BICYCLE COALITION OF GREATER PHILADELPHIA

VISION ZERO

Philadelphia

JUNE 2015

"The United States, once No. 1 in the world in safety, has fallen to nineteenth place. If American highway deaths had followed the European pattern…twenty thousand lives would have been saved in 2011 alone."

- Leonard Evans, Traffic Safety Expert
quoted in Malcolm Gladwell's *The Engineers Lament*,
New Yorker Magazine, May 5, 2015

EXECUTIVE SUMMARY

VISION ZERO

Cities, states, and municipalities across the United States are adopting Vision Zero policies with the goal of eliminating traffic fatalities and serious injuries. Vision Zero policies adopted in New York, Chicago and San Francisco created the framework for a multi-agency approach to road safety. By coordinating municipal agencies such as Streets, Health, and Police Departments, these cities have reduced traffic fatalities through a combination of safer road design, increased awareness through education, and targeted enforcement.

The Bicycle Coalition of Greater Philadelphia urges the next administration to create a task force with a mandate to craft Philadelphia's Vision Zero Policy so that Philadelphia can begin to save 90 to 100 lives a year in Philadelphia.

EXECUTIVE SUMMARY

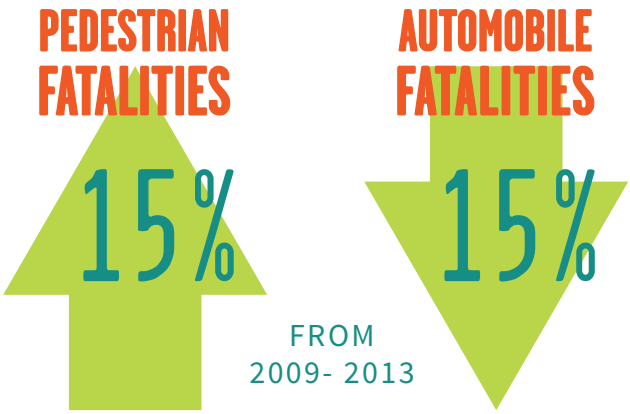
FINDINGS

- Philadelphia has one of the highest rates of pedestrian traffic fatalities of its peer cities in the United States. (NHTSA)
- A pedestrian in Philadelphia is involved in a traffic crash once every 5 hours. (MOTU)
- In 2013, 4 in every 10 Philadelphia traffic fatalities were a pedestrian. (NHTSA)
- For every road fatality in Philadelphia in 2013, almost 3 people suffered a major injury due to road crashes. (NHTSA)
- Road crashes cause the loss of almost 100 lives every year in Philadelphia. (NHTSA)
- Someone dies in traffic on Philadelphia streets every 4.1 days. (MOTU & NHTSA)
- Traffic crashes are the leading cause of death for 15-24 year olds in Pennsylvania.
- Traffic crashes cost the City of Philadelphia $1 bullion each year. (NHTSA)

HOW SAFE ARE PHILADELPHIA STREETS?

On average, approximately 100 Philadelphians are killed in traffic crashes each year. For every traffic fatality in Philadelphia, 3.5 people suffer a major injury. These tragedies affect our most vulnerable road users. From 2009-2013, children under 18 comprised 12.7% of the pedestrian traffic deaths. People over 65 years of age comprised 21.5% of all Philadelphia pedestrian traffic deaths but only 12.4% of the population.

From 2009 to 2013, Philadelphia's pedestrian fatalities increased over 15% at a time when automobile fatalities declined almost 15%.



TOP 12 LOCATIONS FOR PEDESTRIAN-INVOLVED CRASHES

Top 12 Crash Sites for Pedestrian Involved Crashes

Ranking	Closest Intersection	Number of crashes 2009 - 2013
1	Fifth Street & Olney Avenue	19
2	Broad and Race Streets	17
3	Broad Street & Girard Avenue	16
4	Cottman Avenue & Roosevelt Boulevard	16
5	Broad Street & Olney Avenue	16
6	Broad Street and Lehigh Avenue	16
7	Market and 40th Streets	15
8	Market and 11th Street	14
9	Chelten and Wayne Avenues	13
10	Market and 12th Streets	13
11	Cobbs Creek, Market Street, and 63rd Street	13
12	Cecil B. Moore Avenue & Broad Street	13

COST OF CRASHES

Traffic fatalities and major injuries take a large, but largely unnoticed, toll on our society. The National Highway Traffic Safety Administration (NHTSA) estimates that the economic costs of road crashes in 2010 were $871 billion nationwide ($277 billion in economic costs and $594 billion in societal harm); the price our country paid for the deaths of 32,999 persons, 3.9 million injured, and 24 million damaged vehicles. Nationwide, bicycle and pedestrian crashes accounted for approximately $109 billion. ($19 billion in economic costs and $90 billion in societal harm.)

Based on PennDOT's estimates, motor vehicle crashes in 2013 led to the loss of 89 lives in Philadelphia and cost $565 million, while the resulting 11,549 injuries cost $450 million, for a grand total of over $1 billion dollars. [1]

RECOMMENDED STRATEGIES

POLICY

Adopt a comprehensive Vision Zero Policy
Empower a multi-departmental task force to develop a Zero Vision Policy to address road fatalities across Philadelphia with the stated goal of decreasing road deaths and severe injuries by 50% by 2020. The policy should include specific cross-departmental strategies to achieve that goal.

PARTNERSHIP

Engage multiple departments and organizations to realize this vision
Engage all departments that can influence the safety of Philadelphia streets: Police Department, Department of Public Health, Streets Department, etc.

Partner with PennDOT to address state controlled streets with high crashes
A percentage of the deaths on streets within Philadelphia occur on the 357 miles of streets controlled by PennDOT. Partner with PennDOT to address safety measures to reduce these deaths

Develop a strategy to engage City Council and District civic leaders to address most dangerous streets
Provide City Council members with timely information on the safety of streets in their district. The current unacceptably high levels of road fatalities have affected most Philadelphians. Hold meetings in each district to encourage public input.

[1] DVRPC 2013; PennDOT 2013 p.8

RECOMMENDED STRATEGIES (continued)

PARTNERSHIP (CONTINUED)

Provide data
Make fatal and severe injury crash data available to the public through an interactive map, similar to the Philadelphia Police Department's Crime Mapper.[2] An interactive map allows citizens to see where crashes occur and also provides an opportunity for public input to improve the safety of high crash areas.

Public engagement
Provide paving programs to Registered Community Organizations and make publicly available on the website. Create venues for public comment.

EDUCATION

Cultural shift
Foster a cultural shift that does not accept the 100 road deaths as inevitable or acceptable. Increase awareness among both decision makers and citizens of the needless harm road fatalities and injuries cause. Policy makers and citizens must approach the issue of traffic safety from an ethical, humanist perspective, valuing human life over all other considerations.

Public education campaign
Create public service campaigns to raise awareness of the toll of traffic deaths and the causes and prevention measures. Make speeding and aggressive driving socially unacceptable the way Mothers Against Drunk Driving changed the social acceptability of drunk driving.

ROAD DESIGN

Make Safety the Primary Design Principle
Create a policy of designing streets with safety of all users as the primary goal rather than speed or convenience of automobiles, incorporating Complete Streets design principles to level the playing field among users.

Incorporate Vision Zero Policy into the design of all streets during the paving cycle
When paving streets within Philadelphia make safety the top priority in road design. Paving offers an ideal opportunity to implement low cost changes to increase road safety.

Eliminate Speeding
Work with the State Legislature to allow safety cameras on Philadelphia streets. These cameras operate much like red light cameras, allowing our Police Department to increase enforcement through automation, without increasing staffing needs.

FUNDING

Develop a funding stream to achieve goals
Potential sources include:

- A $5 local fee on car registration allowed under Act 89
- NYC received $25 million in TIGER grant money
- National Highway Traffic Safety Administration
- Highway Safety Improvement Program

[2] http://www.phillypolice.com/crime-maps-stats/

INTRO DUCTION

Vision Zero is, quite simply, the seemingly radical notion that traffic deaths and serious injuries can be reduced to zero. This notion is radical, at first glance, only because we accept traffic deaths as inevitable. Humans are fallible and cars are dangerous, we reason. Trains and airplanes are also dangerous and operated by the same fallible human, yet these industries have a zero tolerance for death and their efforts are well documented.

