

CONNECT:

Philadelphia's Strategic Transportation Plan

October 2018



City of
Philadelphia





FORWARD

Mayor Jim Kenney

My vision for Philadelphia is a city where every neighborhood matters and everyone has an opportunity to thrive. Transportation is critical to facilitating the growth of Philadelphia's economy and connecting residents to jobs. Philadelphia has the highest poverty rate among the 10 largest United States cities. If we are to thrive as a City, it is critical to ensure that our transportation infrastructure is aligned to meet the future needs of Philadelphia's evolving economic landscape. This will ensure that growth benefits the lives and daily experiences of all of our residents – especially those who are disadvantaged or live in neighborhoods that have been disconnected from jobs and opportunities for far too long.

I am committed to making sure that all Philadelphians have a brighter future, which is why my Administration is making transformational investments in early educational success and in rebuilding our city's parks, recreation centers, and libraries – investments that will advance both equity and economic prosperity. I know that our City's infrastructure is not up to the standards of a world class city. To fix this, I have made investing in our roads and transportation systems a priority of my Administration. With additional resources, the Streets Department will be able to reach the goal of resurfacing and paving 131 miles annually, getting our roadways closer to a state of good repair. Since the beginning of my administration, we have attracted over \$65 million in outside funding to improve the quality of roads, bridges, transit, and bike lanes and will continue to actively pursue additional funding.

However, significant new infrastructure investment from the federal government remains uncertain, so the purpose of this strategic plan is to set the agenda for how the City of Philadelphia will do more with what it has to prioritize and invest in transportation that benefits everyone.

Government works best when it is close to the people. Giving residents a voice in the infrastructure decisions that affect their lives is a cornerstone of CONNECT over the next seven years.

While we are a growing and increasingly thriving city, we need to ensure growth is inclusive and that all our residents have a chance to prosper. More than half of Philadelphians in poverty do not own a car, meaning public transit is their primary means of getting around. By collaborating with SEPTA, we can transform our bus service, modernize our trolleys, and move people to jobs and other activities more efficiently.

During my first year in office I signed Executive Order 11-16 and created the Office of Complete Streets and the Vision Zero Task Force, which is tasked with making sure our streets are safe for all users. Although Philadelphia is already one of the most walkable cities in the nation, we need to make sure walking is made safer in all neighborhoods and commercial corridors across the City. I am committed to meaningfully expanding the cycling network to give people of all ages and abilities safe places to cycle for transportation and recreation.

Transportation is also key to meeting my commitment of upholding the City's role in the Paris Climate Agreement and working to reduce the worst harms from climate change. Our transportation network must be resilient to the impacts from climate change that we're already experiencing, and efforts to promote transit, walking, and biking will reduce the carbon pollution causing climate change and cut other pollutants that harm our air quality, particularly in our most vulnerable neighborhoods.

Our transportation networks connect neighbors, businesses, families, and friends to one another. This seven-year CONNECT plan will guide the work of my Administration to create a transportation system that benefits everyone.





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Executive Summary

CONNECT is the City of Philadelphia's Strategic Transportation Plan for the next seven years (2019 – 2025). CONNECT is informed by insights from data analysis and civic engagement that highlight the transportation opportunities and challenges that Philadelphia faces.

Our Vision

A transportation system that benefits everyone. It is a system that is safe, affordable, accessible, and reliable at moving Philadelphians, visitors, and commerce so neighborhoods thrive, people are healthy, and the economy grows.

Our Values

Our transportation system should focus on results that benefit all Philadelphians - regardless of race, income, or ability. **Transportation equity** means investing in transportation infrastructure and access to ensure that all people can affordably connect to opportunities, including education and employment, and have the ability to fully participate in their communities and the economy.

Safety – Our transportation system should be safe for all users, in all neighborhoods. We value human life and believe that preserving human life should take priority over convenience.

Opportunity & Access – Our transportation system should ensure that people and neighborhoods are not isolated from opportunities. Our transportation system should provide this opportunity and access regardless of a person's ability or disability.

Sustainability – Our transportation system should uphold the City's commitment to reducing carbon pollution, be resilient to a changing climate, improve local air quality, and manage stormwater runoff. Our transportation system should be financially sustainable to allow us to reach and maintain a state of good repair.

Health – Our transportation system should promote healthy lifestyles by making walking and bicycling easier, more convenient, and safer, while reducing air pollution and noise.



Our Goals

Our Strategies

Goal 0 **Vision Zero**

Working towards the goal of zero traffic deaths by 2030

- Engineer Streets for Safety
- Educate Residents and Schools about Traffic Safety
- Enforce Regulations to Deter Dangerous Behaviors
- Evaluate Strategies to Ensure Results

Goal 1 **Transit First**

Moving people equitably, affordably, and reliably around a growing city

- Transform Bus Service
- Develop a City Transit Plan
- Modernize the Trolley Fleet
- Expand Indego Bike Share
- Stabilize and Grow Regional Transit Funding

Goal 2 **Great Streets**

Investing in well-maintained streets to serve people using all modes of transportation

- Achieve a State of Good Repair
- Ensure a Walkable City
- Create Neighborhood Slow Zones
- Develop a High Quality Bicycle Network

Goal 3 **A Competitive City**

Supporting communities and commerce with a reliable and efficient transportation system

- Manage Congestion
- Manage the Curbside and Parking
- Update the Truck Network
- Pursue Sustainability for Competitiveness

Goal 4 **Efficient Government**

Delivering transportation services and projects efficiently and transparently for residents

- Engage Communities and Build Coalitions
- Streamline Project Delivery and Prioritization
- Modernize Asset Management
- Innovate with Technology
- Plan for a Clean Fleet

Introduction

As Philadelphia's population and economy continue to grow, driving new housing and commercial development to more parts of the city, our technology and travel preferences are changing. In this dynamic environment, the time is right to reconsider the role of transportation in shaping the future of Philadelphia as a competitive, inclusive world class city. Already recognized for our transportation infrastructure, Philadelphia has the opportunity to fill critical transportation gaps, adapt to future economic and residential needs, and ensure better connectivity to job opportunities, as well as facilitate more job growth in the city.

CONNECT is the City of Philadelphia's Strategic Transportation Plan for the next seven years.

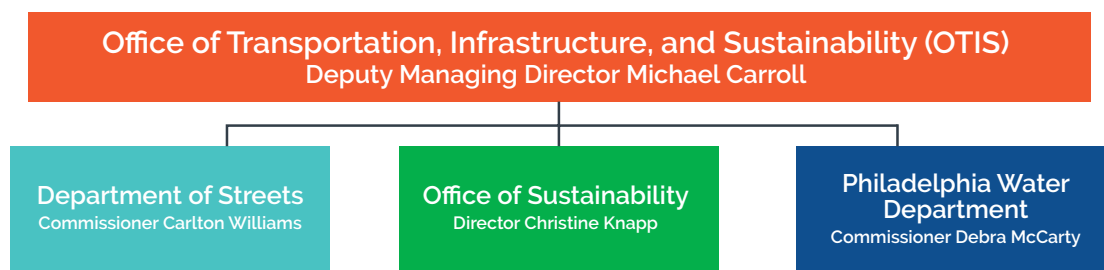
CONNECT integrates the trends of a vibrant city, changes in transportation planning and technology, and data and dialogue from residents, employers, and other stakeholders. The plan is organized around core values to foster a safe, equitable, sustainable, and healthy city with greater access and opportunity.

While the City's comprehensive plan, *Philadelphia2035*, lays out long-term goals for transportation, this strategic plan sets priorities for implementation over the next seven years. CONNECT will guide City departments as they work with stakeholders to focus on the important goals highlighted in CONNECT.

Past generations have endowed Philadelphia with a robust transit network and a dense street grid that promote walking and biking. The principal challenge of this legacy is that these systems, while robust, have not been examined critically or maintained adequately for many decades. Trends in Philadelphia, and nationally, make now the time.

The City and SEPTA meet all Title VI requirements, but more can be done to increase equity. Both the City and the local transportation authority have committed leadership focused on improving equity, opportunity, and connectivity.

Immigrants and millennials are driving Philadelphia's population growth. The city's population is continuing to diversify with 42.9% of residents identifying as Black, 41.3% as White, 13.8% as Latino/Hispanic, 6.9% as Asian, 5.7% as some other race, and 2.8%, as two or more races. The total population of Philadelphia is





expected to exceed 1.6 million residents by 2025. As a majority-minority city, with a growing population of millennial and foreign-born residents, Philadelphia offers employers an unmatched pool of diverse talent. Our residents bring diversity in thought and experience that serve as a great addition to any company.

The transportation world is awash in new technologies, new business models, and new preferences that planners and policy makers must consider. Generational attitudes towards travel choices are changing the transportation landscape with younger people showing less allegiance to a particular mode of transportation and a higher willingness to use a variety of travel modes. New options from ride-hailing to dockless bike share are widening the landscape of options facilitated through on-demand technology. While attitudes towards transit are more positive in younger cohorts, bus ridership has decreased in Philadelphia and across the country. Smart cities and autonomous mobility hold a promising but uncertain future.

Philadelphia's dense, walkable, and robust multi-modal transportation system is one of the city's core competitive advantages; preserving this is essential to any plan for transportation. Indeed, even with the reconstruction of Interstate 95 (I-95), a multi-decade, multi-billion dollar project, the City is working with the Pennsylvania Department of Transportation (PennDOT) to make improvements to the roadway network leading to the highway. These improvements include bike lanes, traffic calming mechanisms, and a cap over I-95 that incorporates a park that will reconnect the city to its Delaware River Waterfront.

Public engagement as an element of infrastructure projects has been required since the 1970s. However, the transportation community has been faulted for "check the box" style outreach where public conversations only happen once all the important decisions have been made. Furthermore, the format of engagement and meetings does not always promote listening between transportation professionals and residents, or between different parts of the community. The launch of the Indego Bike Share system in 2015 gave the City of Philadelphia an opportunity to pilot new ways of engaging with communities to better understand transportation needs and perspectives. Based on that engagement, Indego has piloted numerous innovations that make it the most equitable and inclusive bike share system in the North America, such as an ambassador program, partnering with community organizations, addressing the digital divide, and opening the system to unbanked populations. In a city as diverse as Philadelphia, it will not always be possible to fully accommodate every infrastructure desire, but everyone can be heard.

Listening to the concerns of Philadelphians and looking at a variety of data sources are essential first steps to understanding the transportation challenges and opportunities facing the City. Informed by these insights and driven by the CONNECT values, **this plan lays out a consistent set of goals and strategies to achieve the vision of a transportation system that benefits everyone.**

Modified Urban Intersection - South Broad Street





CONNECT

fundamental values:

Our transportation system should focus on results that benefit all Philadelphians - regardless of race, income, or ability. **Transportation equity** means investing in transportation infrastructure and access to ensure that all people can affordably connect to opportunities, including educational and employment, and have the ability to fully participate in their communities and the economy.

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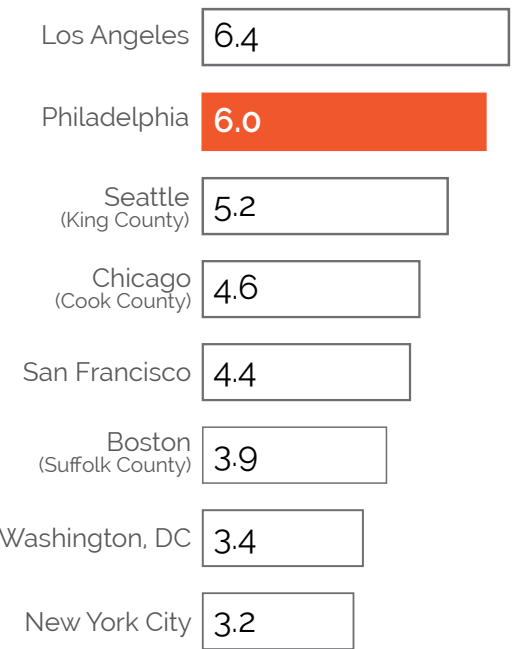
CONNECT

data insights:

The transportation world has more data available than ever before – traffic counts, travel speeds derived from new technologies, Census data, survey data, demographic analysis, crash data, detailed transit counts, and many more. While a more detailed exploration of the data is located in the online CONNECT Databook, overall the data that OTIS has examined can be synthesized into the following five data insights.

