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# Acknowledgments

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## Photo Credits

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## Prepared By



Information contained in this document is for planning purposes and should not be used for final design of any project. All results, recommendations, concept drawings, and commentary contained herein are based on limited data and information, and on existing conditions that are subject to change.

## Letter from the Mayor



Fellow Lancasterians,

The City of Lancaster is joining cities across the world in the Vision Zero movement to eliminate traffic-related deaths and serious injuries. To achieve such an ambitious goal by 2030 will take collaboration between City departments, outside agencies, and community members. That is why we have already begun working with our community and partners to implement the Vision Zero Action Plan that will make our streets safe for all people in Lancaster.

At the center of Vision Zero is the recognition that humans make mistakes and streets should be designed to minimize the impacts of those mistakes, especially for pedestrians and bicyclists who do not have built-in safety features to protect them from the impacts of a crash like automobiles.

The Lancaster Vision Zero Action Plan is based on data collection and crash analysis that identifies causes of crashes. The Plan includes a prioritized list of street improvement projects, education initiatives, city programs and proposed changes to policy. This is a fundamental change from the traditional traffic safety approach.

The Vision Zero Action Plan complements my administration's Strategic Plan. The four priorities of this plan, strong neighborhoods, safe streets, secure incomes, and sound government, focus on the people of the City of Lancaster and the fundamental work of City government. We recognize how City streets cultivate connections with others and one's surroundings, promoting a sense of well-being that is the cornerstone of strong neighborhoods. We are committed to using a data-driven, proactive approach to improve pedestrian and traffic safety resulting in a growing, vibrant and sustainable City. We are dedicated to engaging the community as we design and implement equitable improvements that increase safety and foster a greater sense of community.

These deaths and serious injuries are preventable. Together, we can make this happen.

Sincerely,

Mayor Danene Sorace

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1  
INTRODUCTION

# Introduction

Vision Zero is a transportation safety philosophy that was developed in Sweden in the late 1990s to eliminate traffic deaths and serious injuries in the transportation system. Following the adoption of Vision Zero practices, Sweden has reduced traffic fatalities by half, making it one of the safest places to travel in the world.

At the core of Vision Zero is the belief that people should not be killed or seriously injured as a result of traveling on Lancaster’s streets. To achieve this ambitious goal in Lancaster by 2030, the City is committing to work with community members and partners to implement this Vision Zero Action Plan. Though crashes in Lancaster have been fairly steady

over the years, the city has seen an increase in crashes that result in life-changing injury or loss of life since 2014. This is unacceptable and the Lancaster Vision Zero Action Plan outlines the projects, policies, and programs that will support eliminating these life-changing crashes. Achieving Vision Zero in Lancaster will require attention and resources by City employees,

public officials, critical partners, and the general public. The Lancaster Vision Zero Action Plan commits the City to overseeing the completion of a prioritized list of internal culture change efforts, street improvement projects, education initiatives, City programs, and proposed changes to policy.

Figure 1: Total Crashes by Year

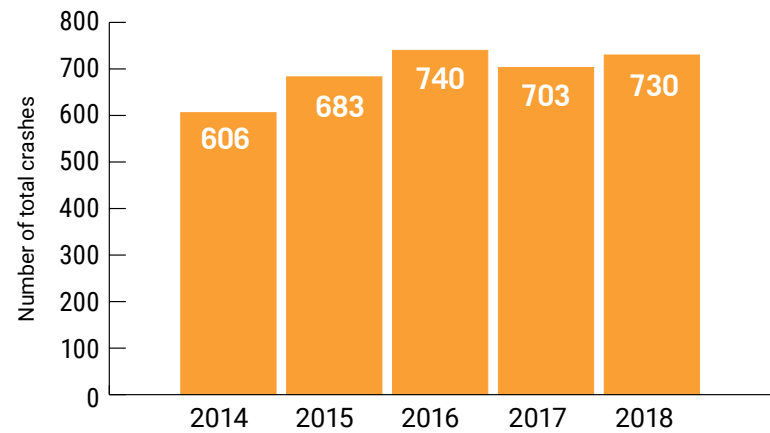
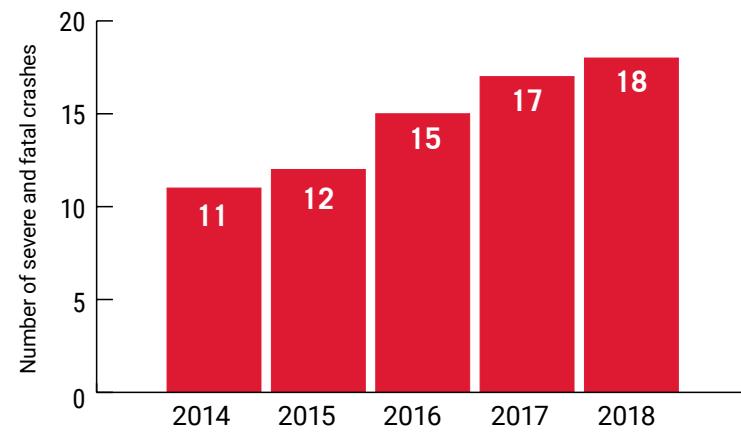


Figure 2: Severe and Fatal Crashes by Year



## How is Vision Zero Different?

Part of what makes Vision Zero different is the recognition that humans make mistakes and streets should be designed to minimize the impacts of those mistakes. This is a fundamental change from a traditional traffic safety approach and means that designers of streets have a responsibility to improve the roadway environment to lessen the severity of crashes. The second major departure from past safety efforts is that Vision Zero is a multidisciplinary effort and recognizes that many factors contribute to safe mobility – including roadway design, travel speeds, individual behaviors, technology, and policy.

## Plan Organization

The following chapters review citywide crash data, highlight the public input process, and include a set of comprehensive recommendations to move Lancaster towards its vision of zero fatalities and serious injuries on its streets by 2030.

**“This goal is not aspirational, we are taking safety very seriously”**

– **Cindy McCormick,**  
Deputy Director of Public Works

Traditional Approach	Vision Zero Approach
Traffic deaths are INEVITABLE	Traffic deaths are PREVENTABLE
PERFECT human behavior	Integrate HUMAN FAILING into approach
Prevent COLLISIONS	Prevent FATAL AND SEVERE CRASHES
INDIVIDUAL responsibility	SYSTEMS approach
Saving lives is EXPENSIVE	Saving lives is NOT EXPENSIVE

Credit: Vision Zero Network



Roadway and intersection design is one element of Vision Zero (Charlotte Street Reconstruction)

## VISION:

Zero traffic deaths and serious injuries by 2030.

## Goals of the Lancaster Vision Zero Action Plan

Based on a review of crash data, input from the public, and input from the Vision Zero Steering Committee, the actions in this plan are organized around the following goal areas.

### Equity

Committing to equity in Vision Zero acknowledges that streets belong to everyone and that changes to our streets and sidewalks must be made safe for all people. Unfortunately, this isn't the case today. Lancaster's crash data tells us that there are more frequent crashes and more serious crashes in low-income communities, in communities of color, and/or in communities with low car ownership. The most vulnerable road users - people walking, biking and riding motorcycles - are also more likely to be involved in serious and fatal crashes than people driving cars.

**Key Actions:** Direct more resources to the areas of the city experiencing disproportionate impacts from crashes and improve safety for the most vulnerable road users.

### Safety and Slow Speeds

Designing streets to operate more safely and at a slower vehicle speeds is critical to achieving Vision Zero. Street designs that result in slower travel speeds, slower turning speeds, better visibility, and more logical operations will passively encourage people to be 'good actors' on the street. This minimizes the likelihood of a crash happening, the impact of crashes that do happen, and the need for active enforcement activities.

**Key actions:** Although many streets would benefit from traffic calming and slower speeds, Lancaster will focus on its most dangerous streets and intersections first.

### Culture Change

Safety-focused street improvements and slower speeds will contribute to safer streets. However, the dominant culture around travel also needs to be examined so that people understand the role they have in the safety of other road users. Street design cannot force someone to eliminate distractions while driving, buckle their seatbelt, or choose not to drive under the influence

**Key actions:** Leverage partnerships with like-minded organizations and the strong community bond within the city to shift thoughts and actions regarding traffic safety.

### Data

Building from the findings of the analysis conducted for the Vision Zero Action Plan, Lancaster must continue to improve, collect, and analyze crash and speed data while evaluating the safety impacts of future projects. Improving data quality and transparency is essential to a greater understanding of the street designs, human behaviors, and other factors that lead to fatal and severe crashes. In addition, the City must continue to broaden data sources and quality. Crash reports don't often tell the whole story and the City must use other data, such as hospital records, survey data, and demographic data, to broaden understanding of the street environment.

**Key actions:** This plan outlines methods for continued analysis, improved data quality, and data-driven project prioritization.

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# Focus on Safety

The City of Lancaster has long placed a priority on creating safe streets for all people throughout the city through efforts such as bike lane installations, crosswalk education campaigns, signal improvements, and planning work.

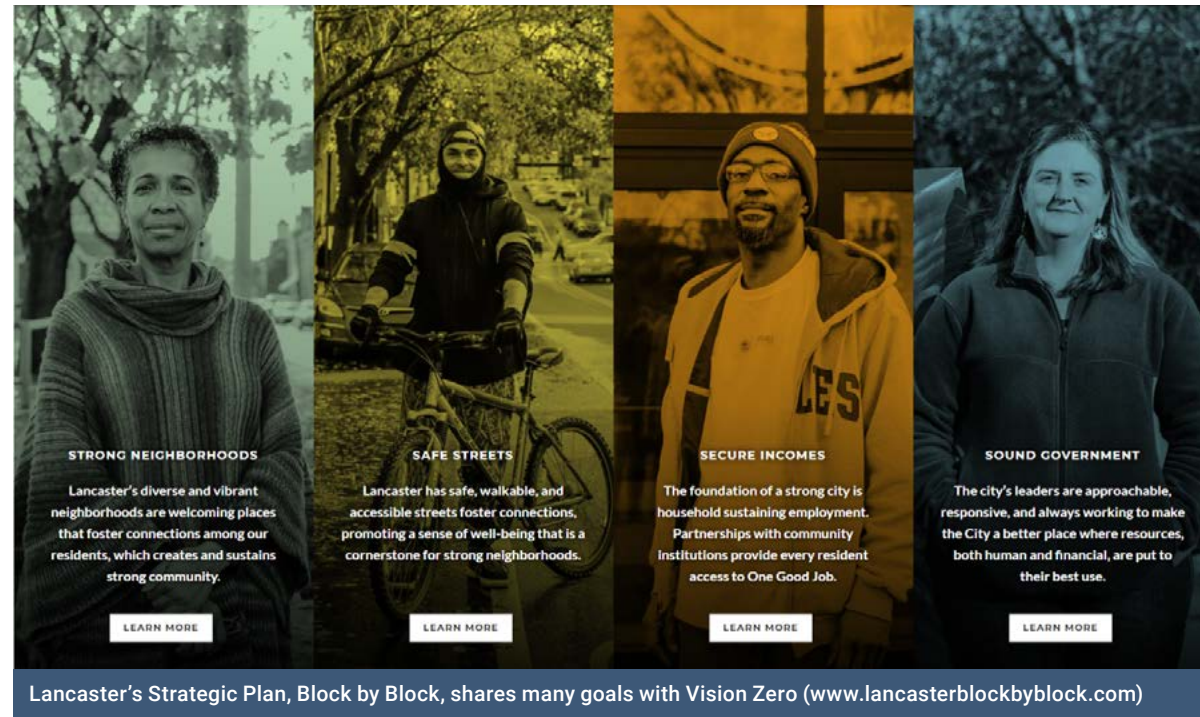
## Past Planning

In 2019, Mayor Danene Sorace published a Strategic Plan naming Safe Streets as one of the four priorities for the city, along with Strong Neighborhoods, Secure Incomes, and Sound Government. Within the Safe Streets priority, there are eight measures identified to gauge progress. All of the eight measures are supported by this Vision Zero Action Plan, and three will be achieved through the implementation of this plan:

- Crashes at 20 targeted locations are reduced by 50 percent.
- A unified safety message is produced and delivered in partnership with business, health care, education, and recreation stakeholders.
- Reported pedestrian, bicyclist and driver/passenger injuries in the City decline by 50 percent.

Other related planning efforts include the 2014 adoption of the Complete Streets Policy. This policy includes a high-level commitment to including facilities for all road users in street designs, including pedestrians, bicyclists, transit users, and persons with disabilities, as well as the drivers and passengers of motor vehicles.

