25%**	**$ 4,475.00**
C. Construction Contingencies	**25%**	**$ 4,475.00**
D. Traffic Control	**5%**	**$ 895.00**
E. Construction Engineering	**Enter if Applicable**	**$ -**
F. Utility Relocation	**8%**	**$ 1,432.00**
G. Total Construction Cost with 6% Escalation	**6%**	**$ 30,927.62**
H. Consulting Planning/Design	**Enter if Applicable**	**$ -**
I.Project Development Costs	**Enter if Applicable**	**$ -**
J. Right-of-way	**Enter if Applicable**	**$ -**
K. Total Project Costs (Rounded up to nearest $1,000)		**$ 31,000.00**

21
Spooky Nook

21 - Spooky Nook

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00			$ -
Concrete for Curb Extension	SY	$ 400.00			$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00			$ -
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00			$ -
Widening (shoulder)	SY	$ 300.00			$ -
Rumble Strips	LF	$ 2.00			
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00			$ -
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00			$ -
Hawk beacon	Each	$ 100,000.00			$ -
Timing Changes	Each	$3,000			$ -
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00			$ -
New Signal	Each	$ 250,000.00			$ -
Ped Detection (pushbutton)	Each	$ 500.00			$ -
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			$ -
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00	**80**	Stop bars - Chiques and W. Broad	$ **1,600.00**
Pavement Marking Removal	LF	$ 1.50		6" white	$ -
Legends	Each	$ 500.00		8' legend	$ -
Raised Pvt Marker	Each	$ 50.00		80' spa exc 20'@ transitions	$ -
Traffic Calming					
Curb Extension	Each	$ 13,000.00			$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00	**4**	intersection warning incl W Broad	$ **1,600.00**
Lighting	Each	$ 5,000.00	**4**	intersection lighting incl W Broad	$ **20,000.00**
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
					$ -
					$ -
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	$ **23,200.00**
B. Design Contingency	**25%**	$ **5,800.00**
C. Construction Contingencies	**25%**	$ **5,800.00**
D. Traffic Control	**5%**	$ **1,160.00**
E. Construction Engineering	**Enter if Applicable**	$ -
F. Utility Relocation	**8%**	$ **1,856.00**
G. Total Construction Cost with 6% Escalation	**6%**	$ **40,084.96**
H. Consulting Planning/Design	**Enter if Applicable**	$ -
I.Project Development Costs	**Enter if Applicable**	$ -
J. Right-of-way	**Enter if Applicable**	$ -
K. Total Project Costs (Rounded up to nearest $1,000)		$ **41,000.00**

22 PA 772 & PA 272

22 - PA 772 & PA 272

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00		incl removal, pavemt restoration	$ -
Concrete for Curb Extension	SY	$ 400.00		includes excavation/roadside development	$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00		lump sum - if not broken out per above	$ -
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00	**500**	on Newport at bank exit	$ **5,000.00**
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00		excav, wrg, base, binder, tack, subbase	$ -
Widening (shoulder)	SY	$ 300.00			$ -
Rumble Strips	LF	$ 2.00			
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00			$ -
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00			$ -
Hawk beacon	Each	$ 100,000.00			$ -
Timing Changes	Each	$3,000			$ -
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00		incl wire	$ -
New Signal heads	Each	$ 1,500.00		for protected lefts	$ -
Ped Detection (pushbutton)	Each	$ 500.00			$ -
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			$ -
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00			
Pavement Marking Removal	LF	$ 1.50		6" white	$ -
Legends	Each	$ 500.00		8' legend	$ -
Raised Pvt Marker	Each	$ 50.00		80' spa exc 20'@ transitions	$ -
Traffic Calming					
Curb Extension	Each	$ 13,000.00		if not broken down per above	$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00	**6**	no left north of intersection, sig ahead - 2 appr, left turn signals - 2	$ **2,400.00**
Lighting	Each	$ 5,000.00			$ -
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
Dilemma Zone Radar	EA	$ 35,000.00	**1**	4-way	$ **35,000.00**
Left turn study	Ea	$ 3,500.00	**1**	for protected lefts	$ **3,500.00**
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	$ **45,900.00**
B. Design Contingency	**25%**	$ **11,475.00**
C. Construction Contingencies	**25%**	$ **11,475.00**
D. Traffic Control	**5%**	$ **2,295.00**
E. Construction Engineering	**Enter if Applicable**	$ -
F. Utility Relocation	**8%**	$ **3,672.00**
G. Total Construction Cost with 6% Escalation	**6%**	$ **79,306.02**
H. Consulting Planning/Design	**Enter if Applicable**	$ -
I.Project Development Costs	**Enter if Applicable**	$ -
J. Right-of-way	**Enter if Applicable**	$ -
K. Total Project Costs (Rounded up to nearest $1,000)		$ **80,000.00**

23 PA 72 & Pinch Rd

23 - PA 72 & Pinch Rd

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00			$ -
Concrete for Curb Extension	SY	$ 400.00			$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00			$ -
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00			$ -
Widening (shoulder)	SY	$ 300.00			$ -
Rumble Strips	LF	$ 2.00	**12000**	Center line and white lines	$ **24,000.00**
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00	**0.25**	east side at 72/Cider Press Rd	$ **6,500.00**
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00	**1**	South of Pinch Rd - pull off pole	$ **5,000.00**
Signals					
RRFB	Each	$ 20,000.00			$ -
Hawk beacon	Each	$ 100,000.00			$ -
Timing Changes	Each	$3,000			$ -
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00			$ -
New Signal	Each	$ 250,000.00			$ -
Ped Detection (pushbutton)	Each	$ 500.00			$ -
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			$ -
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00	**36**	Stop bars at Pinch & Cider Press	$ **720.00**
Pavement Marking Removal	LF	$ 1.50		6" white	$ -
Legends	Each	$ 500.00		8' legend	$ -
Raised Pvt Marker	Each	$ 50.00	**50**	80' spa exc 20'@ transitions	$ **2,500.00**
Traffic Calming					
Curb Extension	Each	$ 13,000.00			$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00	**25**	Chevrons on 2 curves + curve advisory + double sided arrow at Pinch	$ **10,000.00**
Lighting	Each	$ 5,000.00	**2**	Cider Mill and Pinch intersections	$ **10,000.00**
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
					$ -
					$ -
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	$ **58,720.00**
B. Design Contingency	**25%**	$ **14,680.00**
C. Construction Contingencies	**25%**	$ **14,680.00**
D. Traffic Control	**5%**	$ **2,936.00**
E. Construction Engineering	**Enter if Applicable**	$ -
F. Utility Relocation	**8%**	$ **4,697.60**
G. Total Construction Cost with 6% Escalation	**6%**	$ **101,456.42**
H. Consulting Planning/Design	**Enter if Applicable**	$ -
I.Project Development Costs	**Enter if Applicable**	$ -
J. Right-of-way	**Enter if Applicable**	$ -
K. Total Project Costs (Rounded up to nearest $1,000)		$ **102,000.00**

24 Spruce & College

24- Spruce & College

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00			$ -
Concrete for Curb Extension	SY	$ 400.00			$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00			$ -
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00			$ -
Widening (shoulder)	SY	$ 300.00			$ -
Rumble Strips	LF	$ 2.00			
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00	**1**	sw corner Spruce-Cedar	$ **2,000.00**
Clearing/Grubbing	Acre	$ 26,000.00	**0.05**	nw corner Spruce-Arch bush removal	$ **1,300.00**
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00			$ -
Hawk beacon	Each	$ 100,000.00			$ -
Timing Changes	Each	$3,000			$ -
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00			$ -
New Signal	Each	$ 250,000.00			$ -
Ped Detection (pushbutton)	Each	$ 500.00			$ -
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			$ -
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00	**200**	xwalks - 3 intersections	$ **4,000.00**
Pavement Marking Removal	LF	$ 1.50		6" white	$ -
Legends	Each	$ 500.00		8' legend	$ -
Raised Pvt Marker	Each	$ 50.00			$ -
Traffic Calming					
Curb Extension	Each	$ 13,000.00			$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00	**4**	lower speed limit	$ **1,600.00**
Lighting	Each	$ 5,000.00	**4**	add'l light - 4 intersections	$ **20,000.00**
Solar Speed Signage	Each	$ 7,500.00	**2**	1 ea dir	$ **15,000.00**

Additional Items					
Speed Study	Ea	$ 3,500.00	**1**	consider reduction from 35 mph	$ **3,500.00**
					$ -
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	$ **47,400.00**
B. Design Contingency	**25%**	$ **11,850.00**
C. Construction Contingencies	**25%**	$ **11,850.00**
D. Traffic Control	**5%**	$ **2,370.00**
E. Construction Engineering	**Enter if Applicable**	$ -
F. Utility Relocation	**8%**	$ **3,792.00**
G. Total Construction Cost with 6% Escalation	**6%**	$ **81,897.72**
H. Consulting Planning/Design	**Enter if Applicable**	$ -
I.Project Development Costs	**Enter if Applicable**	$ -
J. Right-of-way	**Enter if Applicable**	$ -
K. Total Project Costs (Rounded up to nearest $1,000)		$ **82,000.00**

25 PA 441 & N 3rd

25- PA 441 & N 3rd

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00			$ -
Concrete for Curb Extension	SY	$ 400.00			$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00			$ -
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00			$ -
Widening (shoulder)	SY	$ 300.00			$ -
Rumble Strips	LF	$ 2.00			
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00			$ -
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00			$ -
Hawk beacon	Each	$ 100,000.00			$ -
Timing Changes	Each	$3,000	**1**	NB left turn	$ **3,000.00**
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00		incl wire	$ -
New Signal head	Each	$ 1,500.00	**2**	NB left - protected	$ **3,000.00**
Ped Detection (pushbutton)	Each	$ 500.00			$ -
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Backplates	Each	$ 500.00	**8**	8 exist heads, 2 to be replaced	$ **4,000.00**
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50	**100**	NB left turn lane	$ **250.00**
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00			
Pavement Marking Removal	LF	$ 1.50		6" white	$ -
Legends	Each	$ 500.00	**4**	8' legend - left turn	$ **2,000.00**
Raised Pvt Marker	Each	$ 50.00		80' spa exc 20'@ transitions	$ -
Traffic Calming					
Curb Extension	Each	$ 13,000.00			$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00			$ -
Lighting	Each	$ 5,000.00			$ -
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
Left turn study	Ea	$ 3,500.00	**1**	NB protected left turn	$ **3,500.00**
OH lane use signs	Ea	$ 20,000.00	**1**	NB mast arm + signage	$ **20,000.00**
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	$ **35,750.00**
B. Design Contingency	**25%**	$ **8,937.50**
C. Construction Contingencies	**25%**	$ **8,937.50**
D. Traffic Control	**5%**	$ **1,787.50**
E. Construction Engineering	**Enter if Applicable**	$ -
F. Utility Relocation	**8%**	$ **2,860.00**
G. Total Construction Cost with 6% Escalation	**6%**	$ **61,768.85**
H. Consulting Planning/Design	**Enter if Applicable**	$ -
I.Project Development Costs	**Enter if Applicable**	$ -
J. Right-of-way	**Enter if Applicable**	$ -
K. Total Project Costs (Rounded up to nearest $1,000)		$ **62,000.00**

26 PA 230 & Carey

26 - PA 230 & Carey

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 100.00	**500**	incl removal, pavemt restoration	**$ 50,000.00**
Concrete for Curb Extension	SY	$ 400.00	**30**	north side of 230 east of Anchor	**$ 12,000.00**
Asphalt for Curb Extension	SF	$ 30.00			**$ -**
ADA Ramp	Each	$ 10,000.00			**$ -**
Mod block Retaining Wall	SF	$ 75.00			**$ -**
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00	**1200**	to restrict lefts west of Carey	**$ 12,000.00**
Roadway					
Mill and Overlay	SY	$ 125.00			**$ -**
Reconstruction	SY	$ 500.00			**$ -**
Widening (shoulder)	SY	$ 300.00			**$ -**
Rumble Strips	LF	$ 2.00	**2500**	white lines east of Carey	**$ 5,000.00**
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			**$ -**
Street Tree	Each	$ 700.00			**$ -**
Tree Removal	Each	$ 2,000.00			**$ -**
Clearing/Grubbing	Acre	$ 26,000.00			**$ -**
New Catch Basin	Each	$ 7,000.00			**$ -**
Adjusted Catch Basin	Each	$ 3,500.00			**$ -**
Utility Pole Relocation	Each	$ 5,000.00			**$ -**
Signals					
RRFB	Each	$ 20,000.00			**$ -**
Hawk beacon	Each	$ 100,000.00			**$ -**
Timing Changes	Each	$3,000			**$ -**
APS	Each	$2,000			**$ -**
Ped Signal With Countdown	Each	$ 1,500.00			**$ -**
New Signal	Each	$ 250,000.00			**$ -**
Ped Detection (pushbutton)	Each	$ 500.00			**$ -**
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			**$ -**
Backplates	Each	$ 500.00	**6**	6 heads at 230 & Carey; 2 exist.	**$ 3,000.00**
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			**$ -**
12" Thermoplastic Pavement Markings	LF	$ 10.00			**$ -**
24" Thermoplastic Pvt Mrkg	LF	$ 20.00			
Pavement Marking Removal	LF	$ 1.50	**200**	center turn lines west of Carey	**$ 300.00**
Legends	Each	$ 500.00		8' legend	**$ -**
Raised Pvt Marker	Each	$ 50.00			**$ -**
Traffic Calming					
Curb Extension	Each	$ 13,000.00			**$ -**
Raised Crossing	Each	$ 10,000.00			**$ -**
Raised Intersection	Each	$ 60,000.00			**$ -**
Mini Roundabout (rural)	Each	$ 1,000,000.00			**$ -**
Speed Hump/Table	Each	$ 2,500.00			**$ -**
Roundabout (minor arterial)	Each	$ 4,000,000.00			**$ -**
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			**$ -**
Pedestrian Railing	LF	$ 100.00			**$ -**
Sign and Post	Each	$ 400.00	**6**	no peds on 230 east of anchor; no lefts	**$ 2,400.00**
Lighting	Each	$ 5,000.00			**$ -**
Solar Speed Signage	Each	$ 7,500.00			**$ -**
Additional Items					
Drainage adjustments	LS	$ 85,000.00	**1**	for new sidewalk n side	**$ 85,000.00**
					$ -
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	**$ 169,700.00**
B. Design Contingency	**25%**	**$ 42,425.00**
C. Construction Contingencies	**25%**	**$ 42,425.00**
D. Traffic Control	**5%**	**$ 8,485.00**
E. Construction Engineering	**Enter if Applicable**	**$ -**
F. Utility Relocation	**8%**	**$ 13,576.00**
G. Total Construction Cost with 6% Escalation	**6%**	**$ 293,207.66**
H. Consulting Planning/Design	**Enter if Applicable**	**$ -**
I.Project Development Costs	**Enter if Applicable**	**$ -**
J. Right-of-way	**Enter if Applicable**	**$ -**
K. Total Project Costs (Rounded up to nearest $1,000)		**$ 294,000.00**

27 PA 463 & 9th St

27 - PA 463 & 9th St

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00			$ -
Concrete for Curb Extension	SY	$ 400.00			$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00	**5**	4 at 6th St; 1 at 9th St	$ **50,000.00**
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00			$ -
Widening (shoulder)	SY	$ 300.00			$ -
Rumble Strips	LF	$ 2.00	**2500**	center	$ **5,000.00**
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00			$ -
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00	**1**	at 9th St	$ **20,000.00**
Hawk beacon	Each	$ 100,000.00			$ -
Timing Changes	Each	$3,000			$ -
APS	Each	$2,000	**4**	at 9th St	$ **8,000.00**
Ped Signal With Countdown	Each	$ 1,500.00			$ -
New Signal	Each	$ 250,000.00		4 mast arms/signals/electrical	$ -
Ped Detection (pushbutton)	Each	$ 500.00			$ -
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			$ -
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00	**600**	stop bars, crosswalks - 3 intersections	$ **12,000.00**
Pavement Marking Removal	LF	$ 1.50		6" white	$ -
Legends	Each	$ 500.00	**16**	ped xing at 9th, bike share full length	$ **8,000.00**
Raised Pvt Marker	Each	$ 50.00	**50**	80' spa exc 20'@ transitions	$ **2,500.00**
Traffic Calming					
Curb Extension	Each	$ 13,000.00		if not broken down per above	$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00	**6**	ped at 9th, no left at Union	$ **2,400.00**
Lighting	Each	$ 5,000.00	**1**	add 1 at 8th St	$ **5,000.00**
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
Signal Warrant Analysis	Ea	$ 12,500.00	**1**	Full signal or RRFB at 9th	$ **12,500.00**
No Left Turn Study	Ea	$ 3,500.00	**1**	Union St to 462	$ **3,500.00**
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	$ **128,900.00**
B. Design Contingency	**25%**	$ **32,225.00**
C. Construction Contingencies	**25%**	$ **32,225.00**
D. Traffic Control	**5%**	$ **6,445.00**
E. Construction Engineering	**Enter if Applicable**	$ -
F. Utility Relocation	**8%**	$ **10,312.00**
G. Total Construction Cost with 6% Escalation	**6%**	$ **222,713.42**
H. Consulting Planning/Design	**Enter if Applicable**	$ -
I.Project Development Costs	**Enter if Applicable**	$ -
J. Right-of-way	**Enter if Applicable**	$ -
K. Total Project Costs (Rounded up to nearest $1,000)		$ **223,000.00**