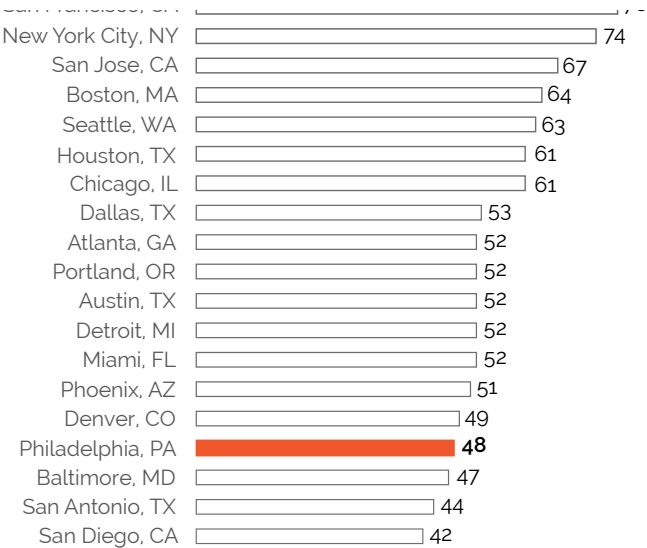
1. **Safety is our most significant transportation problem** when compared with other cities. Eliminating deaths and serious injuries is our top priority.

Traffic Deaths per 100,000 Residents¹

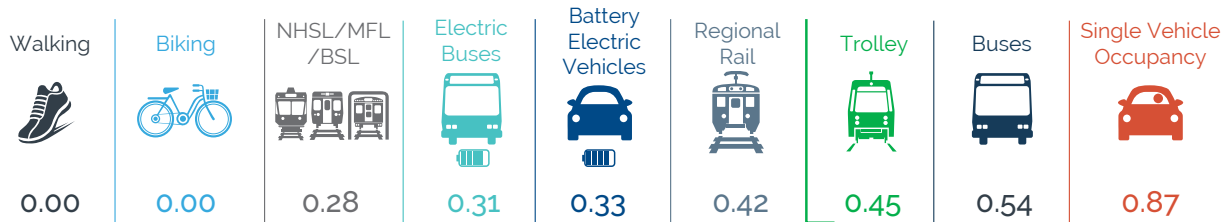


2. Philadelphia is a large and diverse city that has a growing population and economy. While not as severe as other large cities, **congestion will increase unless we take action.**

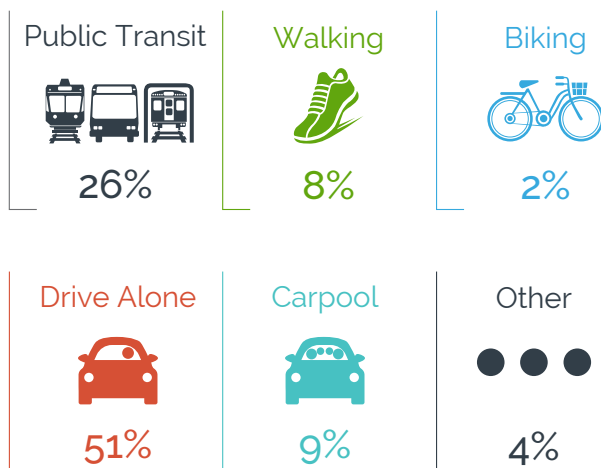
Hours Spent in Traffic Per Resident Per Year²



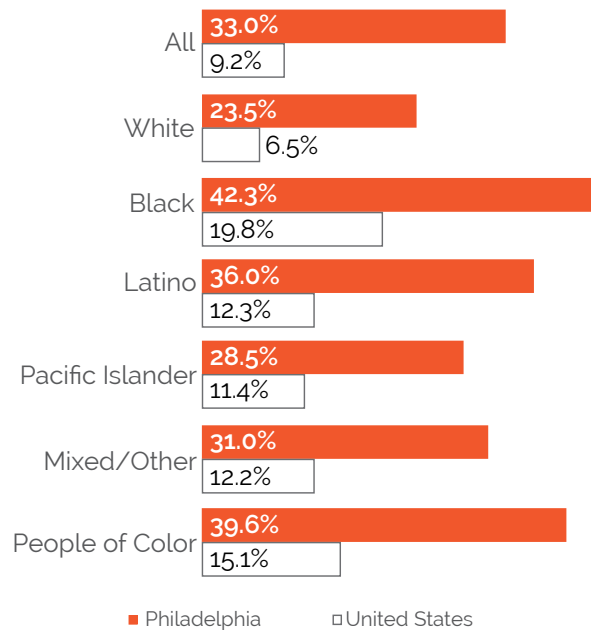
3. Philadelphia has an opportunity to move more people on foot, by bike, and on public transportation to meet our Vision Zero, climate, health, and equity goals. **Transit, walking, and biking should be the fastest, safest, and most convenient options to travel.**

Emissions (lbs CO₂) Per Passenger Mile by Travel Mode³

4. Many **people still use and depend on cars** for transportation, and this should be **supported in a way that respects everyone else who uses the street.**

Means of Transportation to Work⁴

5. Racial inequalities are reflected in how people depend on the transportation system. **Racial inequities in Philadelphia's transportation system must be measured and fixed intentionally.**

Percent of People without a Vehicle
United States vs. Philadelphia⁵



CONNECT

engagement insights:



The Office of Transportation, Infrastructure, and Sustainability (OTIS) and the Philadelphia City Planning Commission (PCPC) listen routinely to transportation concerns and ideas of residents, employers, and other stakeholders. Examples of recent engagement include the Philadelphia 2035 District Plans, Vision Zero outreach, Philly Free Streets, Roosevelt Boulevard Route for Change, Philadelphia Electric Vehicle Task Force, public meetings on bike lane projects, engagement around the operations of the Indego Bike Share system, and work with stakeholders in producing this strategic plan.

While all the thoughts and opinions cannot be represented entirely, the synthesis of these conversations by OTIS yields the following five engagement insights:

1. Philadelphia's diversity is reflected in the **different ways residents get around**.
2. The emotional impact of deaths and serious injuries on our roadways is **unacceptable and preventable. We must do all we can to stop this cycle of tragedy**.
3. Generational poverty and a long history of structural racism have a large effect on how Philadelphia's transportation system meets the needs of residents, or in some cases, does not meet their needs. Our history of inequality influences how we approach issues around **mobility, safety, gentrification, enforcement, funding, and engagement**.
4. **Transportation problems**, even when people do not use that exact term or think of them as such, **are a major cause of quality of life issues in Philadelphia**.
5. **When transportation works well**, it connects people to jobs and other opportunities, provides a civic space for us to interact with our neighbors, and is even enjoyable. **When it does not work well** it leaves people isolated from opportunity, stops us from building wealth, wastes our time, dirties our water and air, is a blight on our urban landscape, and even takes our lives.

Additional insights synthesized from previous engagement are listed later in CONNECT.



CONNECT Vision

A transportation system that benefits everyone.

A transportation system that is safe, affordable, accessible, and reliable at moving Philadelphians, visitors, and commerce so neighborhoods thrive, people are healthy, and the economy grows.



We will achieve our vision by focusing on the following five goals:

0. **Vision Zero** – Working toward the goal of zero traffic-related deaths by 2030
1. **Transit First** – Moving people equitably, affordably, and reliably around a growing city
2. **Great Streets** – Investing in well-maintained streets to serve people using all modes of transportation
3. **A Competitive City** – Supporting communities and commerce with a reliable and efficient transportation system
4. **Efficient Government** – Delivering transportation services and projects efficiently and transparently for residents



Vision Zero Goal 0

STRATEGIES

- Engineer Streets for Safety
- Educate Residents and Schools about Traffic Safety
- Enforce Regulations to Deter Dangerous Behaviors
- Evaluate Strategies to Ensure Results

To learn more
about Vision Zero
initiatives, visit:
VISIONZEROPHL.COM

Traffic crashes are a public health threat to Philadelphians.

Every year in Philadelphia, people are subject to approximately 10,000 traffic crashes on Philadelphia streets, taking the lives of approximately 100 people, and severely injuring more. Compared with peer cities with established Vision Zero policies, Philadelphia has one of the highest rates of traffic-related deaths per 100,000 residents. Philadelphia's traffic death rate is twice as high as that of New York City.

Equity must always be a guiding principle in Vision Zero, as well as in the implementation of any traffic safety measures. The Kenney Administration and the Vision Zero Task Force recognize that children, the elderly, people living with physical disabilities, and those who live below the poverty line are impacted disproportionately by traffic deaths and severe injuries. This is unacceptable. All people—regardless of age, physical ability, or income—should be able to travel safely on our city streets, regardless of how they do so.

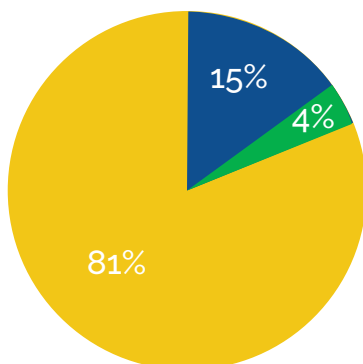
In 2016, the City adopted Vision Zero, rejecting the assumption that traffic deaths are “accidents.” Instead, **the City asserts that traffic deaths are preventable incidents that can—and will—be systematically addressed.** By applying Vision Zero's core principles, lives can be saved and serious injuries can be prevented on city streets, while the quality of life for all Philadelphians can be enhanced.



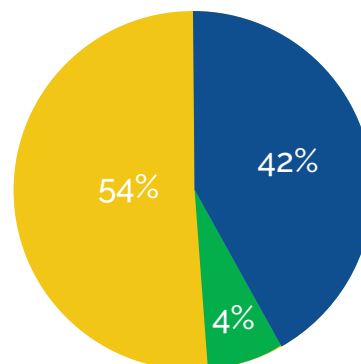
What our data says about Vision Zero

- **50% of crashes that resulted in a death or a severe injury occurred on just 12% of Philadelphia streets (2012-2016).**⁶ This 12% of streets makes up the High Injury Network (HIN) and is the basis of prioritizing safety improvements. Using the HIN is a data-driven way to ensure that the most significant safety problems are dealt with first.
 - a. 42% of people killed in traffic crashes were walking (2012-2017).
 - b. 54% of people killed in traffic crashes were in motor vehicles (2012-2017).
 - c. 4% of people killed in traffic crashes were biking (2012-2017).
- On average, four children every day are reported to be involved in traffic crashes on Philadelphia streets.
- Speed management is essential to Vision Zero. Even minor decreases in motor vehicle speed have a significant effect on safety. **A person walking who is struck at 20 mph has a 90% chance of surviving, while a person struck at 30 mph only has a 50% chance of survival. At 40 mph, a person only has a 10% chance of survival.**

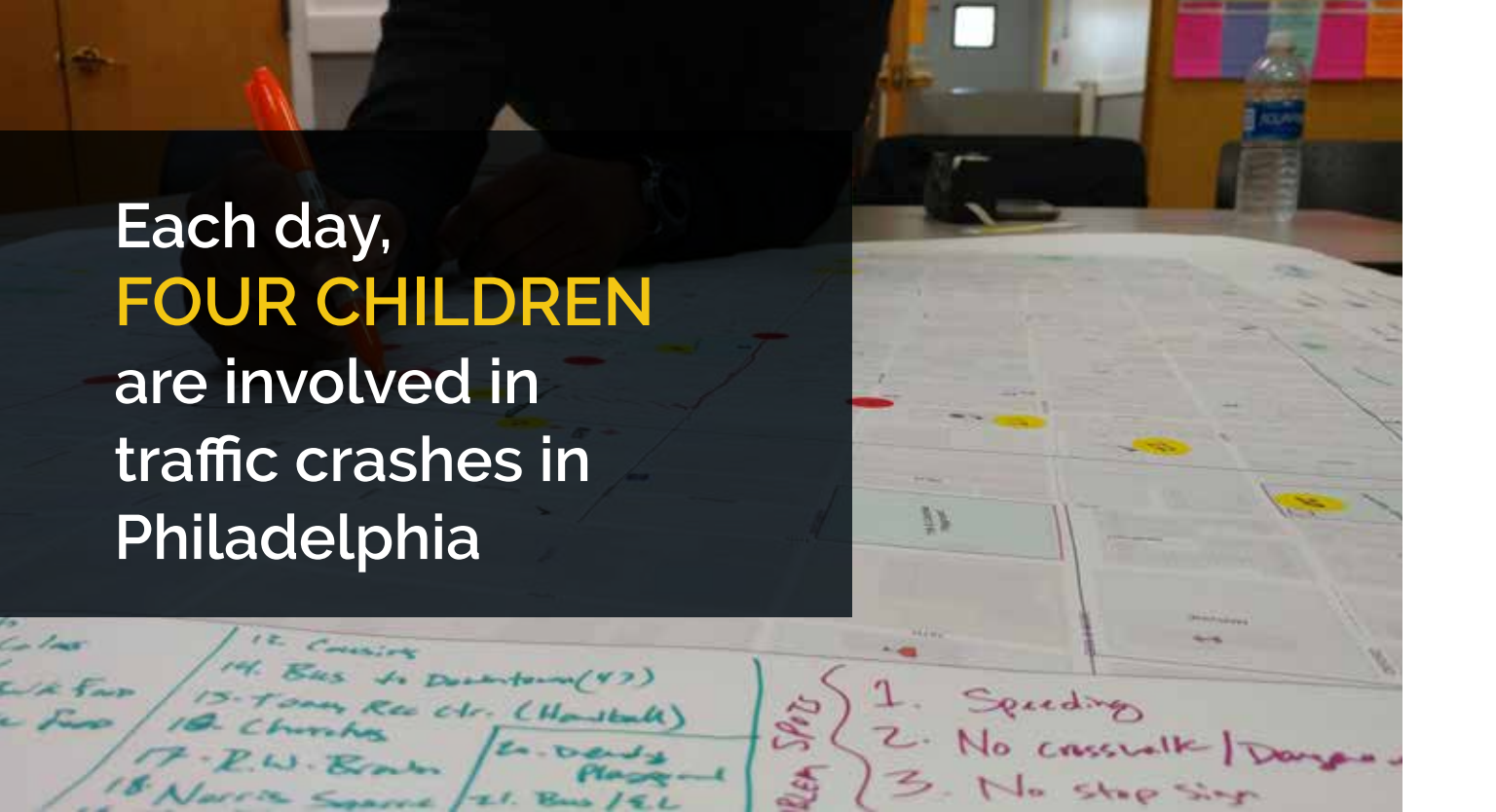
**People Involved in Crashes
2013 - 2017**