The city also collaborated with Lancaster County to publish Lancaster County Active Transportation Plan in 2019. The Active Transportation Plan focuses on creating safer streets for bicyclists and pedestrians.



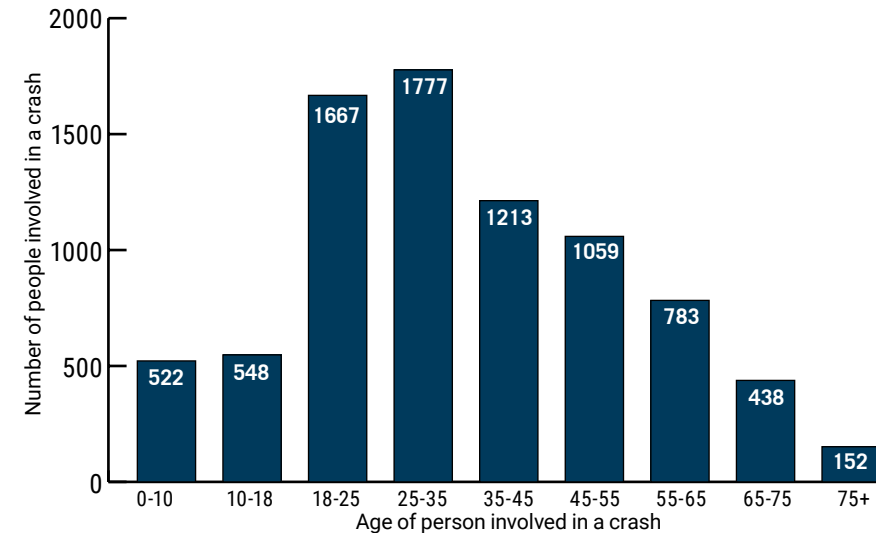
## Crash Data

The crash data analyzed for this Vision Zero Action Plan was downloaded from PennDOT's Pennsylvania Crash Information Tool (PCIT).<sup>1</sup> The PCIT aggregates crash data reported by local law enforcement agencies. When the data for this plan was downloaded in March 2020, the most recent data available was from 2018, so this plan is based on the five years of crash data from 2014-2018.

Over the five years incorporated into this study, an average of 15 people per year have died or suffered from a life-changing injury on Lancaster's streets. During the same time period, an average of 1,651 people were involved in crashes each year with impacts ranging from minor vehicle damage, minor injuries, time off

<sup>1</sup> PennDOT. "Pennsylvania Crash Information Tool." <https://crashinfo.penndot.gov/PCIT/welcome.html>

Figure 3: Total number of people involved in crashes in Lancaster



work, increased insurance premiums and more. Under Vision Zero, these impacts on health, personal finances, and community safety should be minimized.

## Many people are involved in crashes

Although most of the statistics in this plan refer to the number of crashes, multiple people are often involved in just one crash. In fact, a total of 8,159 people in Lancaster have been involved in a crash over the last 5 years. This includes over 1,000 children between the ages 0 and 18, and more than 500 people over the age of 65.

Children ages 0-10 and people over age 75 are more likely to be involved in serious injury and fatal crashes. This is also true for people ages 18-25 and 45-55.

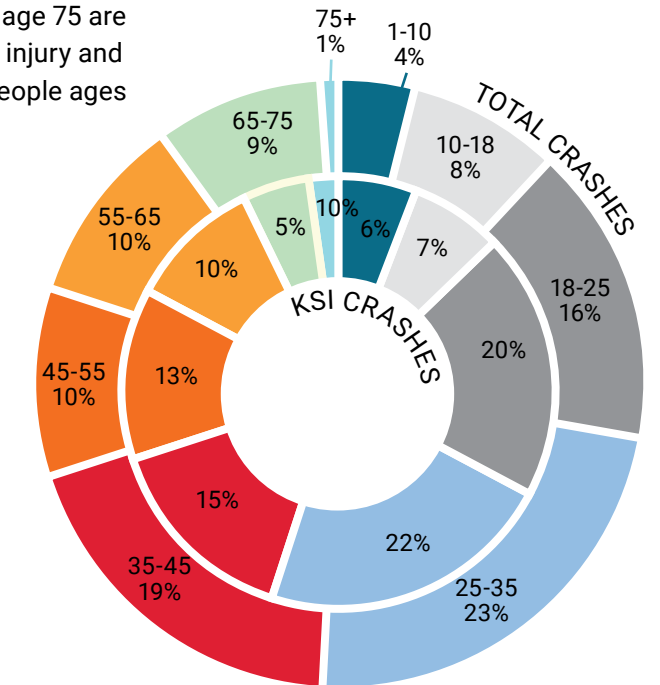


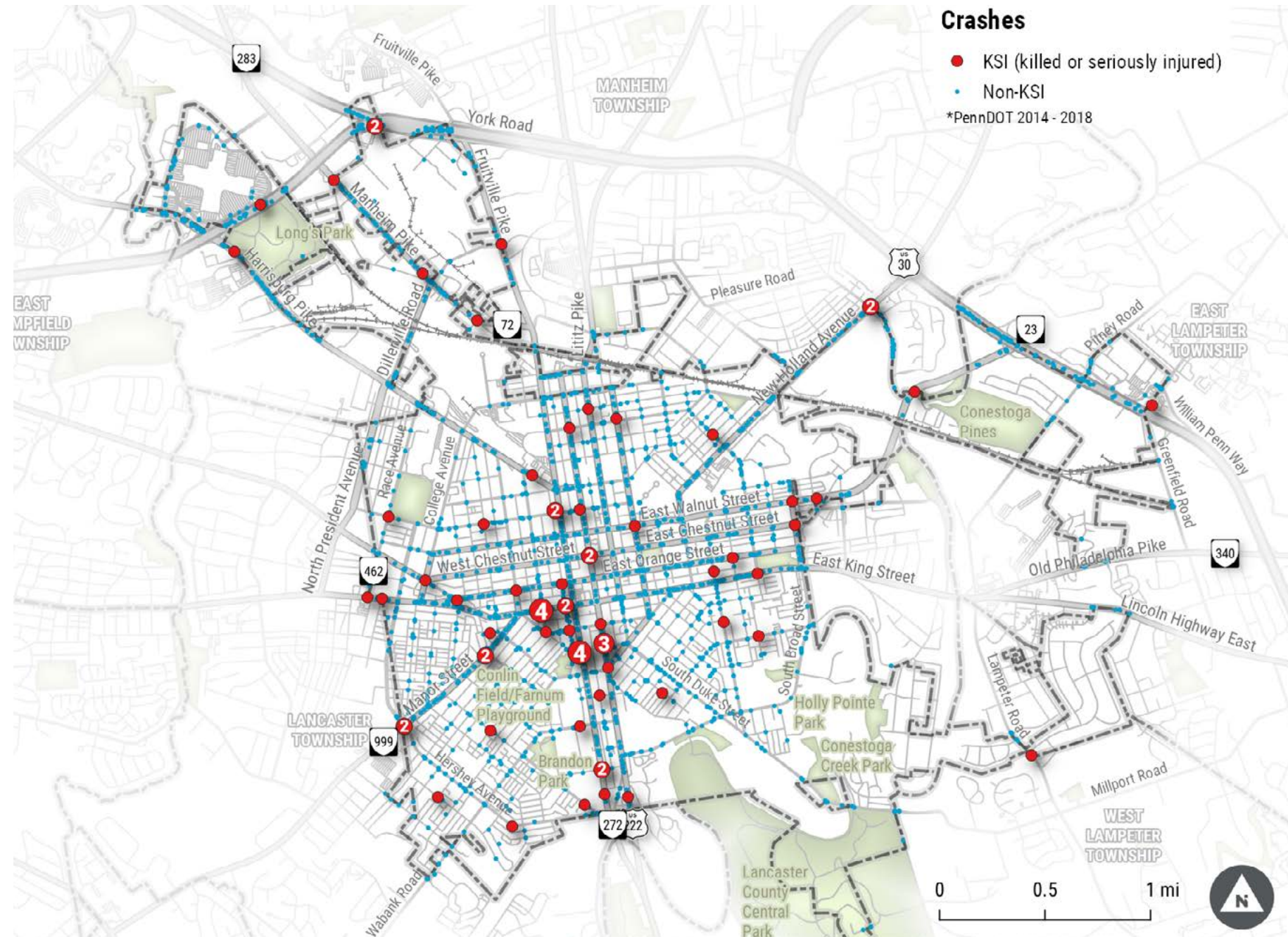
Figure 4: Percentage of all crashes (outer circle) and percentage of crashes where a participant was Killed or Seriously Injured (KSI) (inner circle) by age range.

The next pages explore the following research questions:

- Who is involved in fatal and serious injuries crashes?
- When are crashes occurring?
- What type of street are crashes occurring on?
- What actions lead to crashes?



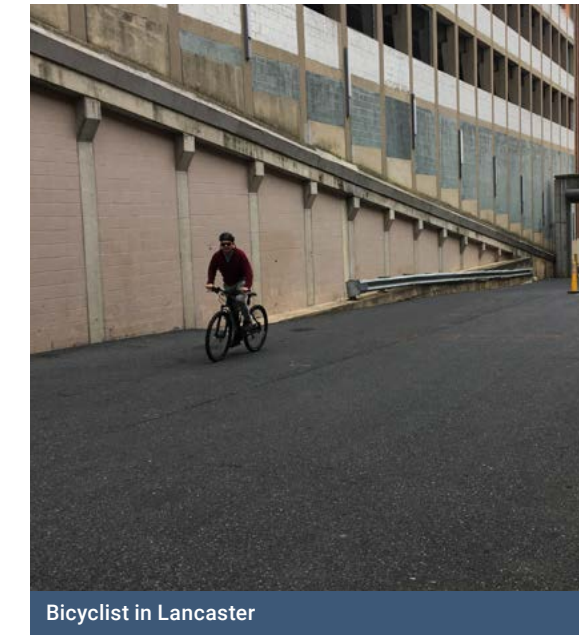
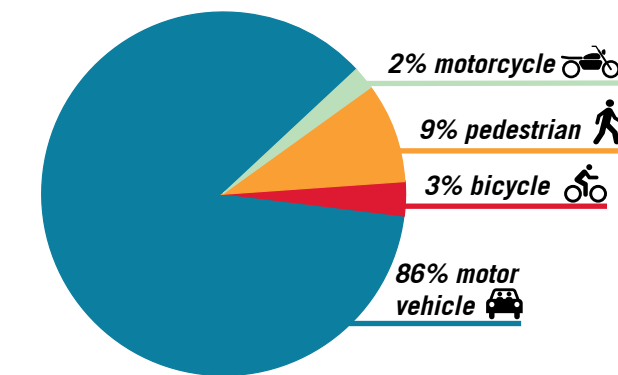
Map 1: All Crashes by Severity



### Bicyclists, pedestrians, and motorcyclists are more likely to be in a serious crash

While only 12 percent of people in Lancaster commute by foot, pedestrians account for 25 percent of deaths and serious injuries due to crashes. Similarly, only 3 percent report commuting by bicycle, yet people on bikes account for 8 percent of deaths and serious injuries due to crashes. Lastly, only 2 percent of people in Lancaster commute using a motorcycle, but people on motorcycles account for 29 percent of deaths and serious injuries due to crashes. Due to these factors, physically vulnerable road users must be prioritized in decisions about roadway design and project funding.

Figure 5: All Crashes by Mode



### Crashes are not happening evenly in every neighborhood

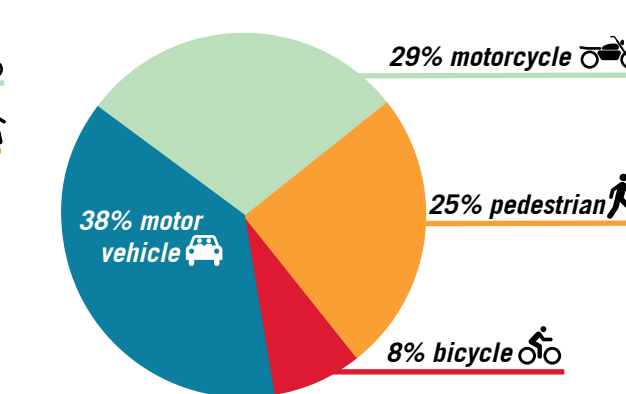
There is a higher concentration of crashes in low-income communities, communities of color, and/or communities with low car ownership. These characteristics were used in the Active Transportation Plan to identify Focus Areas.

These Focus Areas only represent 14 percent of the city's land area but are where 26 percent of the serious and fatal crashes take place. The Focus Areas are shown in the darkest blue on the map on the next page (Map 2).