Vision Zero is not radical. Zero traffic deaths is achievable. In fact, our record in the United States has shown that traffic fatality reduction is not only possible, but has been achieved over multiple decades. Even the auto industry has adopted safety measures including seat belts and airbags that have led to declining traffic death rates per capita since 1970. Deaths per mile traveled have been declining since people first began driving automobiles.

So, while business and government officials and interests have made life safer inside motor vehicles, other street users, like cyclists and pedestrians, remain vulnerable.

New York, Boston, and Chicago have adopted Vision Zero policies with the goal of eliminating all traffic deaths by 2024. Seattle's Vision Zero policy goal is of zero traffic deaths by 2030. These cities have developed action plans to achieve their goal through a combination of road design, education, and enforcement.

Philadelphia, despite a number of programs and initiatives designed to address traffic safety, needs a comprehensive Vision Zero policy to coordinate and accelerate these efforts. The need for a Vision Zero policy is clear: 100 people per year die on Philadelphia roads. In fact, Philadelphia roads are more dangerous than peer cities with traffic deaths per capita 7% to 27% higher. The time has come for those road users outside the automobile to be given the same level of study that has led engineers to make riding inside the car safer.

The Bicycle Coalition calls for the City of Philadelphia to adopt a Vision Zero policy with the stated goal of reducing traffic deaths and severe injuries by 50% by 2020 and to empower a task force of agencies and institutions to develop a Vision Zero Action Plan to achieve that goal.

VISION ZERO PHILADELPHIA

FINDINGS

- Philadelphia has one of the highest rates of pedestrian traffic fatalities of its peer cities in the United States. (NHTSA)
- A pedestrian in Philadelphia is involved in a traffic crash once every 5 hours. (MOTU)
- In 2013, 4 in every 10 Philadelphia traffic fatalities were a pedestrian. (NHTSA)
- For every road fatality in Philadelphia in 2013, almost 3 people suffered a major injury due to road crashes. (NHTSA)
- Road crashes take almost 100 lives every year in Philadelphia. (NHTSA)
- Every 4.1 days someone dies in traffic on Philadelphia streets. (MOTU & NHTSA)
- Traffic crashes are the leading cause of death for 15-24 year olds in Pennsylvania.[3]
- Traffic crashes cost the City of Philadelphia $1 billion dollars every year. (NHTSA)

VISION ZERO

Vision Zero is a policy designed to eliminate traffic deaths and serious injuries for all road users. Vision Zero policies seek to highlight the magnitude of the problem and to eliminate the prevailing sentiment that traffic crashes are inevitable. Both the airline industry and the railroads have a zero tolerance policy. Neither industry accepts passenger deaths as inevitable. It is time for Philadelphia to adopt a zero tolerance for traffic deaths. Through road design, education and enforcement, it is possible to eliminate or dramatically reduce traffic deaths.

[3] http://www.worldlifeexpectancy.com/pennsylvania-cause-of-death-by-age-and-gender accessed 2.6.2015 CDC data

VISION ZERO PHILADELPHIA

HISTORY OF VISION ZERO IN EUROPE

The Vision Zero movement began in 1997, when Sweden adopted Vision Zero as their official road policy. Sweden summarizes their initiative simply as "No loss of life is acceptable."

Traffic deaths are the ninth largest cause of death worldwide and are responsible for 1 million deaths per year. For 15-to-24-year olds worldwide, it is the leading cause of death. As traffic increases, traffic deaths likely will move up to be the fifth leading cause of death by 2030. Road systems must compensate for the fact that people are fallible. Current road systems present unacceptable risks.

Sweden has reduced its traffic fatalities and injuries through a combination of transportation policy and infrastructure improvements. Roads are built with safety prioritized over speed or convenience. Increased safety has been achieved through increased enforcement and low-cost infrastructure improvements such as: low urban speed limits, pedestrian zones, physical barriers separating cars from bicycle traffic, pedestrian bridges, and zebra striped crosswalks flanked by flashing lights and speed bumps. Sweden is on track for exceeding its goal, set in 2007, of cutting fatalities by 50% by 2020. As of 2013 fatalities have dropped 44% from 471 in 2007 to 265 in 2013. If current trends continue, Sweden will achieve a 65% reduction by 2020.

Vision Zero's success in Sweden inspired cities in Norway, Finland, Switzerland, the Netherlands, Denmark, France, Germany and Great Britain to utilize a Vision Zero approach to traffic safety.[4] Paris was able to cut traffic deaths by 50% in just six years.

[4] Deutscher Verkhrssicherheitsrat http://www.dvr.de/presse/informationen/vision_zero_en_4.htm accessed 1.13.15

[5] Center for Active Design, website: http://centerforactivedesign.org/visionzero, accessed: 1.13.2015

HISTORY OF VISION ZERO IN THE UNITED STATES

In the United States, New York City, San Francisco, Seattle and Chicago have officially adopted Vision Zero policies. In addition, a number of cities and states have implemented similar approaches with dramatic results including a 43% reduction in traffic fatalities in Minnesota, a 48% reduction in Utah and a 40% decrease in Washington state.[5]

In Philadelphia, 90 to 100 Philadelphians die in traffic crashes each year. Pedestrians make up fully a third of those fatalities. These traffic deaths contribute approximately $500,000,000 to the $1 billion cost of traffic crashes in Philadelphia. Although a billion dollars is an unconscionable financial burden on our city, the greater tragedy is the impact these deaths have on the friends and family of the deceased.

Every year in the United States 30,000 die in traffic crashes. This is on a par with those suffering from Huntingdon's, ALS, or Cystic fibrosis. Nationally, traffic deaths and violent gun deaths are on a par, yet the national conversation is focused on gun violence. Vision Zero seeks to raise awareness of the extent of the problem to dispel the complacency of the public in accepting this level of tragedy as routine. Traffic deaths are preventable through education, enforcement and road design.

On January 22, 2015, United States Transportation Secretary Anthony Foxx challenged mayors and local elected officials to "take significant action to improve safety for bicycle riders and pedestrians of all ages and abilities over the next year."

His suggestions were to take a Complete Streets approach, identify barriers to making streets safe for everyone, gather and track data, use designs that are appropriate to the context, improve the bicycle and pedestrian network through maintenance, improve bike and pedestrian safety laws, and educate and enforce proper road use behavior. The Transportation Secretary's speech stopped just shy of a comprehensive Vision Zero policy.

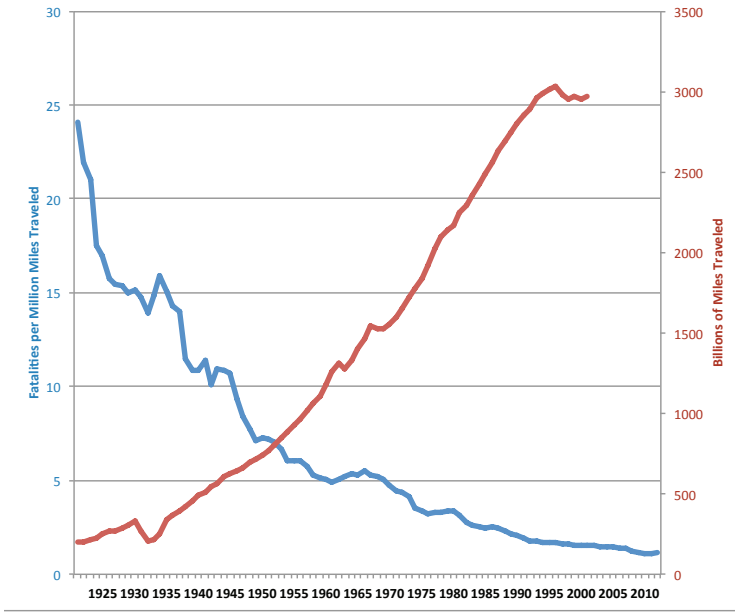
HISTORY OF TRAFFIC DEATH REDUCTION IN THE UNITED STATES

History has proven that traffic death reduction in the United States is achievable. There are a number of ways to calculate traffic deaths in order to compare them over time. One method observes deaths per miles traveled (generally referred to as vehicle miles traveled or VMT). Deaths per VMT compensates for any increases in deaths due to increased mileage, all else being equal. Nationwide, deaths per VMT have steadily declined since 1921 when the federal government first started recording this statistic. (See Figure 1) The US has gone from a high of 24 deaths per million miles traveled in 1921 to 1.13 deaths per **100 million miles** traveled in 2012.