**People Killed in Crashes
2013 - 2017**



■ People Walking ■ People Biking ■ People in Motor Vehicles



Each day,
FOUR CHILDREN
are involved in
traffic crashes in
Philadelphia

What our engagement says about Vision Zero

- In the 2017 Vision Zero Traffic Safety Survey, 961 respondents shared their thoughts about traffic safety in Philadelphia.⁷
 - a. 72% of the respondents either knew someone whose life has been impacted by a traffic crash or have been impacted personally.
 - b. 53% of the respondents did not feel that children can walk safely to schools or parks in their neighborhood - of these, 79% reported "fear of traffic" to be the reason.
 - c. 33% of the respondents either did not know or identified incorrectly the speed limit on local and neighborhood streets in Philadelphia as 25 mph unless otherwise posted.
- According to the 2016-17 Philadelphia Resident Survey Report conducted by the City of Philadelphia, traffic enforcement was lowest ranked among public safety services by residents.⁸

Chestnut Street Protected Bike Lane



Strategies

Engineer Streets for Safety

Philadelphia streets should be designed to prevent fatal crashes and serious injuries to the greatest extent possible. How streets are designed is an expression of values and choices – they can be designed to move people more quickly, or they can be designed to move people more safely. By adopting Vision Zero, Mayor Kenney chose to prioritize safety for Philadelphia. By making targeted engineering improvements, such as how traffic signals are timed, where crosswalks and protected bike lanes are installed, switching to LED streetlighting, and creating new medians, the safety of city streets can be significantly enhanced.

The redesign of streets is one of the key Vision Zero strategies to reduce traffic deaths and injuries. By focusing engineering investments on the HIN as well as integrating systemic improvements to all of the City's on-going paving and maintenance work, safety on Philadelphia's streets can be improved. However, it can be a challenge to ensure that the geographical distribution of engineering improvements is equitable. This challenge can be overcome by using a data-driven approach that prioritizes improvements along the HIN.

"We Meet in the Street" Campaign



Educate Residents and Schools about Traffic Safety

Vision Zero is an opportunity to bring fresh perspectives to traffic safety education. Through a coordinated and comprehensive public education campaign, a culture of traffic safety and responsibility can be fostered throughout Philadelphia.

Vision Zero education will start in the schools—working with the School District of Philadelphia and other educational partners—to ensure that children have a sound understanding of traffic safety do's and don'ts that will keep them safe as they walk and bike around their neighborhoods. By improving street design and educating the public about traffic safety, more people are likely to choose walking and biking as transportation options which will lead to better health outcomes today and in the future.

While Philadelphia is one of the most walkable cities for adults, Philadelphia school children are confronted with safety and environmental challenges. **Each day, four children are involved in traffic crashes in Philadelphia.** In addition to traffic crashes, over 20% of children aged 5-18 enrolled in the School District of Philadelphia are obese.⁹ Today, fewer students walk to school than have in the past. In 1969, nearly 48% of students aged 5-14 walked or biked to school. In 2009, that number was only 13%.¹⁰

The Safe Routes Philly initiative will work with teachers, school administrators, staff, and community members to create a toolkit to educate and encourage safe walking and biking to school. Schools will be targeted for engagement based on health and traffic safety data. Crossing guards are a valuable resource to protect children in Philadelphia, and the deployments of crossing guards should be prioritized to schools on the HIN. By working with schools and communities with the highest need, Safe Routes Philly will champion education and street redesigns to make walking and biking to school the safe and easy choice for parents.



Enforce Regulations to Deter Dangerous Behaviors

In the 2016-17 Philadelphia Residents Survey Report, respondents expressed their desire for a renewed focus on traffic safety enforcement. At the same time, there is a national conversation surrounding the issue of equitable enforcement of laws. To promote both the interest of enhancing enforcement and doing so more equitably, any increase in traffic enforcement must be viewed from the potential benefits of increased safety and the potential risks of perceived profiling and unintended consequences of officer-initiated traffic enforcement.

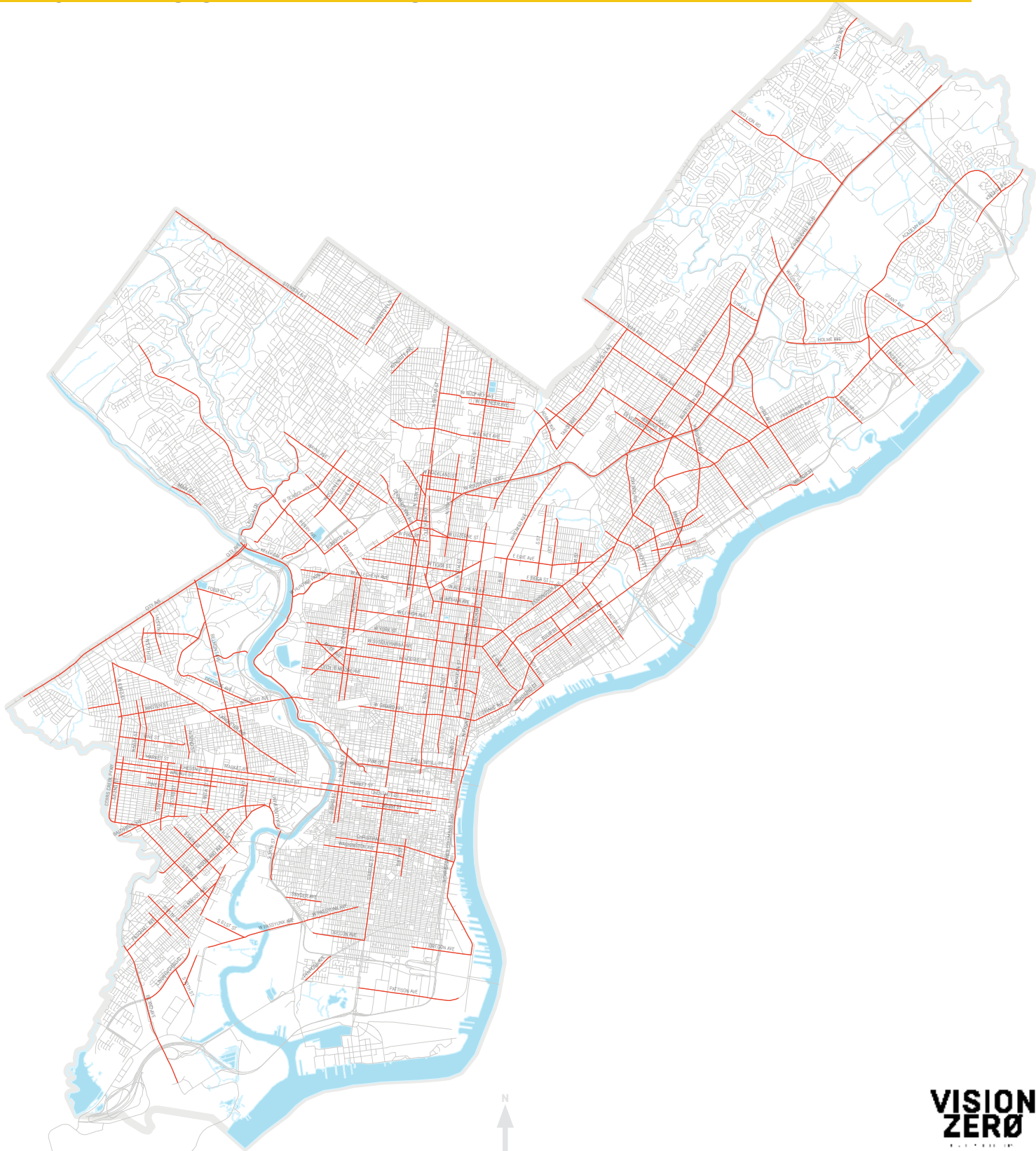
By focusing traffic safety enforcement on violations that result in severe injuries and deaths along the HIN, near schools, housing for seniors, and people living with disabilities, we can save lives and prevent injuries. One strategy that can be employed to improve traffic safety in an equitable manner is the expansion of automated enforcement applied in a data-driven manner. When cameras are not an option for enforcement of the "Safety Six", such as for parking on the sidewalk or failure to yield to pedestrians, officer-initiated traffic enforcement may be needed; however, it should be done equitably and focus on the behaviors that most affect traffic deaths and serious injuries. **The "Safety Six" are those violations most likely to result in traffic deaths or serious injuries:**

1. Reckless/careless driving;
2. Red light- and stop sign – running;
3. Driving under the influence;
4. Failure to yield while turning or to pedestrians;
5. Parking enforcement on or within 20' of a cross walk, on a sidewalk, or in a bike lane; and
6. Distracted driving.

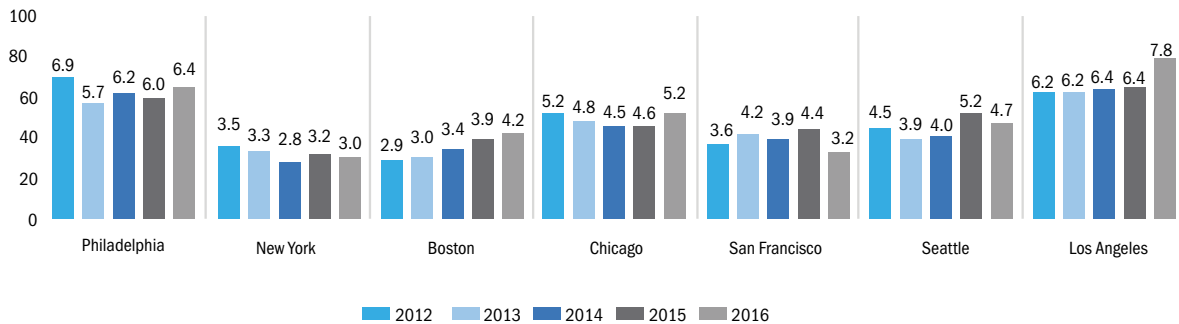
Investments in engineering solutions, along with community education and engagement, will be prioritized before officer-initiated enforcement.

High Injury Network (HIN)

50% of traffic deaths and severe injuries occur on just
12% of our city's streets



Traffic Deaths per 100k Residents per Year - Yearly Change¹¹



Source: NHTSA (NHSTA includes interstate traffic deaths and is tracked at the county level.)

Safety is our most significant transportation problem.

Evaluate Strategies to Ensure Results

By using crash data to inform street design, education, and enforcement investments, safety improvements can have an outsized impact in neighborhoods that need them the most. The HIN – the 12% of Philadelphia streets that account for 50% of traffic deaths and serious injuries – will guide the first three years of work. The HIN will be analyzed every three years to evaluate the effect of improvements.

The City can gain a better understanding of the cost-benefit ratio of its efforts to improve safety and save lives by coupling investments on streets with the highest needs with new technology for data collection and analysis, as well as evaluating the effectiveness of safety projects and initiatives before and after implementation.

Vision Zero

Outcomes

By prioritizing safety and focusing on the Vision Zero strategies by 2030, we can:

1. Decrease traffic deaths to Zero.

How Vision Zero Increases Equity

Pursuing Vision Zero means addressing the fact that traffic crashes disproportionately impact neighborhoods where people of color live, as well as areas where incomes are below the median. This means that traffic safety investments must be prioritized in these locations, and that our work on enforcement must be sensitive to historic and current tensions.