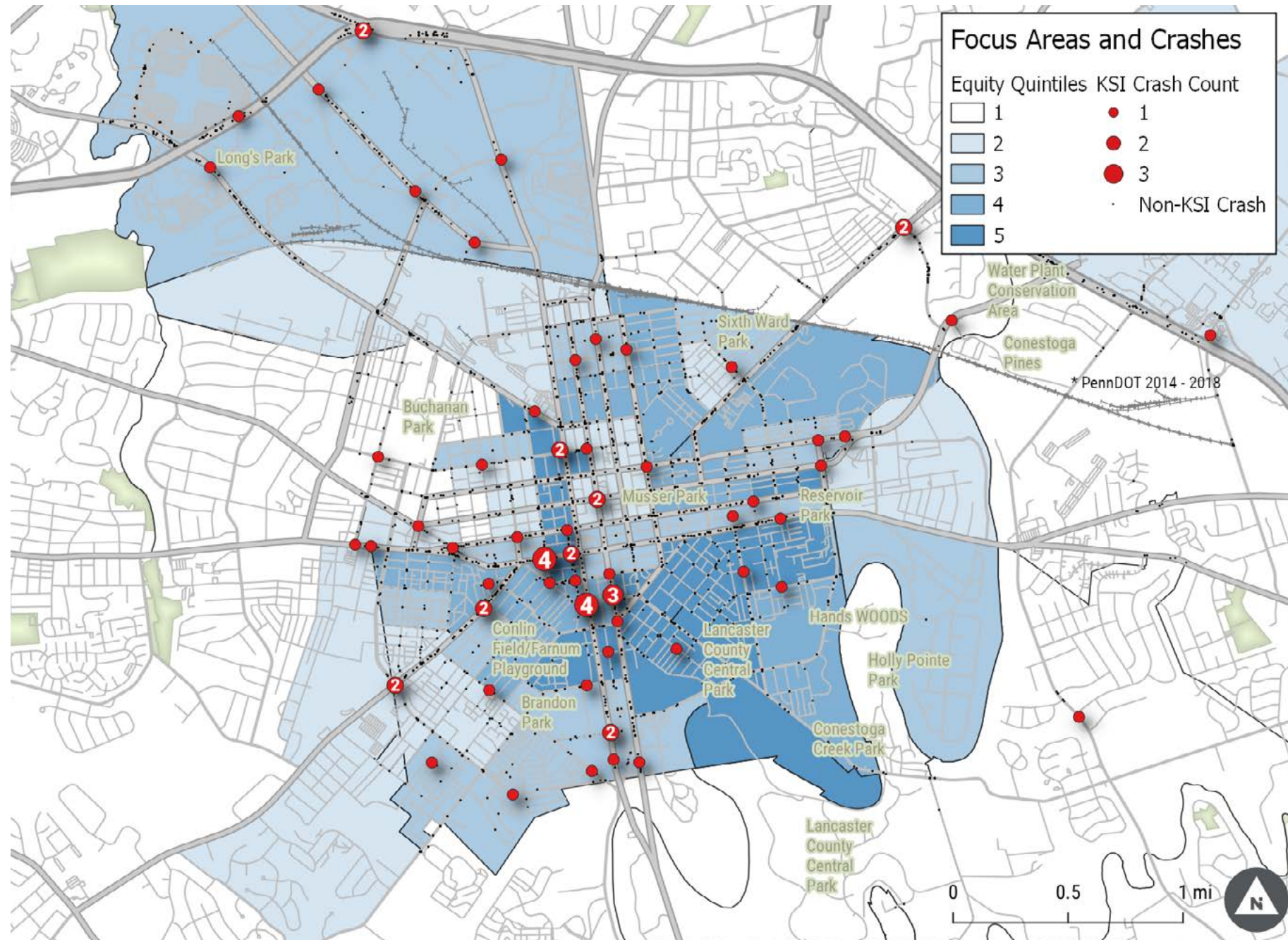
#### Focus Area Characteristics

Vehicle Access - Households with no access to a vehicle
Educational Attainment - Population with no high school diploma or equivalent
Income - Individuals of working age who are living at or below 200 percent of the Federal Poverty Level (FPL)
Limited English Proficiency (LEP) - Percentage of the population that do not speak English as their primary language and have limited ability to communicate in or understand English
Race - Percentage of the population that identifies as non-white
Age - Percentage of the population under 18 years of age and over 65 years of age

Figure 6: Severe and Fatal Crashes by Mode



Map 2: All Crashes by Severity and Focus Areas



### Crashes are more likely at intersections

Although intersections represent only a small percentage of all roadway miles, they are where over half of the all crashes take place and where 63 percent of crashes that result in fatalities or serious injuries occur. This is understandable, intersections are places where people must negotiate turning movements with other vehicles, where pedestrians and vehicles cross paths, and opposing traffic crosses the same space. One fifth of crashes resulting in a serious injury or fatality occurred when drivers were making left turns.

Figure 7: All Crashes: Intersection vs Non-Intersection

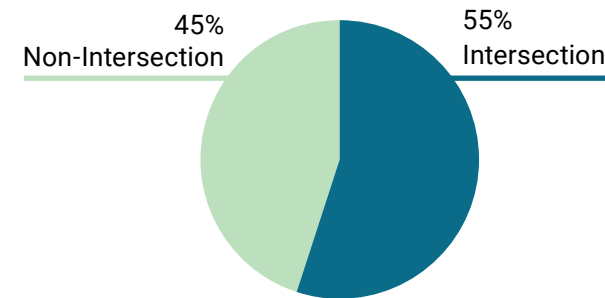
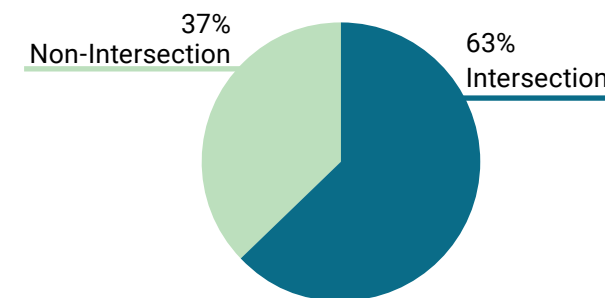


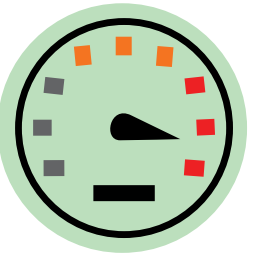
Figure 8: Serious Crashes: Intersection vs Non-Intersection



### Risky behaviors lead to more serious crashes

Driver behaviors that lead to more severe crashes are: speeding, distracted driving, driving under the influence, and aggressive driving. Of those, aggressive driving is a major factor in all crashes, a cause in 60 percent of all crashes and 57 percent of those resulting in death and serious injury.

**Speeding** is cited as a factor in 3 percent of all crashes. It is cited as a factor in 15 percent of crashes that result in death or serious injury.



**Distracted driving** is cited as a factor in 4 percent of all crashes. It is cited as a factor in 12 percent of crashes that result in death or serious injury. Distracted driving is often underreported and may be a contributing factor in more crashes than indicated by the numbers above.



**Drunk driving** is cited as a factor in 7 percent of all crashes. It is cited as a factor in 14 percent of crashes that result in death or serious injury.



**Aggressive driving** is a factor in 57 percent of all crashes and 60 percent of crashes that result in death or serious injury. Aggressive driving may include speeding, weaving, tailgating, passing illegally, or "a combination of moving traffic offenses [that] endanger other persons or property."<sup>1</sup>



<sup>1</sup> PennDOT. "What is Aggressive Driving? Are you Part of the Problem?" <https://www.penndot.gov/PennDOTWay/Pages/Article.aspx?post=30>

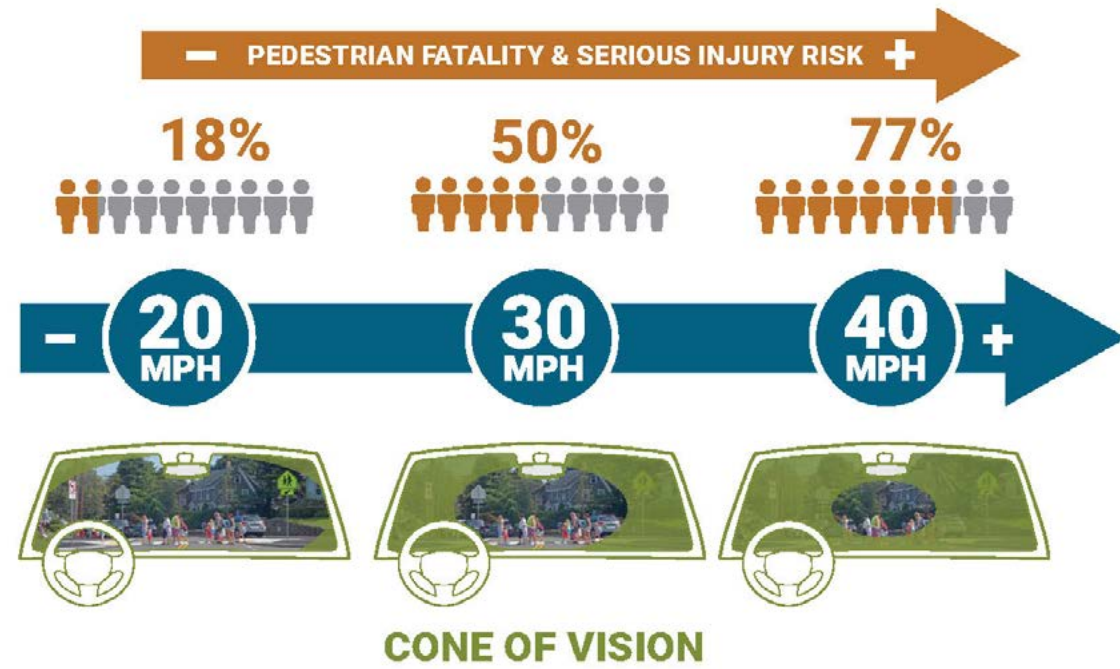
## At the heart of Vision Zero is the need to reduce speeds

Higher traffic speeds make crashes more likely to happen and, if they do happen, higher speeds make it more likely that a crash will result in a serious injury or death, especially for people walking and biking.

National research has found that pedestrians are much more likely to survive a crash without a life changing injury if they are hit by a vehicle moving at 20 mph than if they are hit by a vehicle moving at 30 mph. The likelihood of a crash resulting in death or a serious injury increases with the speed of the vehicle, and if a vehicle is moving at 40 mph there is a 77 percent likelihood that a crash will kill or seriously injure a pedestrian.

The difference between a vehicle moving at 20 mph compared to 30 mph is significant. Dropping speeds only 10 mph reduces the risk of serious injuries and fatalities by more than half.

Even crashes that are influenced by driver behavior can be addressed, in part, through design. Vehicle speeds are influenced by roadway design and people will drive as fast as the street design allows them. Even if a driver is distracted or not wearing a seatbelt, if the street is designed for slower speeds that driver is more likely to be driving slower. This gives them a wider field of vision and more time to react, reducing the likelihood and severity of a crash.



Many of the streets in downtown Lancaster are narrow and, even on the sidewalk, people are walking close to motor vehicles. Slower speeds will allow drivers to see pedestrians sooner and adjust their actions.

Many of the actions laid out in Chapter 4 address speeding through education and passive enforcement, such as changes in the street's design that encourage slower driving.

Active enforcement is recommended only as a last resort. Not only does active enforcement increase negative interactions between law enforcement and drivers, Pennsylvania is the only state where municipal law enforcement is not allowed to use radar technology to

enforce speed limits. Current technology used by local municipalities in Pennsylvania is not as accurate and makes it difficult for law enforcement to issue citations.<sup>2</sup> As shown in the graphic, a difference of 10 mph makes an enormous difference in the likelihood that someone hit in a crash walks away without a serious injury, and the City of Lancaster will continue to advocate for the ability to use radar to effectively enforce speeding in the city.

<sup>2</sup> Pennsylvania General Assembly, Title 75 § 3368.



Your input on this map will help inform the recommendations in the City of Lancaster's Vision Zero Action Plan.

**1. identify** behavior issues, locations that need improvements, and places you feel safe by clicking 'Add Points'

*1. identifique* problemas de comportamiento, ubicaciones que necesitan mejoras y lugares en los que se siente seguro haciendo clic en 'Add Points'

**2. describe** your comment by using the automatic pop-up box

*2. describa* su comentario utilizando el cuadro emergente automático.