A second method of representing traffic fatality statistics is the number of fatalities per 100,000 in population. This method corrects for the increase in deaths simply due to the greater numbers of people in the United States and, presumably, on the road. This method (Figure 2) reveals a much more complex relationship between deaths and population than deaths per million VMT. Traffic deaths increased relative to population from 1900 to 1935, followed by a sharp wartime decline starting in 1938. After 1944 fatalities per 100,000, while varying year to year, trended upward to peak in 1969. In the 40 years from 1972 to 2012, traffic deaths declined 59%. This decrease has been achieved primarily through safety enhancements to prevent vehicle occupant injury in a collision (crumple zones, seatbelts, airbags, etc.) and the successful efforts spearheaded by Mothers Against Drunk Driving to reduce drunk driving.

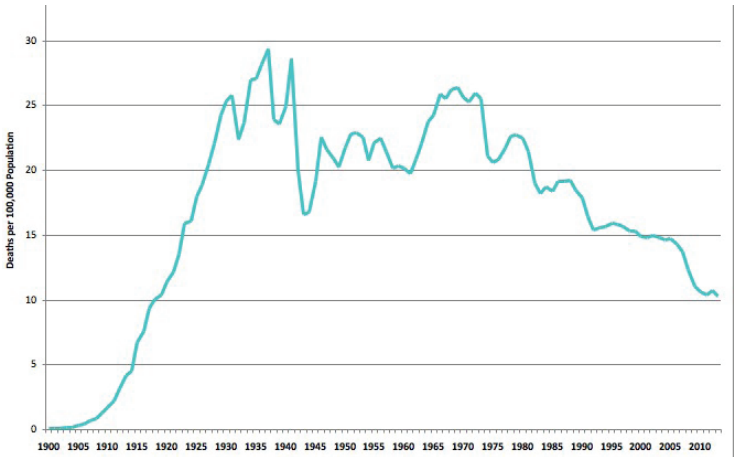
History has proven that it is possible to reduce traffic deaths even in the face of increases in both population and number of miles traveled. The United States experienced a 59% decline in traffic fatalities in the 40 years from 1972 to 2012 at a time when VMT increased 136% and the population increased 50%. Why stop there? Further decreases are possible.

Historic Traffic Deaths per Billion Miles Traveled v. VMT
Figure 1



Source: NHTSA FARS Data

U.S. Motor Vehicle Deaths per 100,000 Population
Figure 2



Source: NHTSA FARS Data

UNITED STATES ROAD FATALITIES RATES COMPARED TO EUROPE

Despite these admirable reductions in fatalities on United States roads, the United States lags behind its peers in Europe in its efforts to curb fatalities. Table 1 shows the number of traffic fatalities per year per 100,000 inhabitants for peer countries in Europe. The US has more than double the fatalities of France (the European country with the highest number of traffic fatalities per 100,000) and three times that of the Denmark, Norway, Switzerland and UK. Further reduction of US traffic fatalities requires a commitment to making the safety of all road users the top priority in road design.

2010 Traffic Fatality Rates of European Countries
Table 1

Country	Traffic Fatalities per 100,000 Inhabitants
Denmark	3
Finland	4.7
France	4.9
Germany	4.3
Netherlands	3.9
Norway	2.9
Switzerland	3.4
United Kingdom	3.5
United States	**11.6**

Source: World Health Organization, *Global Status Report on Road Safety 2013*

UNITED STATES ROAD FATALITIES RATES COMPARED TO THE WORLD

According to the World Health Organization, the United States' road safety is on a par with countries such as Domenica, Bangladesh, and Chile. Our safety record is worse than Uzbekistan, Romania and Poland. Table 2 shows the countries with similar fatality rates to the United States.

2010 Traffic Fatality Rates of World Countries
Table 2

Country	Traffic Fatalities per 100,000 Inhabitants
Domenica	11.8
Montenegro	11.8
Bangladesh	11.6
United States	**11.6**
Chile	11.5
Jamaica	11.4
Uzbekistan	11.3
Romania	11.1
Poland	10.9
Latvia	10.8
North Korea	10.7
Bahrain	10.5
Bulgaria	10.4

Source: World Health Organization, *Global Status Report on Road Safety 2013*

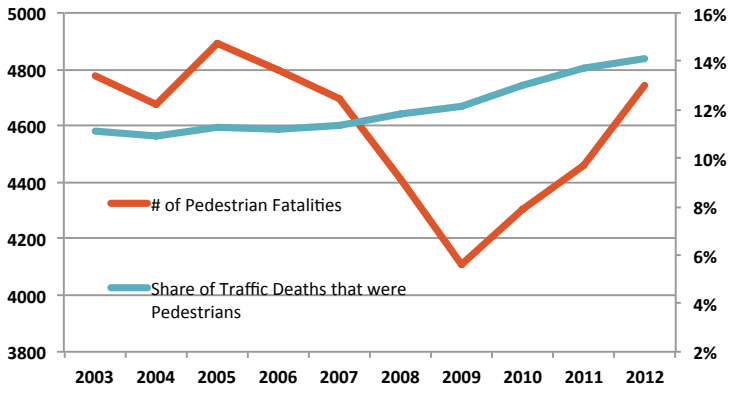
PEDESTRIAN VULNERABILITY

Not only are U.S. deaths per 100,000 population high, pedestrian deaths show a disconcerting trend. U.S. pedestrian fatalities have increased dramatically since 2009 in raw numbers. In the period 2009 - 2012 pedestrian fatalities went from 4,109 to 4,743, an increase of 15%. Additionally, pedestrian deaths as a percentage of total traffic deaths have risen increasingly since 2004. Even in the years where the number of pedestrian deaths declined, pedestrian deaths comprised a higher percentage of total road deaths. (See Figure 4.) For example, between 2008 and 2009 the number of pedestrian deaths declined sharply from a total of 4,414 pedestrian deaths in 2008 to a total of 4,109 pedestrian deaths in 2009 (a decrease of almost 7%) yet, the portion of all traffic deaths that were pedestrian victims rose from 11.8% to 12.1% in the same time period. Overall traffic deaths are decreasing faster than pedestrian deaths. Although U.S. roads are becoming safer for those driving on them, they are becoming increasingly dangerous for pedestrians.

One reason for this disturbing trend has been the approach to road safety. The National Highway Transportation Safety Administration (NHTSA) has focused on decreasing automobile deaths through vehicle safety devices designed to protect the passenger in a crash, such as seat belts and air bags. These efforts are effective in reducing overall traffic fatalities, but not in reducing pedestrian fatalities. Further reductions in fatalities will be achieved through an integrated safety approach that includes better road safety policy, design and regulation.

US Pedestrian Fatalities 2003-2012

Figure 4



Source: NHTSA

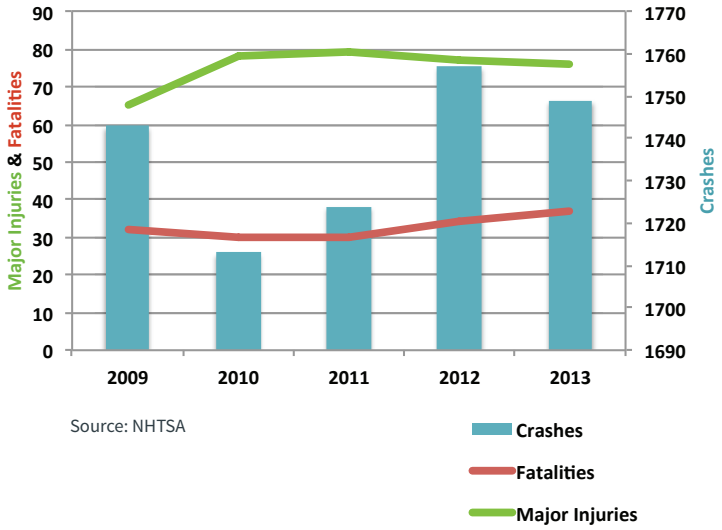
VISION ZERO PHILADELPHIA

HOW SAFE ARE PHILADELPHIA STREETS?

On average, approximately 100 Philadelphians are killed in traffic crashes every year. For every traffic fatality in Philadelphia, 3.5 people suffer a major injury. These tragedies affect our most vulnerable road users. From 2009-2013, children under 18 comprised 12.7% of the pedestrian traffic deaths. People over 65 years of age comprised 21.5% of all Philadelphia pedestrian traffic deaths but only 12.4% of the population.[6]

In Philadelphia from 2009 to 2013 major pedestrian injuries increased 17%, and pedestrian fatalities increased over 16%. (See Figure 5) At a time when automobile fatalities declined almost 15%.