28
Blue Rock Rd

28 - Blue Rock Road

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00			$ -
Concrete for Curb Extension	SY	$ 400.00			$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00			$ -
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Guide Rail	LF	$ 100.00	**100**	close off Old Blue Rock	$ **10,000.00**
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00			$ -
Widening (shoulder)	SY	$ 300.00			$ -
Rumble Strips	LF	$ 2.00	**4000**	center	$ **8,000.00**
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00			$ -
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00			$ -
Hawk beacon	Each	$ 100,000.00			$ -
Timing Changes	Each	$3,000			$ -
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00			$ -
New Signal	Each	$ 250,000.00			$ -
Ped Detection (pushbutton)	Each	$ 500.00			$ -
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50	**100**	skip lines - white	$ **250.00**
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00	**50**	stop bars - 2 intersect	$ **1,000.00**
Pavement Marking Removal	LF	$ 1.50		6" white	$ -
Legends	Each	$ 500.00		8' legend	$ -
Raised Pvt Marker	Each	$ 50.00	**50**	80' spa exc 20'@ transitions	$ **2,500.00**
Traffic Calming					
Curb Extension	Each	$ 13,000.00			$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00	**8**	speed reduction, intersection warming	$ **3,200.00**
Lighting	Each	$ 5,000.00	**2**	add 2 corners	$ **10,000.00**
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
Speed Study	Ea	$ 3,500.00	**1**	consider reduction - now 50 mph	$ **3,500.00**
Guide rail transitions	EA	$ 7,000.00	**1**	approach + trailing, close off Old Blue Rk	$ **7,000.00**
Pavement removal	LS	$ 10,000.00	**1**	cut off old blue rock	$ **10,000.00**
					$ -

A. Office Estimate (construction items)	**From itemized list above**	$ **55,450.00**
B. Design Contingency	**25%**	$ **13,862.50**
C. Construction Contingencies	**25%**	$ **13,862.50**
D. Traffic Control	**5%**	$ **2,772.50**
E. Construction Engineering	**Enter if Applicable**	$ -
F. Utility Relocation	**8%**	$ **4,436.00**
G. Total Construction Cost with 6% Escalation	**6%**	$ **95,806.51**
H. Consulting Planning/Design	**Enter if Applicable**	$ -
I.Project Development Costs	**Enter if Applicable**	$ -
J. Right-of-way	**Enter if Applicable**	$ -
K. Total Project Costs (Rounded up to nearest $1,000)		$ **96,000.00**

29 US 30W to PA 23

29 - US 30W to PA 23

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00			$ -
Concrete for Curb Extension	SY	$ 400.00			$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00			$ -
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00			$ -
Widening (shoulder)	SY	$ 300.00			$ -
Rumble Strips	LF	$ 2.00			
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00			$ -
Clearing/Grubbing	Acre	$ 26,000.00			$ -
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00			$ -
Hawk beacon	Each	$ 100,000.00			$ -
Timing Changes	Each	$3,000	**1**	check yellow/red clearance, ped intervals - 2 intersections	$ **3,000.00**
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00			$ -
New Signal	Each	$ 250,000.00			$ -
Ped Detection (pushbutton)	Each	$ 500.00			$ -
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Reflective backplates	Each	$ 500.00	**6**	north ramp intersection; south done	$ **3,000.00**
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			$ -
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00			$ -
Pavement Marking Removal	LF	$ 1.50			$ -
Legends	Each	$ 500.00			$ -
Raised Pvt Marker	Each	$ 50.00			$ -
Traffic Calming					
Curb Extension	Each	$ 13,000.00			$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00			$ -
Lighting	Each	$ 5,000.00			$ -
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
					$ -
					$ -
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	$ **6,000.00**
B. Design Contingency	**25%**	$ **1,500.00**
C. Construction Contingencies	**25%**	$ **1,500.00**
D. Traffic Control	**5%**	$ **300.00**
E. Construction Engineering	**Enter if Applicable**	$ -
F. Utility Relocation	**8%**	$ **480.00**
G. Total Construction Cost with 6% Escalation	**6%**	$ **10,366.80**
H. Consulting Planning/Design	**Enter if Applicable**	$ -
I.Project Development Costs	**Enter if Applicable**	$ -
J. Right-of-way	**Enter if Applicable**	$ -
K. Total Project Costs (Rounded up to nearest $1,000)		$ **11,000.00**

30 PA 23 - Hershey

30 - PA 23-Hershey

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00		incl removal, pavemt restoration	$ -
Concrete for Curb Extension	SY	$ 400.00		includes excavation/roadside development	$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00		lump sum - if not broken out per above	$ -
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00			$ -
Widening (shoulder)	SY	$ 300.00			$ -
Rumble Strips	LF	$ 2.00			
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00	**0.5**	trim NE corner	$ **1,000.00**
Clearing/Grubbing	Acre	$ 26,000.00			$ -
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00			$ -
Hawk beacon	Each	$ 100,000.00			$ -
Timing Changes	Each	$3,000			$ -
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00			$ -
New Signal	Each	$ 250,000.00			$ -
Ped Detection (pushbutton)	Each	$ 500.00			$ -
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			$ -
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00	**30**	stop bars - Hershey	$ **600.00**
Pavement Marking Removal	LF	$ 1.50		6" white	$ -
Legends	Each	$ 500.00		8' legend	$ -
Raised Pvt Marker	Each	$ 50.00		80' spa exc 20'@ transitions	$ -
Traffic Calming					
Curb Extension	Each	$ 13,000.00			$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00	**3**	cross street (EB/WB), speed limit WB	$ **1,200.00**
Lighting	Each	$ 5,000.00	**1**	additional/new luminaire	$ **5,000.00**
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
					$ -
					$ -
					$ -
					$ -

A. Office Estimate (construction items)	**From itemized list above**	$ **7,800.00**
B. Design Contingency	**25%**	$ **1,950.00**
C. Construction Contingencies	**25%**	$ **1,950.00**
D. Traffic Control	**5%**	$ **390.00**
E. Construction Engineering	**Enter if Applicable**	$ -
F. Utility Relocation	**8%**	$ **624.00**
G. Total Construction Cost with 6% Escalation	**6%**	$ **13,476.84**
H. Consulting Planning/Design	**Enter if Applicable**	$ -
I.Project Developm	**Enter if Applicable**	$ -
J. Right-of-way	**Enter if Applicable**	$ -
K. Total Project Costs (Rounded up to nearest $1,000)		$ **14,000.00**

31
Pitney Rd

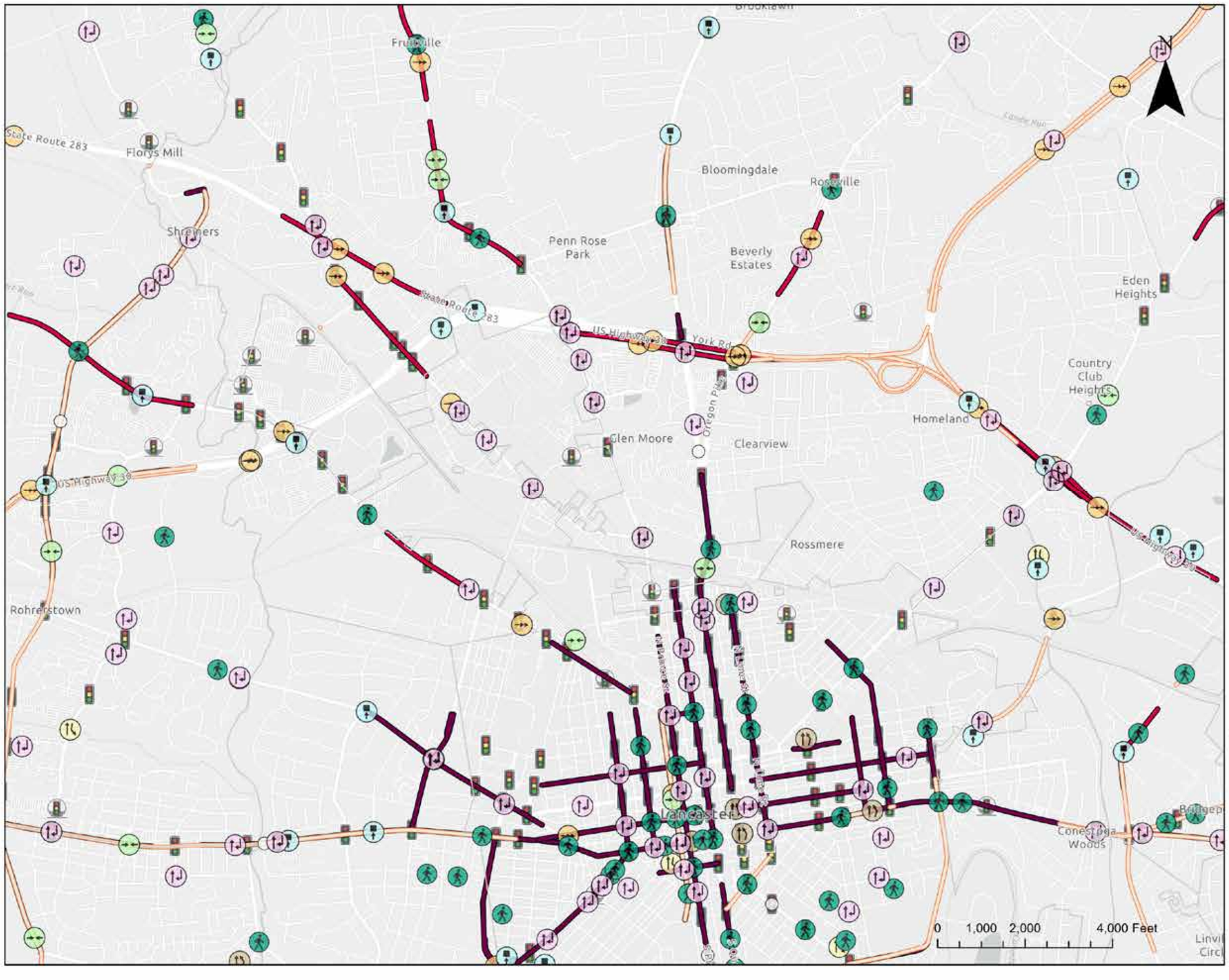
31 - Pitney Road

	Unit of Measure	Unit Cost	Project Quantity	Project Notes	Project Cost
Sidewalks etc.					
Conc Curbing	LF	$ 250.00			$ -
Concrete for Curb Extension	SY	$ 400.00			$ -
Asphalt for Curb Extension	SF	$ 30.00			$ -
ADA Ramp	Each	$ 10,000.00			$ -
Mod block Retaining Wall	SF	$ 75.00			$ -
Structural Retaining Wall	SF	$ 150.00			
Island/Median	SF	$ 10.00			$ -
Roadway					
Mill and Overlay	SY	$ 125.00			$ -
Reconstruction	SY	$ 500.00			$ -
Widening (shoulder)	SY	$ 300.00			$ -
Rumble Strips	LF	$ 2.00	**3000**	center line + shoulders ~1000'	$ **6,000.00**
Utilities/Vegetation					
Loam and Seed	SY	$ 2.00			$ -
Street Tree	Each	$ 700.00			$ -
Tree Removal	Each	$ 2,000.00	**1**		$ **2,000.00**
Clearing/Grubbing	Acre	$ 26,000.00	**0.25**	tree trimming, brush removal on E bank	$ **6,500.00**
New Catch Basin	Each	$ 7,000.00			$ -
Adjusted Catch Basin	Each	$ 3,500.00			$ -
Utility Pole Relocation	Each	$ 5,000.00			$ -
Signals					
RRFB	Each	$ 20,000.00			$ -
Hawk beacon	Each	$ 100,000.00			$ -
Timing Changes	Each	$3,000			$ -
APS	Each	$2,000			$ -
Ped Signal With Countdown	Each	$ 1,500.00		incl wire	$ -
New Signal	Each	$ 250,000.00		4 mast arms/signals/electrical	$ -
Ped Detection (pushbutton)	Each	$ 500.00			$ -
Thermal Detection	Each	$ 10,000.00			
Signal Post R&R	Each	$ 5,000.00			$ -
Pavement Markings (Thermo)					
6" Thermoplastic Pavement Markings	LF	$ 2.50			$ -
12" Thermoplastic Pavement Markings	LF	$ 10.00			$ -
24" Thermoplastic Pvt Mrkg	LF	$ 20.00	**200**	refresh exist ped crossing at Millenium	
Pavement Marking Removal	LF	$ 1.50		6" white	$ -
Legends	Each	$ 500.00		8' legend	$ -
Raised Pvt Marker	Each	$ 50.00	**20**	80' spa exc 20'@ transitions	$ **1,000.00**
Traffic Calming					
Curb Extension	Each	$ 13,000.00			$ -
Raised Crossing	Each	$ 10,000.00			$ -
Raised Intersection	Each	$ 60,000.00			$ -
Mini Roundabout (rural)	Each	$ 1,000,000.00			$ -
Speed Hump/Table	Each	$ 2,500.00			$ -
Roundabout (minor arterial)	Each	$ 4,000,000.00			$ -
Roundabout (major arterial)	Each	$ 6,000,000.00			
Other					
Flex Delineator	Each	$ 250.00			$ -
Pedestrian Railing	LF	$ 100.00			$ -
Sign and Post	Each	$ 400.00	**14**	chevrons, curve signs (regulatory), intersection warning (Millenium)	$ **5,600.00**
Lighting	Each	$ 5,000.00	**3**	at 3 intersections	$ **15,000.00**
Solar Speed Signage	Each	$ 7,500.00			$ -

Additional Items					
Guide rail end treatments		$ 7,000.00	**1**	approach + trailing	$ **7,000.00**
					$ -
					$ -
					$ -

A. Office Estimate (construction items)		**From itemized list above**	$ **43,100.00**
B. Design Contingency		**25%**	$ **10,775.00**
C. Construction Contingencies		**25%**	$ **10,775.00**
D. Traffic Control		**5%**	$ **2,155.00**
E. Construction Engineering		**Enter if Applicable**	$ -
F. Utility Relocation		**8%**	$ **3,448.00**
G. Total Construction Cost with 6% Escalation		**6%**	$ **74,468.18**
H. Consulting Planning/Design		**Enter if Applicable**	$ -
I.Project Development Costs		**Enter if Applicable**	$ -
J. Right-of-way		**Enter if Applicable**	$ -
K. Total Project Costs (Rounded up to nearest $1,000)			$ **75,000.00**

APPENDIX D
NON-CITY PRIORITY PROJECT LOCATION MAPS



Page Index: 1

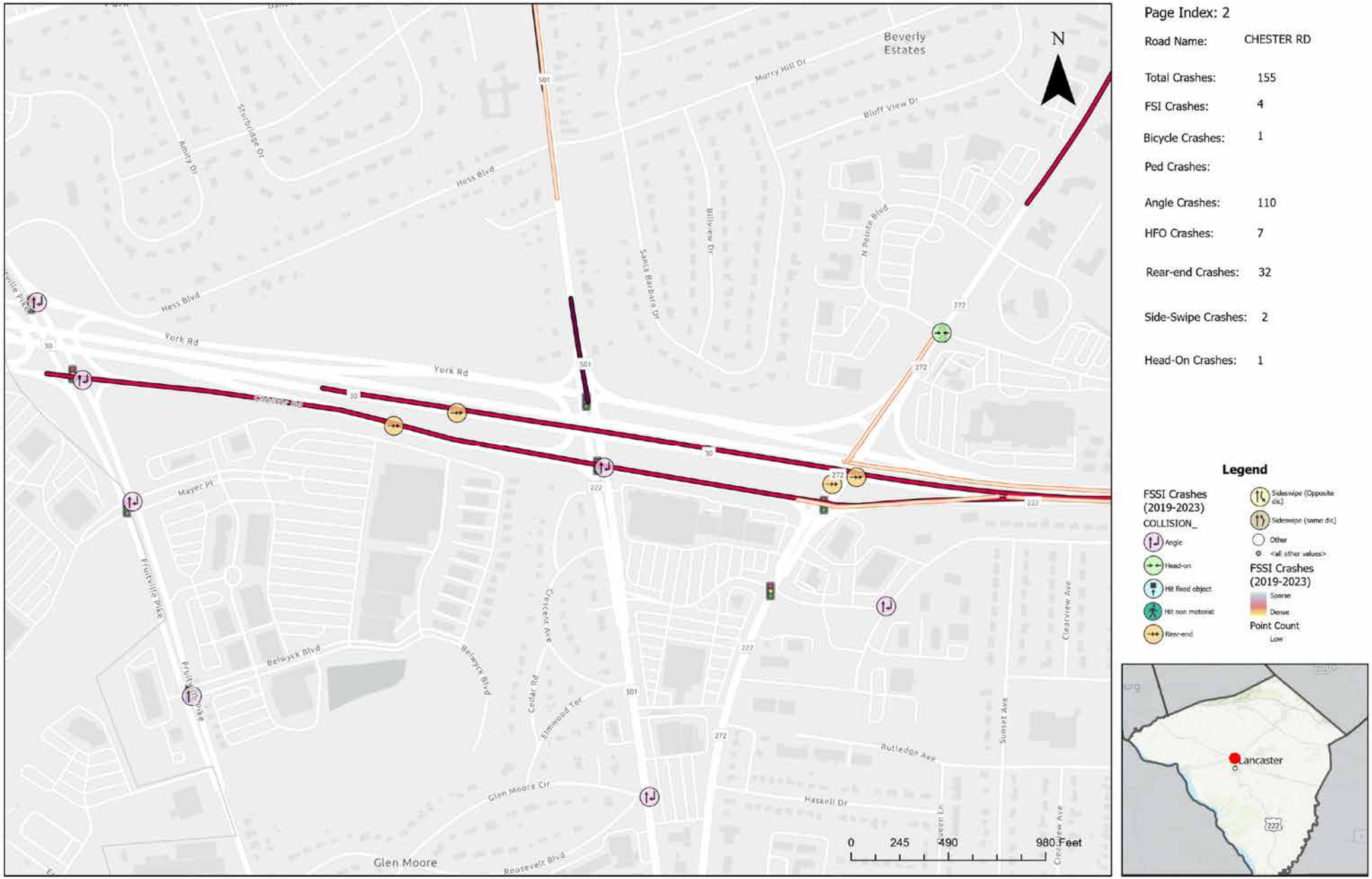
Road Name:	ROUTE 30 W
Total Crashes:	121
FSI Crashes:	5
Bicycle Crashes:	0
Ped Crashes:	0
Angle Crashes:	12
HFO Crashes:	21
Rear-end Crashes:	75
Side-Swipe Crashes:	6
Head-On Crashes:	1