**3. discuss** other's comments by clicking on points and agreeing or disagreeing

*3. discuta* los comentarios de otros haciendo clic en los puntos y aceptando o en desacuerdo

**Legend**

Unsafe driver behaviors  
*Conductas inseguras del conductor*

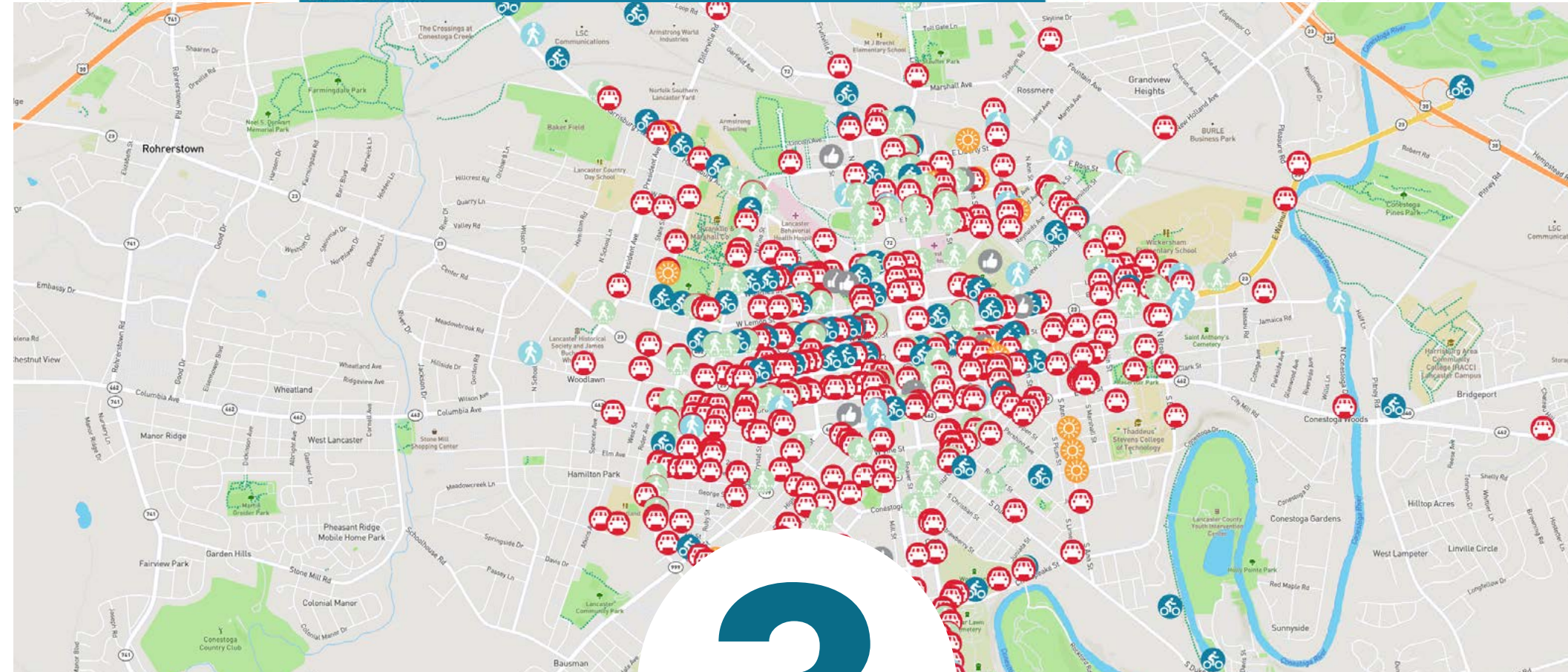
Crossing improvement  
*Mejora de cruce*

Sidewalk improvement  
*Mejora de la acera*

Bicycle facility improvement  
*Mejora de las instalaciones de bicicletas*

Lighting improvement  
*Mejora de iluminación*

I feel safe here  
*Me siento seguro aquí*



**3**  
PUBLIC OUTREACH

# Public Outreach

The Lancaster Vision Zero Action Plan process began in early March 2020. By mid-March, Lancaster and other parts of the country were under lockdown orders due to the Covid-19 pandemic. As cases spread, plans for in-person outreach at events and with community groups had to be revised. This section describes the public outreach approach and materials that were created for the plan, what we heard, and the ways outreach will continue during implementation.

## Steering Committee

The Steering Committee for the Vision Zero Action Plan consists of 24 members selected from a variety of local agencies and organizations working on different elements of Vision Zero. A full list of Steering Committee members is shown on the plan's Acknowledgment page.

After an initial in-person meeting, the Steering Committee met online for a total of five times throughout the planning process. At these meetings, the Steering Committee helped establish the plan's Focus Areas, provided input on the outreach strategy, and reviewed crash data and weighed in on recommendations. Moving forward, members of the Steering Committee have been asked to take ownership of some of the plan's recommendations and assist the City with implementation.

### Steering Committee Meeting Topics

<b>March Meeting #1</b>	Kick-off
<b>April Meeting #2</b>	Initial Data Analysis
<b>June Meeting #3</b>	Community Engagement, High Injury Network
<b>August Meeting #4</b>	Recommendations, Implementation
<b>September Meeting #5</b>	Draft Plan

## Neighborhood Advisory Group

In addition to the Steering Committee, the City also convened a Neighborhood Advisory Group. For this group, the City recruited 8 residents and business owners, ensuring representation from each of the four quadrants in the city. Several members of the group have been personally affected by traffic crashes. A full list of the Neighborhood Advisory Group's members is shown on the plan's Acknowledgment page.

The Neighborhood Advisory Group met virtually three times during plan development and will continue meeting on a regular basis to advise on implementation. The Neighborhood Advisory Group also serves as ambassadors for the plan, talking to friends and family members about traffic safety and seeking input on the ways the City can make its streets safer.

## Stakeholder Interviews

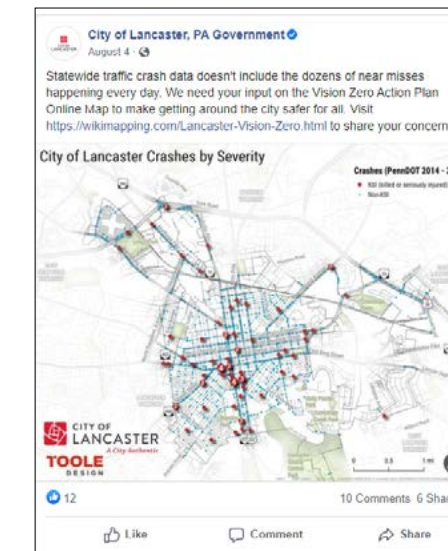
Early in the planning process, the project team met one-on-one or in small groups with representatives from the

- Lancaster Police Department
- Lancaster Recreation Commission
- Lancaster School District
- Penn Medicine /Lancaster General Health
- The Center for Traffic Safety
- Pennsylvania Department of Transportation
- The Downtowners

In these meetings, participants shared their views on the biggest challenges to achieving Vision Zero (a car-centered culture, roadway design, parking too close to intersections, and staffing limitations) as well as the ways their organizations can contribute to the solutions (provide educational resources, teach classes, and assist with data creation and management). These conversations helped establish the context for the plan and identify partners to assist with implementation.

## City Webpage and Social Media Accounts

The project team developed content for a Vision Zero page on the City's website and drafted social media posts about the project. The posts, which appeared on the City's Facebook and Instagram accounts, were designed to drive people to the project website and online map.



## Postcards

To help reach residents who do not follow the City's social media accounts, the City mailed postcards to households on the streets where the most crashes happen. The postcards contained basic information on Vision Zero and directed residents to the webpage for more information. The postcards generated some input via emails to City staff and on the online map, but not as much as the social media posts.



Help make Lancaster's streets safe for all people. Our goal? Reduce fatalities or serious injuries from traffic crashes to **ZERO** by 2030.

Ayude a que las calles de Lancaster sean seguras para todas las personas. ¿Nuestro objetivo? Reduzca las muertes o lesiones graves por accidentes de tránsito a **CERO** para el 2030.

Feel unsafe when you walk, bike, or drive? Tell us your concerns on the interactive map at [tinyurl.com/LancasterVZ](https://tinyurl.com/LancasterVZ). Your input will help inform the recommendations in Lancaster's Vision Zero Action Plan.

Want to learn more? Visit the city's website at [cityoflancasterpa.com/vision-zero/](https://cityoflancasterpa.com/vision-zero/).

¿Te sientes inseguro cuando caminas, andas en bicicleta o conduces? Cuéntenos sus inquietudes en el mapa interactivo en [tinyurl.com/LancasterVZ](https://tinyurl.com/LancasterVZ). Su aporte ayudará a informar las recomendaciones del Plan de Acción Visión Cero de Lancaster.

¿Quiere aprender más? Visite el sitio web de la Ciudad en [cityoflancasterpa.com/vision-zero/](https://cityoflancasterpa.com/vision-zero/).



## Online Map and Survey

The online map for the project was available in English and Spanish and was live from June 29, 2020 to August 31, 2020. Visitors to the map were asked to fill out a short registration survey and indicate on the map where they felt unsafe when traveling around the City of Lancaster. In total, 408 people filled out the registration survey and left a total of 788 comments on the map.

The number of responses on the map increased following social media posts and other promotional activities.

## What we heard

Visitors to the online map provided valuable information about their knowledge of Vision Zero and their experiences traveling throughout the city.

Almost half of the respondents indicated they had not heard of Vision Zero, which could indicate a need for broader communication and outreach efforts to build support for this plan and its recommendations.

When asked about the top two behaviors they believe lead to crashes, speeding and failure to yield to pedestrians were the most common responses.

Figure 10: Knowledge of Vision Zero

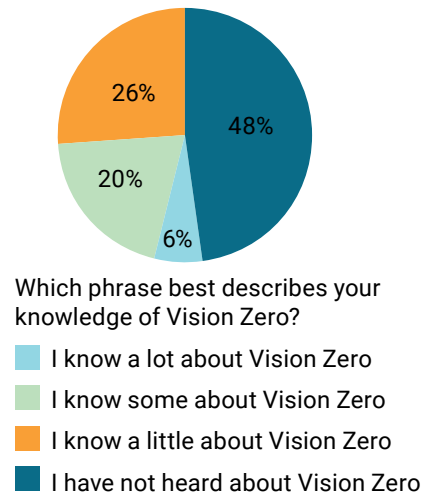
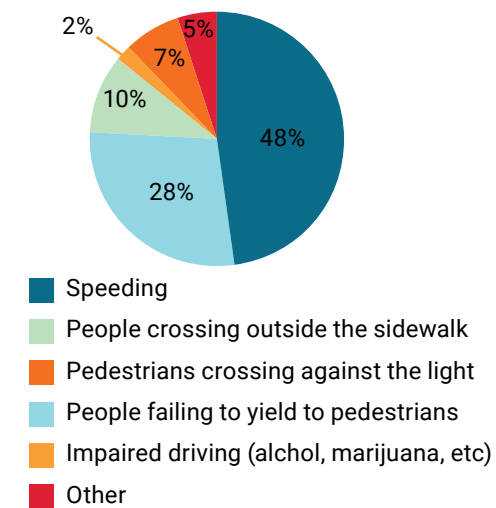