Vision Zero Strategies and Deliverables

Engineer Streets for Safety

Deliver By End of 2020

Finish construction and delivery of American Street TIGER project

Install protected, high quality bike lanes at priority locations

Collaborate with PennDOT on revisions to design manuals to include safety best practices

Deliver By End of 2025

Convert all of Philadelphia's streetlights to LEDs to increase visibility

Integrate safety improvements into over \$150 million in infrastructure projects over the next seven years, including in these example projects:

- North Broad Medians Safety Project
- Improvements at the intersection of 20th, Penrose, Moyamensing, and Packer
- Summerdale, Adams, and Roosevelt Boulevard safety improvements
- Washington Avenue, Grays Ferry to Delaware, Complete Streets improvements
- Improve safety through all paving and line striping work

Educate Residents and Schools about Traffic Safety

Deliver By End of 2020

Expand "We Meet in the Street", the Vision Zero public awareness campaign

Develop a toolkit of curriculum and resources for educators and community members to implement at their schools

Partner with cohorts of 20 schools annually to provide support for Safe Routes Philly, establishing and evaluating the program in School District of Philadelphia neighborhood schools.

Develop a city-wide Walk to School Day program

Host Vision Zero Safety Zone at Philly Free Streets programs

Deliver By End of 2025

Establish a stable funding source for Safe Routes Philly

Evaluate and make physical safety improvements to infrastructure near high need schools, particularly within the HIN

Develop a standardized parent engagement strategy

Improve robustness and effectiveness of crossing guard system

Enforce Regulations to Deter Dangerous Behaviors

Deliver By End of 2020

Expand use of Automatic Red Light Enforcement cameras at intersections identified through data driven analysis

Install speed enforcement cameras on Roosevelt Boulevard, the city's most dangerous road

Work with partners to continue to implement "Safety Six" traffic safety enforcement campaign

Host Vision Zero workshops for Philadelphia Police Department captains

Deliver By End of 2025

Secure enabling legislation from the Commonwealth to allow speed cameras near schools

Gain legislative approval from the Commonwealth to permit local police officers to use radar for speed enforcement

Evaluate Strategies to Ensure Results

Deliver By End of 2020

Fully roll out electronic crash reporting in police districts via TRACS

Input Vision Zero projects into public-facing GIS layer

Develop new 3-year Vision Zero Action plan for 2020-2022 with reevaluated high injury network

Conduct before-and-after evaluations of safety improvement projects and programs

Deliver By End of 2025

Work with PennDOT and other partners on revising procedures to collect the data necessary to complete a Vision Zero racial equity analysis

Engage in research that advances traffic safety policies and practices, working with University partners

Develop new 3-year Vision Zero Action plan for 2023-2025 with reevaluated HIN



Transit First

Goal 1

STRATEGIES

- Transform Bus Service
- Develop a City Transit Plan
- Modernize the Trolley Fleet
- Expand Indego Bike Share
- Stabilize and Grow Regional Transit Funding

Philadelphia works as a competitive and inclusive city due to its effective public transit. Public transit has been an integral part of Philadelphia's history from the beginning. In the 1600's, ferry service operated along the Delaware River, and in the 1800's, omnibus and commuter rail services allowed the city to expand beyond its historic core. SEPTA was formed in the 1960s to consolidate privately owned transit operations and provide a unified transit system in the city and region. Regional rail improvements, including the Center City Commuter Tunnel, allowed Center City to maintain its status as a regional employment hub into the present era. **Improving mass transit is key to keeping Philadelphians moving in a growing city in an inclusive manner, cutting greenhouse gases, and keeping the economy competitive.** For many residents, access to transit and the range of where transit will take them forms a wall around their lives – inside the wall is opportunity, while outside the wall are the jobs and other activities they cannot access. Improving transit will benefit low income residents who have lower car ownership. Transit is the best tool Philadelphia has to physically connect people to opportunity.

Both the City and SEPTA have a strong role in ensuring that public transit is the first travel mode of choice. The transit system has four main components – bus, trolley, subway, and regional rail. Regional rail and subway improvements are important and the City supports SEPTA's large-scale rail improvements that connect Philadelphia residents to job centers in the city and

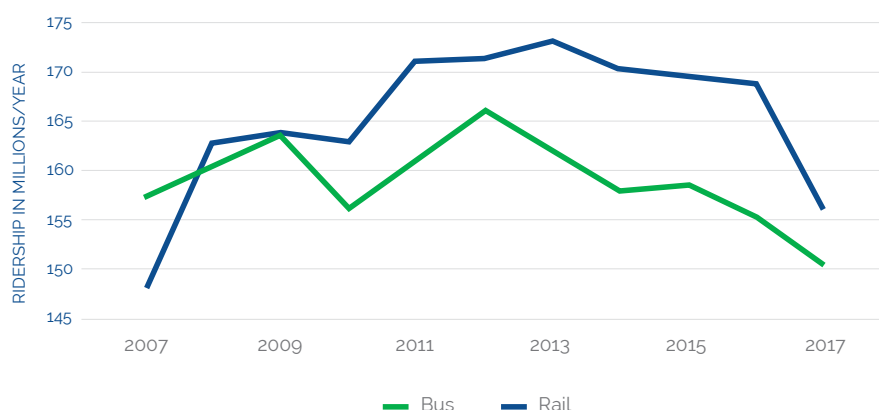


regionally. However, this plan focuses mostly on improvements to surface transit modes of bus and trolley. While SEPTA and other agencies have direct operational control of transit in Philadelphia, the City is a key player in transit's success. The City, for example, must consider how to use and prioritize road space, establish the character of land use and development, and enforce traffic regulations. **A combination of transportation system improvements and focused development around frequent transit will ensure that Philadelphia's public transit system is an efficient and attractive travel option.**

What data says about putting transit first

Philadelphians are highly reliant on public transit. Forty percent of Philadelphia residents get to work without a car, most of whom use transit.¹² These residents, who tend to be poorer and disproportionately minority than the city overall, depend on a high-quality transit system to live their lives, whether bus, trolley, subway, or regional rail. **One-third of total residents, and fully one-half of residents in poverty, do not have a car.**¹³ These people depend on transit. Philadelphians report that transportation is the most significant barrier to job opportunities for residents below the poverty line.¹⁴

SEPTA Ridership Change Since 2006¹⁹



SEPTA ridership has declined substantially since its peak in 2012. Ride-sharing, congestion, and automobile ownership create a negative feedback cycle that must be reversed.

Boulevard Direct Station



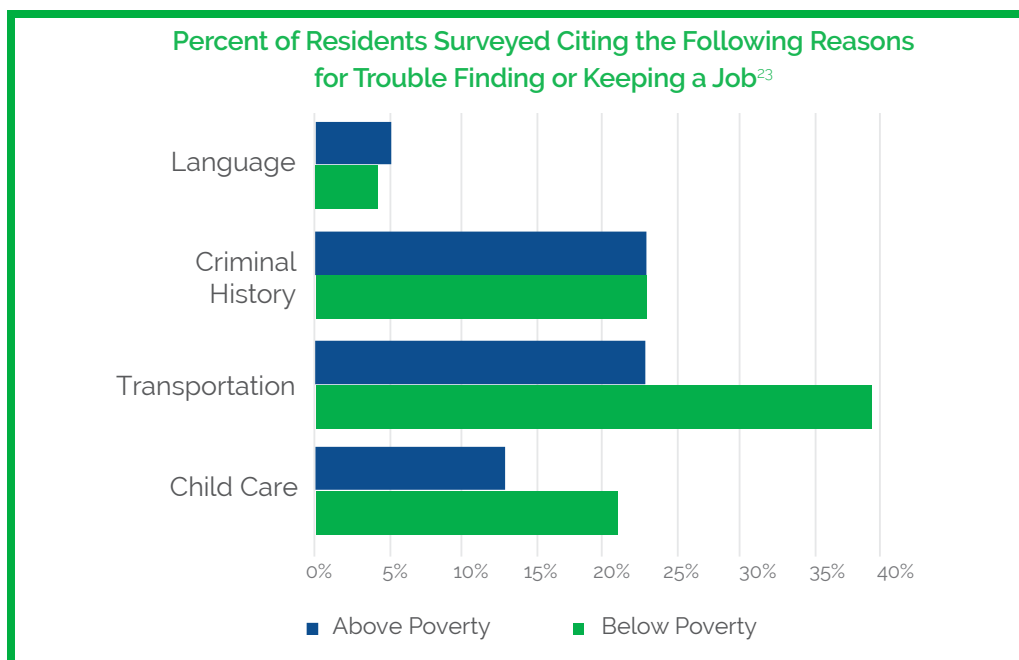
The quickest, most cost effective, and most equitable way to improve transit in Philadelphia is to take steps to improve the efficiency, affordability, and connectivity of bus service.

While SEPTA provides a high level of service to poor and minority communities – 77% of all Philadelphia residents and 83% of minority residents and residents in poverty are within ¼ mile or less of frequent transit service¹⁵ – improving and expanding frequent, reliable transit service is key to connecting communities in need with jobs, education, and other activities. It is also key to making transit the most convenient option for people from all backgrounds and for all trip purposes.

SEPTA faces many challenges. On-time performance of buses is falling as traffic congestion worsens. Bus ridership has been declining in cities across the country, including in Philadelphia.¹⁶ The quickest, most cost effective, and most equitable way to improve transit in Philadelphia is to take steps to improve the efficiency and connectivity of bus service. Trolleys are SEPTA's other surface transit mode and carry more than 90,000 people daily. They are among SEPTA's highest ridership and most efficient routes. However, the existing fleet is aging and not accessible to people with disabilities.

Transit vehicles contribute less to local air pollution and climate change than private automobiles. The average greenhouse gas emissions per passenger mile from cars are almost twice those of SEPTA's current hybrid buses, and three times that of the subway and elevated rail network. Greenhouse gas emissions from transit can be further reduced by the electrification of local transit, cleaning of Philadelphia's regional electricity grid, and increasing the ridership per bus mile of transit in Philadelphia.¹⁷

Transit is also a tool to promote health. Studies show that transit users get 15 minutes of physical activity during a journey, while auto users receive only about one minute.¹⁸



Access to fast, frequent, affordable, and reliable transportation is a key to upward mobility, particularly for Philadelphians in poverty.

What our engagement says about putting transit first

1. Transit is a vital resource connecting Philadelphians to jobs, other activities, and to each other.
2. While some residents do not see transit as a realistic option, most Philadelphians will and do take the bus, if it works for them. Transit needs to be reliable, fast, and frequent for residents to take it. It must also be safe and comfortable.
3. The unique needs of those who travel to jobs at night or on weekends are often missed in discussion about transit service, yet these people are often those who need the service the most. Improving the transit experience not only for potential riders, but current riders who are disproportionately minority or low income, will have a positive equity impact.
4. The transfer penalty, charged to switch between most transit lines, is a barrier for many transit riders to affordably and efficiently use the network.
5. Many people, especially in West and Southwest Philadelphia, use and love their existing trolleys, but are also receptive to the improvements that will come with SEPTA's Trolley Modernization program.
6. Modernizing trolley service will be significant for those who cannot use the existing trolleys, such as those who use a wheelchair or families with strollers.
7. People see and welcome Indego Bike Share as investments in their neighborhoods and value the service for both transportation and recreation. Indego is seen widely as an option for improving health and reducing disparities.

Strategies

Transform Bus Service

Inclusive growth can happen only if those without access to a car are able to access jobs, education, and other activities by transit more reliably and affordably. Transit must be frequent, reliable, and affordable throughout the day and on weekends to get Philadelphians to jobs. Large rail investments are important, but can cost billions of dollars and take well over a decade.

Transforming bus service in Philadelphia can be accomplished in the next seven years and cost much less than a major rail investment while still making a significant difference in daily life in Philadelphia.

SEPTA's June 2018 *Philadelphia Bus Network Choice Report* found that the bus network can be redesigned to move more people to more places more quickly, all without an increase in SEPTA's operating subsidy. Transit agencies in other major cities, such as Houston and Baltimore, have recently redesigned their bus systems and have seen the benefits of increased mobility and time saved for transit riders. These systems also have reversed national and regional declining ridership trends. SEPTA alone cannot transform the bus service. The City of Philadelphia, and partners

like the Philadelphia Parking Authority, are critical in keeping traffic flowing and enforcing the rules of the road. The Report recognized this and had recommendations for both SEPTA and the City. For SEPTA, the Report contains four strategies to decrease duplication and excess service and four strategies to increase connection opportunities. The City of Philadelphia is committed to working with SEPTA to implement these strategies to transform bus service. The City will work closely with SEPTA during the Comprehensive Bus Network Redesign to find an opportunity to remove the transfer penalty while ensuring SEPTA's firm financial footing.