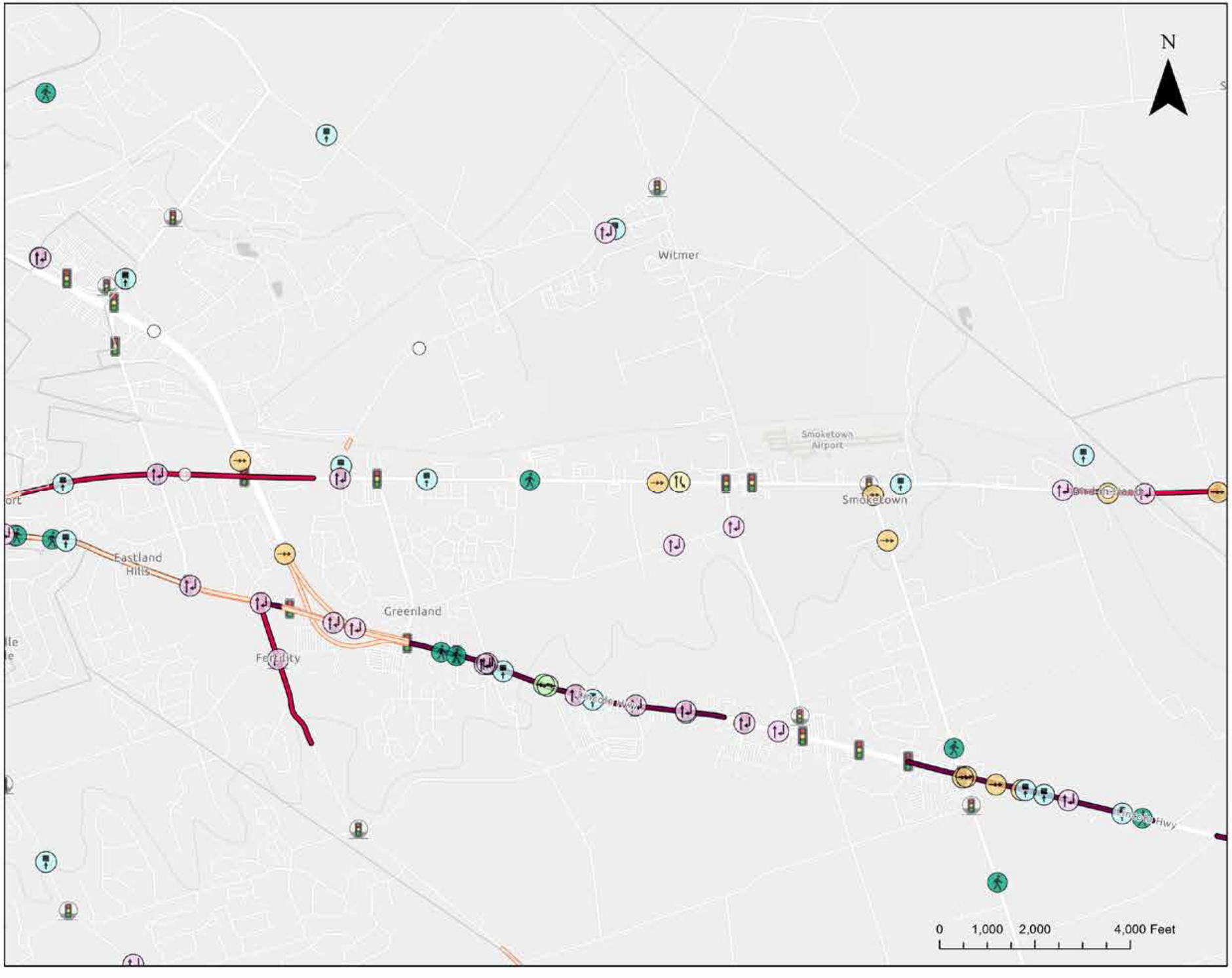
Legend

FSSI Crashes (2019-2023)
COLLISION_
- Angle
- Head-on
- Hit fixed object
- Hit non motorist
- Rear-end
- Sideswipe (Opposite dir.)
- Sideswipe (same dir.)
- Other
- <all other values>

FSSI Crashes (2019-2023)
- Sparse
- Dense

Point Count
Low


Page Index: 2
Road Name: CHESTER RD
Total Crashes: 155
FSI Crashes: 4
Bicycle Crashes: 1
Ped Crashes:
Angle Crashes: 110
HFO Crashes: 7
Rear-end Crashes: 32
Side-Swipe Crashes: 2
Head-On Crashes: 1
Legend
FSSI Crashes (2019-2023)
COLLISION_
Angle
Head-on
Hit fixed object
Hit non motorist
Rear-end
Sideswipe (Opposite dir.)
Sideswipe (same dir.)
Other
<all other values>
FSSI Crashes (2019-2023)
Sparse
Dense
Point Count
Low
Lancaster
0 245 490 980 Feet
N
Beverly Estates
Murry Hill Dr
Bluff View Dr
Hess Blvd
York Rd
Chestnut Rd
Mayer Pl
Fruitville Pike
Belwyck Blvd
Cedar Rd
Elmwood Ter
Glen Moore Cir
Glen Moore
Roosevelt Blvd
Rutledge Ave
Haskell Dr
Sunset Ave
Clearview Ave
Santa Barbara Dr
Billview Dr
N Pointe Blvd
Amity Dr
Sturbridge Dr
501
30
222
272



Page Index: 3

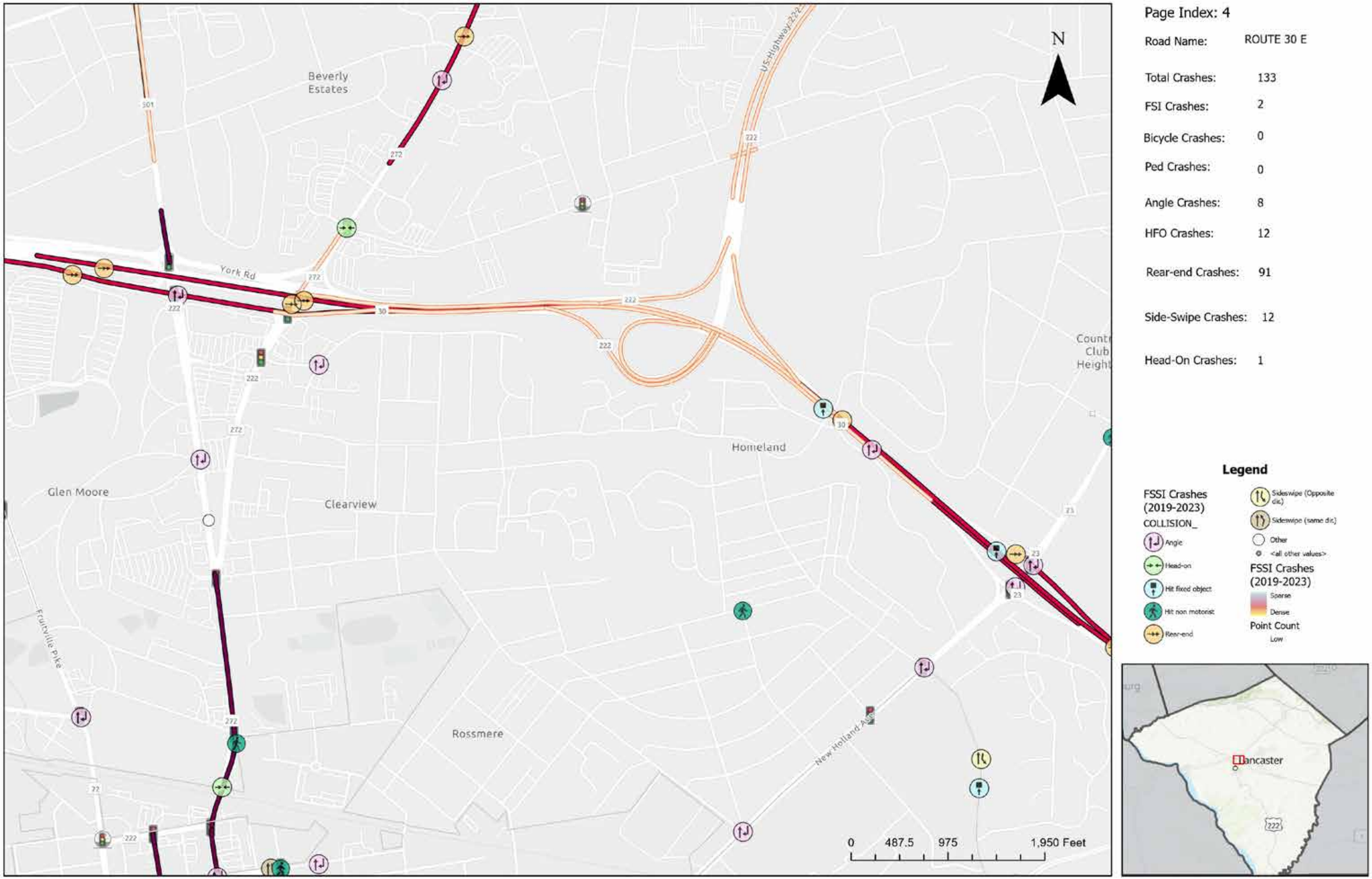
Road Name:	OLD PHILADELPHIA PIKE
Total Crashes:	83
FSI Crashes:	5
Bicycle Crashes:	0
Ped Crashes:	0
Angle Crashes:	37
HFO Crashes:	18
Rear-end Crashes:	25
Side-Swipe Crashes:	0
Head-On Crashes:	0

Legend

FSSI Crashes (2019-2023)
COLLISION_
- Angle
- Head-on
- Hit fixed object
- Hit non motorist
- Rear-end
- Sideswipe (Opposite dir.)
- Sideswipe (same dir.)
- Other
- <all other values>

FSSI Crashes (2019-2023)
- Sparse
- Dense

Point Count
Low


Beverly Estates
York Rd
Glen Moore
Clearview
Homeland
Rossmere
Fruitville Pike
New Holland Ave
U.S. Highway 222
N
0 487.5 975 1,950 Feet
Page Index: 4
Road Name: ROUTE 30 E
Total Crashes: 133
FSI Crashes: 2
Bicycle Crashes: 0
Ped Crashes: 0
Angle Crashes: 8
HFO Crashes: 12
Rear-end Crashes: 91
Side-Swipe Crashes: 12
Head-On Crashes: 1
Legend
FSSI Crashes (2019-2023)
COLLISION_
Angle
Head-on
Hit fixed object
Hit non motorist
Rear-end
Sideswipe (Opposite dir.)
Sideswipe (same dir.)
Other
<all other values>
FSSI Crashes (2019-2023)
Sparse
Dense
Point Count
Low
Lancaster

Page Index: 5

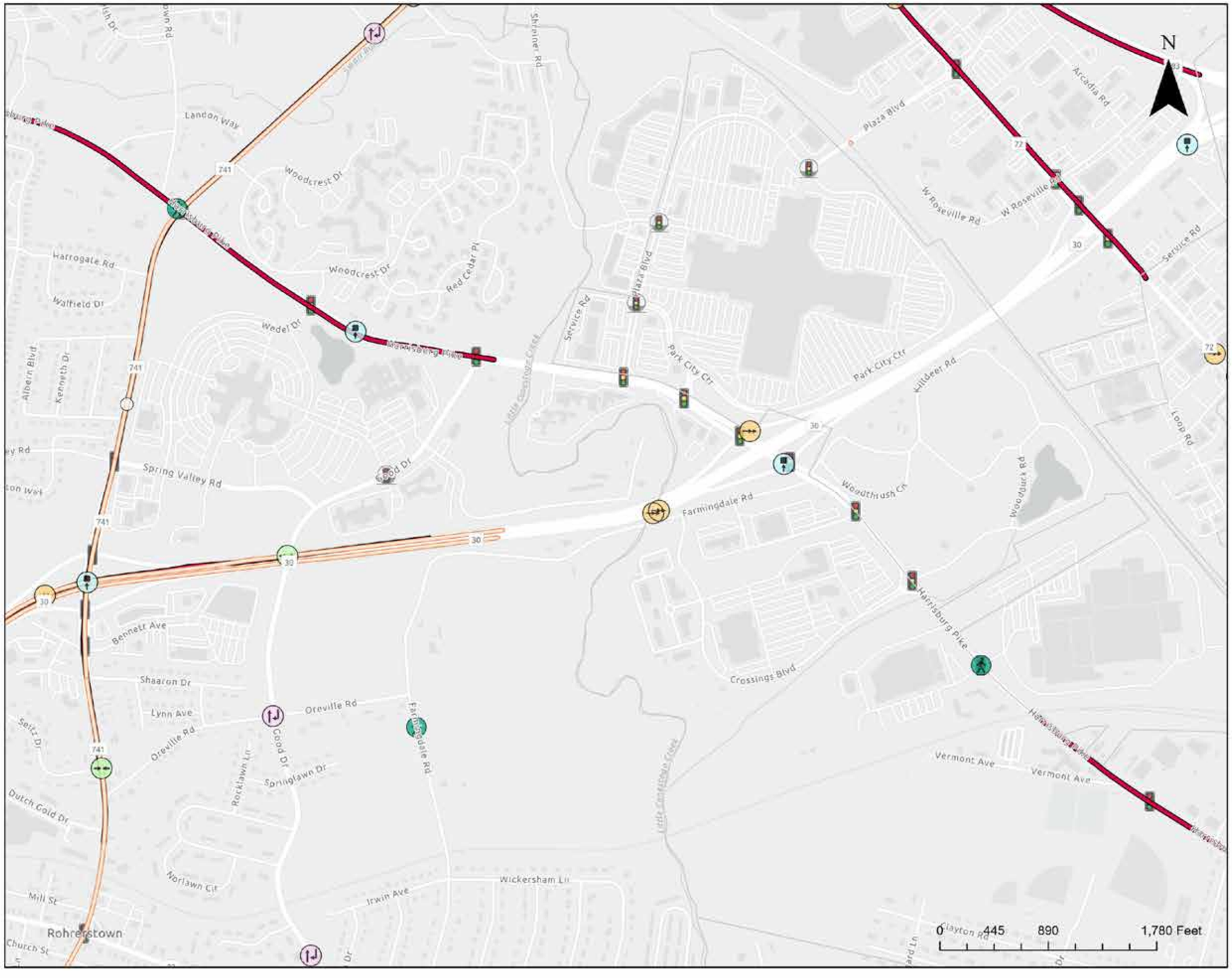
Road Name:	GEORGETOWN RD
Total Crashes:	26
FSI Crashes:	3
Bicycle Crashes:	0
Ped Crashes:	0
Angle Crashes:	24
HFO Crashes:	1
Rear-end Crashes:	0
Side-Swipe Crashes:	0
Head-On Crashes:	0

Legend

FSSI Crashes (2019-2023)
COLLISION_
- Angle
- Head-on
- Hit fixed object
- Hit non motorist
- Rear-end
- Sideswipe (Opposite dir.)
- Sideswipe (same dir.)
- Other
- <all other values>

FSSI Crashes (2019-2023)
- Sparse
- Dense

Point Count
Low



Page Index: 6

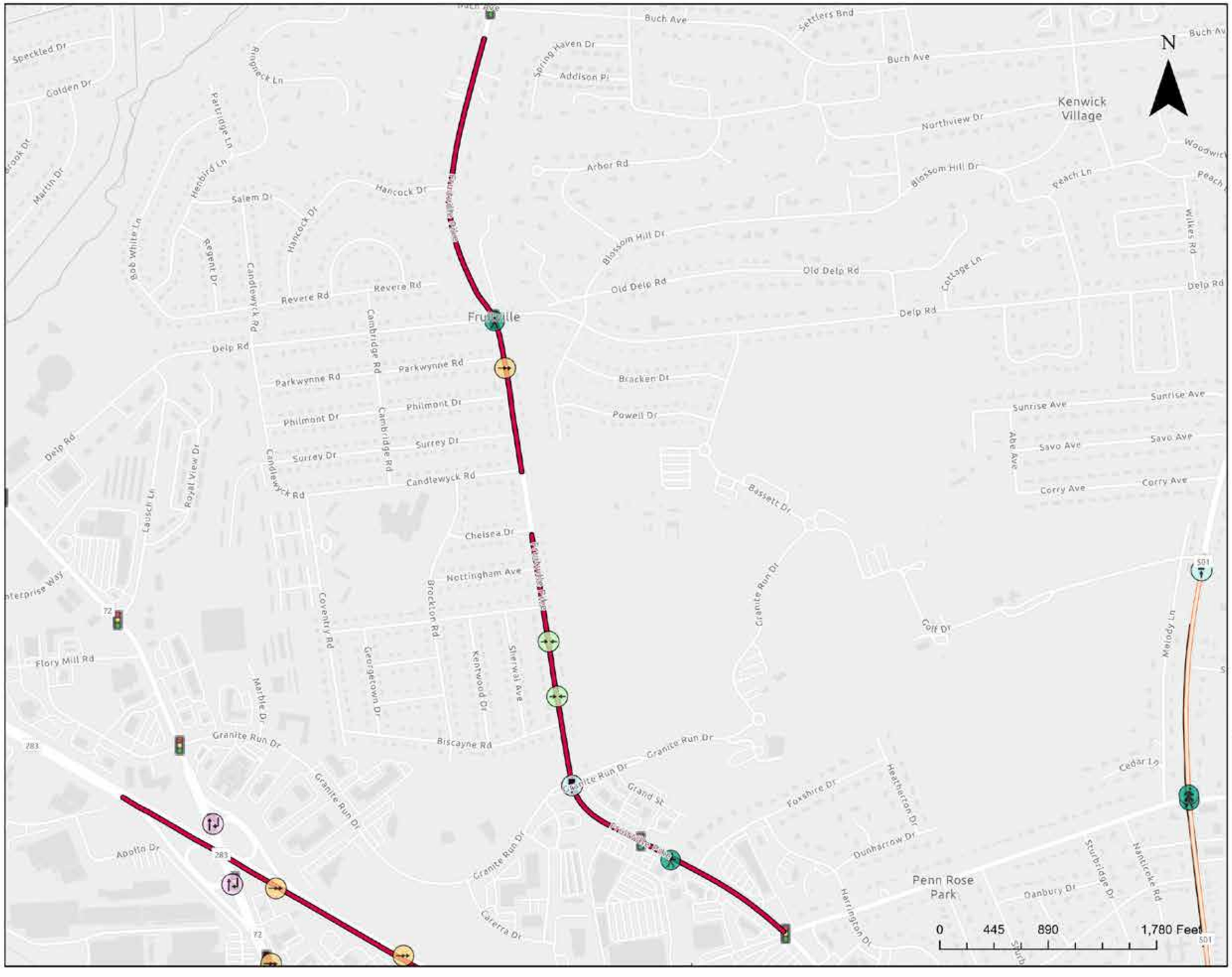
Road Name:	HARRISBURG PIKE
Total Crashes:	51
FSI Crashes:	2
Bicycle Crashes:	2
Ped Crashes:	1
Angle Crashes:	18
HFO Crashes:	9
Rear-end Crashes:	19
Side-Swipe Crashes:	0
Head-On Crashes:	1