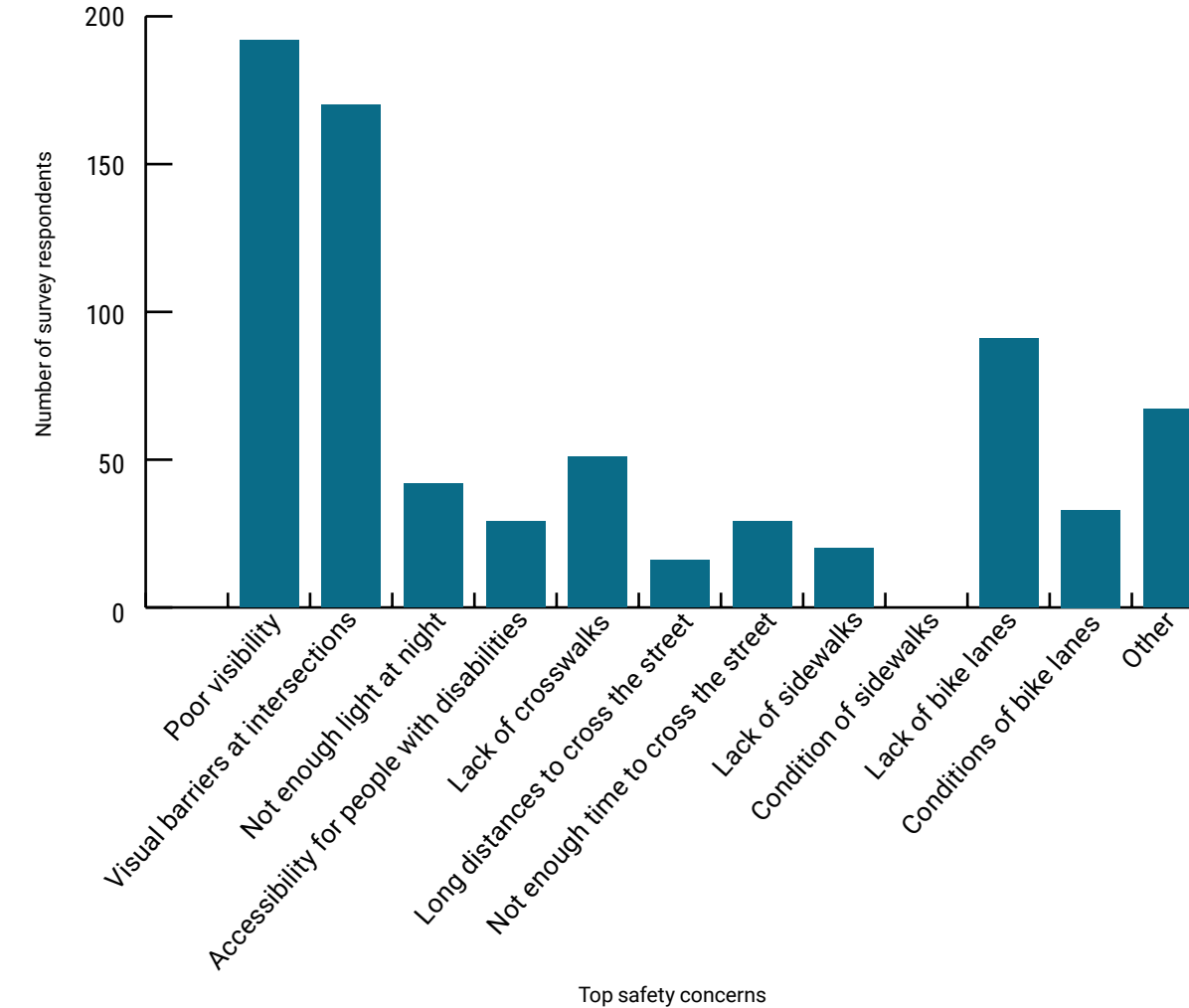
Figure 11: Responses on Behaviors Believed to Lead to Traffic Safety Issues



When users were asked to select their top two safety concerns, poor visibility and visual barriers at intersections were the most common responses. Missing crosswalks, missing bike lanes, and the condition of existing bike lanes were other frequently noted concerns.

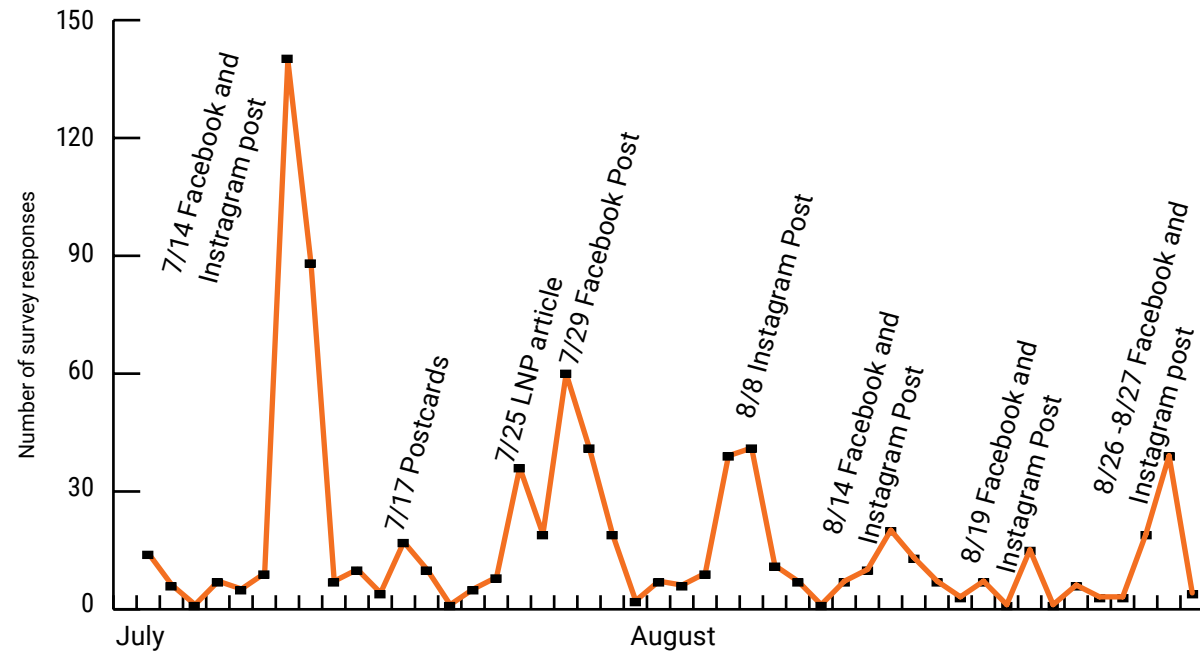
Users were also asked what ONE thing the City should do to improve traffic safety; designing and building safer streets was selected by more than one-third of respondents.

Figure 12: Top Safety Concerns



Action	No. of Responses
Build safe streets for everyone, including safe pedestrian crossings, bicycle facilities, and motor vehicle facilities	156
Improve enforcement of traffic laws like speed limits and red light running	94
Reduce speeding	81
Reduce distracted driving	26
Other	20
Engage the community and offer education about traffic safety	13
Be transparent with data and information, and response with actions	12
<b>Grand Total</b>	<b>402</b>

Figure 9: WikiMap Responses Over Time



### On the map

On the map itself, users could make comments in six categories. As shown in the table below, more than half of the comments received were about “unsafe driver behaviors.” Where users indicated physical improvements were needed, 85 comments were related to bike infrastructure, 33 were related to sidewalks, and 16 were about lighting.

Category	No. of Responses
Unsafe driver behaviors	460
Crossing improvement needed	178
Bike improvement needed	85
Sidewalk improvement needed	33
Lighting improvement needed	16
I feel safe here	16
<b>Grand Total</b>	<b>788</b>

### Who is commenting?

The map below shows the density of the comments made with more comments in the northern and western parts of the city. Additional maps showing the density of comments by type can be found in Appendix B.

In addition to fewer comments made in the southern and eastern parts of the city, there were very few made by young people under age 25. Almost 55 percent of the map responses

were made by people between the ages of 25 and 45.

The recommendations in this plan seek to address these gaps with emphases on schools and infrastructure projects in the equity Focus Areas.

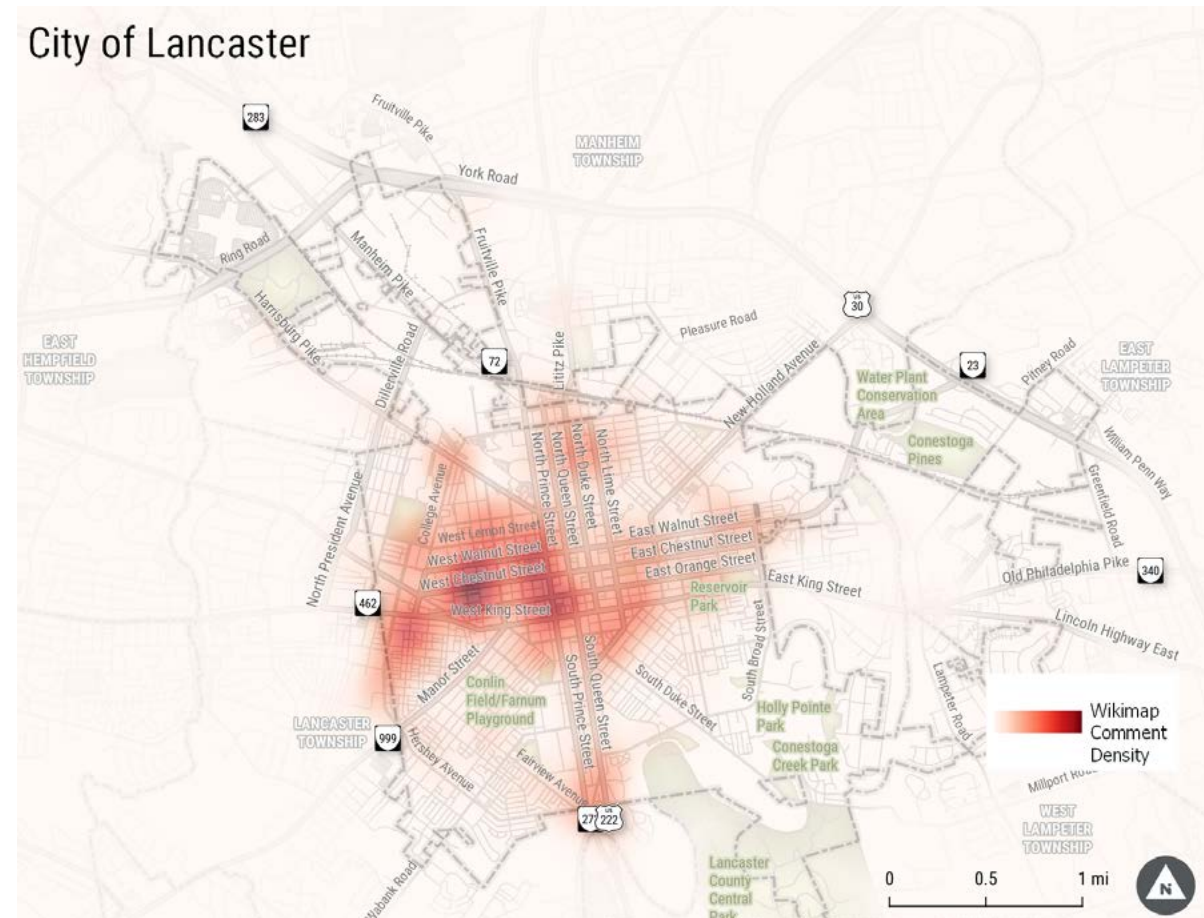


Figure 13: Age Range of Survey Respondents

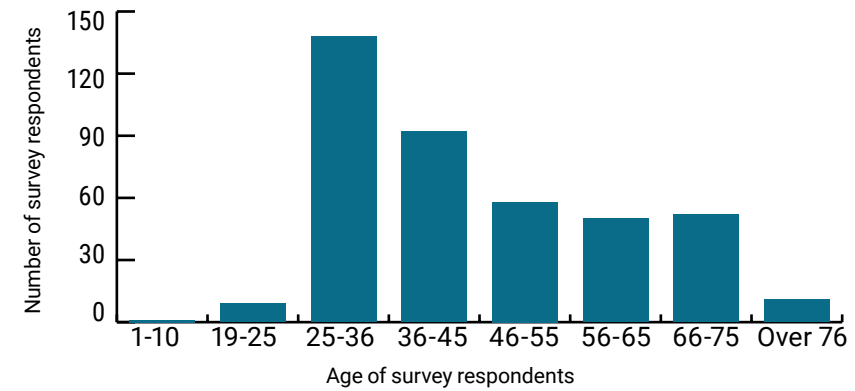
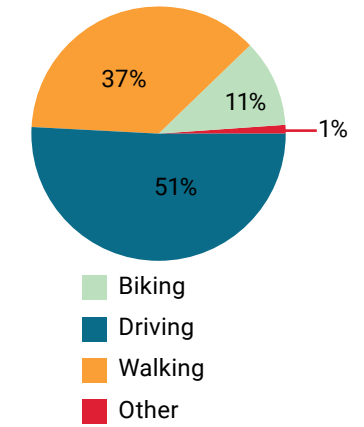


Figure 14: Primary Travel Mode of Survey Respondents



### Draft and Final Plan

The draft plan was uploaded to the City of Lancaster’s new community engagement website, Citizen Lab, which will also become a place where residents can look for updates and progress in Lancaster’s path to Vision Zero. Respondents were able to give the City comments on the overall plan and were also asked to participate in ranking the Plan’s proposed recommendations. Of those who responded, the highest ranked recommendations were:

- Improve Crosswalks on the High Injury Network (S3), p39
- Improve the High Injury Network (S1), p39
- Dedicate Funding for Vision Zero Implementation (C2), p43
- Educate the Public (C3), p43

Read more about these specific recommendations on the pages noted above.