Philadelphia Pedestrian Crashes, Fatalities & Major Injuries 2009-2013
Figure 5



TARGETING PHILADELPHIA'S MOST DANGEROUS STREETS

Philadelphia has robust data regarding locations and factors contributing to pedestrian crashes due to NHTSA federal reporting requirements. The Bicycle Coalition analyzed pedestrian crashes that result in death or serious injury to determine Philadelphia's most dangerous locations. Because there are far more severe injuries than deaths, the combination of severe injuries and fatalities provides a more accurate indication of dangerous locations for pedestrians, than would fatality data alone.

Crashes involving pedestrians are not distributed evenly across our streets. Mapping of pedestrian crash data reveals high crash corridors on major roads, near transit stops and in areas with high pedestrian use. Azavea, PlanPhilly, and Mayor's Office of Transportation and Utilities have studied the crash data. Most analyses focused on corridors. MOTU created a list of the top 10 Corridors to inform their safety efforts.

Top 10 Corridors for Pedestrian-Involved Crashes

1. **Market Street** from City Hall to Eighth Street.
2. **Chestnut Street** from 22nd Street to 16th Street.
3. **Broad Street** from Oregon to Snyder Avenues.
4. **52nd Street** from Baltimore Avenue to Sansom Street.
5. **Allegheny Avenue** from G Street to Martha Street.
6. **Market Street** from City Hall to 20th Street.
7. **Chestnut Street** from Broad Street to Eighth Street.
8. **Broad Street** from Allegheny Avenue to Cumberland Street.
9. **JFK Boulevard** from 15th Street to 20th Street.
10. **Broad Street** from City Hall to Vine Street.

SOURCE: The Mayor's Office of Transportation and Utilities.

[6]NHTSA

VISION ZERO PHILADELPHIA

TARGETING PHILADELPHIA'S MOST DANGEROUS STREETS FOR PEDESTRIANS

One of the tools to address dangerous locations is developing site-specific solutions. With that in mind, the Bicycle Coalition of Greater Philadelphia analyzed the National Highway Traffic Safety Administration (NHTSA) crash data from 2009-2013 to identify specific sites where pedestrian crashes are high. Using geographic information systems (GIS), we aggregated crashes to the nearest intersection. The table below lists the top twelve pedestrian crash locations. Included are nearby transit stops, as high pedestrian crash areas often correlate with high pedestrian activity around transit stops.

Top 12 Crash Sites for Pedestrian Involved Crashes
Table 3

Ranking	Closest Intersection	Number of crashes 2009 - 2013	Transit Stop	Council District
1	Fifth Street & Olney Avenue	19	Buses: 18, 26, 47	9
2	Broad and Race Streets	17	Broad Street Line	1, 5
3	Broad Street & Girard Avenue	16	Broad Street Line	5
4	Cottman Avenue & Roosevelt Boulevard	16	Buses: 1,14, 20, 50, 70, 77	6, 7
5	Broad Street & Olney Avenue	16	Broad Street Line	8, 9
6	Broad Street and Lehigh Avenue	16	Broad Street Line	5, 8
7	Market and 40th Streets	15	Market-Frankford Line	3
8	Market and 11th Street	14	Market-Frankford Line	1
9	Chelten and Wayne Avenues	13	Buses: 26, 53, 65, J, K	8
10	Market and 12th Streets	13	Market-Frankford Line	1
11	Cobbs Creek, Market Street, and 63rd Street	13	Market-Frankford Line	3, 4
12	Cecil B. Moore Avenue & Broad Street	13	Broad Street Line	5

Source: NHTSA: FARS

See **Appendix A** for a complete list of the Top 52 Pedestrian Crash Sites citywide.

VISION ZERO PHILADELPHIA

TARGETING PHILADELPHIA'S MOST DANGEROUS STREETS

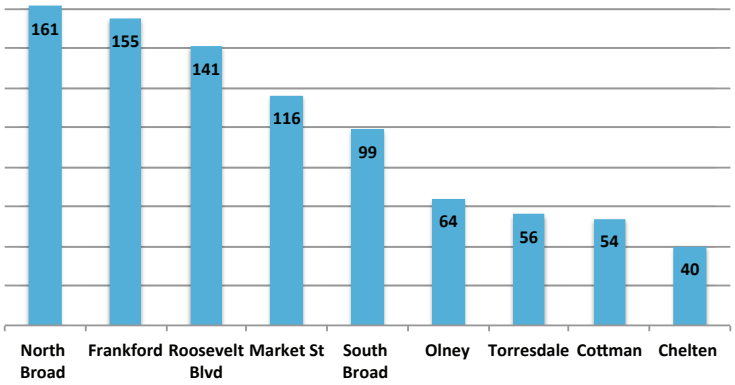
The map in Figure 6 displays the 52 locations in Philadelphia where nine or more pedestrian crashes occurred during the five-year period 2009-2013. The inset displays the crashes in Center City Philadelphia. In addition to identifying top pedestrian crash sites; the map in Figure 6 also reveals the pattern of pedestrian crashes along major corridors. Figure 7 lists the top nine pedestrian crash corridors and the number of crashes along each corridor.

TARGETING PHILADELPHIA'S MOST DANGEROUS STREETS BY COUNCIL DISTRICT

Pedestrian crashes are not distributed evenly across the city. Some council districts have a greater share of high crash sites, while others don't have a single location with more than 8 crashes in the five-year period. Table 4 lists the top three crash pedestrian crash sites within each council district. (The 2nd District lists five sites. Three locations tied for third place.)

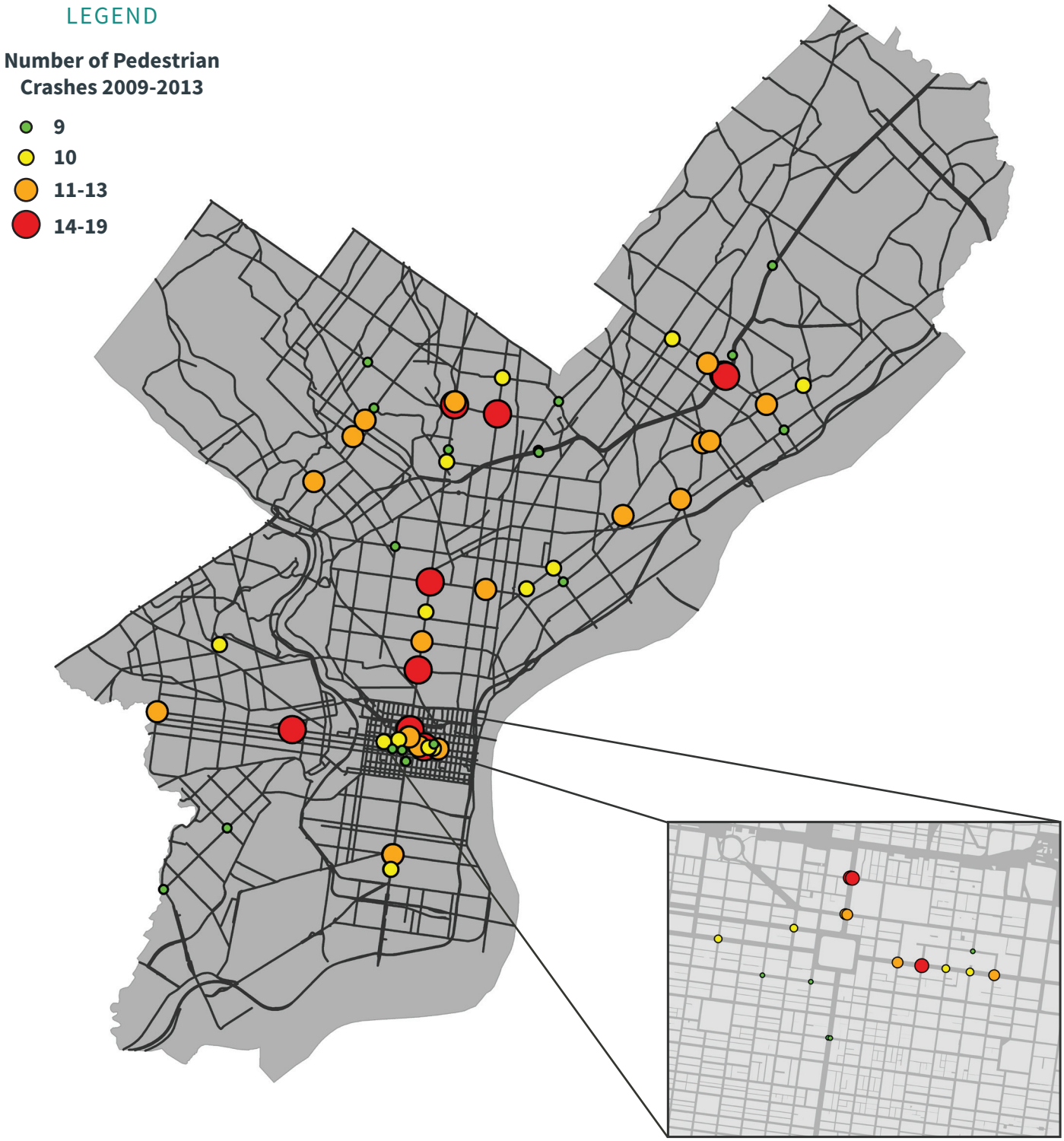
Top Pedestrian Crash Corridors 2009-2013