Legend

FSSI Crashes (2019-2023)
COLLISION_
- Angle
- Head-on
- Hit fixed object
- Hit non motorist
- Rear-end
- Sideswipe (Opposite dir.)
- Sideswipe (same dir.)
- Other
- <all other values>

FSSI Crashes (2019-2023)
- Sparse
- Dense

Point Count
Low



Page Index: 7

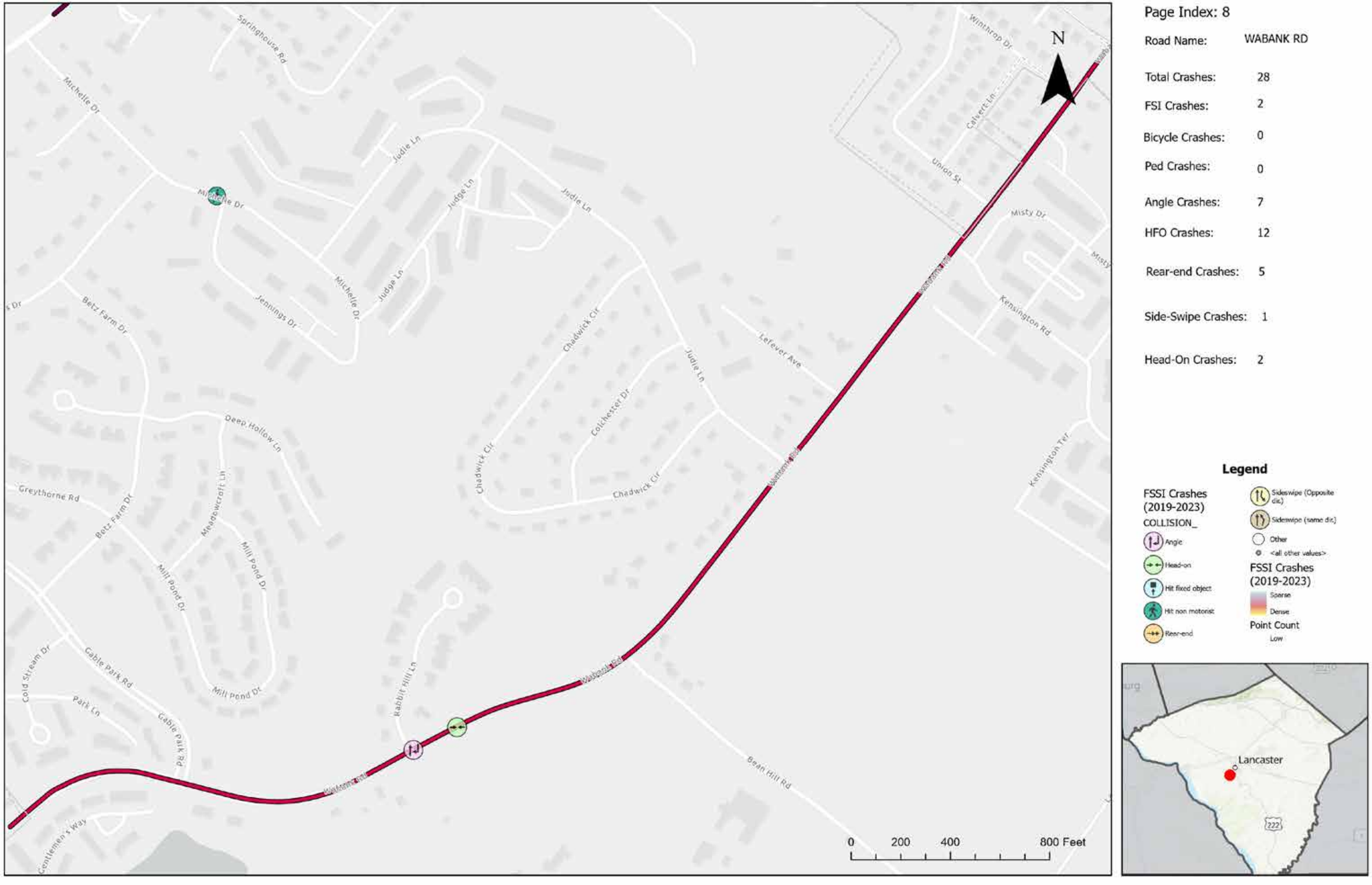
Road Name:	FRUITVILLE PIKE
Total Crashes:	89
FSI Crashes:	6
Bicycle Crashes:	0
Ped Crashes:	3
Angle Crashes:	40
HFO Crashes:	15
Rear-end Crashes:	26
Side-Swipe Crashes:	1
Head-On Crashes:	4

Legend

FSSI Crashes (2019-2023)
COLLISION_
- Angle
- Head-on
- Hit fixed object
- Hit non motorist
- Rear-end
- Sideswipe (Opposite dir.)
- Sideswipe (same dir.)
- Other
- <all other values>

FSSI Crashes (2019-2023)
- Sparse
- Dense

Point Count
Low



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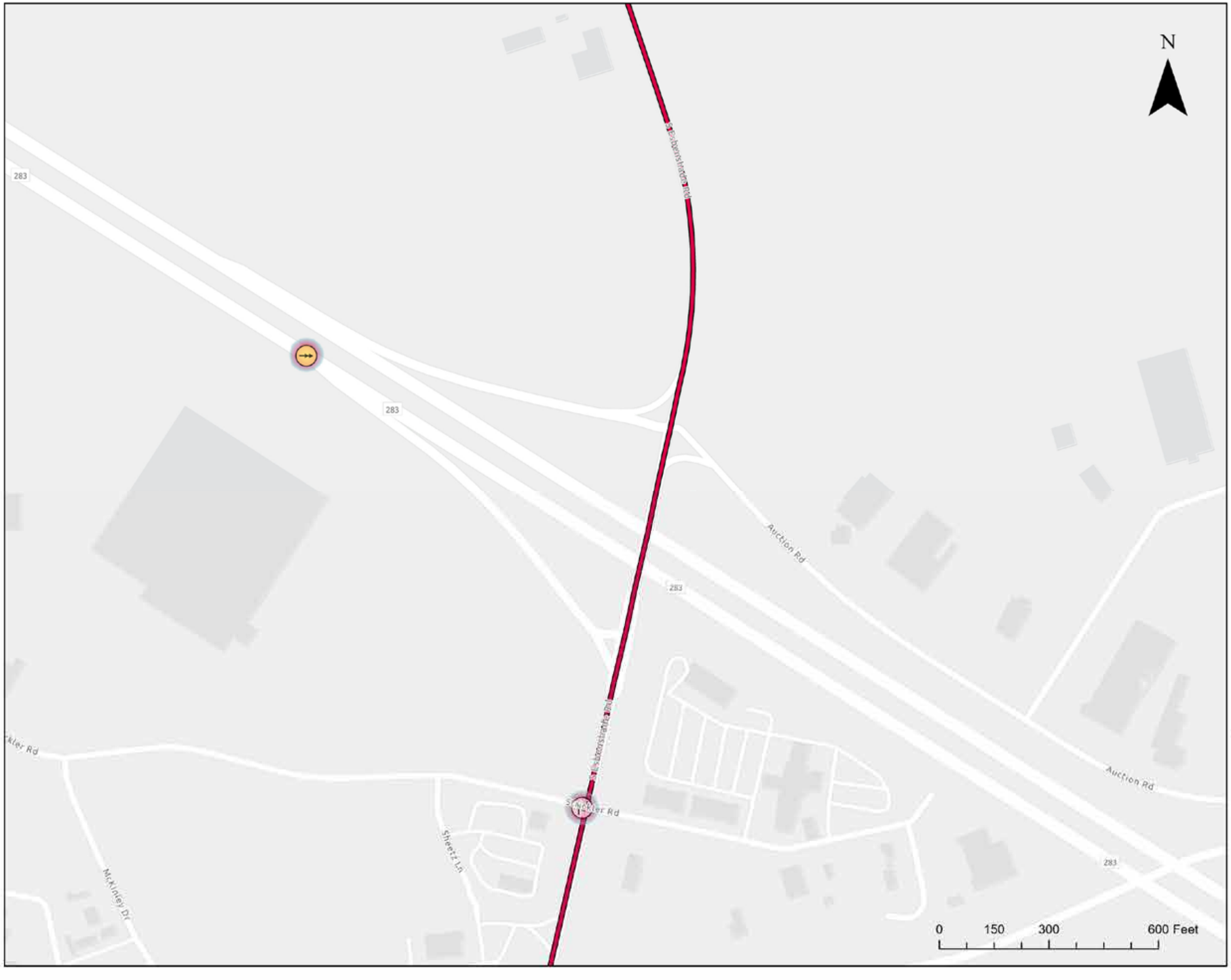
Road Name:	WABANK RD
Total Crashes:	28
FSI Crashes:	2
Bicycle Crashes:	0
Ped Crashes:	0
Angle Crashes:	7
HFO Crashes:	12
Rear-end Crashes:	5
Side-Swipe Crashes:	1
Head-On Crashes:	2

Legend

FSSI Crashes (2019-2023)
COLLISION_
- Angle
- Head-on
- Hit fixed object
- Hit non motorist
- Rear-end
- Sideswipe (Opposite dir.)
- Sideswipe (same dir.)
- Other
- <all other values>

FSSI Crashes (2019-2023)
- Sparse
- Dense

Point Count
Low



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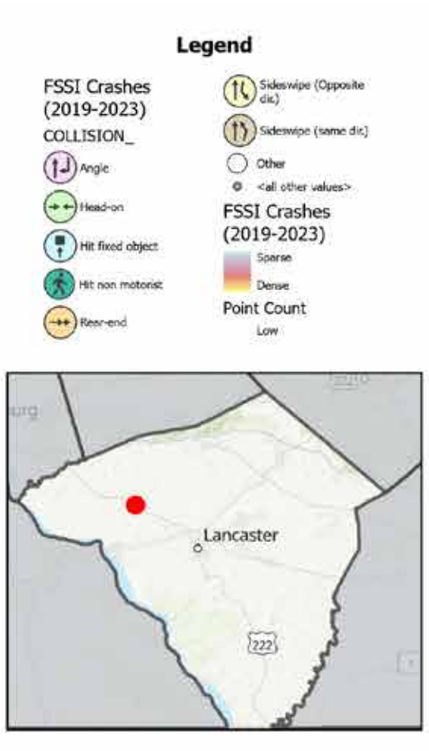
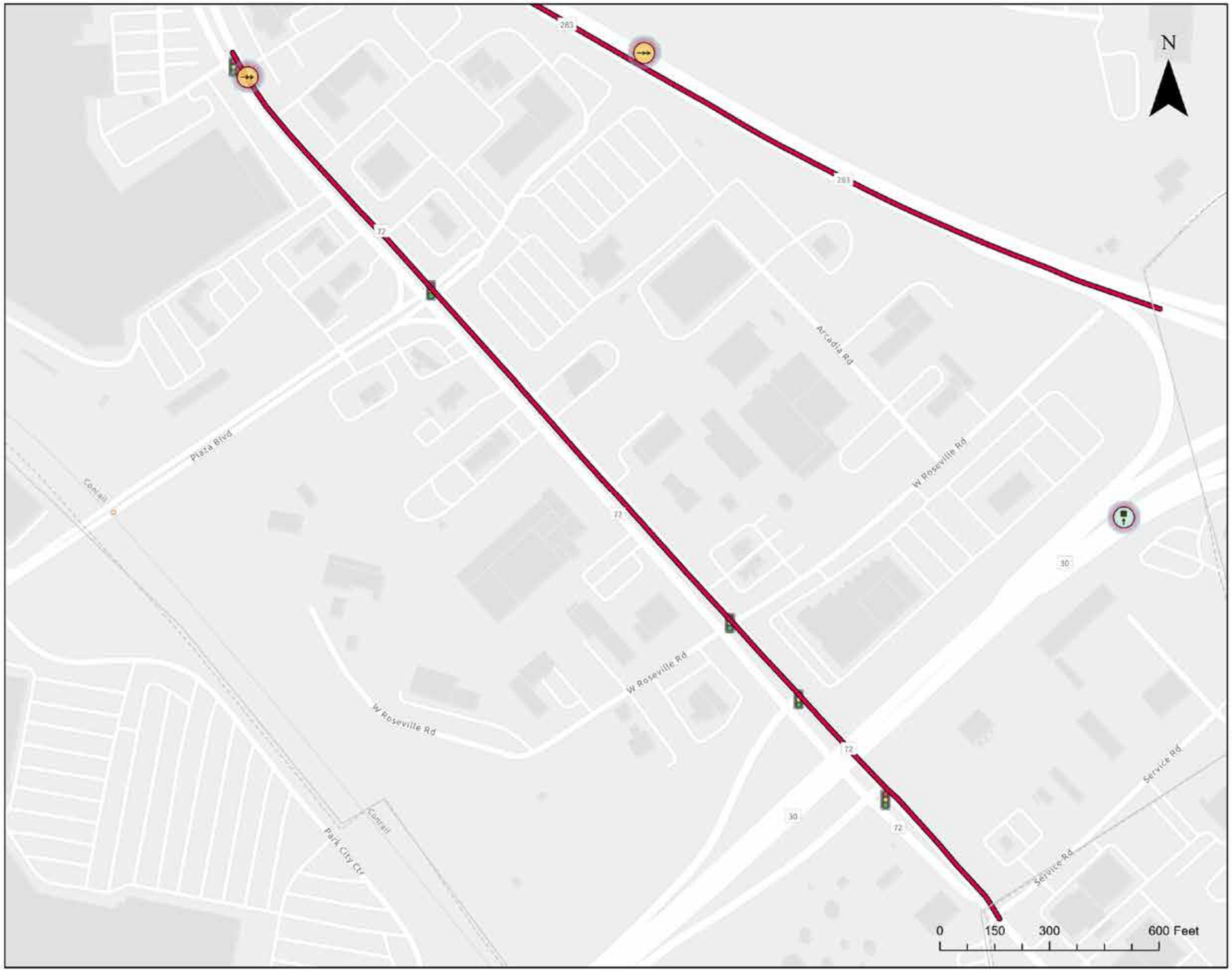
Road Name:	S ESBENSHADE RD
Total Crashes:	9
FSI Crashes:	0
Bicycle Crashes:	0
Ped Crashes:	0
Angle Crashes:	8
HFO Crashes:	1
Rear-end Crashes:	0
Side-Swipe Crashes:	0
Head-On Crashes:	0





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Road Name:	MANHEIM PIKE
Total Crashes:	39
FSI Crashes:	1
Bicycle Crashes:	1
Ped Crashes:	0
Angle Crashes:	24
HFO Crashes:	0
Rear-end Crashes:	12
Side-Swipe Crashes:	1
Head-On Crashes:	0

Legend

FSSI Crashes (2019-2023)
COLLISION_
- Angle
- Head-on
- Hit fixed object
- Hit non motorist
- Rear-end
- Sideswipe (Opposite dir.)
- Sideswipe (same dir.)
- Other
- <all other values>

FSSI Crashes (2019-2023)
- Sparse
- Dense

Point Count
Low

Page Index: 11

Road Name:	NEW HOLLAND PIKE
Total Crashes:	55
FSI Crashes:	3
Bicycle Crashes:	0
Ped Crashes:	0
Angle Crashes:	14
HFO Crashes:	19
Rear-end Crashes:	16
Side-Swipe Crashes:	2
Head-On Crashes:	2