### Commitment to future outreach

The City will continue to engage the public throughout implementation. Most of the physical infrastructure recommendations in this plan will require further study and design, with additional opportunities for input. The comments from the online map will be revisited as locations are evaluated for improvements. Resident input and leadership are key to many of the programmatic recommendations in the plan, and the City is committed to continuing to work with the Neighborhood Advisory Group, community organizations, schools, and others to achieve the plan’s vision of zero traffic deaths or serious injuries by 2030.

To keep informed on project updates, residents are encouraged to sign up on the City’s participation platform Citizen Lab site (<https://engage.cityoflanasterpa.com>) where the Vision Zero Action Plan will have its own section.

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**4**  
RECOMMENDATIONS

# Recommendations

The crash data and public input detailed in the previous chapters form the basis of the recommendations in this Action Plan.

The crash data were used to identify the places in the city with most serious injury and fatal crashes. This subset of streets and intersections helps focus resources on the most dangerous locations with the short-term goals of reducing crash frequency and severity, and the long-term goal of eliminating all serious injuries and fatalities.

Public input was used to tailor the comprehensive education and awareness recommendations to Lancaster’s unique culture. Public input provided via the online map will also help the city make informed design decisions at particular locations when projects are initiated and can supplement police-reported crash data with the lived experience of Lancaster residents.

## High Injury Network (HIN)

The High Injury Network (HIN) is a subset of streets in the city where the majority of serious injury and fatal crashes occur. It was developed using GIS mapping and a manual review. Crash data from PennDOT was mapped onto the city’s roadway network and queried to identify a subset of streets with the highest number of crashes within 20 feet. The manual review of the query results checked for gaps and extended some segments to include serious and fatal crashes at nearby intersections. The results, shown on the next page, were vetted by city staff and members of the Steering Committee.

Lancaster’s HIN contains some or all segments of 19 different streets. Lancaster’s HIN and HINs in other cities exhibit similar characteristics. These include:

**A relatively small percentage of cities’ street networks account for a disproportionately high proportion of traffic deaths and serious injuries;**

- The Lancaster HIN is only 6 percent of the streets in the city but have 77 percent of the serious and fatal crashes (56/73).
- The HIN is also the location of 66 percent of all bicycle and pedestrian crashes regardless of severity level (272/420).

Table 1: Streets with segments on the HIN

Streets on the HIN
ANN ST
BROAD ST
COLUMBIA AVE
CONESTOGA ST
DUKE ST
FAIRVIEW AVE
FRANKLIN ST
HARRISBURG AVE
HERSHEY AVE
KING ST
LEMON ST
LIME ST
MANOR ST
NEW HOLLAND AVE
ORANGE ST
PRINCE ST
QUEEN ST
SEYMOUR ST
WATER ST

Map 3: Lancaster Vision Zero High Injury Network





Many of the streets in the HIN are arterials, or streets that carry higher volumes of vehicles at higher speeds; and

- The streets on Lancaster’s HIN are categorized mostly as major and minor arterials, with a few major collectors – generally the widest and fastest streets in the city.
- In Lancaster, 95 percent of the streets in the HIN are state routes. Permanent changes on these roadways will require close coordination with PennDOT.
- Approximately 9 miles, or 60 percent of the HIN are one-way streets with more than one travel lane.

Many HIN streets are located in low-income communities, communities of color, and/or communities with low car ownership.

- Using the Focus Areas developed in the Active Transportation Plan, the top quintile focus area is 14 percent of the city’s land area but is the location of 26 percent of the serious and fatal crashes (19/73).
- This area also has 28 percent of all bicycle and pedestrian crashes (117/420).

## One-way Streets on the HIN

Almost 50 miles - including many major thoroughfares - of Lancaster’s 141 total miles of streets are built for one-way traffic.

Even though they make up about a third of the streets in Lancaster, one-way streets make up 60 percent of Lancaster’s High Injury Network.

One-way streets are designed to move motor vehicle traffic through an area as efficiently as possible. This efficient movement of vehicles can negatively impact other modes and the overall street network.

## Comparing One-Way and Two-Way Streets

### Healthy Street Network

Two-way streets create more choices for road users. Where one-way streets constrain cyclists, motorists, and mass transit riders to a limited number of routes, two-way streets create many ways to get to a destination.

An interconnected street network made up of two-way streets relieves traffic pressure by providing direct routing and by dispersing traffic to a larger number of streets. In the case of emergencies, special events, and street maintenance, two-way streets provide flexibility. A street can be closed without threatening the traffic flow of the entire roadway network.

### Safety

Restoring streets from one-way to two-way will help to reduce speeds, eliminate dual threat crashes, and lessen enforcement needs. The sense of enclosure on two-way streets encourages slower driving speeds. In a crash, chances of survival for involved parties increase as motor vehicle speeds decrease.

In addition, pedestrians crossing a one-way road with multiple lanes risk a dual threat crash. A dual threat is a situation where a driver in one lane stops for a person crossing the street, but the driver in the next lane does not see the person and does not stop.

Two-way streets provide more passive enforcement because there is less speeding, reckless driving, weaving, and wrong-way travel.

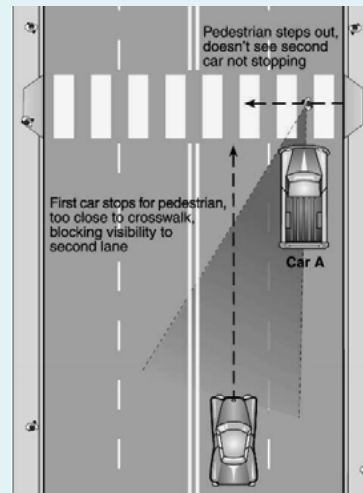


Diagram of a dual threat crash



Walnut Street

### Livability and Economic Vitality

Restoring one-way to two-way streets brings vibrancy to downtowns. Rather than sending the message that throughput is more important than place, two-way streets encourage place-making. Two-way streets provide advantageous economic exchange by increasing the storefront exposure.

A study of a one-way street in Louisville, Kentucky found that property values increased by almost 40% when the street was converted to two-way traffic. This increase is credited to improved mobility, reduced traffic speeds, and lower crime rates.

### Previous studies

#### Two-Way Conversion Study

The 2019 Two-Way Conversion Study, evaluates the possibility of converting Duke Street (SR 2041), Lime Street (SR 222), Orange Street (SR 1002), and Church Street (SR 222) from one-way to two-way traffic operations.

The study looked at three scenarios:

- 1 - Convert Duke Street together with Church Street
- 2 - Scenario 1 with the addition of converting Lime Street
- 3 - Scenario 2 with the addition of converting Orange Street

The study found that “both Scenario 1 and Scenario 2 are conditionally feasible to implement, while the implementation of Scenario 3 is not feasible without roadway infrastructure expansion such as roadway widening and intersection geometric improvements.”

### Downtown Walkability Analysis

The City’s Downtown Walkability Analysis, completed in 2015 by Jeff Speck, recommended reverting some one-way streets to two-way to improve pedestrian safety and walkability.

The report states, “Duke Street is being considered for 2-way reversion, despite being PennDOT controlled, because it already welcomes two-way travel north of McGovern Avenue. Such a reversion is to be encouraged, as it should be for all downtown streets.”

The Walkability Analysis does not recommend reverting Lime Street to two-way traffic, mentioning that it is a good example of a PennDOT owned roadway with 10-foot wide travel lanes.

### Recommendation

While there are several benefits to reverting one-way streets to two-way traffic, these reversions can be quite expensive and require several improvements to improve traffic flow and safety.

The City must invest in new signal equipment, sign and pavement markings changes. Additional traffic signals will need to be programmed to accommodate for new travel lanes. The City must address turning movement needs, which may include changes to parking. The timing of the left turn signals at intersections can create additional movement and potential conflicts.

Therefore, the City should pursue further study and cost estimates for Scenarios 1 and 2 in the two-way study.

In the short term, and for streets that remain one-way, the City should work with PennDOT to:

- pursue 10-ft travel lanes on one-way streets,
- consider narrowing treatments like bulb outs,
- add turn wedges at intersections,
- add signs and stripe advance yield lines at mid-block crossings, and
- educate road users about dual threat crashes.

## Top 10 Intersections

Intersections are places where pedestrians, bicyclists and cars traveling in the same or different directions interact. With more potential conflicts, it is not surprising to see more crashes occurring at intersections than along roadway segments. A higher percentage of fatal and serious injury crashes occur at intersections (63 percent) than overall crashes (55 percent).

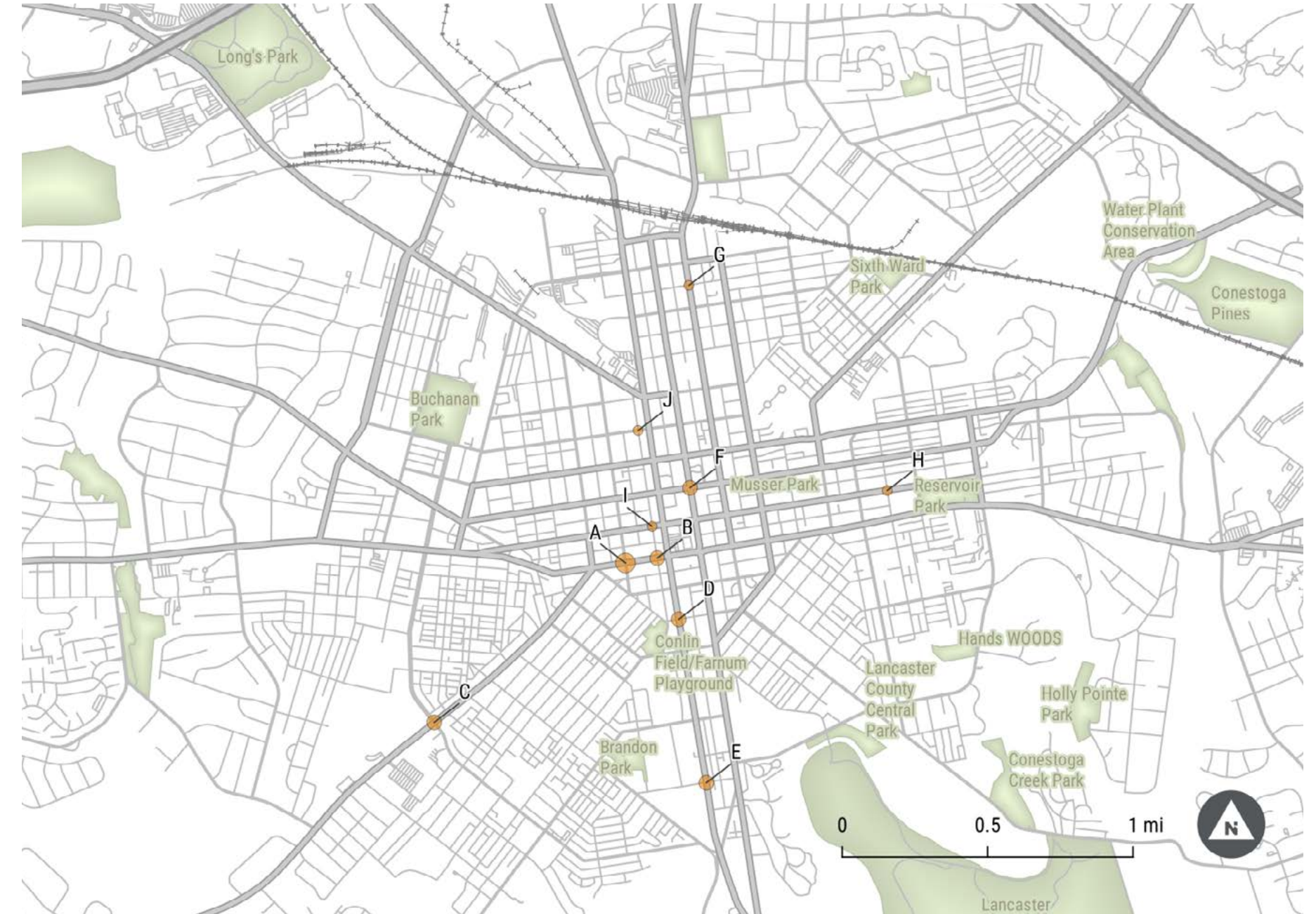
Crashes involving bicyclists and pedestrians (of any severity) are even more likely to occur at intersections. For pedestrians, 68 percent of crashes occur at intersections, and for bicyclists, 78 percent of crashes occur at intersections.