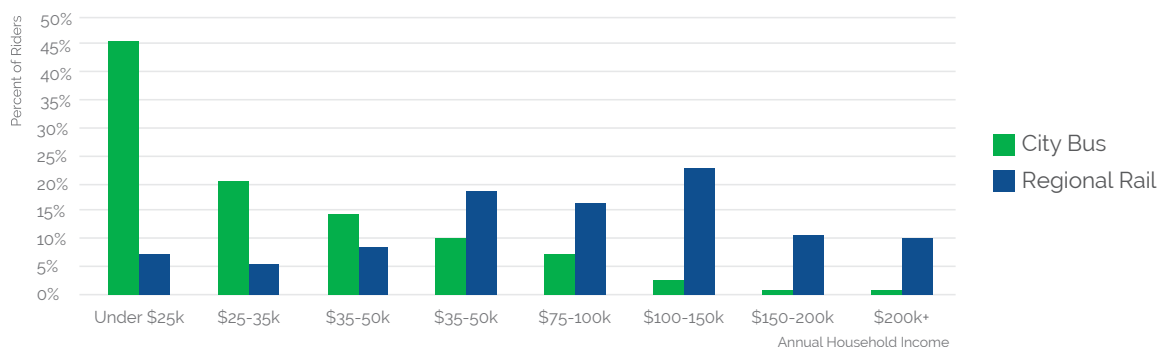
Installing bus shelters, maintaining and transforming existing bus lanes, and implementing new bus priority treatments are all steps the City can take to improve bus service. Choosing to transform bus service in Philadelphia will mean prioritizing road space for transit over road space for cars in certain locations. Bus priority treatments can be a combination of transit signal priority, peak-hour or all-day bus lanes, improved pavement markings, and enhanced enforcement of bus lanes. Bus lanes and other priority treatments will need to be enforced, both by automated technology and by uniformed officers to make sure that transit service is reliable.

Philadelphia has a choice to make. Philadelphia can choose to streamline routes, modernize service standards, provide better bus-rail connections, give transit a priority in traffic, reexamine off-peak and weekend service, better connect neighborhoods to opportunities, and attract new customers out of their cars. Doing so will connect residents to job centers and maintain mobility in an increasingly congested city. Or, Philadelphia can maintain the status quo and face a vicious cycle of ridership losses, service cuts, and isolated communities excluded from Philadelphia's growing prosperity.

"The [bus] network could be redesigned so that more people could get to more places, sooner... SEPTA does not fully control quality of transit in the city. The City of Philadelphia government has at least as much power over the success of transit."

- Philadelphia Bus Network Choice Report²⁴

Transit Rider Income Comparison - City Bus vs. Regional Rail²⁵



Improvements to bus service can promote equitable participation in work, education, and other opportunities in a way and at a scale that few other strategies can.

Develop a City Transit Plan

The SEPTA *Philadelphia Bus Network Choice Report* pointed to the City as the holder of many of the keys to putting transit first. For example, the City is responsible for the allocation and prioritized use of road space, for managing the curb, and for the form and intensity of land use. The first two – prioritization of road space and use of the curb – are the ones that can be most changed between now and 2025. A coordinated plan for improving transit has not been completed in 50 years, but is required if Philadelphia is going to equitably and sustainably provide opportunity and access in a growing city.

New York, San Francisco, and Seattle have been able to make meaningful coordinated improvements to public transit by developing a city transit plan. A Philadelphia City Transit Plan will build off of the Comprehensive Bus Network Redesign. Prioritizing transit first requires deliberate action and tradeoffs. Through careful consideration, analysis, and engagement, a City Transit Plan will prioritize corridors for bus improvements and address other issues that affect the quality of transit service, such as curbside management. **It will also cast a long-term vision for rail improvements in Philadelphia, such as the Broad Street Navy Yard extension or 20th Street Market-Frankford Line infill station, which have the power to increase access to jobs, reduce greenhouse gas emissions, and improve mobility in the face of congestion.** Most rail

projects beyond state of good repair investments are infeasible in the current public sector funding environment, but casting a vision for the future will allow Philadelphia to respond to changing conditions.

A City Transit Plan is also needed to make sure equity issues and climate risks are measured, elevated, and addressed as appropriate. The plan will evaluate the impacts of the current system, especially for those who live in neighborhoods with high concentrations of households in poverty, residents of color, residents with disabilities, and households without personal automobiles, as well as evaluating how improvements can better serve these communities.

The City Transit Plan should also address ways of improving transit and increasing ridership that are not service or infrastructure related. A university transit pass program has proved successful in other metropolitan regions and should be explored for Philadelphia. In Seattle, over half of employers pay for subsidized transit passes for the employees, accounting for 40% of system farebox revenue.²⁰ The plan will explore how more businesses in Philadelphia can provide transit benefits.



Modernize the Trolley Fleet

SEPTA's trolley routes, particularly those that use the trolley tunnel, efficiently transport tens of thousands of passengers a day into Center City and University City without creating congestion. SEPTA's trolleys use vehicles that are nearly 40 years old and are reaching the end of their useful life. **In the years ahead, SEPTA plans to buy modern trolley vehicles and create stations accessible by wheelchairs and strollers.** Through Trolley Modernization, SEPTA and the City are making a commitment to bring new stations and long overdue street improvements along the trolley lines for all—whether traveling by transit, bike, foot, or car. Early planning for Trolley Modernization is underway, but in the years ahead, this billion-dollar-plus investment will require more extensive planning, engineering, and collaboration with the diverse communities that the trolley system serves.

Expand Indego Bike Share

Launched in 2015, Indego Bike Share has become regarded as a national leader in equitable bike share and community-led strategies. In the first three years of operation, the program has grown to include 128 stations and 1,300 bikes. Nearly 40% of Indego stations are in low-to moderate-income neighborhoods.

Indego's mission is to provide a bike share system that gives the user access to the city and its diverse communities. The end goal is a financially sustainable system that reaches the largest and most diverse service area possible. Plans call for expanding the system into new areas and increasing the density of stations in high-ridership areas.

To become operationally and financially sustainable, Indego must improve its cost recovery, adopt and adapt to new technologies, and build a capital fund for equipment replacement and expansion. At the same time, Philadelphia must remain open to new products and operators. Dockless bike share is a recent innovation that has expanded the bike share concept worldwide, but has also brought some challenges, such as cluttered sidewalks and bikes without properly functioning safety equipment.

To mitigate those challenges, Philadelphia will issue regulations to manage and pilot this new technology.



Stabilize and Grow Regional Transit Funding

At 11%, the Philadelphia region has a comparatively low contribution of regional funds to public transit – 41% for Boston, 42% for Washington DC, 46% for Los Angeles, and 60%+ for New York City and Chicago.²¹ Federal funding through the Fixing America's Surface Transportation Act makes up about 40 cents of every dollar of SEPTA's funding.²² State funding for SEPTA is governed by Act 89 of 2013 which amends Act 44 of 2007. While the passage of Act 89 was critical to supplying the necessary funding to help meet state of good repair needs, and the federal Transportation Investment Generating Economic Recovery (TIGER) and Better Utilizing Investments to Leverage Development (BUILD) discretionary grant programs have provided competitive funding for selected projects, SEPTA's lack of sufficient capital funds limits its ability to expand the system's reach to provide more communities with more access and opportunity. Additionally, changes in Act 44 funding loom in the years ahead and threaten transit funding statewide, with serious state of good repair implications for the Philadelphia region. Other urban regions have recently raised funds to improve their transit systems. **By working with regional partners, Philadelphia can stabilize the funding streams that supports SEPTA, continue to bring the system into a state of good repair, and expand access to jobs and other activities.**

Transit First Outcomes

By focusing on Transit First strategies by 2025, we can:

1. Increase transit ridership in Philadelphia by 10% vs. the national trend
2. Increase the number of jobs accessible by transit within 30 minutes at noon by the average resident by 10% and by non-white residents by 15%
3. Increase the number of residents living within 0.25 miles of frequent transit by 10%
4. Increase the number of riders in the city served by bus shelters from 32% to 40%
5. Increase bike-share trips by 100% and those taken by minority or low-income populations by 120%
6. Increase average bus speed by 5%

How Transit First Increases Equity

The city needs transit to thrive. So many of our residents and workers depend on transit every day. Ensuring access to high-quality and affordable surface transit is the largest step we can take to promote equity in Philadelphia's transportation system. Our strategy to Transform Bus Service, in partnership with SEPTA, has the potential to yield the most consistent impact for the most people among all the CONNECT initiatives. Because people of color make such extensive use of the bus network, as do young people, seniors, people with disabilities, and households in poverty, **improvements to bus service can promote more equitable participation in work, education, and other opportunities in a way and at a scale that few other strategies can.** A City of Philadelphia Transit Plan shall include an equity analysis to assess connectivity, affordability, accessibility to help address racial and economic disparities for underserved communities.

The City of Philadelphia's Indego Bike Share program is the best model on how to engage with the public, and especially underserved communities, around transportation. This is especially exemplified by the national Better Bike Share Partnership that focuses on promoting bike share in low income communities through the Community Ambassador Program, learn-to-ride classes, and cash payment and discounted Indego Access pass options. Indego 2.0 seeks to build on this success by expanding the existing system to serve new neighborhoods while maintaining a consistent balance between system sustainability and equity in determining where stations are located.

Transit First Strategies and Deliverables

Transform Bus Service

Deliver By End of 2020

Revise and re-issue the Transit First executive order
Partner with SEPTA on planning a network-wide Comprehensive Bus Network Redesign
Improve operations and enforcement on current dedicated bus facilities – Chestnut Street and Market Street
Partner with PennDOT and SEPTA to implement dedicated bus facilities along Roosevelt Boulevard
Pilot real-time bus arrival information displays
Continue to install and upgrade bus shelters and other street furniture

Deliver By End of 2025

Work with SEPTA, residents, and other partners to implement an improved bus network
Implement transit priority improvements on five high-priority corridors
Work with SEPTA and other partners to secure enabling legislation from the Commonwealth to allow automated enforcement of bus lanes
Work with SEPTA to provide real-time bus arrival information displays at high ridership rail and bus stations and stops
Complete installation of 600+ City-owned bus shelters

Develop a City Transit Plan

Deliver By End of 2020

Produce a City of Philadelphia Transit Plan for efficiently and affordably moving people in a growing city and region, including a plan of capital improvements

Deliver By End of 2025

Implement priority treatments and other measures to support the transformation and improvement of transit as detailed in the City Transit Plan

Modernize the Trolley Fleet

Deliver By End of 2020

Develop and implement operational plans to improve current trolley service, especially during planned outages
Engage with SEPTA and communities on streetscape changes to accompany new the trolley fleet

Deliver By End of 2025

Work with SEPTA to begin construction of revamped trolley lines, including new vehicles, extensive streetscape improvements, and trolley infrastructure upgrades

Expand the Indego Bike Sharing System

Deliver By End of 2020

Release new business plan for Indego
Launch Indego 2.0. Follow-up on new business plan by re-bidding the contract for bike share equipment and operations
Expand the Indego service to three new neighborhoods while maintaining a focus on reliability and equity
Test new equipment to expand Indego offerings and service area
Release regulations for a dockless bike share pilot program

Deliver By End of 2025

Expand the service area to eight additional neighborhoods
Improve connectivity between Indego and SEPTA, PATCO, and other transit operators
Establish a state of good repair/capital replacement fund through improved financial performance
Develop an end-of-life-cycle plan for existing equipment

Stabilize and Grow Regional Transit Funding

Deliver By End of 2020

Collaborate on a regional plan for transit funding with the Commonwealth, SEPTA, neighboring counties, and other partners



Great Streets

Goal 2

STRATEGIES

- Achieve a State of Good Repair
- Ensure a Walkable City
- Create Neighborhood Slow Zones
- Develop a High Quality Bicycle Network

Philadelphia is a great city and all neighborhoods deserve great streets. **A Great Street is one where everyone is welcome.** The roadway, signs, sidewalk, and other infrastructure are all in a state of good repair. The city's streets should be designed to safely accommodate all users – pedestrians, bicyclists, public transit riders, personal vehicle drivers, and freight. People from 8 to 80 years old can bike comfortably on a great street or stroll along it. Children feel safe walking to school along a great street. A great street is not merely a transportation facility but also a civic space where neighbors interact. Although not all streets in Philadelphia are great today, significant progress can be made by focusing on critical strategies and investments.