Page Index: 12

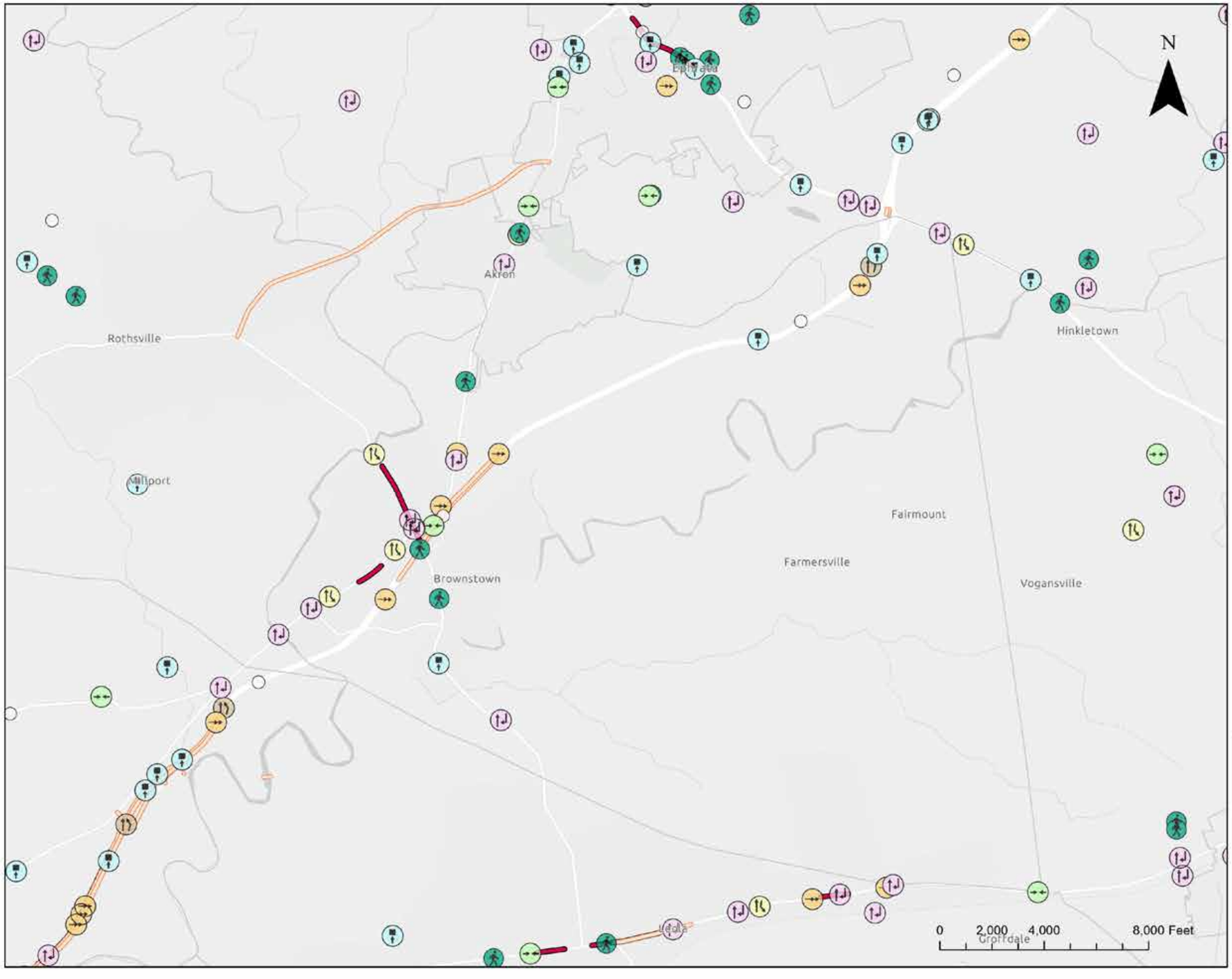
Road Name:	ROUTE 283 E
Total Crashes:	51
FSI Crashes:	1
Bicycle Crashes:	0
Ped Crashes:	0
Angle Crashes:	0
HFO Crashes:	7
Rear-end Crashes:	36
Side-Swipe Crashes:	5
Head-On Crashes:	0

Legend

FSSI Crashes (2019-2023)
COLLISION_
- Angle
- Head-on
- Hit fixed object
- Hit non motorist
- Rear-end
- Sideswipe (Opposite dir.)
- Sideswipe (same dir.)
- Other
- <all other values>

FSSI Crashes (2019-2023)
- Sparse
- Dense

Point Count
- Low



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Road Name:	W MAIN ST
Total Crashes:	75
FSI Crashes:	7
Bicycle Crashes:	1
Ped Crashes:	5
Angle Crashes:	20
HFO Crashes:	8
Rear-end Crashes:	29
Side-Swipe Crashes:	8
Head-On Crashes:	2

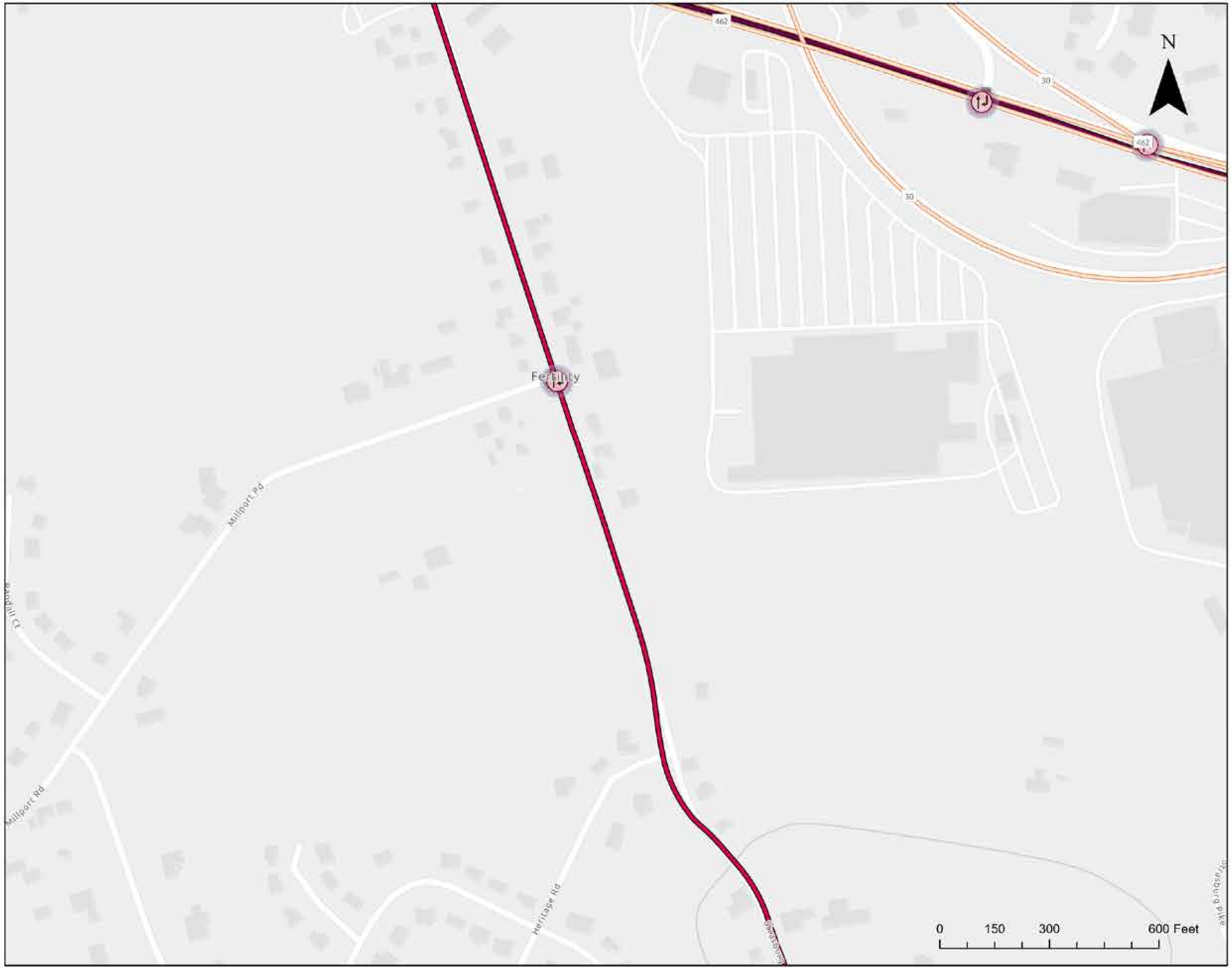
Legend

FSSI Crashes (2019-2023)
COLLISION_
- Angle
- Head-on
- Hit fixed object
- Hit non motorist
- Rear-end
- Sideswipe (Opposite dir.)
- Sideswipe (same dir.)
- Other
- <all other values>

FSSI Crashes (2019-2023)
- Sparse
- Dense

Point Count
- Low


N
322
322
322
23
23
23
Dairy Ln
Dairy Ln
Sunset Ave
Sunset Ave
New St
New St
Rancks Church Rd
Rancks Church Rd
Main St
Grayson Ave
Grayson Ave
Granite Dr
Marble Ave
Blue Ball
Broad St
Broad St
Center Ave
Center Ave
Rose Ave
Wea Wit St
Musser Rd
0
200
400
800 Feet
Page Index: 14
Road Name: MAIN ST
Total Crashes: 12
FSI Crashes: 4
Bicycle Crashes: 0
Ped Crashes: 1
Angle Crashes: 2
HFO Crashes: 5
Rear-end Crashes: 4
Side-Swipe Crashes: 0
Head-On Crashes: 0
Legend
FSSI Crashes (2019-2023)
COLLISION_
Angle
Head-on
Hit fixed object
Hit non motorist
Rear-end
Sideswipe (Opposite dir.)
Sideswipe (same dir.)
Other
<all other values>
FSSI Crashes (2019-2023)
Sparse
Dense
Point Count
Low
Lancaster
222



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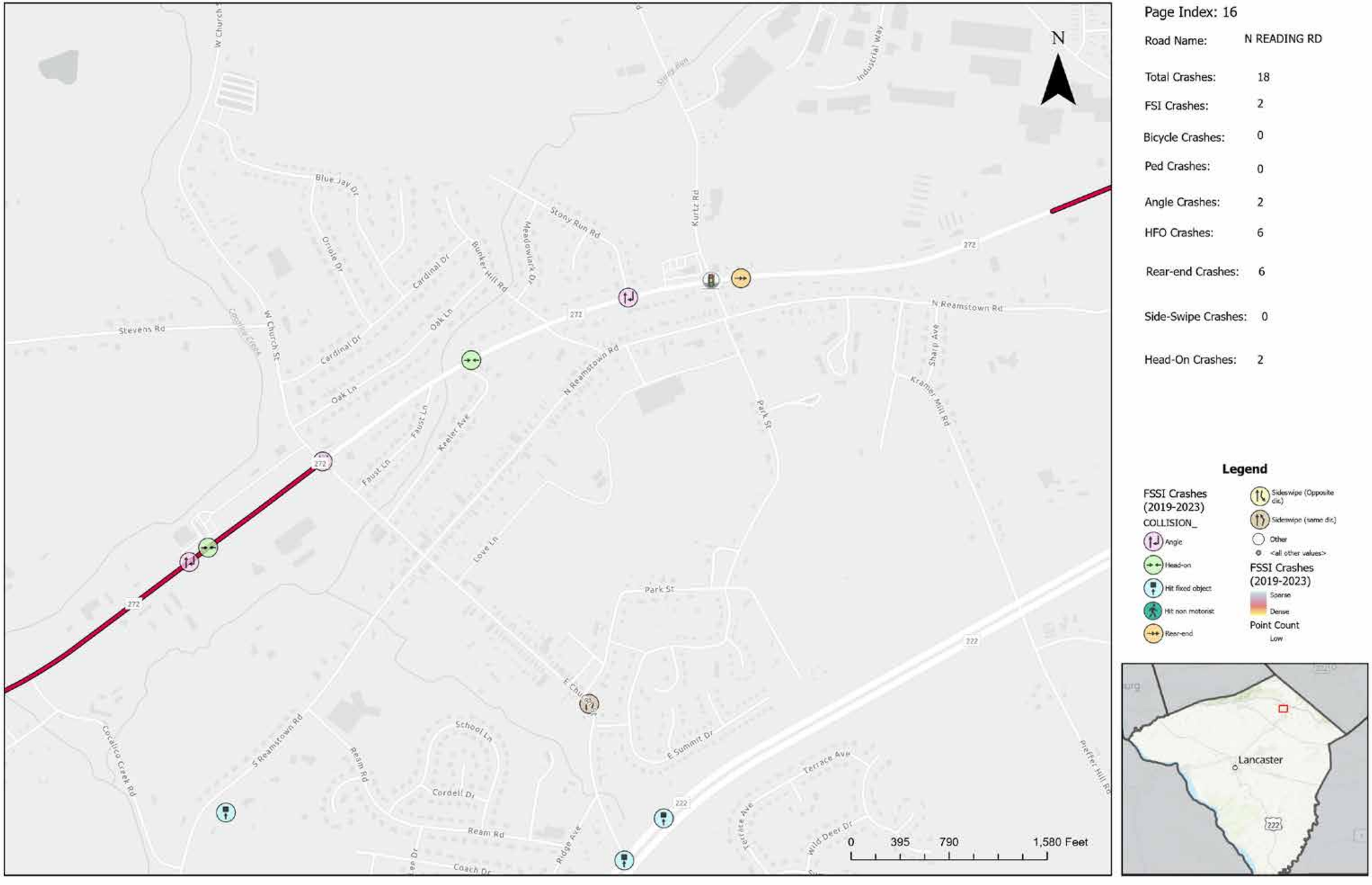
Road Name:	STRASBURG PIKE
Total Crashes:	9
FSI Crashes:	1
Bicycle Crashes:	0
Ped Crashes:	0
Angle Crashes:	2
HFO Crashes:	1
Rear-end Crashes:	6
Side-Swipe Crashes:	0
Head-On Crashes:	0

Legend

FSSI Crashes (2019-2023)
COLLISION_
- Angle
- Head-on
- Hit fixed object
- Hit non motorist
- Rear-end
- Sideswipe (Opposite dir.)
- Sideswipe (same dir.)
- Other
- <all other values>

FSSI Crashes (2019-2023)
- Sparse
- Dense

Point Count
- Low


N
Page Index: 16
Road Name: N READING RD
Total Crashes: 18
FSI Crashes: 2
Bicycle Crashes: 0
Ped Crashes: 0
Angle Crashes: 2
HFO Crashes: 6
Rear-end Crashes: 6
Side-Swipe Crashes: 0
Head-On Crashes: 2
Legend
FSSI Crashes (2019-2023)
COLLISION_
Angle
Head-on
Hit fixed object
Hit non motorist
Rear-end
Sideswipe (Opposite dir.)
Sideswipe (same dir.)
Other
<all other values>
FSSI Crashes (2019-2023)
Sparse
Dense
Point Count
Low
Lancaster
0 395 790 1,580 Feet
W Church St
Blue Jay Dr
Oriole Dr
Cardinal Dr
Bunker Hill Rd
Meadowlark Dr
Stony Run Rd
Kurtz Rd
Industrial Way
N Reamstown Rd
Stevens Rd
Oak Ln
Faust Ln
Keeler Ave
Park St
Shaffer Ave
Kramer Mill Rd
Love Ln
School Ln
E Summit Dr
Terrace Ave
Wild Deer Dr
Pfeffer Hill Rd
S Reamstown Rd
Ream Rd
Cocalico Creek Rd
Cordell Dr
Coach Dr
Ridge Ave
272
222

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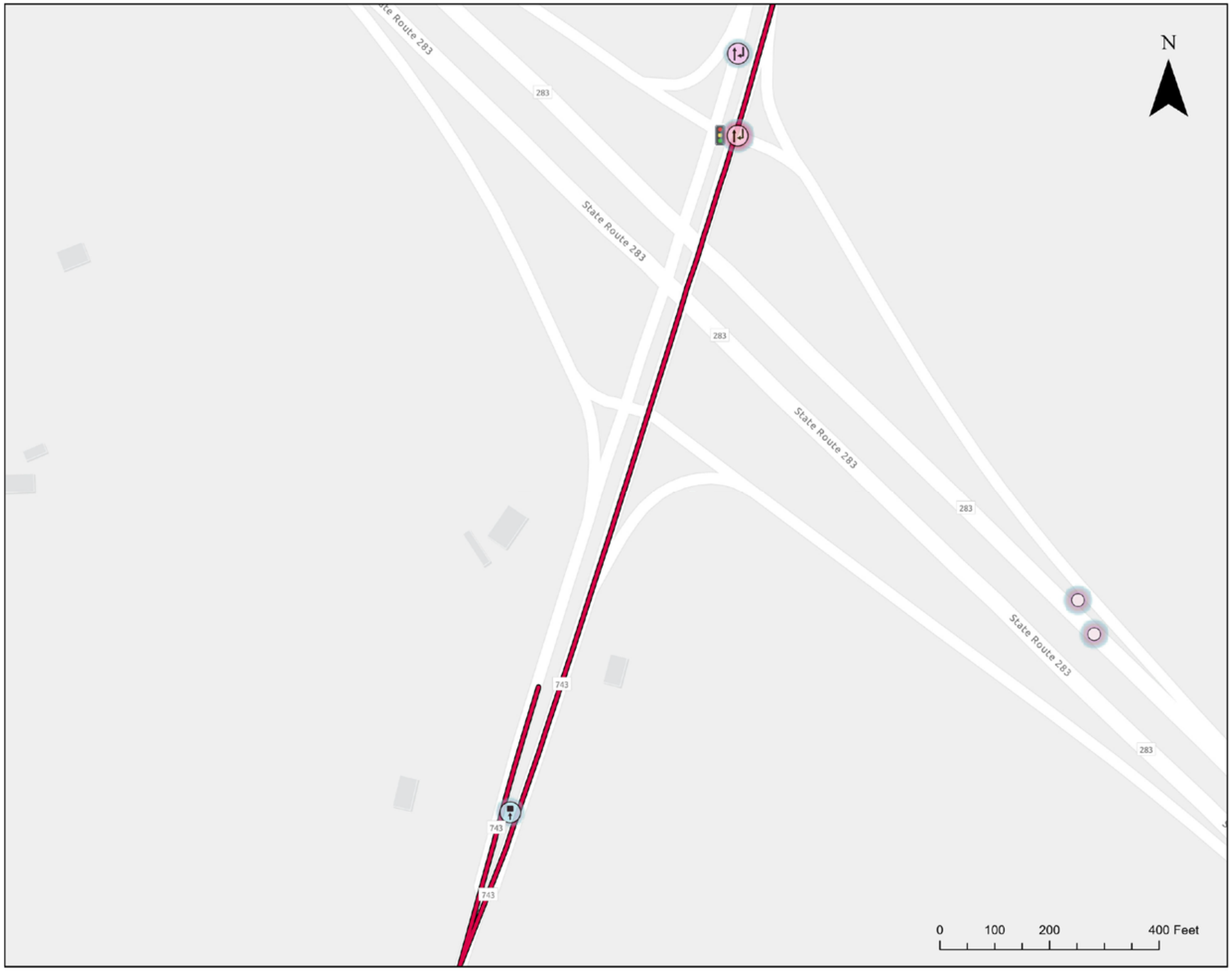
Road Name:	E HIGH ST
Total Crashes:	36
FSI Crashes:	2
Bicycle Crashes:	0
Ped Crashes:	1
Angle Crashes:	26
HFO Crashes:	1
Rear-end Crashes:	6
Side-Swipe Crashes:	1
Head-On Crashes:	1