Figure 7



Source: NHTSA: FARS

Map of Top Philadelphia Pedestrian Crash Sites
2009-2013
Figure 6



Source: NHTSA: FARS
GIS Credit: Eric Jones

Top Three Pedestrian Crash Locations 2009-2013 for each Council District

Table 4

Council District	Nearest Intersection to Crash	Crash Count
1	N BROAD ST & RACE ST	17
1	MARKET ST & N 11TH ST & S 11TH ST	14
1	MARKET ST & N 12TH ST & S 12TH ST	13
2	S BROAD ST & SNYDER AVE	12
2	RITNER ST & S BROAD ST	10
2	CHESTNUT ST & S 15TH ST *	9
2	CHESTNUT ST & S 17TH ST *	9
2	LOCUST ST & S BROAD ST *	9
3	MARKET ST & N 40TH ST & S 40TH ST	15
3	COBBS CREEK PKWY & MARKET ST & N 63RD ST	13
3	S 58TH ST & WOODLAND AVE	9
4	COBBS CREEK PKWY & MARKET ST & N 63RD ST	13
4	HENRY AVE & W SCHOOL HOUSE LN	11
4	JEFFERSON ST & N 52ND ST	10
5	N BROAD ST & RACE ST	17
5	N BROAD ST & W GIRARD AVE	16
5	N BROAD ST & W LEHIGH AVE	16
6	COTTMAN AVE & E ROOSEVELT BLVD	16
6	BUSTLETON AVE & COTTMAN AVE	12
6	COTTMAN AVE & FRANKFORD AVE & RYAN AVE	12
7	COTTMAN AVE & E ROOSEVELT BLVD	16
7	BUSTLETON AVE & COTTMAN AVE	12
7	N AMERICAN ST & W LEHIGH AVE	12
8	N BROAD ST & W LEHIGH AVE	16
8	N BROAD ST & W OLNEY AVE	16
8	W CHELTEN AVE & WAYNE AVE	13
9	N 05TH ST & W OLNEY AVE	19
9	N BROAD ST & W OLNEY AVE	16
9	N BROAD ST & OLD YORK RD & W CHEW AVE	12
10	ACADEMY RD & BYBERRY RD	8
10	ALGON AVE & COTTMAN AVE	7
10	BLUE GRASS RD & GRANT AVE	6

Source: NHTSA: FARS

* Council District 2 had three streets tied for third place with 9 crashes, thus five streets are listed.

NB: The above crashes did not necessarily happen at the intersection stated. Streets listed are the closest intersection to the site of the crash.

CAUSES OF CRASHES

Reviewing five years of Philadelphia pedestrian and bicycle crash data from 2009 to 2013, the vast majority of crashes happen on dry streets and in good weather. The leading contributing factors to fatal crashes are:

- Aggressive driving (including speeding) is a contributing factor in 56% of crashes in Philadelphia.
- Intersection design is a contributing factor in 43% of fatal crashes in Philadelphia.
- Drunk driving and distracted driving are contributing factors in 31% of fatal crashes in Philadelphia.

UNSAFE ROAD DESIGN

One factor outside the scope of the NHTSA fatality reports is unsafe road design beyond intersections. Even more than posted speed limits, the elements of street design combine to determine how fast traffic will flow. Road widths, lighting, crosswalks, and intersections all have an impact on the relative safety of our roads. Proper road design can greatly reduce crashes.

Many current principles of road design are based on studies of high-speed, limited access roads (highways) where traffic flow is the primary guiding principle and vulnerable users are largely absent. Somewhat counter-intuitively, what makes our highways safe can be very dangerous on local roads. The wide, straight interstates are safe, in part, due to the lack of intersections and vulnerable users. However, when these same highway design principles are applied to local road design, the design encourages an increase in the speed of traffic that reduces the safety of all road users. Wide arterials account for a large proportion of road fatalities in Philadelphia. Roosevelt Boulevard is a prime example of dangerous design.

This misapplication of highway design on city streets has been recognized by the legislature. In December of 2014, three Pennsylvania state representatives wrote a letter to the General Accountability Office to complain of the danger of inappropriate civil engineering of neighborhood roads. The full text of that letter can be seen in Appendix B.

SPEED

It is important to understand the role of speed in fatal crashes. In addition to being a factor in causing the crash, speed is also the primary determinant as to whether a crash victim will be live or die. (See Figure 8.) At 20 miles per hour survival rate is over 90%. At 30 miles per hour it is only 60%. At 40 miles per hour the survival rate drops to 20%. A number of factors contribute to speeding, including speed limits, road design, and enforcement. Reducing speeding will require a multi-pronged approach that addresses all these factors.

Speed and Survival

Figure 8

Source: City of San Francisco Vision Zero Two Year Action Strategy February 2015

COST OF CRASHES

Traffic fatalities and major injuries take a large, but largely unnoticed, toll on our society. The National Highway Traffic Safety Administration estimates that the economic costs of road crashes in 2010 were $871 billion nationwide ($277 billion in economic costs and $594 billion in societal harm), the price our country pays for the deaths of 32,999 persons, 3.9 million injured, and 24 million damaged vehicles. Nationwide, bicycle and pedestrian crashes accounted for approximately $109 billion. ($19 billion in economic costs and $90 billion in societal harm.)

Based on Pennsylvania Department of Transportation (PennDOT) estimates, the motor vehicle crashes in 2013 that led to the loss of 89 lives in Philadelphia cost $565 million, while the resulting 11,549 injuries cost $450 million for a grand total of over $1 billion dollars.[6]

EXISTING PHILADELPHIA PROGRAMS

What is Philadelphia already doing toward a Vision Zero?

Philadelphia has not been ignoring this serious road safety issue. There are a number of initiatives already in place in Philadelphia to further the goals of Vision Zero even in the absence of an official Vision Zero Policy. These programs, described below, include:

- Safe Routes Philly: http://saferoutesphilly.org/
- Walk Safe PHL: http://saferoutesphilly.org/
- Pedestrian and Bicycle Safety Improvements Program (ARLE funded) https://phillymotu.wordpress.com/tag/arle/ and https://phillymotu.wordpress.com/2015/05/21/low-cost-safety-improvement-on-springfield-baltimore-avenues/
- Education and Enforcement Efforts in Pedestrian Focus Cities: https://cityofphiladelphia.wordpress.com/2014/04/25/city-of-philadelphia-wins-competitive-grant-for-pedestrian-safety/

SAFE ROUTES PHILLY

The Bicycle Coalition of Greater Philadelphia, with the support of the Philadelphia Health and Human Services Department, has been educating elementary school children on safe biking and safe walking since 2010. Safe Routes Philly is a national "train the trainer" model. Staff at the Bicycle Coalition train elementary school teachers to implement pedestrian and bicycle safety lessons, primarily in health and physical education classes. BCGP provides free hard copies of the curriculum to any interested Philadelphia teachers and administrators. Since 2010, Safe Routes Philly has trained over 200 teachers and our safety lessons have been taught in 133 schools reaching over 75,000 students. In addition to the education component, BCGP works directly with school champions to encourage more students to safely walk and bike to school. Such initiatives include Walk or Bike to School Days, Walking School Buses, Walkability Audits, and Bicycle Rodeos.

This program has been funded by a combination of local Public Health and NHTSA dollars.