The following map and table highlight the ten intersections in the City of Lancaster with the most serious and fatal crashes. The total number of pedestrian and bicycle crashes and the total number of crashes regardless of mode are shown for comparison and to help differentiate the intersections with the same number of serious and fatal crashes. These are the intersections the city should prioritize for physical changes that reduce speeds, separate modes, and improve visibility.

Table 2: Top intersections with the most serious and fatal crashes

Map ID	Cross Streets	Serious and Fatal Crashes	Pedestrian and Bicycle Crashes	All Crashes
A	N MULBERRY ST / S MULBERRY ST / W KING ST	3	2	9
B	N WATER ST / S WATER ST / W KING ST	2	4	17
C	HERSHEY AVE / MANOR ST / MILLERSVILLE PIKE / S WEST END AVE	2	2	16
D	S PRINCE ST / W FARNUM ST	2	1	14
E	SEYMOUR ST / S PRINCE ST	2	1	11
F	E CHESTNUT ST / N QUEEN ST / W CHESTNUT ST	2	6	8
G	E ROSS ST / N DUKE ST	1	2	19
H	E ORANGE ST / N MARSHALL ST	1	1	15
I	N WATER ST / W ORANGE ST	1	2	15
J	N WATER ST / W LEMON ST	1	1	13

Map 4: Top intersections with the most serious and fatal crashes



## Low-Cost Design Treatments to Improve Safety at Intersections

The following low-cost treatments address common safety concerns, including:

- Visual barriers at intersections
- High-speed turning movements
- Long crossing distances

The benefits of using low-cost treatments include:

- Most are paint and flex-posts making them quick and easy to install.
- They can be applied at many locations throughout the network.
- The paint and flex-post approach does not interfere with run-off or access to existing curb ramps.
- Low-cost treatments can be used as proof-of-concept in the short-term, and later made permanent.

### Left turn traffic calming treatments

- In Lancaster, 1 out of 5 serious injury and fatal crashes involve a left turning vehicle
- Effective examples include hardened centerlines and left-turn wedges
  - A hardened centerline is appropriate for locations where a one-way roadway meets a two-way intersection
  - A slow turn wedge (below) is also appropriate for one-way to one-way applications
- In New York City, these treatments were found to reduce pedestrian injuries by 20% and reduce average left turning speeds by 20.5%<sup>1</sup>



### Traffic signal improvements, including Leading Pedestrian Intervals (LPI)

- A Leading Pedestrian Interval (LPI) is when the walk signal is shown a few seconds before the green light for parallel traffic
- LPIs have been found to reduce collisions involving pedestrians between 46 - 73%<sup>2</sup>
- Adding pedestrian signal heads and accessible pedestrian signals help pedestrians understand when it's their turn to cross
- Area-wide No Turn On Red restrictions reduce conflicts between pedestrians and right turning vehicles



<sup>1</sup> NYC Department of Transportation

<sup>2</sup> NACTO; [https://nacto.org/wp-content/uploads/2015/04/safety\\_effectiveness\\_of\\_lpi\\_fayish.pdf](https://nacto.org/wp-content/uploads/2015/04/safety_effectiveness_of_lpi_fayish.pdf)

## Low-Cost Design Treatments to Improve Safety at Intersections

### Intersection daylighting

- Daylighting restricts parking near intersections to improve visibility for drivers and pedestrians
- A 30% reduction in pedestrian crashes is expected after daylighting is implemented<sup>3</sup>



<sup>3</sup> CMF Clearinghouse; [https://safety.fhwa.dot.gov/ped\\_bike/tools\\_solve/fhwasa18041/fhwasa18041.pdf](https://safety.fhwa.dot.gov/ped_bike/tools_solve/fhwasa18041/fhwasa18041.pdf)

<sup>4</sup> FHWA; [https://safety.fhwa.dot.gov/ped\\_bike/step/docs/techSheet\\_VizEnhancemt2018.pdf](https://safety.fhwa.dot.gov/ped_bike/step/docs/techSheet_VizEnhancemt2018.pdf)

<sup>5</sup> Minnesota Department of Transportation; <https://www.dot.state.mn.us/stateaid/trafficsafety/reference/ped-bike-handbook-09.18.2013-v1.pdf>

### Crosswalk visibility enhancements

- High-visibility crosswalk markings and advance stop or yield markings can help make crossing pedestrians more visible to drivers.
- Crosswalk visibility enhancements can reduce crashes by 23–48%<sup>4</sup>
- Maintenance and lighting are also issues that should be noted during evaluation and addressed to improve safety



### Measures to slow down right turns and reduce free-flowing movements

- Removing high-speed slip lanes
- Providing curb extensions and protected intersections that:
  - Slow turning vehicle speeds
  - Shorten the pedestrian crossing distance
  - Narrow the roadway
- Curb extensions can reduce all crash types by 39-46%<sup>5</sup>



## Action Plan

The Lancaster Vision Zero Action Plan recommendations described on the following pages demonstrate a comprehensive, integrated approach to get the city to zero deaths and life-changing injuries on its streets. They are organized around the four goal areas established by the Steering Committee:

1) Equity, 2) Safety and Slow Speeds, 3) Culture Change, and 4) Data.

The timeframe, major resource needs and key players responsible for implementation are listed with each action.

- The timeframe can be ongoing, near-term (1-2 years), or mid-range (3-10 years).
- Major resource needs might include additional staff, changes in legislation or policy, and additional funding. The relative magnitude of funding needs are indicated with the \$ symbol. The least expensive actions, such as ones that can be carried out with current staffing and resources, have one \$, while more expensive actions, like major street reconstruction projects have three \$.
- The key players responsible for implementation include multiple city departments, city leaders, and community partners like the school district, state department of transportation, and others.



Grant Street Reconstruction



Walnut Street Repainting

## EQUITY: Ensure safe and accessible streets are available to all people in Lancaster

Equal access to safe streets is an important goal for the Lancaster Vision Zero Action Plan and is infused throughout the analysis and the recommendations. Currently, serious injury and fatal crashes do not occur equally throughout the city - crash data shows that serious crashes occur at a higher rate in the Focus Areas with higher concentrations of low-income communities, communities of color, and/or low mobility communities. Based on this, the Action Plan recommends that more money should be spent on projects in those areas to see the highest impacts.

Traffic enforcement is a critical component of Vision Zero initiatives around the world and this Action Plan recommends a number of initiatives in collaboration with the Lancaster Police Department such as educational activities, better crash data tracking, and training. However, increasing traffic enforcement, especially in communities of color, could exacerbate injustices of the past and increase distrust in the very communities that this Action Plan looks to serve. The goal of this Vision Zero Action Plan is not increased traffic fines or interactions with law enforcement.

The goal of Vision Zero is safer streets and a successful Vision Zero project would reduce speeds and other dangerous actions along the HIN without increasing traffic violations. To achieve this, active enforcement must be a last resort. Other recommendations, such as design changes to the street resulting in passive enforcement, engagement and education, are prioritized.

Action	Timeline			Major Needs		
	Ongoing	1-2 Years	3-10 Years	Staffing	Legislation	Funding
<b>E1 Establish a standing Vision Zero Coordinating Committee</b>						
<b>E1.1</b> Committee members should include City staff, partner institutions, members of the community, advocacy groups, state and county leadership, and community-based organizations who have a role in advancing Vision Zero action items.						
<b>E1.2</b> Establish an annual agenda and meet quarterly.	X			X		\$
<b>E1.3</b> Purpose and Function – to follow up on plan and review progress.						
<b>E1.4</b> Identify a funding source to compensate members of the community and community-based organizations to enable their participation.						
(Key Players: DPW)						

EQUITY	Timeline			Major Needs		
	Ongoing	1-2 Years	3-10 Years	Staffing	Legislation	Funding

Action	Ongoing	1-2 Years	3-10 Years	Staffing	Legislation	Funding
<b>E2 Develop processes and funding opportunities to support the participation of community-based organizations in the development and implementation of Vision Zero related efforts.</b>						
<b>E2.1</b> The selection process for community-based organizations should prioritize the organizations serving the High Injury Network or Focus Areas.						
<b>E2.2</b> Eligible projects should address top collision factors, physically vulnerable road users, and/or culture change.		X				\$
<b>E2.3</b> Examples of eligible projects include public art, communication campaigns, discussion groups, and educational programming.						
(Key Players: Neighborhood Engagement)						

<b>E3 Develop and implement a community engagement plan for all Vision Zero projects.</b>						
<b>E3.1</b> Work with city staff to draft a Community Engagement Plan (CEP) for every Vision Zero project over \$50,000 or with significant programmatic or legislative impacts.						
<b>E3.2</b> The CEP should include, at a minimum, engagement goals, engagement strategies, major community partners, and a timeline that is matched to the design/construction schedule.						
<b>E3.3</b> Engagement must be conducted in multiple languages, including Spanish and English.						
<b>E3.4</b> The CEP should specifically name methods for engaging people who have been historically underrepresented in the engagement process, including people of color, people over 65 and under 18, and low-income individuals.	X			X		\$
<b>E3.5</b> Brand changes to the HIN with a consistent Vision Zero and safety message.						
<b>E3.6</b> All communications materials should provide information to drivers, pedestrians and bicyclists about new roadway features, vehicle characteristics and how to look out for each other.						
(Key Players: Neighborhood Engagement)						

<b>E4 Prioritize Vision Zero investments in low-income communities, communities of color, and/or low mobility communities.</b>						
<b>E4.1</b> Ensure that funding allocations are prioritized for improvements within Focus Areas.	X			X		
(Key Players: Mayor's Office, DPW)						

## SAFETY: Focus on safety and slow speeds

The entire Vision Zero Action Plan is focused on safety. The recommendations listed below will result in physical changes to the High Injury Network and physical changes to the citywide street network to address systemic issues that result in the most serious crashes.

SAFETY - HIGH INJURY NETWORK	Timeline			Major Needs		
	Ongoing	1-2 Years	3-10 Years	Staffing	Legislation	Funding

<b>S1 Improve the High Injury Network (HIN)</b>						
<b>S1.1</b> Create a prioritization system for capital improvements based on HIN.						
<b>S1.2</b> Evaluate the entire HIN to identify locations for rapid implementation projects and feed projects into capital safety improvement plan.						
<b>S1.3</b> Build capital safety improvements on two HIN segments each year.	X	X	X	X		\$\$\$
<b>S1.4</b> Build capital safety improvements at the 10 identified high crash intersections within 10 years.						
<b>S1.5</b> Prioritize engagement and improvements near schools and in Focus Areas.						
(Key Players: DPW)						

<b>S2 Evaluate speeds on the HIN.</b>						
<b>S2.1</b> Inventory speed limits on the HIN and take live measurements to evaluate the posted speed limit vs. the actual speed of travelers (operating speed).						
<b>S2.2</b> Identify locations where lower speed limits should be considered.						
<b>S2.3</b> Identify locations where operating speed is higher than the posted speed limit and evaluate for design interventions to lower the operating speed. Candidates should include streets with consistently higher operating speeds as well as operating speeds that are episodically higher, for example speeding overnight or in non-peak travel hours.		X				\$
(Key Players: DPW)						

<b>S3 Improve crosswalks on the HIN</b>						
<b>S3.1</b> Inspect all crosswalks on HIN; especially near schools.						
<b>S3.2</b> Upgrade at least 50 per year to high-visibility, piano key crosswalks.	X					\$
(Key Players: DPW)						

SAFETY - HIGH INJURY NETWORK	Timeline			Major Needs		
	Ongoing	1-2 Years	3-10 Years	Staffing	Legislation	Funding
<b>S4 Improve lighting on the HIN</b>						
<b>S4.1</b> Review sidewalk and intersection lighting levels on HIN and improve at least one corridor per year. (Key Players: DPW)	X		x	x		\$\$\$
<b>S5 Build a complete and connected sidewalk network on the HIN</b>						
<b>S5.1</b> Determine gaps in the sidewalk network along the HIN and prioritize locations annually for improvement.			x	x		\$\$\$
<b>S5.2</b> Prioritize locations near schools and in Focus Areas. (Key Players: DPW)						
<b>S6 Integrate the HIN into development review.</b>						
<b>S6.1</b> Review development review guidelines for integrating the HIN.						
<b>S6.2</b> Ensure safety improvements are integrated into development projects on the HIN. (Key Players: Planning)		x		x		
<b>S7 Quickly identify ongoing projects on the HIN and review them for the incorporation of Vision Zero design changes.</b>						
<b>S7.1</b> Review all ongoing, planned, and funded projects on the HIN including the paving program, capital improvement plans, and PennDOT's Transportation Improvement Plan.						
<b>S7.2</b> Identify projects on the HIN, compare to the HIN speed evaluation, rapid improvement evaluation, crosswalk evaluation, sidewalk gap evaluation, and lighting evaluation.	X			X		\$
<b>S7.3</b> Incorporate or advocate for the incorporation of appropriate improvements into ongoing projects. (Key Players: DPW)						
<b>S8 Advocate for design changes to state roads entering Lancaster that support changes made within Lancaster.</b>						
<b>S8.1</b> Ensure Lancaster has the ability to make changes to state roads locally or obtain specific commitments from PennDOT for roadway safety improvements on the HIN.	X		X	X		\$
<b>S8.2</b> Advocate for making funding design changes to Lancaster's HIN a statewide priority. (Key Players: DPW, Mayor's Office, Lancaster County MPO, PennDOT)						