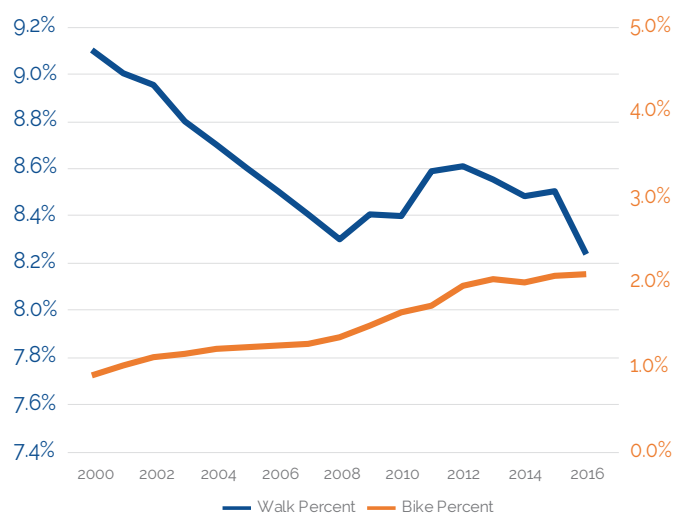
What the data says about making Great Streets

Streets are public spaces with many competing uses. Philadelphia has 2,575 miles of streets. Of this, PennDOT owns 360 miles, Fairmount Park has 35 miles, and the remaining 2,180 miles are under the authority of the Streets Department. Making all of these miles great is the Kenney Administration's goal.

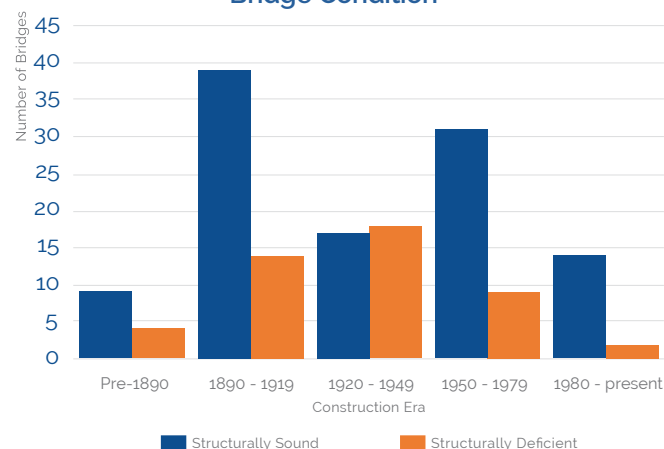
According to WalkScore²⁶, Philadelphia is the fifth most walkable city in the United States, but many parts of Philadelphia lack a high-quality pedestrian environment. Philadelphia has the highest share of people commuting by bike of any large city in the United States.²⁷ However, Philadelphia's share has been steady while the share in other large cities has been increasing.

Philadelphia must pave approximately 131 miles of its streets per year to keep them in a state of good repair. For several years at the beginning of the decade, fewer than 40 miles per year were paved. Budget cuts after the Great Recession and Americans with Disabilities Act ramp requirements are the two largest factors contributing to the decrease in paving. The paving backlog now totals about 1,000 miles. The sustained lack of investment in paving is the most significant reason for Philadelphia's crumbling roads and pothole epidemic.

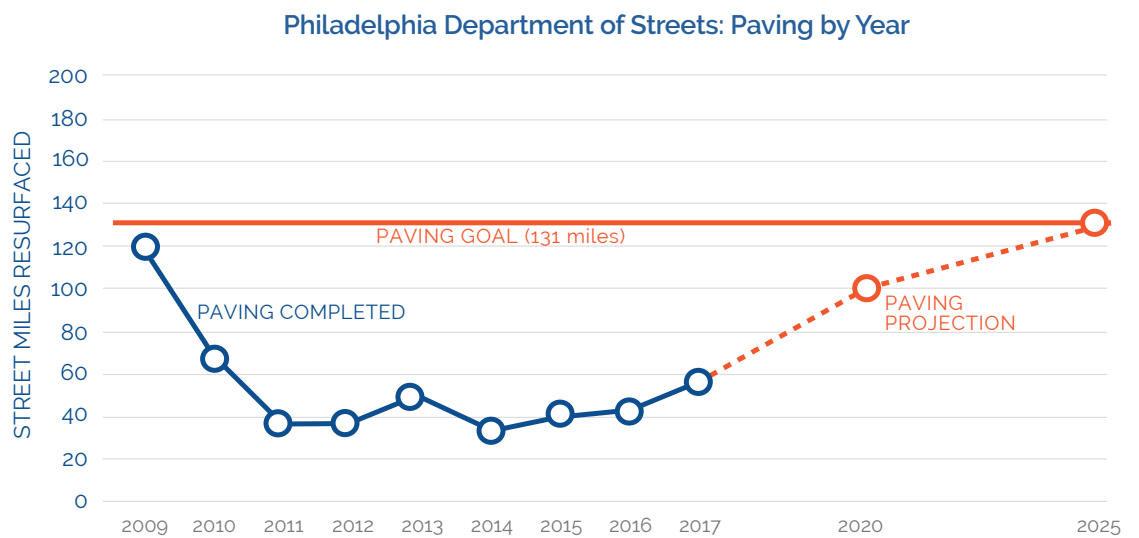
Walk and Bike Commute Mode since 2000²⁹



Philadelphia Department of Streets Bridge Condition³⁰



The Kenney Administration has made significant new investments to increase paving each year. A second paving crew was hired and equipped in 2018 and the FY18-22 Five-Year Plan anticipates funding to add a third paving crew.



What our engagement says about Great Streets

1. A great street is a **safe** street.
2. A great street is in **good repair**. Pavement, signals, street furniture, and other infrastructure are well maintained.
3. A great street has **great sidewalks** that are in good repair and has an attractive mix of trees and street furniture.
4. Sidewalks in Philadelphia are the responsibility of the owner to maintain and to repair. Yet, many **residents struggle to afford** several thousands of dollars of **sidewalk repairs**.
5. A great street accommodates **multiple modes**.
6. A great street is **comfortable, safe, and accessible to all ages and abilities**, including those using a wheelchair or stroller.
7. A great street is not necessarily fast, but one can drive **reliably** or use a bus that does not get stuck in traffic.
8. A great street is a **civic space** where neighbors can meet.



Strategies

Achieve a State of Good Repair

Great Streets are in good repair. With almost 2,200 miles of roads, not to mention signals, bridges, signs, lights, and other assets, maintaining Philadelphia's streets in a state of good repair with a constrained municipal budget is a challenge. A state of good repair exists when an asset (e.g. a bridge or a section of pavement) functions as designed within the useful service life, meets expectations for reliability, and is not functionally obsolete. Pavement that is cracking, bridges that are structurally deficient, and signal systems that cannot be repaired or easily synchronized do not meet this definition.

Years of under-investment have left the City with a state of good repair paving backlog of about 1,000 miles. This means 1,000 miles of city streets that are rough, prone to potholes, and have faded markings. There are also significant backlogs in other asset classes – bridges, traffic signals, fiber network, and others.

Bridges can last a long time with appropriate maintenance, but a lack of bridge maintenance can turn moderate periodic repairs into costly replacement. Currently, almost 30% of Streets Department bridges by deck area are in poor condition. The longer a bridge goes without regular maintenance, the larger the chance it will need to be replaced completely at a high cost.

Many **traffic signals** in Philadelphia date from the 1960s and are difficult to maintain. The original manufacturers of the equipment are no longer in business and parts are difficult to obtain. The older signals cannot connect to the Traffic Operations Center and must be synchronized manually.

The Kenney Administration has made significant new investments in labor and equipment to increase the miles that can be repaved and stripped each year. **A second paving crew was hired and equipped in 2018, and the FY18-22 Five-Year Plan anticipates funding to add a third paving crew.** State and Federal funds will continue to be used to repair or replace bridges in poor condition and upgrade signal systems. A Vision Zero maintenance crew was added in the FY19 budget and will be hired by April 2019.

In addition to dedicating more funding, the Streets Department will look at methods to increase productivity and efficiency. By modernizing asset management, the City will better prioritize maintenance and replacement and **produce a three-year look-ahead paving plan.** Infrastructure investments must also consider the warmer and wetter climate Philadelphia will face in the years ahead, as well as the risks posed by a rise in sea level. Technologies such as warm-mix asphalt or cool pavement could allow Philadelphia to lengthen the paving season while reducing emissions and the urban heat island.

Ensure a Walkable City

Over one-third of Philadelphia residents do not have a car. While SEPTA's transit network provides an affordable option for many, and the city's bicycle network makes it safer for people to cycle, walking remains the most affordable and accessible mode of transportation. A high-quality pedestrian environment consists of sidewalks in good repair, safety from both crime and traffic crashes, a lack of litter, many places to walk to, and interesting streetscapes along the way. **Due to its dense street grid and abundant destinations, Philadelphia is one of the most walkable cities in the country. However, walking is not prioritized uniformly in every neighborhood.**

Tree plantings and other street furniture contribute to a better walking environment. The City will evaluate the feasibility of installation based on available space, funding, community interest, and its capacity to maintain these right of way amenities. Where possible, the City works with external partners to supplement both routine and long-term maintenance. Despite city-wide demand for these placemaking elements, many neighborhoods do not have organizations that have the capacity to accept this level of responsibility and stewardship of elements in the public right of way. Developing solutions to overcome these barriers is critical to enhancing public space and walkability in Philadelphia. _

Making sure that pedestrian facilities are safe and remain open during construction is complex and involves tradeoffs but is important to promote walking. Innovative approaches to sidewalk repair are needed. Active programming such as Philly Free Streets, encourages new thinking about public space.

Create Neighborhood Slow Zones

A Great Street is a safe street. Speed management is central to Vision Zero. Not only is speed a fundamental predictor of crash survival, it is also a frequently expressed concern from neighbors throughout the city. Despite the common understanding that speed can be deadly, residents often do not understand the range of possible safety improvements that could make their streets safer or feel empowered to request those improvements. Other times, the requested intervention may not be appropriate for the location, which can result in unproductive efforts that do not solve the problem.

The Philly Neighborhood Slow Zone Program is a new approach to traffic calming and working collaboratively and proactively with neighborhoods that have demonstrated traffic safety issues. Instead of planning and implementing traffic calming measures on one block at a time, the Slow Zone program will bring traffic calming improvements to an entire "zone" of streets. Working with neighbors, the City will look at every street in the zone to first identify problems and then to design comprehensive solutions.

In each Neighborhood Slow Zone, you may find:

- Pavement markings and signage,
- Speed cushions,
- Traffic diverters, and
- Neighborhood traffic circles.



Philadelphia's First Bike Signal

Develop a High Quality Bicycle Network

The City of Philadelphia has the highest percentage of people who commute by bicycle of any large city in the United States. Further establishing and encouraging bicycling as a mode of transportation can lead to positive outcomes in the realms of public health, equity, environmental sustainability, and economic efficiency as the city's population continues to grow.

By building on Philadelphia's already strong bicycle culture, there is significant potential to grow bicycling in the city. Currently, 23% of all trips within Philadelphia are under two miles and are made by automobile.²⁸ By implementing new policies, programs, and projects that lead people to switch these trips to walking or biking, the City can improve health, sustainability, and even congestion in Philadelphia. One nationwide survey shows that about **50% of people are "interested, but concerned" when it comes to biking.** By building high-quality bicycle facilities that are designed for people who are "interested, but concerned", they will be encouraged to try biking, especially for short trips.

Since the adoption of the City's 2012 Pedestrian and Bicycle Plan, the City has been working steadily to build out its bike network, which now has over 250 miles of bikeways. Critical gaps still exist in the current network and proven best practices in implementing bike facilities place a strong emphasis on high-quality bicycle infrastructure and trails. To implement and extend

the 2012 Pedestrian and Bicycle Plan, the City will create a High Quality Bicycle Network, which includes more protected bike infrastructure on a subset of streets that were identified in the 2012 plan.

In order to create a High Quality Bicycle Network, the City will continue to partner with local council members, community organizations, businesses, advocates, and neighbors to educate, design, and build bike lanes that provide improved safety and comfort. In addition, the City recognized the need for better maintenance of existing and new bike infrastructure, which is why the City's Fiscal Year 2019 budget allocated additional funds to support a Vision Zero maintenance crew. Together, this work of building and maintaining bike infrastructure, will help the City better connect residents to not only jobs, but also to schools, recreation centers, libraries, and parks.