Legend

FSSI Crashes (2019-2023)
COLLISION_
- Angle
- Head-on
- Hit fixed object
- Hit non motorist
- Rear-end
- Sideswipe (Opposite dir.)
- Sideswipe (same dir.)
- Other
- <all other values>

FSSI Crashes (2019-2023)
- Sparse
- Dense

Point Count
- Low



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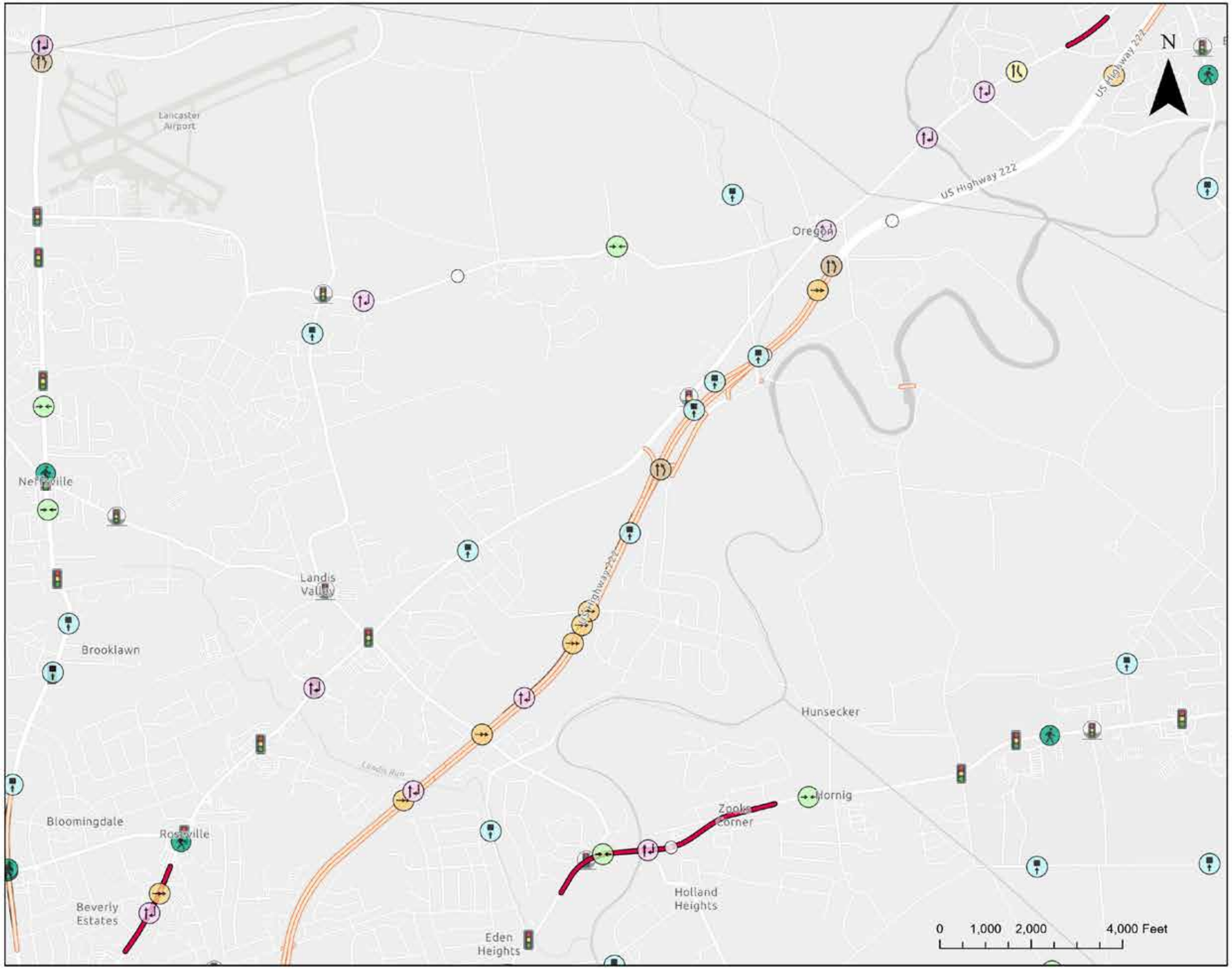
Road Name:	HERSHEY RD
Total Crashes:	60
FSI Crashes:	3
Bicycle Crashes:	0
Ped Crashes:	0
Angle Crashes:	27
HFO Crashes:	6
Rear-end Crashes:	21
Side-Swipe Crashes:	0
Head-On Crashes:	5

Legend

FSSI Crashes (2019-2023)
COLLISION_
- Angle
- Head-on
- Hit fixed object
- Hit non motorist
- Rear-end
- Sideswipe (Opposite dir.)
- Sideswipe (same dir.)
- Other
- <all other values>

FSSI Crashes (2019-2023)
- Sparse
- Dense

Point Count
- Low



Page Index: 19

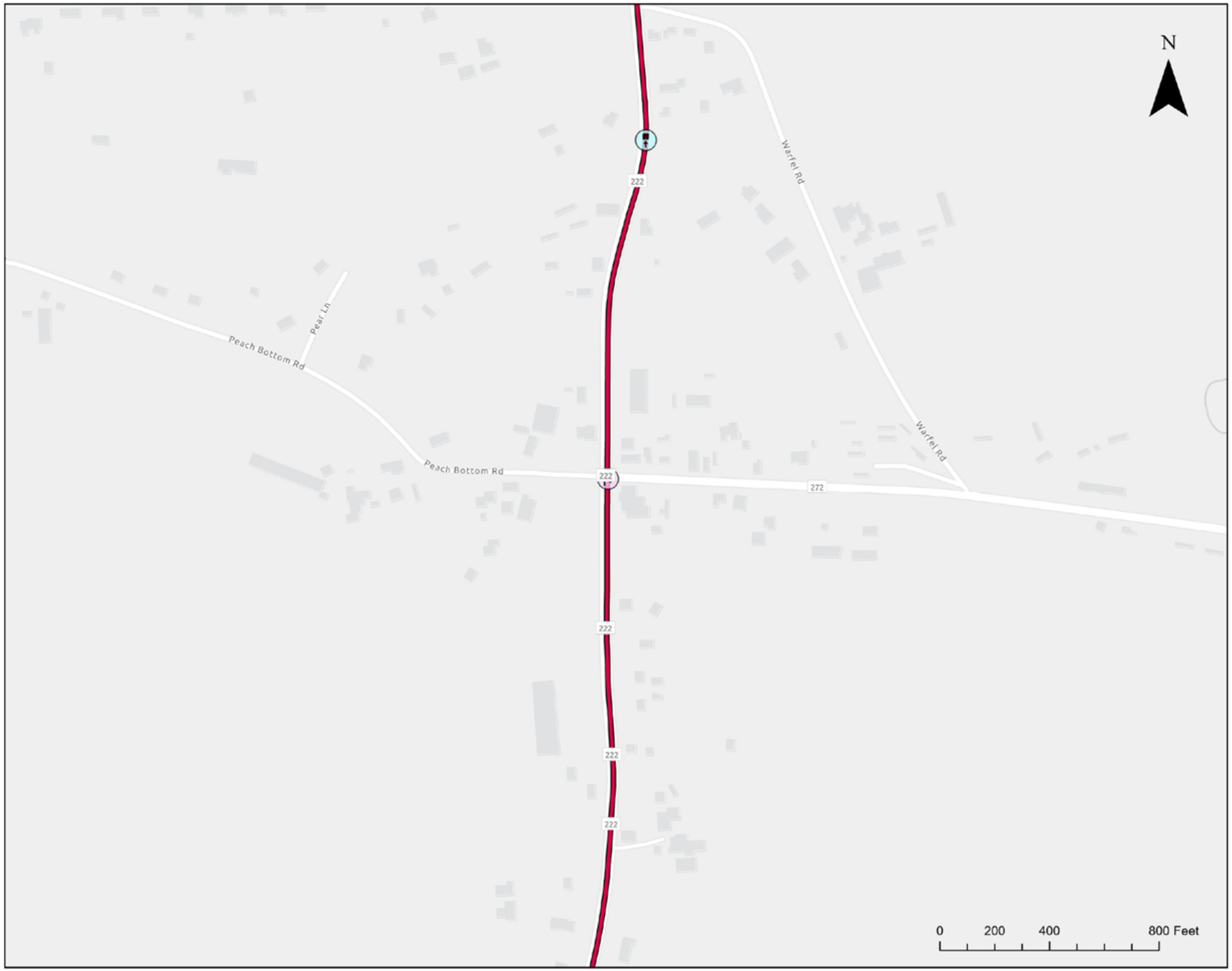
Road Name:	OREGON PIKE
Total Crashes:	14
FSI Crashes:	2
Bicycle Crashes:	1
Ped Crashes:	0
Angle Crashes:	6
HFO Crashes:	0
Rear-end Crashes:	7
Side-Swipe Crashes:	0
Head-On Crashes:	0

Legend

FSSI Crashes (2019-2023)
COLLISION_
- Angle
- Head-on
- Hit fixed object
- Hit non motorist
- Rear-end
- Sideswipe (Opposite dir.)
- Sideswipe (same dir.)
- Other
- <all other values>

FSSI Crashes (2019-2023)
- Sparse
- Dense

Point Count
- Low



Page Index: 20

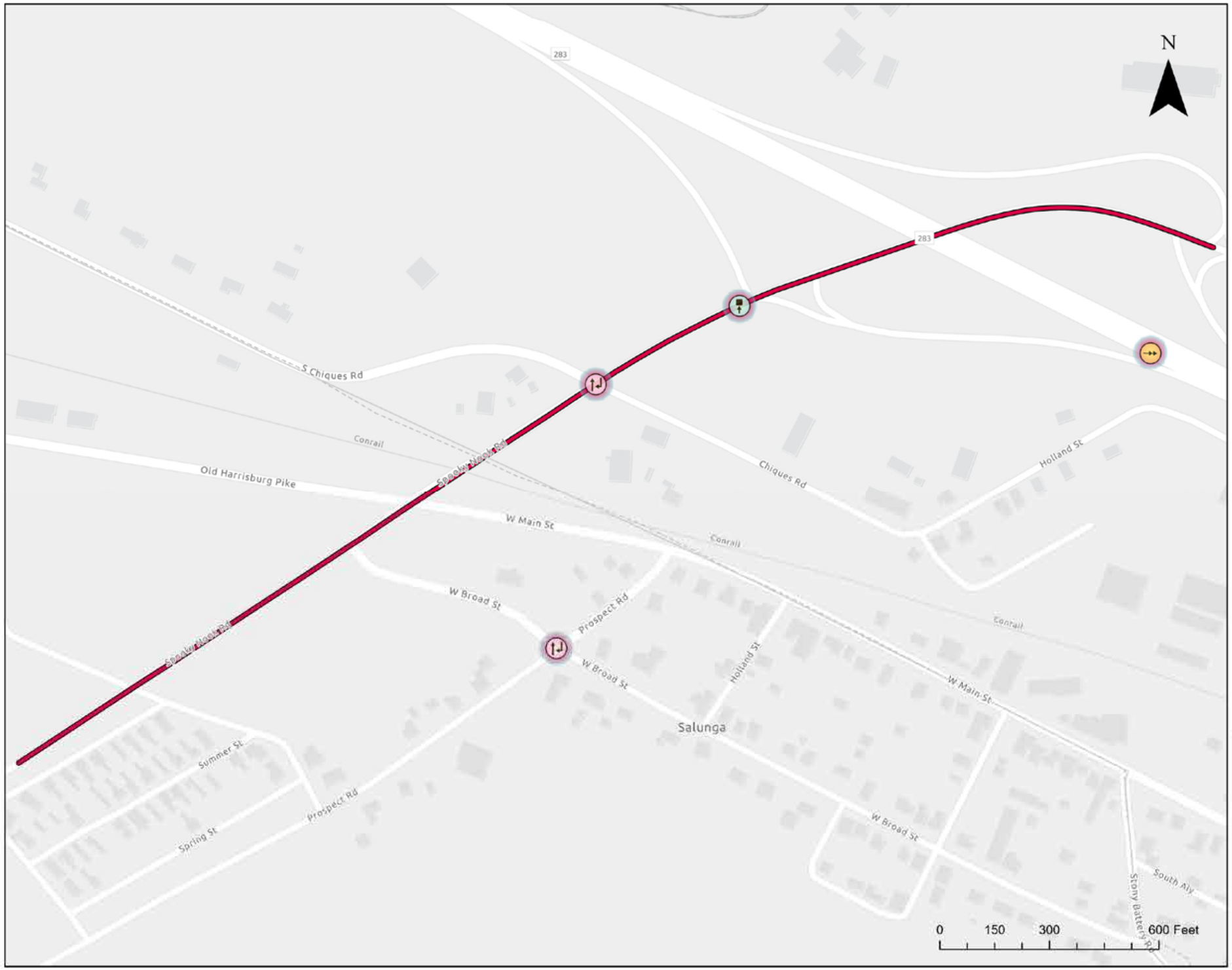
Road Name:	ROBERT FULTON HWY
Total Crashes:	9
FSI Crashes:	1
Bicycle Crashes:	0
Ped Crashes:	0
Angle Crashes:	1
HFO Crashes:	4
Rear-end Crashes:	0
Side-Swipe Crashes:	0
Head-On Crashes:	3

Legend

FSSI Crashes (2019-2023)
COLLISION_
- Angle
- Head-on
- Hit fixed object
- Hit non motorist
- Rear-end
- Sideswipe (Opposite dir.)
- Sideswipe (same dir.)
- Other
- <all other values>

FSSI Crashes (2019-2023)
- Sparse
- Dense

Point Count
- Low



Page Index: 21

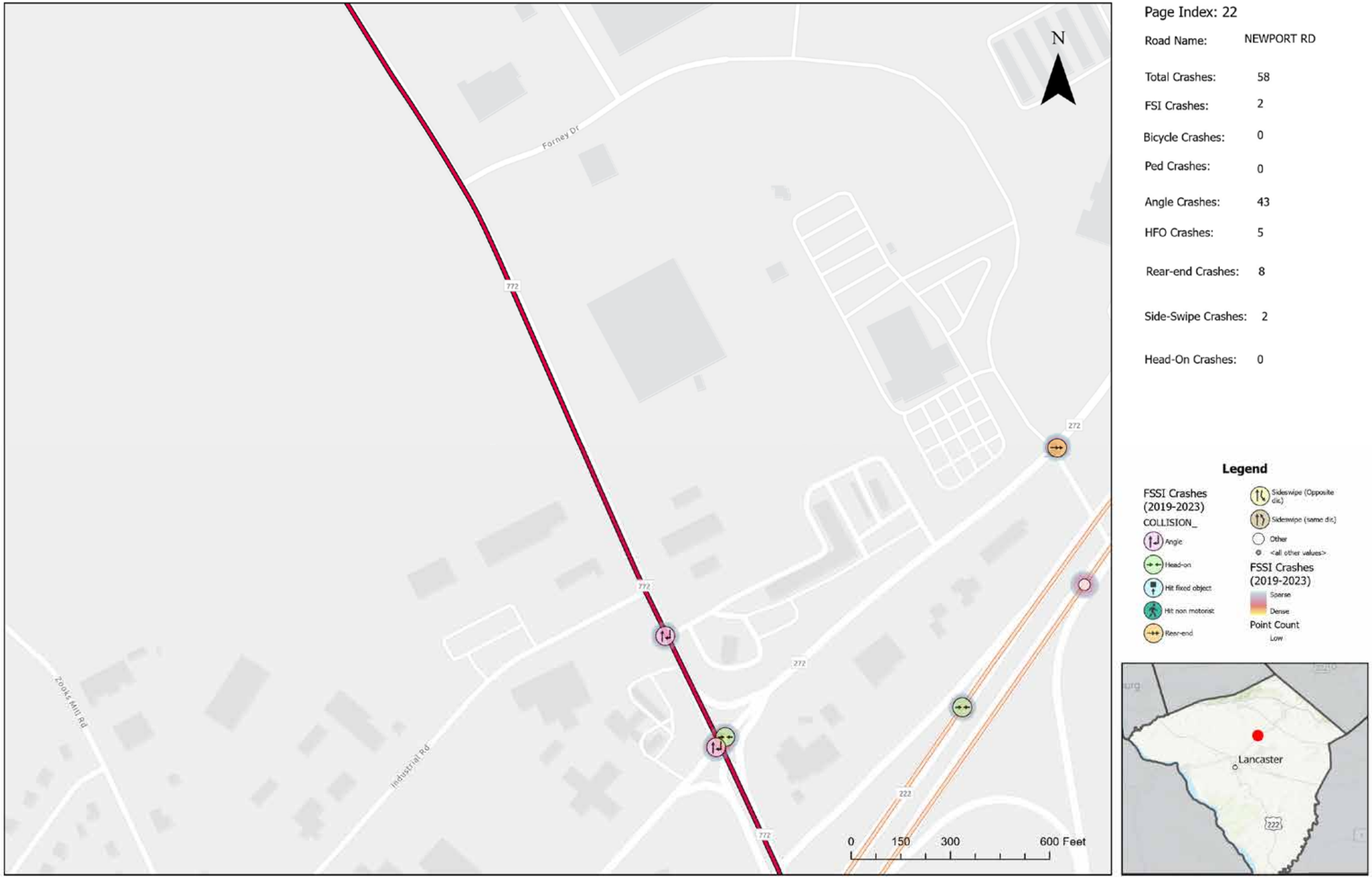
Road Name:	SPOOKY NOOK RD
Total Crashes:	40
FSI Crashes:	0
Bicycle Crashes:	0
Ped Crashes:	0
Angle Crashes:	23
HFO Crashes:	5
Rear-end Crashes:	10
Side-Swipe Crashes:	1
Head-On Crashes:	0