SAFETY - CITYWIDE	Timeline			Major Needs		
	Ongoing	1-2 Years	3-10 Years	Staffing	Legislation	Funding
<b>S9 Establish Vision Zero Design Guidelines</b>						
<b>S9.1</b> Consolidate policies and design guidelines from adopted plans such as the Downtown Walkability Report, the Lancaster County Complete Streets Guidebook, Lancaster County's Active Transportation Plan, and Complete Streets Policy to guide Lancaster's street design, traffic, and parking procedures in order to prioritize safety and reduce the incidence of severe and fatal collisions. Include national and state-level guidance where available.		X		X	X	\$
<b>S9.2</b> Expand guidelines to include design elements identified in the citywide crash analysis such as intersection treatments, signalization, and crosswalk improvements. (Key Players: DPW, Planning)						
<b>S10 Work with 1 school per year to install safety projects surrounding school.</b>						
<b>S10.1</b> Collect student travel tallies to identify schools with the highest walking and biking rates.						
<b>S10.2</b> Involve students in issue identification and design process.	X			X		\$\$\$
<b>S10.3</b> Prioritize projects on the HIN and in Focus Areas. (Key Players: DPW, School District)						
<b>S11 Develop a speed management program</b>						
<b>S11.1</b> Develop a program for systematically collecting speed data throughout the city.						
<b>S11.2</b> Focus on passive enforcement solutions such as automated speed enforcement (if legalized at state level in the future), traffic calming, or other design interventions, especially within communities of color.						
<b>S11.3</b> Explore implementing a 25mph speed limit citywide.	X			X		\$\$\$
<b>S11.4</b> Explore implementing speed limits under 25 for neighborhood streets through a neighborhood slow zone program. (Key Players: DPW)						

SAFETY - CITYWIDE	Timeline			Major Needs		
	Ongoing	1-2 Years	3-10 Years	Staffing	Legislation	Funding
<b>S12 Install automated red light enforcement and designate funds from automated enforcement for Vision Zero projects.</b>						
<b>S12.1</b> Pass a local ordinance allowing this, per state legislation.			X	X	X	
<b>S12.2</b> Prioritize locations on the HIN, especially in Focus Areas and near schools.						
(Key Players: DPW)						
<b>S13 Identify criteria for installation of “No Turn on Red” and Leading Pedestrian Intervals</b>						
<b>S13.1</b> Outline process for implementing changes at priority intersections.						
<b>S13.2</b> Consider city-wide or district-wide applications for consistency.		X		X		\$
<b>S13.3</b> Reprogram signals to automatically display the walk signal.						
(Key Players: DPW)						
<b>S14 Ensure freight master planning includes focus on safe and reliable urban truck movements.</b>						
<b>S14.1</b> Work with Lancaster County and PennDOT partners to evaluate current truck movements within Lancaster.						
<b>S14.2</b> Work with freight operators to provide education to drivers on safe movements within Lancaster.			X			
(Key Players: Lancaster County MPO)						

CULTURE CHANGE: Encourage those designing and using Lancaster streets to consider all road users.

A commitment to Vision Zero is a commitment to changing the status quo and creating a culture where everyone understands the role they play in preventing traffic violence.

CULTURE CHANGE	Timeline			Major Needs		
	Ongoing	1-2 Years	3-10 Years	Staffing	Legislation	Funding
<b>Action</b>						
<b>C1 Adopt a Vision Zero policy.</b>						
<b>C1.1</b> Include person-first language that emphasizes safety and the value of human lives.						
<b>C1.2</b> Identify necessary changes to city processes such as public outreach, enforcement, development review, street design process and other areas where safety may not currently be prioritized.		X			X	
(Key Players: Mayor’s Office, City Council, DPW, Planning)						
<b>C2 Establish a permanent, dedicated funding source for Vision Zero implementation.</b>						
<b>C2.1</b> Identify projects that should be funded locally, like ongoing crosswalk implementation, and those that require grant funding through Lancaster County MPO and PennDOT.						
<b>C2.2</b> Collaborate with County and PennDOT partners on state roads and projects that will require grant funding.		X			X	\$\$\$
(Key Players: Mayor’s Office, Lancaster County MPO, PennDOT)						
<b>C3 Invest in a comprehensive public communication campaign.</b>						
<b>C3.1</b> The campaign should have the goal of shifting the driving culture toward a multimodal culture.						
<b>C3.2</b> This should address top collision factors, such as distracted driving and speeding.						
<b>C3.3</b> Develop or incorporate Vision Zero material into training and outreach materials for use by schools, fleet managers, and driving instructors.		X		X		\$
(Key Players: Center for Traffic Safety, Neighborhood Engagement, Public Safety, Lancaster General, School District of Lancaster)						
<b>C4 Create a staffing matrix of existing and proposed staff for the delivery of Vision Zero action items.</b>						
		X				
(Key Players: DPW)						

CULTURE CHANGE	Timeline			Major Needs		
	Ongoing	1-2 Years	3-10 Years	Staffing	Legislation	Funding
<b>C5 Ensure staff are trained to implement the Vision Zero Plan</b> <b>C5.1</b> Send key staff responsible for implementing the Vision Zero Action Plan, such as Public Works, Police, Health, Housing, Community Services and elected officials, to Vision Zero-related conferences and trainings. <b>C5.2</b> Conduct complete streets design training for planners, engineers, and contractors designing and building projects in Lancaster. <b>C5.3</b> Train Public Safety staff on Vision Zero priorities and equity considerations. (Key Players: PennDOT, City, Lancaster County MPO, Public Safety, Center for Traffic Safety)			X	X		\$\$
<b>C6 Promote Safe Routes to School (SRTS) programming to all schools and integrate Vision Zero principles into the school transportation policies and efforts.</b> <b>C6.1</b> Grow existing SRTS programming each year. <b>C6.2</b> Work with teachers and schools to create and implement a street safety curriculum centered around Vision Zero. Begin using this curriculum in junior high school classrooms. (Key Players: School District, Lancaster Bikes, Lancaster Recreation Commission, Lancaster Boys & Girls Club)		X			X	
<b>C7 Incorporate Vision Zero data and recommendations into transportation elements of future planning efforts.</b> <b>C7.1</b> Evaluate ongoing and upcoming planning efforts for the incorporation of Vision Zero elements including the ongoing Comprehensive Plan and updates to Lancaster's Official Map. (Key Players: DPW, Planning)	X					
<b>C8 Provide information and training to local media</b> <b>C8.1</b> Focus on understanding crash data, minimizing victim blaming, and a high-level understanding of Vision Zero. <b>C8.2</b> Begin this process with internal communications staff at the City and within the Public Safety Department. (Key Players: Mayor's Office, Public Safety, Center for Traffic Safety)		X		X		

## DATA: Improve quality, analysis, and use of crash data.

Vision Zero is grounded in a thorough understanding of crash data to identify, understand and address the most serious crashes. Improving data collection and use will lead to better outcomes.

DATA	Timeline			Major Needs		
	Ongoing	1-2 Years	3-10 Years	Staffing	Legislation	Funding
<b>D1 Improve access to and understanding of crash data.</b> <b>D1.1</b> Form a Crash Analysis Team from all departments that works to improve the quality, detail, accessibility, and organization of PennDOT and police crash data. <b>D1.2</b> Work with PennDOT to link crash data to EMS, and hospital and trauma registry data to collect more accurate injury information and connect it to crashes. <b>D1.3</b> Work with PennDOT to improve local access to detailed crash data, including CDART. (Key Players: DPW, PennDOT, Lancaster General, Lancaster PD)	X			X		\$
<b>D2 Complete Vision Zero Walk Audits along the High Injury Network</b> <b>D2.1</b> Develop a Vision Zero Walk Audit Checklist. <b>D2.2</b> Involve neighborhood members in the audit. <b>D2.3</b> Make findings public. (Key Players: DPW, Lancaster General, Lancaster County MPO, School District)		X		X		
<b>Map 5: Update HIN map every 3 years.</b> (Key Players: DPW)			X	X		



DATA	Timeline			Major Needs		
	Ongoing	1-2 Years	3-10 Years	Staffing	Legislation	Funding
<b>D3 Conduct before and after studies of safety improvements to assess effectiveness and refine future applications.</b>						
<b>D3.1</b> Include a quantitative evaluation such as a description of past crashes, descriptions of design changes made, multimodal capacity counts, speed recordings, and turning counts.						
<b>D3.2</b> Include a qualitative evaluation using intercept surveys, public surveys, walk audits, and/or focus groups.			X	X		\$
<b>D3.3</b> Include an overall project evaluation including interviews with those involved in implementation at all stages and lessons learned.						
(Key Players: DPW)						
<b>D4 Publish an annual report to document the prioritized efforts and funding toward Vision Zero that includes:</b>						
<b>D4.1</b> Implementation status of the action plan;						
<b>D4.2</b> Statistics on crashes, fatalities, and serious injuries;	X			X		
<b>D4.3</b> Key traffic citation metrics or changes to citation practices; and						
<b>D4.4</b> A summary on the effect of safety countermeasures.						
(Key Players: DPW, Vision Zero Coordinating Committee, Crash Analysis Team)						



## Near-term Actions

A summary of the near-term actions from the previous section is included below. Some of these recommendations are already underway, and the rest should be addressed in the next two years.

### Improve Coordination

Many of the near-term actions ensure that Vision Zero will become integrated into Lancaster's existing processes.

- The HIN will be integrated into development review and ongoing projects.
- The Vision Zero Action Plan will have an associated staffing plan, dedicated funding source, and list of projects for grant applications.

### Improve the High Injury Network (HIN)

This Plan identified focus locations to help prioritize the work of City staff, including the High Injury Network and the Top Intersections. Upon publication, numerous evaluations will

take place to begin detailing the work that will lead to design improvements. The following items will be complete in the first two years:

- An evaluation of the entire HIN identifying locations for rapid implementation and long-term projects.
- The Intersection Team, created during the development of this plan, will have evaluated all 10 high-priority intersections and identified rapid implementation opportunities.
- Many projects identified in the Rapid Implementation evaluation will be underway.
- The city will begin upgrading all crosswalks on the HIN to high-visibility, piano key crosswalks at a rate of 50 crosswalks per year.
- Speed limits and operating speeds along the entire HIN will be measured and evaluated.

- The city will have an ongoing speed management program and neighborhood slow street program that will address areas with high operating speeds through changes in design.

### Improve Awareness

More people in Lancaster will know about Vision Zero, the HIN, and will have noticed projects implemented around the city due to the completion of a comprehensive public communications campaign.

- The City of Lancaster and local residents will have partnered to complete walk audits on the entire HIN, informing future improvements.
- City staff and partners will have worked with schools to raise awareness for Vision Zero, incorporate Vision Zero education programming, and implement safety improvements surrounding schools.

## Monitoring Implementation

As a best practice and to fulfill the requirements for the WalkWorks grant that funded a portion of this plan development, the following performance measures will be tracked annually to assess progress on plan implementation.

- Number of serious and fatal crashes, with the goal of reaching zero by 2030
- Number of intersection re-design projects, including one of the top 10 intersections each year
- Number of improved signal timing projects
- Number of completed recommendations within Focus Areas
- Number of completed recommendations on the High Injury Network
  - Audits
  - Projects
- Number of completed Vision Zero projects within 200 feet of a school or park
  - Years 1-3
  - Years 3-10
- Number of new crosswalks
  - On the HIN
  - Within 200' of Schools
  - Within 200' of Parks
- Number of people reached through Vision Zero outreach and education campaigns
- Number of media trainings
- Number of community-led Vision Zero projects

### CALL TO ACTION:

**Achieving Vision Zero will require commitments from individuals, businesses and community organizations to improve awareness and challenge popular assumptions about traveling in the City.**

**Only by working together can Lancaster achieve zero deaths and serious injuries on its roadways by 2030.**

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