A Great Street

People of all ages and abilities are able to bike around the city on a High Quality Bicycle Network

Automated enforcement keeps all users of the street safe by deterring dangerous behaviors

Waterways are kept clean by green stormwater infrastructure that captures runoff while beautifying and cooling the street

The street furniture zone provides well maintained amenities such as lighting, bike parking, and seating

All people who use the street are more comfortable with paving in good repair

People driving and delivering packages have access to high-turnover parking and loading spaces

Dense urban development makes a great street possible by providing meaningful destinations and encouraging walking

Bus trip times are shortened by bus only lanes and other Transit First treatments

People are able to make quick and impromptu trips on bike share

Bus passengers wait comfortably and know when their bus will arrive with realtime displays

All users are able to access the city with ADA ramps and signalized pedestrian crossings

Illustration Courtesy of NACTO

Great Streets Outcomes

By focusing on the Great Streets strategies by 2025, we can:

1. Increase the percent of residents living within 1/4 miles of a protected bike lane or trail from 16% to 28%.
2. Double the percentage of commuters who travel by bike
3. Increase the total percentage of commuters who either walk, bike, or use transit by five percentage points from 36% to 41%.
4. Increase annual paving to 131 miles or more.

How Great Streets Increase Equity

We all deserve great streets. Yet Philadelphia's infrastructure has suffered decades of underinvestment and with it the public's trust in government. CONNECT is focused on getting the basics right to improve the state of good repair of our streets and pavements so that all neighborhoods benefit from increased investments in transportation. This is especially true for the strategies that improve walking and cycling, which are the two lowest cost most available modes of transportation.

CONNECT is also taking a more proactive approach to solving transportation problems for neighborhoods, such as with the Neighborhood Slow Zones program intended to promote interaction with underserved neighborhoods and foster collaboration towards addressing tangible transportation and traffic safety issues more holistically.

Great Streets Strategies and Deliverables

Achieve a State of Good Repair

Deliver By End of 2020

Increase annual paving from 56 (2017) to 110 miles of streets and produce a publicly accessible three-year paving plan

Investigate costs, benefits, and challenges of switching to warm-mix asphalt

Hire a Vision Zero maintenance crew

Deliver By End of 2025

Increase paving to 131 miles annually and reduce the 1,000 miles of paving backlog

Repair or replace critical bridges that are identified by the Streets Department as being in poor condition

Upgrade and connect signal systems to Traffic Operations Center

Ensure a Walkable City

Deliver By End of 2020

Conduct a study to identify best practices in peer cities for sidewalk repair and enforcement programs

Install at least two new raised intersections or crosswalks

Install leading Pedestrian Intervals (LPIs) at 50 intersections per year and pedestrian countdown timers at 13 intersections per year

Deliver By End of 2025

Conceive of and implement a functioning sidewalk repair and maintenance strategy that enables sidewalk repair on both private and public property while filling high-priority sidewalk gaps

Implement a public space stewardship program

Implement an improved inspection and enforcement strategy to minimize sidewalk and bike lane closures due to construction projects, especially on the High Injury Network

Pilot protected intersections

Extend intersections improvements on South Broad Street from City Hall to Washington Avenue

Continue working with PennDOT to incorporate elements of a great street as the I-95 reconstruction process continues

Create Neighborhood Slow Zones

Deliver By End of 2020

Publish application and selection criteria and work with community groups on applications

Select two neighborhoods to pilot Slow Zones based on traffic crash data and work with them to plan and implement slow zones safety improvements

Deliver By End of 2025

Evaluate effectiveness of initial two slow zones

Work with additional neighborhoods to implement Slow Zones

Develop a High Quality Bicycle Network

Deliver By End of 2020

Implement High Quality Bicycle Network Priority Facilities on:

- JFK Boulevard (15th to 20th Streets)
- Market Street (15th to 30th Streets)
- Race Street (8th to 6th)
- Torresdale Avenue (over Pennypack Creek)
- Parkside Avenue (Girard to Bryn Mawr Avenues)

Deliver By End of 2025

Work with City Council and communities to finish building the 40 mile network of protected bike lanes, including, but not limited to, these specific projects:

- Spring Garden Street (Delaware Avenue to Eakins Oval)
- Washington Avenue (Grays Ferry to Delaware Avenues)

Work with partners to complete key sections of major trails, including the Schuylkill, Delaware, and sections of the East Coast Greenway



A Competitive City

Goal 3

STRATEGIES

- Manage Congestion
- Manage the Curbside and Parking
- Update the Truck Network
- Pursue Sustainability for Competitiveness

Dense cities like Philadelphia are significant drivers of the nation's economy. Having so many people and businesses located in dense areas leads to efficiency and an explosion of creativity and collaboration. A city's walkability and bikeability support a high-quality of life and thriving commercial environment, for both longtime residents and new neighbors. Transit is also key to making both Philadelphia and Pennsylvania competitive - **more than one-third of statewide population growth between 2010 and 2016 occurred in census tracts along the Broad Street Subway and Market-Frankford Line.**³¹ Transit, walking, and biking are also environmentally friendly. As Philadelphia and other cities around the world begin to experience the impacts of climate change, a sustainable transportation network is essential to remaining competitive in the 21st century global economy. Many in today's workforce want the freedom to live without dependence on a car for daily life, and many prospective employers are making it clear they will only locate in cities with extensive transit networks because the mobility, competitiveness, and livability offered by transit. By managing congestion and ensuring transportation options and elements meet business needs, Philadelphia has the opportunity to increase job growth in the city and reduce the need for reverse commutes. Today, 24% of Philadelphia residents reverse commute to jobs outside of the city.³² Regional transit and road networks are vital to meeting these needs, but increased local job growth should be a long-term priority of transportation infrastructure projects.



Density also presents some challenges that must be managed - people and goods must be able to move reliably throughout the city to participate in the diverse activities that Philadelphia offers. In the current era of expanded delivery service and ride share activity clogging streets, managing congestion is becoming an increasingly important issue. While Center City and University City are the two largest job centers in the region, connecting residents to other major job centers such as the Navy Yard, Temple University and North Broad Street, the Port, and the Airport are also critical. Increasing connections between major job centers and residents is key to Philadelphia remaining a Competitive City. Other job centers such as those in the Far Northeast and the suburbs are also important to be connected to transit to the extent that they can be efficiently served. The strategies outlined in this section will ensure that transportation enables Philadelphia to remain a competitive place to live and do business.

What the data says about A Competitive City

1. **Some level of congestion in urban areas is unavoidable and is in fact a sign of a prosperous and healthy city.** Increasing density leads to more jobs and other activities accessible in a given amount of time, even if the speed in miles per hour is lower. This is productive congestion. However, congestion that results from the inefficient

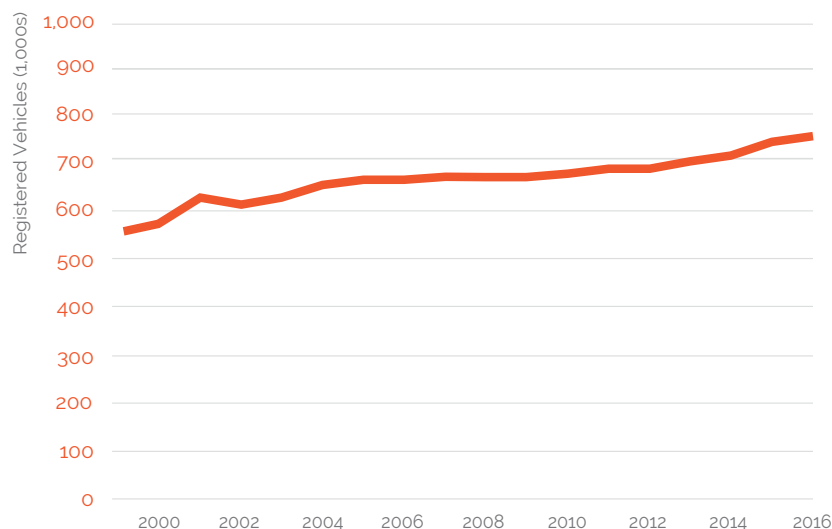
use of transportation facilities, bad policy, and neglect can have a choking effect on a city's future and reduce quality of life. As shown in the graphic on page 54, transit, walking, and biking are all more efficient at moving people than travel by automobile.

While still not as severe as many peer cities, by some measures Philadelphia area residents spend up to 42 hours per year in congestion.³³ There are an average of 9.7 miles of driving per day for every Philadelphia resident. Additionally, there is more competition for curb space than ever before. A lot of this is because of ride sharing, which has added a significant amount of driving, approximately 200 million miles per year, in the city.³⁴

2. **Philadelphians now have more cars than ever**, 68,000 more in the last eight years alone.³⁵ Creating more off-street parking has significant negative side effects, such as adding tens of thousands of dollars to housing costs. A single structured parking stall can cost \$25,000³⁶ to \$50,000³⁷ to construct. Philadelphia has 754,253 registered vehicles including 649,831 registered passenger vehicles³⁸, a little under 1.6 million people, but over 2.1 million parking spaces.³⁹ While there are significantly more parking spaces than cars overall in Philadelphia, some neighborhoods at certain times of day have more demand for parking than supply, especially for free on-street parking.

Philadelphia now has more cars than ever, 68,000 more in the last 8 years alone.

Registered Vehicles in Philadelphia⁴⁵



3. Philadelphia's current transportation system is responsible for 17% of greenhouse gases in Philadelphia and is second only to buildings as the largest source of carbon dioxide and other greenhouse gases that warm our atmosphere.⁴⁰ Climate projections show that Philadelphia will face warmer and wetter weather in the years to come, with the possibility of as many as 60 days above 95 degrees on average by 2100.⁴¹ These climate changes present risks to the existing transportation network, further underscoring the need for climate action to ensure A Competitive City in the years to come.

What our engagement says about A Competitive City

1. Congestion is a burden, although it tends to be concentrated in areas such as Center City and University City.
2. Congestion affects transit riders when buses are late or bunched. Some people grow tired of waiting for a bus and then use a ride-share, which only increases congestion.
3. High-quality walking and biking infrastructure is increasingly important to businesses and the workforce they seek to attract.
4. Many people are more concerned with the reliability of their travel than the absolute time a trip takes. Reliable travel allows people to plan their day.
5. Parking is one of the most contentious transportation issues in many parts of Philadelphia.
6. Philadelphians have a range of opinions on how to solve or manage the mismatch between parking demand and supply. Many believe on-street parking should always be free, while others are willing to explore permits and pricing structures to manage this scarce resource.
7. Freight delivery is an important and essential element of life and the economy in Philadelphia.
8. Large truck parking is an issue in some neighborhoods, demonstrating the need to find secure truck parking away from residential areas.
9. Philadelphians are eager to see their City lead on climate action, and our transportation sector is a key area of opportunity to demonstrate Philadelphia's leadership to cut carbon pollution.
10. Some Philadelphians want to switch from internal combustion engine to electric cars but electric vehicle charging remains a challenge in dense neighborhoods with a majority of residential parking occurring in on-street shared public space.

Major Regional Job Centers



Strategies

Manage Congestion

While congestion is a source of frustration for travelers it is also an indication that a city is a desirable and dynamic place to be. After a century of infrastructure improvements and careful study, transportation professionals know that congestion can be managed, but not necessarily solved. Effectively managing congestion requires that different travel options are made safe and reliable. In Philadelphia, there are not many opportunities to build or expand roadways to handle more travelers. Instead, investing in technology and making better use of data will support better organization and more efficient management of the network. Congestion will be reduced by using

automated enforcement, increasing fines for congestion causing behaviors like "block the box", and shifting delivery times. Prioritizing efficient modes, continuing to integrate and connect the signal network, and managing traffic patterns in real time are just some of the techniques to manage the network to improve mobility. As a model for other areas of the city, the City will develop a Central Philadelphia Transportation Analysis Program documenting early action and long-range improvements. The Central Philadelphia Transportation Analysis Program will also interface with the City Transit Plan strategy to refine the role of transit in enhancing mobility and managing congestion in Center City.

Autonomous Vehicles

Autonomous or “self-driving” vehicles (AV) hold a great deal of promise to reduce traffic fatalities, congestion, and fuel consumption. There is still a great deal of uncertainty around the degree and timing of these benefits. While safely operating in limited driving environments like Interstates seems closer, an AV capable of operating in a complex urban environment seems beyond the time frame of CONNECT. The year when a substantial portion of the vehicle fleet is composed of AVs is even farther off. But strategies such as improving curbside management and prioritizing the movement of people by transit, walking, and biking will make Philadelphia a competitive city, regardless of who or what is behind the wheel.



Manage the Curbside and Parking

Philadelphia has numerous competing interests vying for limited curbside space – deliveries, residential parking, commercial parking, and rideshare drop-off and pick-up, among others.

A lack of dedicated truck parking zones is contributing to an increase in truck parking in residential areas. Three main issues exist in regard to truck parking:

1. Owner operators need places to store tractor trailers overnight outside of residential areas.
2. Long-haul truckers need facilities that provide amenities and places to rest with amenities.
3. Drivers require safe locations to park while waiting before drop-off or pick-up.