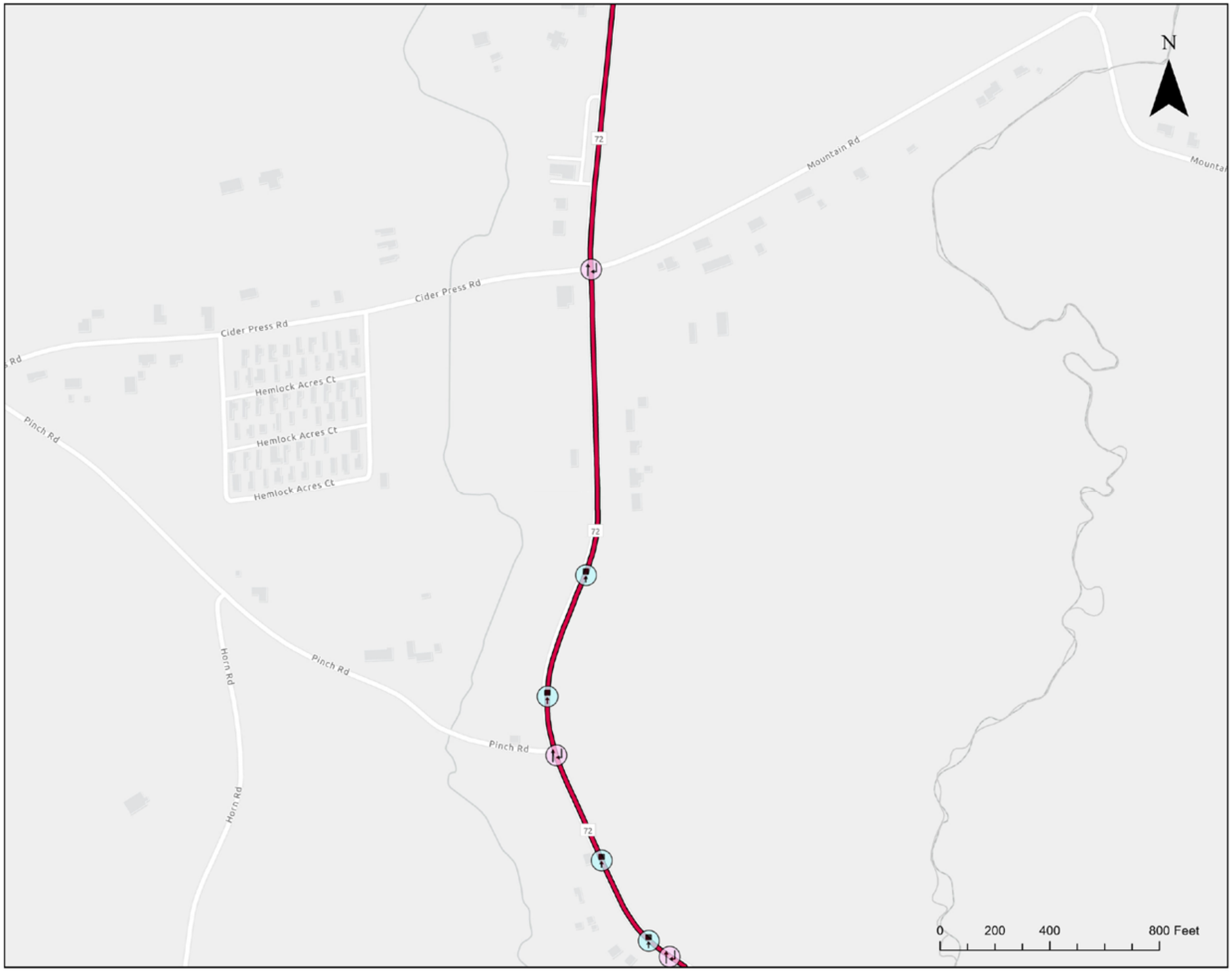
Legend

FSSI Crashes (2019-2023)
COLLISION_
- Angle
- Head-on
- Hit fixed object
- Hit non motorist
- Rear-end
- Sideswipe (Opposite dir.)
- Sideswipe (same dir.)
- Other
- <all other values>

FSSI Crashes (2019-2023)
- Sparse
- Dense

Point Count
Low


N
Forney Dr
772
272
Brooks Mill Rd
Industrial Rd
222
0 150 300 600 Feet
Page Index: 22
Road Name: NEWPORT RD
Total Crashes: 58
FSI Crashes: 2
Bicycle Crashes: 0
Ped Crashes: 0
Angle Crashes: 43
HFO Crashes: 5
Rear-end Crashes: 8
Side-Swipe Crashes: 2
Head-On Crashes: 0
Legend
FSSI Crashes (2019-2023)
COLLISION_
Angle
Head-on
Hit fixed object
Hit non motorist
Rear-end
Sideswipe (Opposite dir.)
Sideswipe (same dir.)
Other
<all other values>
FSSI Crashes (2019-2023)
Sparse
Dense
Point Count
Low
Lancaster
222



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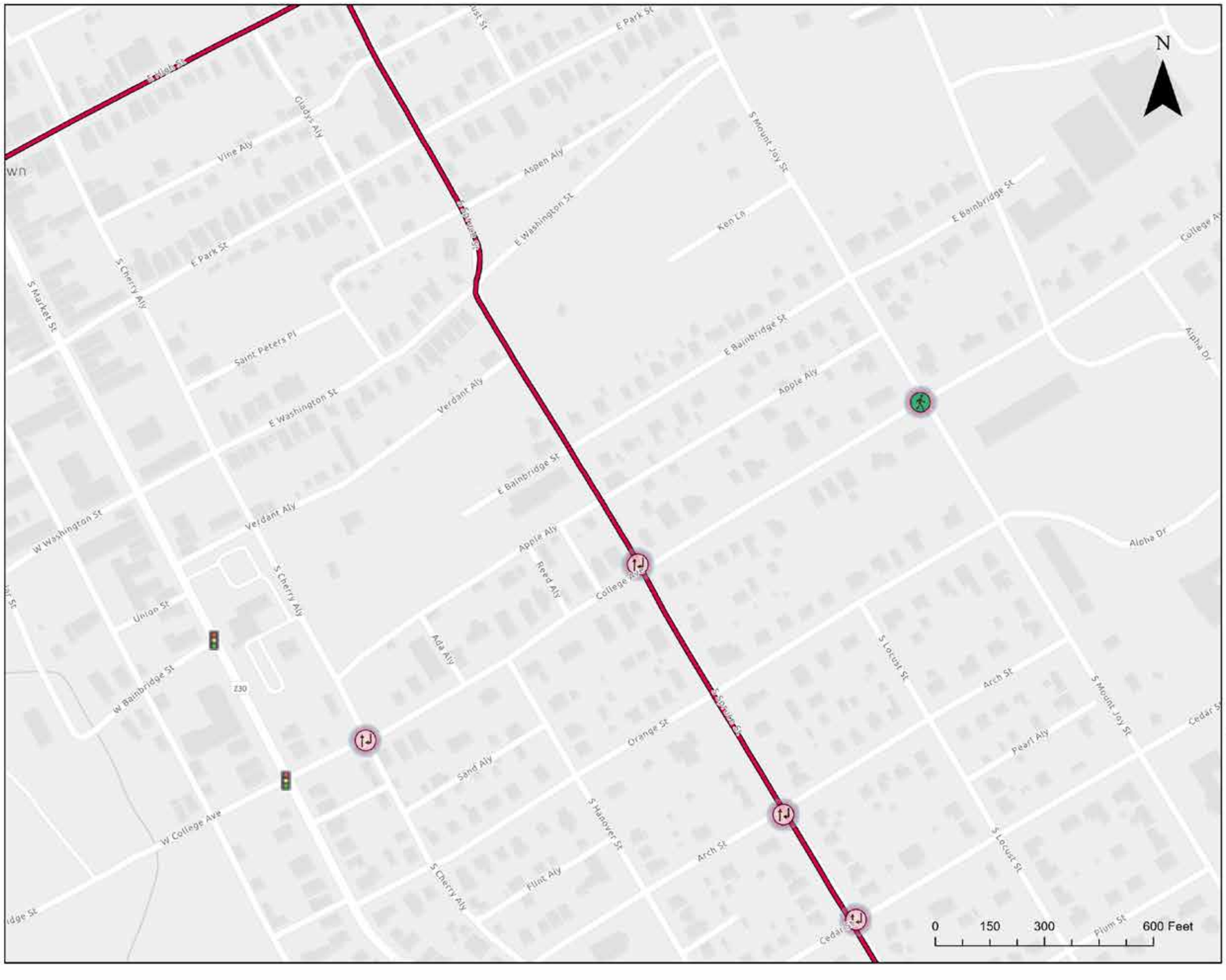
Road Name:	LEBANON RD
Total Crashes:	49
FSI Crashes:	8
Bicycle Crashes:	0
Ped Crashes:	0
Angle Crashes:	18
HFO Crashes:	18
Rear-end Crashes:	9
Side-Swipe Crashes:	1
Head-On Crashes:	1

Legend

FSSI Crashes (2019-2023)
COLLISION_
- Angle
- Head-on
- Hit fixed object
- Hit non motorist
- Rear-end
- Sideswipe (Opposite dir.)
- Sideswipe (same dir.)
- Other
- <all other values>

FSSI Crashes (2019-2023)
- Sparse
- Dense

Point Count
- Low



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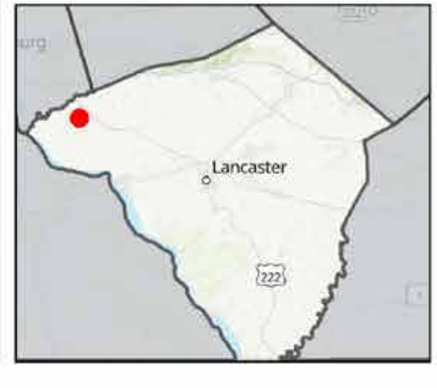
Road Name:	S SPRUCE ST
Total Crashes:	22
FSI Crashes:	2
Bicycle Crashes:	1
Ped Crashes:	2
Angle Crashes:	15
HFO Crashes:	2
Rear-end Crashes:	0
Side-Swipe Crashes:	1
Head-On Crashes:	1

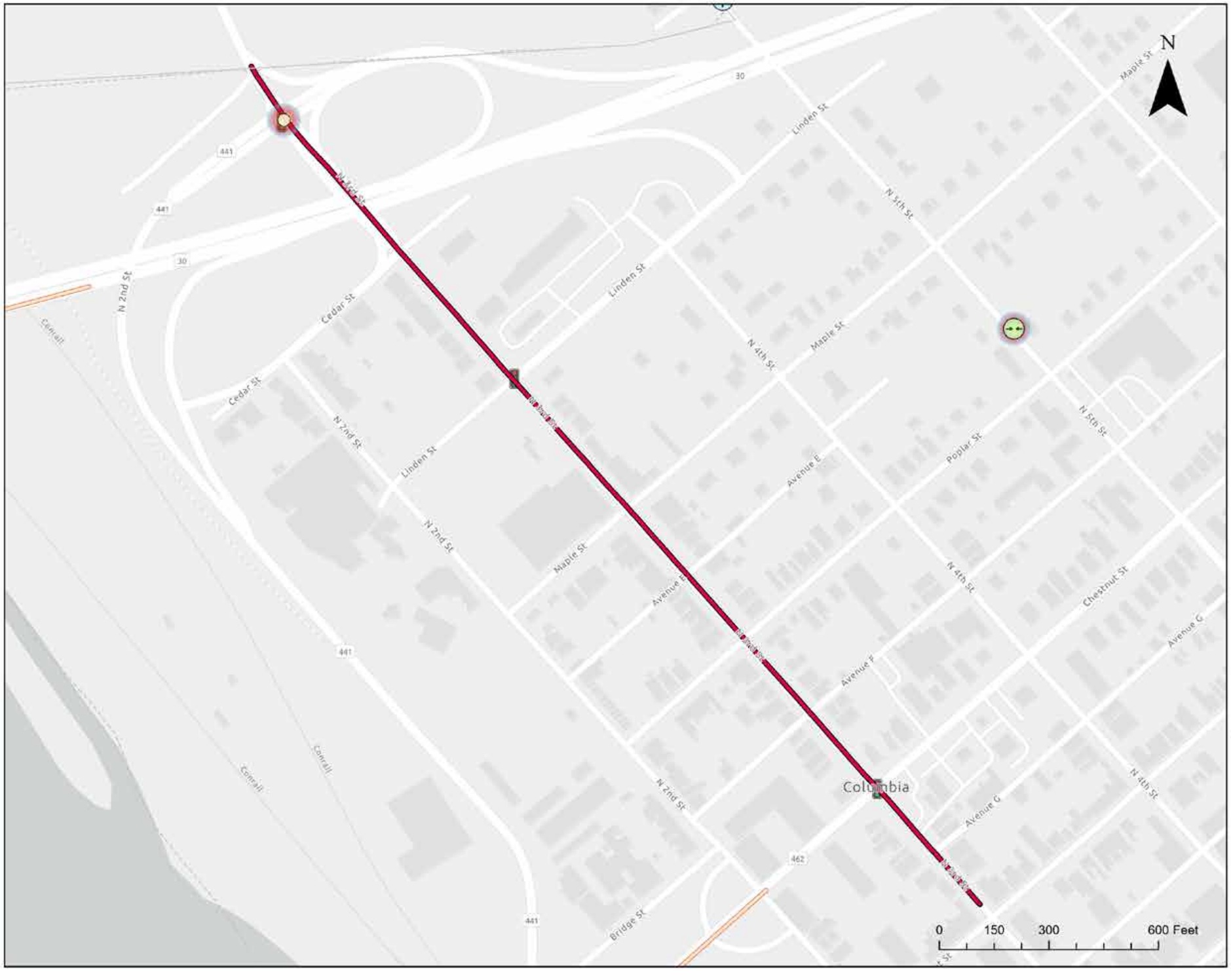
Legend

FSSI Crashes (2019-2023)
COLLISION_
- Angle
- Head-on
- Hit fixed object
- Hit non motorist
- Rear-end
- Sideswipe (Opposite dir.)
- Sideswipe (same dir.)
- Other
- <all other values>

FSSI Crashes (2019-2023)
- Sparse
- Dense

Point Count
Low





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Road Name:	N THIRD ST
Total Crashes:	61
FSI Crashes:	1
Bicycle Crashes:	0
Ped Crashes:	1
Angle Crashes:	36
HFO Crashes:	3
Rear-end Crashes:	10
Side-Swipe Crashes:	2
Head-On Crashes:	5

Legend

FSSI Crashes (2019-2023)
COLLISION_
- Angle
- Head-on
- Hit fixed object
- Hit non motorist
- Rear-end
- Sideswipe (Opposite dir.)
- Sideswipe (same dir.)
- Other
- <all other values>