AUTOMATED RED LIGHT ENFORCEMENT FUNDS

Philadelphia has approximately 25 intersections with red light cameras to capture red light running infractions at key intersections. This program generates $3-4 million per year. Philadelphia applied for and received approximately 50% of the funds generated, which Philadelphia uses to fund the Pedestrian and Biyccle Safety Improvement Program. This program provides low-cost safety improvements such as signal changes, lighting improvements, signage, and pavement changes. To date, Philadelphia has received $20 million in ARLE funds allowing the implementation of intersection modifications at 67 intersections including: bulb-outs, that reduce crossing distances for pedestrians and improve sight lines; round-abouts, which calm traffic and reduce crashes at

[6]DVRPC 2013; PennDOT 2013 p.8

complex intersections; and speed cushions to help reduce speeding. Philadelphia spent $7 million on traffic signal improvement work at 547 intersections citywide, which also benefits pedestrians. Seven intersections received curb extension to reduce pedestrian crossing distances. Traffic calming projects continue including roundabouts.

Low cost safety improvements at the intersection of Springfield and Baltimore Avenues in West Philadelphia dramatically improved safety for all users with traffic paint and flexible delineator posts. These low cost improvements replaced a high speed merge with a safer turn for automobiles, while reducing the pedestrian crossing distance from seventy feet to less than thirty-five feet.

In addition, the Streets Department has used $1.5 millon in ARLE funds to enhance conflict zones at 34 intersections along 7 miles of bike lanes with green paint and other low cost improvements.

EDUCATION AND ENFORCEMENT EFFORTS IN PEDESTRIAN FOCUS CITIES

Philadelphia was one of three cities to receive NHTSA funding for pedestrian safety programs, along with Louisville, Kentucky and New York City. Philadelphia received $525,000 from NHTSA and an additional $150,000 from the State of Pennsylvania for education and enforcement. The two-year grant, awarded in 2014 is provide providing for extra police patrols, education on pedestrian safety for both police and citizens. Philadelphia revamped its 'Its Road Safety, Not Rocket Science' public service campaign with humorous posters on public transit and created a You Tube video designed to go viral. (View at: https://www.youtube.com/watch?v=GgDBDkN_5ew)

The city is targeting their education and enforcement efforts on three zones with high pedestrian crash levels: Broad Street from Race to Lehigh, Market Street from 8th to 22nd, and Olney Transportation Center with a goal of reducing crashes by 50% in two years.

A portion of the grant will provide funding for Safe Routes Philly to support education programs. BCGP is committed to

- have 25 schools teach Safe Routes Philly Pedestrian Safety Curriculum to students in grades K - 3.
- Promote Walk to School Days and make resources available to schools in the target zones.
- Develope a **new tool for older students** encouraging them to use critical thinkng to address traffic safety and behavior. Middle and high school students will engage in a crime scene-like investigation of targeted high crash intersections. Students will perform an analysis to determine interventions to improve safety.
- Three schools will receive support to engage in walkability audits. A **walkability audit** is method for evaluating current conditions and improving walkability. Students, staff, and city engineers work together to assess the walkability of the streets surrounding the school. The engineers oversee the process whereby students, parents and staff walk the adjacent streets and provide input on potential safety hazards. The engineering firm then creates a walkability plan to improve the safety of the walking environment around neighborhood schools. Recommendations may include items such as improving signal timing for adequate crossing times, repairing damaged sidewalk, providing curb bump-outs to reduce crossing distances, and implementing traffic calming measures to curb speeding traffic.

EXISTING PHILADELPHIA PROGRAMS

BIKING AND WALKING TRAVEL DATA

Philadelphia is ahead of the curve on pedestrian and bicycle travel data collection. When US Transportation Secretary Foxx called for mayors to collect more data, the Delaware Regional Planning Commission (DVRPC), recognizing the high levels of bicycle and pedestrian traffic in Philadelphia, had already been collecting this bicycle and pedestrian traffic data since 2010.

DVRPC traffic counts help city officials and advocates understand the ways in which Philadelphians are using our streets. This data is crucial to decision makers for determining priorities when building and maintaining the street grid. The bicycle and pedestrian counts generated by DVRPC supplement the Census Bureau travel data, that provides only "journey to work" or commuting data which may be as little as 20% of all trips. Because the DVRPC counters operate 24/7, they provide a much broader picture of how Philadelphians travel around the city.

COMPLETE STREETS

Philadelphia adopted a Complete Streets Bill in 2009 that called for enhancing the city's public rights of way for all users. This holistic approach to street design requires that all development that impacts the right of way complete a Complete Streets checklist. Checklists are reviewed by both the Streets Department and the City Planning Department to ensure that the development accommodates the safety and convenience of all users of Philadelphia public rights of way.

PEER U.S. CITIES

HOW DOES PHILADELPHIA COMPARE TO PEER CITIES?

Philadelphia has the most traffic fatalities per 100,000 population among its peer cities. At 5.7 fatalities per 100,000 population, Philadelphia rate is 16% to 39% higher than its peer cities. (Figure 9)

NEW YORK

Goal: Eliminate all road deaths by 2024
2013 Traffic Death Toll: **294** 61 % Pedestrian
Rate: 3.5 deaths/per 100,000 population
Plan: Vision Zero Action Plan (2014)
http://www.nyc.gov/html/visionzero/pdf/nyc-vision-zero-action-plan.pdf

New York's efforts include road diets, pedestrian plazas, and separated bicycle infrastructure that have transformed the streets of Manhattan. NYC has low overall traffic fatalities per capita (Figure 9); however, pedestrian fatalities are high at 2.1 per 100,000 population. (Figure 10) Pedestrians comprised 61% of the 293 road fatalities in 2013 in New York City.

SAN FRANCISCO

Goal: Eliminate all road deaths by 2024
2013 Traffic Death Toll: **33** 55% Pedestrian
2013 Death Rate: **3.9** deaths/100,000 population
Plan: Vision Zero San Francisco, Two-Year Action Strategy (2015)
http://www.joomag.com/magazine/vision-zero-san-francisco/0685197001423594455?short

Six percent of San Francisco's roads are responsible for 60% of pedestrian fatalities and pedestrians comprise 55% of all traffic fatalities. San Francisco employs a data driven approach to Vision Zero to achieve advances in five categories: engineering, education, enforcement, evaluation and policy. San Francisco has created a City Vision Zero Task Force and uses a broad based multi-agency approach that includes opportunities for public input.

SEATTLE

Goal: Zero deaths by 2030
2013 Traffic Death Toll: **30** 37% Pedestrian
2013 Death Rate: **4.6** deaths/100,000 population
Plan: Vision Zero: Seattle's Plan to End Traffic Deather and Serious Injuries by 2030 (2015)

http://www.seattle.gov/Documents/Departments/beSuperSafe/visionzeroplan.pdf

Seattle is a recognized as a safe city yet, in 2013, thirty people were killed in road crashes, 37% were pedestrians. Even this relatively low fatality rate is unacceptable. Seattle will use street designs that emphasize safety, predictability and the potential for human error coupled with targeted education and data-driven enforcement.

PEER U.S. CITIES

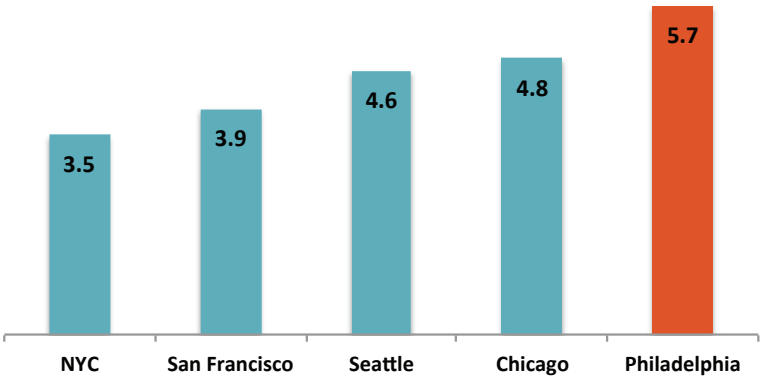
HOW DOES PHILADELPHIA COMPARE TO PEER CITIES?

CHICAGO

Goal: Eliminate all road deaths by 2024
2013 Traffic Death Toll: 131 21% Pedestrian
2013 Death Rate: **4.8** deaths/100,000 population
Plan: Chicago Forward, Department of Transportation Action Agenda (2014)
http://www.cityofchicago.org/dam/city/depts/cdot/Admin/ChicagoForwardCDOTActionAgenda.pdf

Chicago sees Vision Zero as key to maintaining a vibrant city that is globally competitive and economically viable. Chicago's action plan calls for planning, evaluation and budget programming as the foundation for improving safety. Innovative design, education and enforcement are the three key components for achieving their vision.