FSSI Crashes (2019-2023)
- Sparse
- Dense

Point Count
Low

Page Index: 26

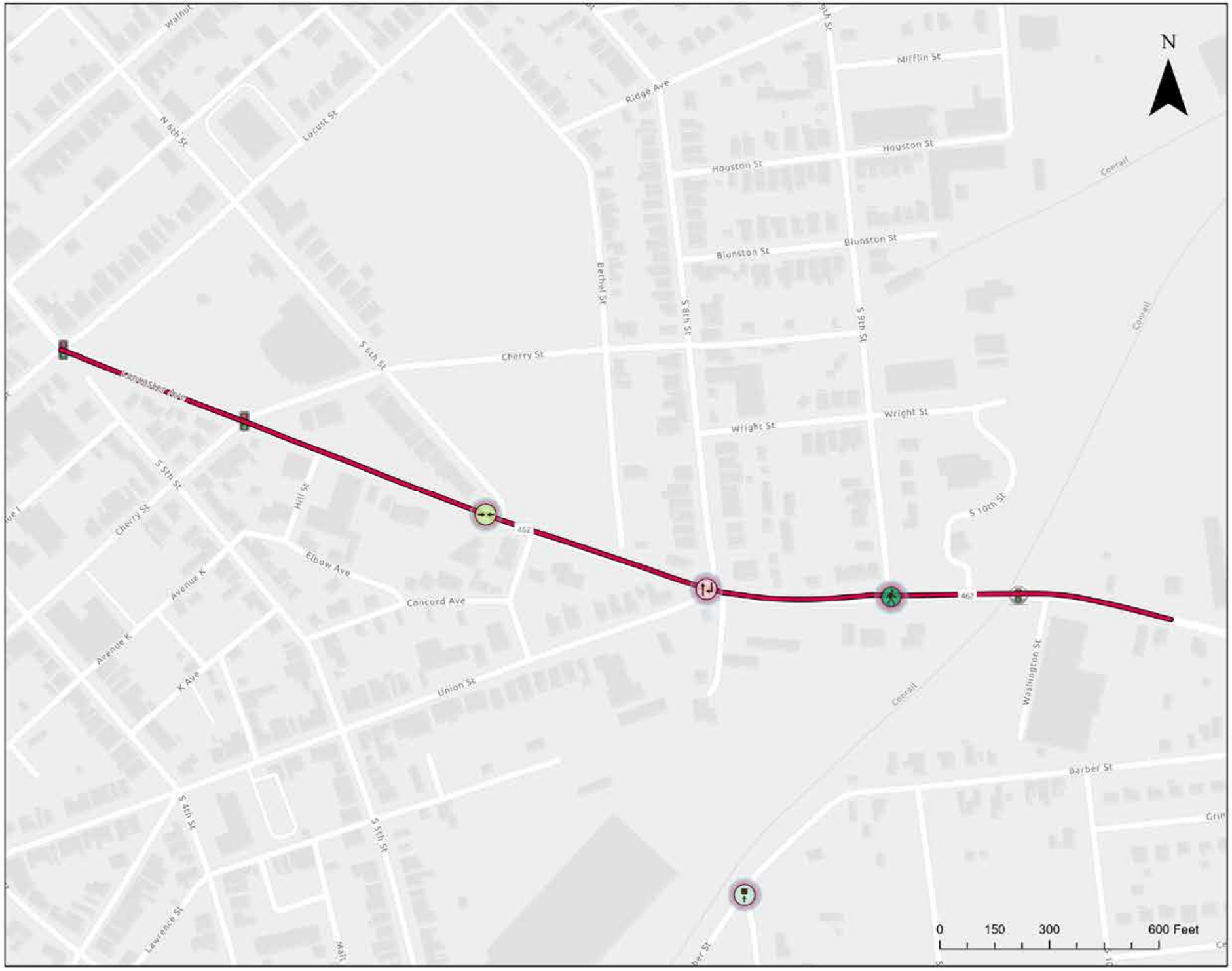
Road Name:	S MARKET ST
Total Crashes:	40
FSI Crashes:	2
Bicycle Crashes:	0
Ped Crashes:	4
Angle Crashes:	10
HFO Crashes:	3
Rear-end Crashes:	19
Side-Swipe Crashes:	2
Head-On Crashes:	2

Legend

FSSI Crashes (2019-2023)
COLLISION_
- Angle
- Head-on
- Hit fixed object
- Hit non motorist
- Rear-end
- Sideswipe (Opposite dir.)
- Sideswipe (same dir.)
- Other
- <all other values>

FSSI Crashes (2019-2023)
- Sparse
- Dense

Point Count
Low



Page Index: 27

Road Name:	LANCASTER AVE
Total Crashes:	29
FSI Crashes:	3
Bicycle Crashes:	0
Ped Crashes:	1
Angle Crashes:	7
HFO Crashes:	1
Rear-end Crashes:	13
Side-Swipe Crashes:	3
Head-On Crashes:	2

Legend

FSSI Crashes (2019-2023)
COLLISION_
- Angle
- Head-on
- Hit fixed object
- Hit non motorist
- Rear-end
- Sideswipe (Opposite dir.)
- Sideswipe (same dir.)
- Other
- <all other values>

FSSI Crashes (2019-2023)
- Sparse
- Dense

Point Count
Low

Page Index: 28

Road Name:	BLUE ROCK RD
Total Crashes:	17
FSI Crashes:	3
Bicycle Crashes:	1
Ped Crashes:	0
Angle Crashes:	11
HFO Crashes:	3
Rear-end Crashes:	1
Side-Swipe Crashes:	1
Head-On Crashes:	0

Legend

FSSI Crashes (2019-2023)
COLLISION_
- Angle
- Head-on
- Hit fixed object
- Hit non motorist
- Rear-end
- Sideswipe (Opposite dir.)
- Sideswipe (same dir.)
- Other
- <all other values>

FSSI Crashes (2019-2023)
- Sparse
- Dense

Point Count
- Low

Page Index: 29

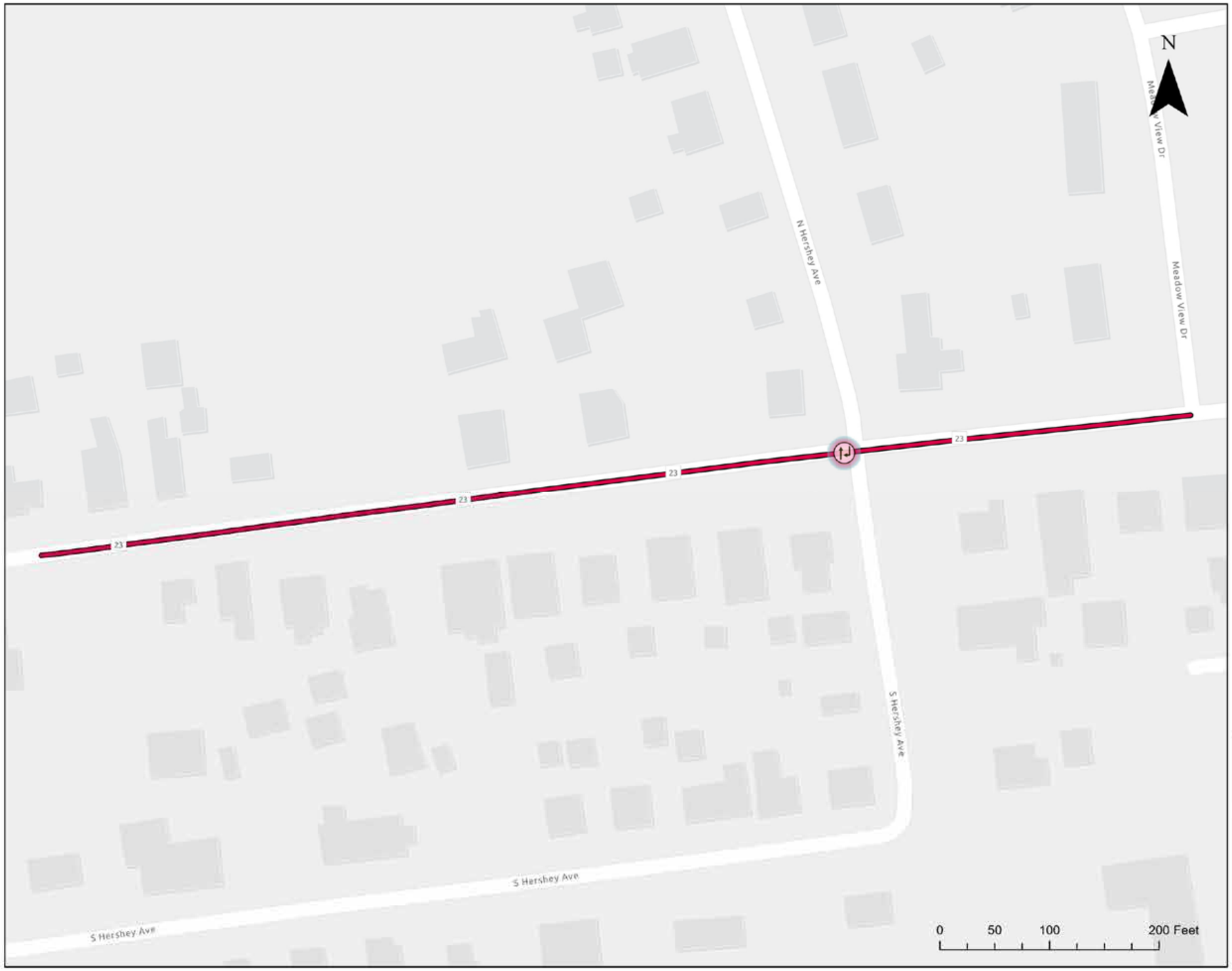
Road Name:	ROUTE 30 W TO NEW HOLLA
Total Crashes:	66
FSI Crashes:	1
Bicycle Crashes:	0
Ped Crashes:	0
Angle Crashes:	55
HFO Crashes:	2
Rear-end Crashes:	6
Side-Swipe Crashes:	0
Head-On Crashes:	3

Legend

FSSI Crashes (2019-2023)
COLLISION_
- Angle
- Head-on
- Hit fixed object
- Hit non motorist
- Rear-end
- Sideswipe (Opposite dir.)
- Sideswipe (same dir.)
- Other
- <all other values>

FSSI Crashes (2019-2023)
- Sparse
- Dense

Point Count
- Low



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Road Name:	E MAIN ST
Total Crashes:	14
FSI Crashes:	1
Bicycle Crashes:	0
Ped Crashes:	0
Angle Crashes:	5
HFO Crashes:	1
Rear-end Crashes:	6
Side-Swipe Crashes:	0
Head-On Crashes:	1

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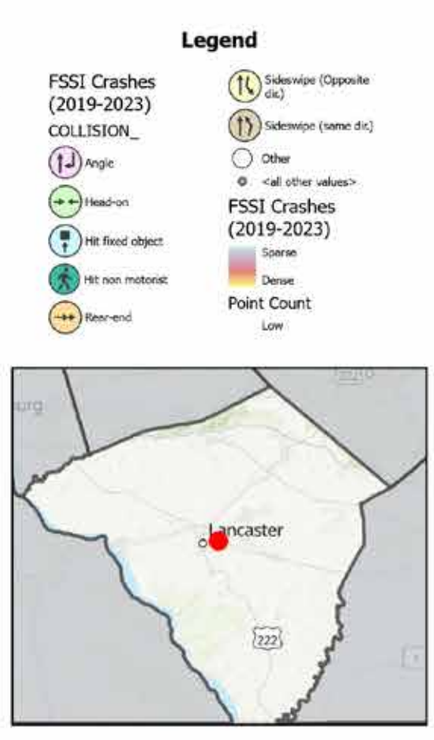
Road Name:	PITNEY RD
Total Crashes:	7
FSI Crashes:	3
Bicycle Crashes:	1
Ped Crashes:	1
Angle Crashes:	0
HFO Crashes:	3
Rear-end Crashes:	2
Side-Swipe Crashes:	0
Head-On Crashes:	0



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APPENDIX E
SS4A FY24 SELF-CERTIFICATION WORKSHEET (COMPLETED 9.11.25)

S|S
4|A

Safe Streets and Roads for All

Self-Certification Eligibility Worksheet

All applicants should follow the instructions in the NOFO to correctly apply for a grant. See the SS4A website for more information.

Table 1 of the SS4A NOFO describes eight components of an Action Plan, which correspond to the questions in this worksheet. Applicants should use this worksheet to determine whether their existing plan(s) contains the required components to be considered an eligible Action Plan for SS4A.

This worksheet is required for all SS4A **Implementation Grant** applications and any **Planning and Demonstration Grant applications to conduct Supplemental Planning/Demonstration Activities only**. Please complete the form in its entirety, do not adjust the formatting or headings of the worksheet, and upload the completed PDF with your application.

Eligibility

An Action Plan is considered eligible for an SS4A application for an Implementation Grant or a Planning and Demonstration Grant to conduct Supplemental Planning/Demonstration Activities if the following two conditions are met:

- You can answer "YES" to Questions **3, 7,** and **9** in this worksheet; *and*
- You can answer "YES" to **at least four of the six remaining** Questions, **1, 2, 4, 5, 6**, and **8.**

If both conditions are not met, an applicant is still eligible to apply for a Planning and Demonstration Grant to fund the creation of a new Action Plan or updates to an existing Action Plan to meet SS4A requirements.

Applicant Information

Lead Applicant: Lancaster County MPO **UEI:** _____

Action Plan Documents

In the table below, list the relevant Action Plan and any additional plans or documents that you reference in this form. Please provide a hyperlink to any documents available online or indicate that the Action Plan or other documents will be uploaded in Valid Eval as part of your application. Note that, to be considered an eligible Action Plan for SS4A, the plan(s) coverage must be broader than just a corridor, neighborhood, or specific location.

Document Title	Link	Date of Most Recent Update
Lancaster County MPO Traffic Safety Action Plan	https://lancastercountyplanning.org/328/Traffic-Safety-Action-Plan	09/30/2025

U.S. Department of Transportation

Action Plan Components

For each question below, answer "YES" or "NO." If "YES," list the relevant plan(s) or supporting documentation that address the condition and the specific page number(s) in each document that corroborates your response. This form provides space to reference multiple plans, but please list only the most relevant document(s).

1. Leadership Commitment and Goal Setting

Are **BOTH** of the following true?

- A high-ranking official and/or governing body in the jurisdiction publicly committed to an eventual goal of zero roadway fatalities and serious injuries; and
- The commitment includes either setting a target date to reach zero OR setting one or more targets to achieve significant declines in roadway fatalities and serious injuries by a specific date.

☑ **YES**

☐ **NO**

Note: This may include a resolution, policy, ordinance, executive order, or other official announcement from a high-ranking official and the official adoption of a plan that includes the commitment by a legislative body.

If "YES," please list the relevant document(s) and page number(s) that corroborate your response.

Document Title	Page Number(s)
Lancaster County MPO Traffic Safety Action Plan	15-16

2. Planning Structure

To develop the Action Plan, was a committee, task force, implementation group, or similar body established and charged with the plan's development, implementation, and monitoring?

☑ **YES**

☐ **NO**

Note: This should include a description of the membership of the group and what role they play in the development, implementation, and monitoring of the Action Plan.

If "YES," please list the relevant document(s) and page number(s) that corroborate your response.

Document Title	Page Number(s)
Lancaster County MPO Traffic Safety Action Plan	18-19

3. Safety Analysis

Does the Action Plan include **ALL** of the following?

- Analysis of existing conditions and historical trends to provide a baseline level of crashes involving fatalities and serious injuries across a jurisdiction, locality, Tribe, or region;
- Analysis of the location where there are crashes, the severity, as well as contributing factors and crash types;
- Analysis of systemic and specific safety needs, as needed (e.g., high-risk road features or specific safety needs of relevant road users); and,
- A geospatial identification (geographic or locational data using maps) of higher risk locations.

☑ **YES**
☐ **NO**

Note: Availability and level of detail of safety data may vary greatly by location. The Fatality and Injury Reporting System Tool (FIRST) provides county- and city-level data. When available, local data should be used to supplement nationally available data sets.

If "YES," please list the relevant document(s) and page number(s) that corroborate your response.

Document Title	Page Number(s)
Lancaster County MPO Traffic Safety Action Plan	28-43

4. Engagement and Collaboration

Did the Action Plan development include **ALL** of the following activities?

- Engagement with the public and relevant stakeholders, including the private sector and community groups;
- Incorporation of information received from the engagement and collaboration into the plan; and
- Coordination that included inter- and intra-governmental cooperation and collaboration, as appropriate.

☑ **YES**
☐ **NO**

Note: This should be a description of public meetings, participation in public and private events, and proactive meetings with stakeholders.

If "YES," please list the relevant document(s) and page number(s) that corroborate your response.

Document Title	Page Number(s)
Lancaster County MPO Traffic Safety Action Plan	17-24

5. Equity Considerations

Did the Action Plan development include **ALL** of the following?

- Considerations of equity using inclusive and representative processes;
- The identification of underserved communities through data; and
- Equity analysis developed in collaboration with appropriate partners, including population characteristics and initial equity impact assessments of proposed projects and strategies.

☑ **YES**
☐ **NO**

Note: This should include data that identifies underserved communities and/or reflects the impact of crashes on underserved communities, prioritization criteria that consider equity, or a description of meaningful engagement and collaboration with appropriate stakeholders.

If "YES," please list the relevant document(s) and page number(s) that corroborate your response.

Document Title	Page Number(s)
Lancaster County MPO Traffic Safety Action Plan	25-27

6. Policy and Process Changes

Are **BOTH** of the following true?

- The plan development included an assessment of current policies, plans, guidelines, and/or standards to identify opportunities to improve how processes prioritize safety; and
- The plan discusses implementation through the adoption of revised or new policies, guidelines, and/or standards.

☑ **YES**
☐ **NO**

Note: This may include existing and/or recommended Complete Streets policy, guidelines for community engagement and collaboration, policy for prioritizing areas of greatest need, local laws (e.g., speed limit), design guidelines, and other policies and processes that prioritize safety.

If "YES," please list the relevant document(s) and page number(s) that corroborate your response.

Document Title	Page Number(s)
Lancaster County MPO Traffic Safety Action Plan	44-51

7. Strategy and Project Selections

Does the plan identify a comprehensive set of projects and strategies to address the safety problems in the Action Plan, with information about time ranges when projects and strategies will be deployed, and an explanation of project prioritization criteria?

☑ YES
☐ NO

Note: This should include one or more lists of community-wide multi-modal and multi-disciplinary projects that respond to safety problems and reflect community input and a description of how your community will prioritize projects in the future.

If "YES," please list the relevant document(s) and page number(s) that corroborate your response.

Document Title	Page Number(s)
Lancaster County MPO Traffic Safety Action Plan	52-69

8. Progress and Transparency

Does the plan include **BOTH** of the following?

- A description of how progress will be measured over time that includes, at a minimum, outcome data.
- The plan is posted publicly online.

☑ YES
☐ NO

Note: This should include a progress reporting structure and list of proposed metrics.

If "YES," please list the relevant document(s) and page number(s) that corroborate your response.

Document Title	Page Number(s)
Lancaster County MPO Traffic Safety Action Plan	70-72

9. Action Plan Date

Was at least one of your plans finalized and/or last updated between 2019 and April 30, 2024?

☐ YES
☑ NO

Note: Updates may include major revisions, updates to the data used for analysis, status updates, or the addition of supplemental planning documents, including but not limited to an Equity Plan, one or more Road Safety Audits conducted in high-crash locations, or a Vulnerable Road User Plan.

If "YES," please list your most recent document(s), date of finalization, and page number(s) that corroborate your response.

Document Title	Date of Most Recent Update	Page Number(s)

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LANCASTER COUNTY MPO TRAFFIC SAFETY ACTION PLAN
Lancaster County, Pennsylvania

ADOPTED OCTOBER 28, 2025