Peer City Comparison of All 2013 Traffic Fatalities (Deaths per 100,000 Population)
Figure 9



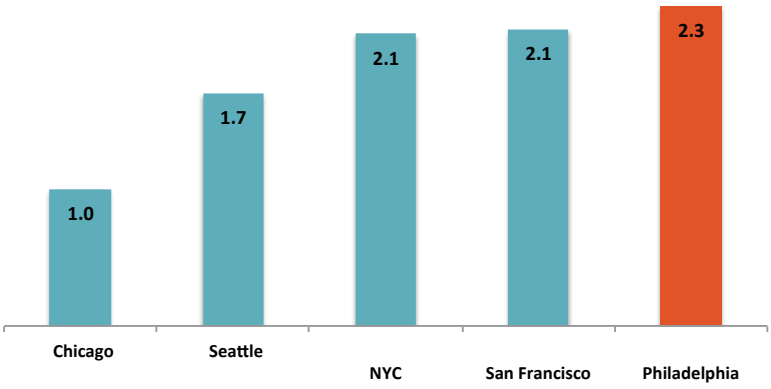
Source: NHTSA

PHILADELPHIA

Goal: None yet
2013 Traffic Death Toll: 89 40% Pedestrian
2013 Death Rate: 5.7 deaths/100,000 population

Philadelphia has not yet adopted a Vision Zero policy. Many valiant individual efforts are underway within various city and private entities, but this is not enough. The City of Philadelphia should create a Task Force to design a cohesive, multi-agency Vision Zero policy to address traffic fatalities. Using site-specific solutions at know dangerous locations and a multi-pronged approach incorporating design, education and enforcement, Philadelphia can begin to eliminate the tragedy of traffic deaths in our neighborhoods.

Peer City Comparison of All 2013 Pedestrian Traffic Fatalities (Deaths per 100,000 Population)
Figure 10



Source: NHTSA

RECOMMENDED STRATEGIES

POLICY

Adopt a comprehensive Vision Zero Policy
Empower a multi-departmental task force to develop a Zero Vision Policy to address road fatalities across Philadelphia with the stated goal of decreasing road deaths and severe injuries by 50% by 2020. The policy should include specific cross-departmental strategies to achieve that goal.

PARTNERSHIP

Engage multiple departments and organizations to realize this vision
Engage all departments that can influence the safety of our streets: Philadelphia Police Department, Department of Public Health, Streets Department, etc.

Partner with PennDOT to address state controlled high crash streets
A percentage of the deaths on streets within Philadelphia occur on streets controlled by PennDOT. Partner with PennDOT to address safety measures to reduce these deaths.

Develop a strategy to engage City Council and District civic leaders to address most dangerous streets
Provide City Council members with timely information on the safety of streets in their district. The current unacceptably high levels of road fatalities have affected most Philadelphians. Hold meetings in each district to encourage public input.

Meet with stakeholders
Publish a list of streets that will be repaved each year and hold public meetings in each Council District to allow for public comment on proposed paving and striping plans. Use these meetings as an opportunity to further educate the public on the goals and strategies employed to achieve Vision Zero.

Provide data
Make crash data immediately available to the public similar to the city's "murder map" to provide Philadelphians with information regarding crash hot spots. This is also an opportunity for public input to improve the safety of high crash areas.

Public engagement
Provide paving programs to Registered Community Organizations and make publicly available on the website. Create venues for public comment.

EDUCATION

Cultural shift
Foster a cultural shift that does not accept the 100 road deaths as inevitable or acceptable. Increase awareness among both decision makers and citizens of the needless harm road fatalities and injuries cause. Policy makers and citizens must approach the issue of traffic safety from an ethical, humanist perspective, valuing human life over all other considerations.

Public education campaign
Create public service campaigns to raise awareness of the toll of traffic deaths and the causes and prevention measures. Make speeding and aggressive driving socially unacceptable the way Mothers Against Drunk Driving changed the social acceptability of drunk driving.

RECOMMENDED STRATEGIES

DESIGN

Make Safety the Primary Design Principle
Create a policy of designing streets with safety of all users as the primary goal rather than speed or convenience of automobiles, incorporating Complete Streets design principles to level the playing field among users.

Incorporate Vision Zero Policy into the design of all streets during the paving cycle.
When paving streets within Philadelphia make safety the top priority in road design. Paving offers an ideal opportunity to implement low cost changes to increase road safety.

Eliminate Speeding
Work with the State Legislature to allow the Philadelphia Police Department to use radar and to allow safety (speed) cameras on Philadelphia streets. These cameras operate much like red light cameras, allowing our Police Department to increase enforcement through automation, without increasing staffing needs.

FUNDING

Develop a funding stream to achieve goals
Potential sources include:

- Car registration: Act 89 allows a $5 local fee
- TIGER Grants: NYC received $25 million in TIGER grant money
- National Highway Traffic Safety Administration Grants
- Highway Safety Improvement Program

REDUCING CRASHES: A VISION ZERO TOOLBOX

TRAFFIC CALMING

One key factor in surviving a road crash is the speed of the collision. The chances of a 20 mph crash resulting in fatality is only 5%, while the chance of a 30 mph crash resulting in a fatality is 40%. Chances of survival continue to drop as speed increases. Thus, curbing speed is a key factor in protecting vulnerable users such as pedestrians and bicyclists.

Road design plays a large role in road safety Philadelphia's urban and neighborhood streets should not be designed to comfortably drive faster than 25 mph. Traffic calming measures reduce the incidence of speeding traffic through creating an environment that induces slower speeds and makes drivers more aware of other road users.

Speed humps: Modern speed tables are a disincentive to speeding traffic that does not interfere with emergency vehicles.

Roundabouts: At some complex intersections roundabouts can reduce traffic crashes by slowing entry speeds, eliminating stop sign or red light running, and creating safer pedestrian crossings.

Bike Lanes: Installation of bike lanes on Spruce and Pine Streets correlated with a decrease in top speeding traffic, with no significant reduction in average speed. The general calming of traffic due to this intervention led to a 26% reduction in major auto crashes in the three year period following implementation versus the three year period prior to implementation.

Road diets: By eliminating excess road capacity, road diets can reduce speeding and heighten awareness of vulnerable road users.

Bulb-outs: Bulb outs are extensions of the sidewalk into the parking lane. Pedestrian safety is enhanced through reduced crossing distances and increased visibility of cross traffic.

Pedestrian refuge islands: On roads with large crossing widths, providing a pedestrian refuge midway can provide a safe stopping point for those pedestrians unable to cross the entire street in one green phase.

Signal timing and countdown signals: Enhancing signal timing to accommodate pedestrians and providing appropriate countdowns allows pedestrians to safely cross during the green light phase. At heavy pedestrian intersections a leading pedestrian green allows pedestrians to cross prior to right-turning traffic.

Enforcement Some bad road behavior is encouraged by a lack of enforcement. If speeding is not recognized as a potential life threatening hazard, enforcement will remain low and scofflaws will continue past behavior due to a feeling of impunity.

Automated Speed Enforcement: What automated red light cameras have done for red light running, automated speed enforcement can do for speeding. Allowing Philadelphia police officers to employ radar would also facilitate speed enforcement. Both speed cameras and radar speed enforcement by municipal police officers require a change in legislation at the state level. Given the many duties our law enforcement officers are called upon to perform and the hazards of speeding, automated speed enforcement is a low cost investment in safety.

Automated Red Light Cameras Enforcement (ARLE): As mentioned above, ARLE provides two important safety enhancements. It reduces red light running and it provides a funding stream for low cost road safety infrastructure.

CONCLUSION

Vision Zero is, above all, a comprehensive approach to road safety that requires building consensus among a wide variety of stakeholders, including: drivers, bicyclists, pedestrians, public transit, Philadelphia Parking Authority taxi and limo drivers, Philadelphia Police Department, Philadelphia Public Health Department, the business community, policy makers, city council, the mayor, residents and commuters.

Although Philadelphia has a number of excellent safety initiatives, Philadelphia cannot rest on its laurels. The road safety programs already in place are not a substitute for a cohesive Vision Zero Policy. Philadelphia needs an official Vision Zero Policy that engages all stakeholders to accomplish the goal of reducing road fatalities and injuries by 50% by 2020. The Vision Zero policy must spell out specific commitments from each city agency, governmental body and the public and provide strategies for accomplishing its goal.

Pubic engagement, education and outreach are critical to ensure the success of the Vision Zero policy. An informed public can help city agencies achieve their goals. Vision Zero requires a change in attitude from residents from an acceptance of nearly 100 deaths per year to a commitment to not allow other priorities to overshadow the safety of our streets.

Responsibility for developing the Vision Zero Policy must fall to a high-level task force within city government that includes all agencies that impact street safety. This task force must be endowed with the authority and the funding to achieve their mission.

Support of the principles of a Vision Zero policy are implicitly embraced by a number of city and private agencies as enumerated above: SRP, ARLE, etc. This report calls for an official Vision Zero Policy that will provide a cohesive set of principles to guide decision making across departments to increase safety and eliminate the tragedy of road fatalities and serious injuries in Philadelphia.

VISION ZERO

SOURCES

US DOT, NHTSA, Traffic Safety Facts 2012 Data, p. 9 Table 8

ABBREVIATIONS

ARLE:	Automated Red Light Enforcement
BCGP:	Bicycle Coalition of Greater Philadelphia
DVRPC:	Delaware Valley Regional Planning Commission
FARS:	Fatality Analysis Reporting System
MOTU:	Mayor's Office of Transportation and Utilities
NHTSA:	National Highway Traffic Safety Administration
PPA:	Philadelphia Parking Authority
PennDOT:	Pennsylvania Department of Transportation
RCO:	Registered Community Organization
SRP:	Safe Routes Philly

VISION ZERO PLANS

CHICAGO

Chicago Forward, Department of Transportation Action Agenda, 2014 http://www.cityofchicago.org/dam/city/depts/cdot/Admin/ChicagoForwardCDOTActionAgenda.pdf

NEW YORK

Vision Zero Action Plan 2014, http://www.nyc.gov/html/visionzero/pdf/nyc-vision-zero-action-plan.pdf

SAN FRANCISCO

Vision Zero San Francisco, Tow-Year Action Strategy, 2015, http://www.joomag.com/magazine/vision-zero-san-francisco/0685197001423594455?short

SEATTLE

Vision Zero: Seattle's Plan to End Traffic Deather and Serious Injuries by 2030, http://www.seattle.gov/Documents/Departments/beSuperSafe/visionzeroplan.pdf

APPENDIX A

TOP 52 CRASH SITES CITYWIDE 2009-2013

Ranking	Closest Intersection	Number of crashes closest to Intersection
1	N 05TH ST & W OLNEY AVE	19
2	N BROAD ST & RACE ST	17
3	COTTMAN AVE & E ROOSEVELT BLVD	16
4	N BROAD ST & W GIRARD AVE	16
5	N BROAD ST & W LEHIGH AVE	16
6	N BROAD ST & W OLNEY AVE	16
7	MARKET ST & N 40TH ST & S 40TH ST	15
8	MARKET ST & N 11TH ST & S 11TH ST	14
9	CECIL B MOORE AVE & N BROAD ST	13
10	COBBS CREEK PKWY & MARKET ST & N 63RD ST	13
11	MARKET ST & N 12TH ST & S 12TH ST	13
12	W CHELTEN AVE & WAYNE AVE	13
13	ARCH ST & N BROAD ST	12
14	BRIDGE ST & TORRESDALE AVE	12
15	BUSTLETON AVE & COTTMAN AVE	12
16	COTTMAN AVE & FRANKFORD AVE & RYAN AVE	12
17	N AMERICAN ST & W LEHIGH AVE	12
18	N BROAD ST & OLD YORK RD & W CHEW AVE	12
19	S BROAD ST & SNYDER AVE	12
20	E CHELTEN AVE & GERMANTOWN AVE & W CHELTEN AVE	11
21	FRANKFORD AVE	11
22	HENRY AVE & W SCHOOL HOUSE LN	11
23	MARKET ST & N 08TH ST	11
24	COTTMAN AVE & GLENDALE AVE	10
25	D ST & E SOMERSET ST & KENSINGTON AVE	10
26	E ALLEGHENY AVE & H ST & KENSINGTON AVE	10
27	E ROOSEVELT BLVD & RHAWN ST	10
28	FRANKFORD AVE & RHAWN ST	10
29	JEFFERSON ST & N 52ND ST	10
30	JOHN F KENNEDY BLVD & N 16TH ST	10
31	MARKET ST & N 09TH ST & S 09TH ST	10
32	MARKET ST & N 10TH ST & S 10TH ST	10
33	MARKET ST & N 19TH ST & S 19TH ST	10
34	N 05TH ST & W GODFREY AVE	10
35	N BROAD ST & W SUSQUEHANNA AVE	10
36	N BROAD ST & W WYOMING AVE	10
37	RITNER ST & S BROAD ST	10
38	ADAMS AVE & RISING SUN AVE	9
39	BAYNTON ST & E CHELTEN AVE	9
40	C ST & E ROOSEVELT BLVD	9
41	CHESTNUT ST & S 15TH ST	9
42	CHESTNUT ST & S 17TH ST	9
43	CHEW AVE & E WASHINGTON LN	9
44	COBBS CREEK PKWY & ISLAND AVE & WOODLAND AVE	9
45	COTTMAN AVE & TORRESDALE AVE	9
46	E ALLEGHENY AVE & FRANKFORD AVE	9
47	E ROOSEVELT BLVD & E ROOSEVELT BLVD & E ROOSEVELT BLVD	9
48	FILBERT ST & N 09TH ST	9
49	LOCUST ST & S BROAD ST	9
50	N 22ND ST & W ALLEGHENY AVE	9
51	N BROAD ST & W ROCKLAND ST	9
52	S 58TH ST & WOODLAND AVE	9

APPENDIX B

LETTER FROM THREE REPRESENTATIVES TO THE GENERAL ACCOUNTABILITY OFFICE

December 18th, 2014

The Honorable Gene L Dodaro
Comptroller General
U.S. Government Accountability Office
441 G Street, NW
Washington, D.C. 20548

Dear Mr. Dodaro:
While overall traffic-related fatalities have been declining in recent years, our most vulnerable road users—pedestrians and cyclists—have experienced an increase in fatalities. In 2012, 4,743 pedestrians were killed, or an average of one fatality every two hours. Also in 2012, 726 cyclists were killed on our roads. These pedestrian and cyclist fatality totals each represent a 6 percent increase from 2011.

Furthermore, we are concerned that conventional engineering practices have encouraged engineers to design roads at 5-15 miles per hour faster than the posted speed for the street. This typically means roads are designed and built with wider, straighter lanes and have fewer objects near the edges, more turn lanes, and wider turning radii at intersections. While these practices improve driving safety, a suspected unintended consequence is that drivers travel faster when they feel safer. Greater speeds can increase the frequency and severity of crashes with pedestrians and cyclists who are moving at much slower speeds and have much less protection than a motorized vehicle affords.

Because of these increasing fatality numbers among the most vulnerable road users, we request that the Government Accountability Office (GAO) investigate the trends and causes of these roadway fatalities and the challenges associated with improving pedestrian and cyclist safety. In particular, we are interested in information about the relationship between vehicle speed and roadway fatalities, and how roadway design speeds and other common practices may exacerbate this problem.

APPENDIX B (continued)

Accordingly, we would like for GAO to examine:

LETTER FROM THREE REPRESENTATIVES TO THE GENERAL ACCOUNTABILITY OFFICE

- The trends in pedestrian and cyclist accidents (including causes of such accidents), fatalities, and injuries in the last decade.
- Challenges that states face in improving pedestrian and cyclist safety (including roadway design speeds and FHWA guidelines for road design), and the initiatives states have undertaken to address this issue. We are particularly interested in the effects of the common road engineering standard that sets speed limits at the rate 85% of drivers would use under regular conditions.
- The extent that federal initiatives and funds been made available to assist states in improving pedestrian and cyclist safety, and additional federal actions that may be needed.

Thank you for your consideration.

Sincerely,

Rick Larsen
Member of Congress

Peter DeFazio
Member of Congress

Eleanor Holmes Norton
Member of Congress

BICYCLE COALITION OF GREATER PHILADELPHIA

1500 WALNUT STREET, SUITE 1107, PHILADELPHIA, PA 19102

215-242-9253 INFO@BICYCLECOALITION.ORG