Accordingly, the City will seek legislative, planning, and engineering solutions that can be communicated clearly to citizens and the freight hauling community to address large truck circulation and parking needs.

The demand for parking, especially free on-street parking, exceeds the supply in some residential and commercial corridors, at least for certain times of day. The current permit parking is one tool that can be used to help balance the interests of residents and visitors, but is not a perfect solution to parking problems in every neighborhood. There is an opportunity to pilot additional policies to manage parking demand and supply in both residential and commercial areas.

National figures from 2015 show that a metered parking spot in a commercial district can result in \$175,000-\$200,000 in annual sales for adjacent businesses.⁴² There is some data that shows that the effects may be different for Philadelphia, especially for dense walkable areas. A study by University City District showed that **businesses that removed a parking space for a parklet saw a 20% increase in sales**.⁴³ Additionally, while each parking space might turn over up to 15 times per day, it was found that parklets serve up to 150 customers per day. **The goal of commercial parking is maximizing customer access to the store regardless of their arrival mode.**

The turnover of parking spaces is key for access by automobile. Customers arriving by vehicle to on-street parking prefer an open spot somewhere on the block that contains the business they are accessing.⁴⁴ A business owner or employee who occupies a metered spot all day will deprive that spot for a potential customer and may lose possible retail sales. Therefore, parking policy and pricing structures must be geared towards providing turnover and one or two open spots on each block to allow the greatest number of customers to have access to the commercial corridor. Dynamic parking pricing on commercial corridors is one potential solution that will be explored to meet this goal.

People Capacity of a Lane of Traffic by Different Modes

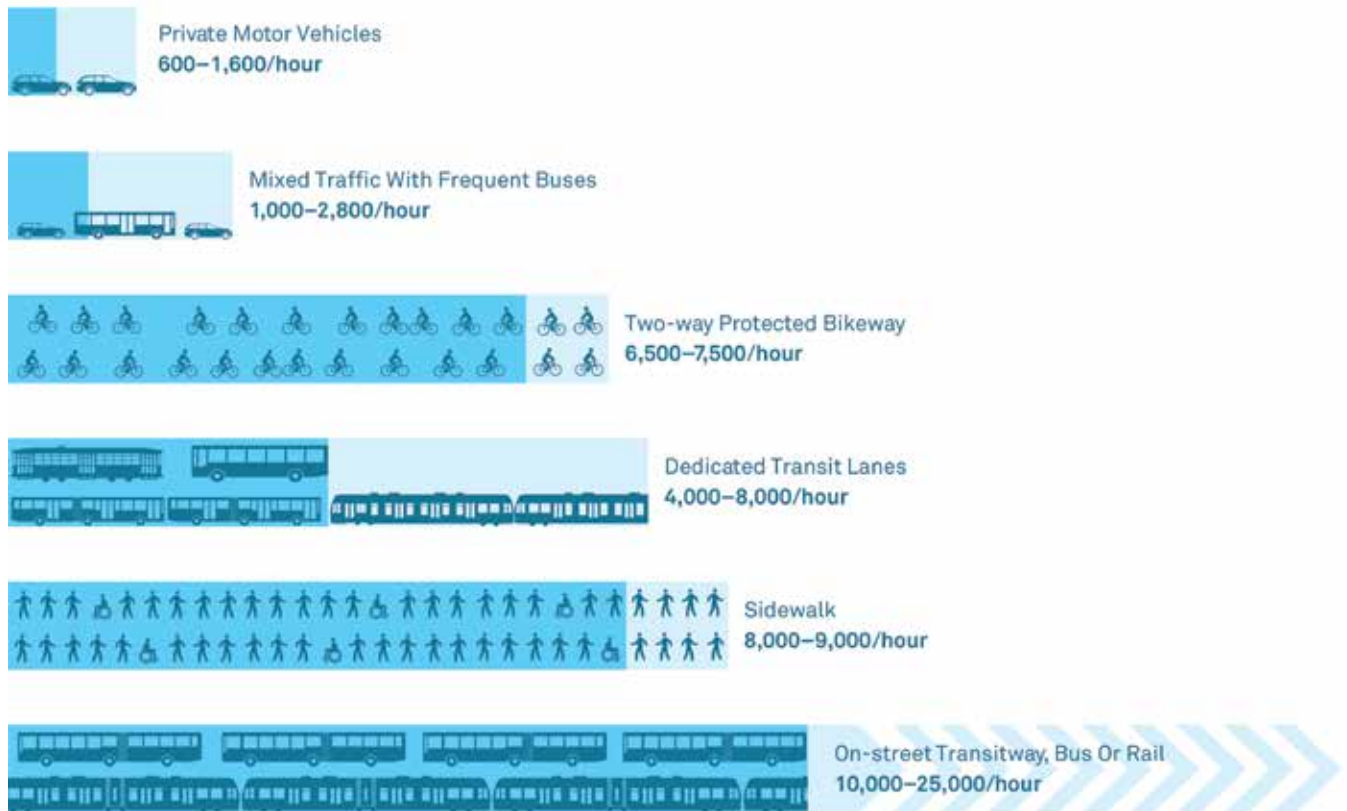


Image Courtesy of NACTO, *Global Street Design Guide*

Update the Truck Network

With the widespread adoption of internet commerce and increasingly dense development patterns, the need for trucks to deliver to and from residential, commercial, and industrial locations is growing. This truck activity can create movement conflicts for all modes of travel, whether by foot, bicycle, transit, or car. The City's Vision Zero commitment, which seeks to eliminate all traffic fatalities by 2030, creates greater need to find solutions that accommodate all modes of travel. But not all streets can perform all functions. For example, certain streets need to be designed with special attention to bicycles, transit, or freight. Those streets that have particular freight considerations comprise the truck network.

By clearly defining how, where, and what size trucks can move on different sized roadways to make deliveries throughout the city, we can maintain economic growth along these truck networks while supporting safe travel for all roadway users. This strategy, combined with the measures in the Manage the Curbside and Parking strategy, will result in a wide set of truck and freight issues being addressed.



Pursue Sustainability for Competitiveness

Cities that grow and thrive in the 21st century will be those that address its greatest challenges, including climate change. **Transportation is responsible for 17% of carbon pollution in Philadelphia, the second largest source, underscoring the importance of taking steps today to ensure our transportation system is low-carbon and resilient.**

Cutting greenhouse gas emissions from the transportation sector is essential to meeting Philadelphia's commitment to the Paris Climate Agreement and Mayor Kenney's long-term goal of cutting carbon pollution 80 percent by 2050. Making a shift to transit, walking, and biking will contribute the lion's share towards Philadelphia's goal of reducing transportation emissions. Switching auto-miles that are currently fossil fuel powered to sustainably generated electric vehicle power is also essential, but will require extensive partnerships to solve issues around electrification planning and implementation.

Transitioning to low-carbon sources of transportation will help reduce the likelihood

of the worst impacts of climate change, but to remain a competitive city in the face of these changes Philadelphia will also need to ensure that the transportation network is robust and resilient in the face of these threats. Transportation improvements will consider climate projections for a warmer and wetter Philadelphia. Technologies, such as pavement, have the potential to leverage transportation investments to reduce the harms of a changing climate and position Philadelphia as a global leader.

As Philadelphia continues to move toward a transportation system that acknowledges and addresses the sources and impacts of climate change, the City will also address other sustainability goals in alignment with the its Greenworks sustainability plan.

Achieving the Great Streets and Transit First goals while moving toward transportation electrification will help cut local air pollution, improving public health in neighborhoods across the city. OTIS and the Streets Department will also work with the Philadelphia Water Department's Green City, Clean Waters program to add green infrastructure as a component of new transportation initiatives as appropriate.

A Competitive City Outcomes

By focusing on A Competitive City strategies by 2025, we can:

1. Manage congestion as measured by per capita Peak Hours of Excessive Delay to grow by no more than 0.65%/year (from 22.4 in 2017 to 23.6 in 2025).
2. Increase the integration of the City's signal network by 20%.
3. Decrease vehicle miles traveled per capita in a growing city.
4. Reduce carbon emissions from transportation by 10%.
5. Increase the number of jobs accessible by transit within 30 minutes at noon by the average resident by 10% and by non-white residents by 15%.

How a Competitive City Increases Equity

As a majority-minority city, with a growing population of millennial and foreign-born residents, Philadelphia offers employers an unmatched pool of diverse talent. This is bolstered by Philadelphia's many world-class Universities. Our residents bring diversity in thought and experience that serve as a great addition to any business. Collectively, the strategies identified as part of the goal of making Philadelphia A Competitive City are intended to spread opportunity throughout the city by evaluating barriers that limit worker's access to job centers and by ensuring that Philadelphia's networks are designed and operated in ways that accommodate all types of travelers. Sustainability is a centerpiece of our competitiveness goals. The strategies in CONNECT will address the impacts of climate change and energy cost that are often a source of inequitable outcomes.

A Competitive City Strategies and Deliverables

Manage Congestion

Deliver By End of 2020

Streamline real time monitoring and response to incidents and traffic “hot-spots” working with PPA, SEPTA, and PennDOT

Develop a data and technology roadmap to consolidate data resources

Deliver By End of 2025

Produce a Central Philadelphia Transportation Analysis Program focused on ensuring the reliability, effectiveness, and state of good repair of the multiple transportation networks in Central Philadelphia

Establish sustainable, dedicated funding to support capital improvements, maintenance, and operations as identified in the Central Philadelphia Transportation Analysis Program

Manage the Curbside and Parking

Deliver By End of 2020

Update fines, fees, and policy for modern circulation and parking patterns

Identify potential publicly or privately owned parcels in cooperation with PCPC and other partners for a range of truck parking needs

Improve curbside management for deliveries

Investigate opportunities and enabling legislation to expand carshare in Philadelphia

Deliver By End of 2025

Working with public and private sector, secure at least one new location for owner-operators to park their trucks overnight

Have in place an enforcement strategy with PPD and PPA to direct truck drivers to available parking locations

Pilot dynamic pricing on one commercial corridor to manage parking availability

Update the Truck Network

Deliver By End of 2020

Update the Complete Streets Manual, and other relevant City documents, to incorporate truck network considerations

Re-examine streets and interstate access network to support Port deliveries

Deliver By End of 2025

Confirm and inventory the existing truck network and update it as appropriate

Develop an improved online presence with truck-related information

Roll out an educational campaign about the updated truck network

Pursue Sustainability for Competitiveness

Deliver By End of 2020

Establish a city-wide climate action plan consistent with the Paris Climate Agreement goals

Work with SEPTA and PECO to establish a pathway to further electrification of the transit fleet

Increase greened acres from new transportation projects

Deliver By End of 2025

Pilot cool pavement materials in neighborhoods most impacted by extreme heat

Integrate citywide Electric Vehicle policy into multimodal strategies to reduce carbon emissions

Develop citywide competitive resilience strategy encompassing major infrastructure investment and community assets



Efficient Government

Goal 4

STRATEGIES

- Engage Communities and Build Coalitions
- Streamline Project Delivery and Prioritization
- Modernize Asset Management
- Innovate with Technology
- Plan for a Clean Fleet

Efficiently delivering transportation services and projects is critical to delivering the other four goals in **CONNECT**. Vision Zero, Great Streets, Transit First, and A Competitive City can only be implemented effectively if the City and its partners maximize and prioritize the use of limited resources, are connected to communities, and leverage new technologies. The strategies that contribute to the goal of Efficient Government will have a lasting impact on delivering services long beyond the seven year time frame of **CONNECT**.

An efficient government is one that uses its resources wisely. It ties investments to policy goals. An efficient government leads by example and is responsive to needs expressed by the public.



What the data says about Efficient Government

The Transportation division of the Streets Department receives over 60,000 service requests per year. Pavement defects, street lights, and traffic signal repair are three of the largest categories of service requests, with pavement defects being the largest class of request by far. This includes fixing potholes, restoring ditches, and repairing cave-ins. The Streets Department has fixed over 57,000 potholes as of September in calendar year 2018 and is on track to fix 18,000 more potholes in 2018 than in 2017.⁴⁶ The average time to fix a pothole in 2018 was fewer than three days after being reported. Philadelphia residents rate the Streets Department well on lighting (85% Excellent, Good, or Fair) and snow removal (66% Excellent, Good, or Fair), and signal timing (80% Excellent, Good, or Fair) but less positively on street repair (50% Excellent, Good, or Fair).⁴⁷

What our engagement says about Efficient Government

1. **Residents want to participate in infrastructure decisions that affect their lives.** The professionals in the Streets Department and OTIS are experts in transportation, but residents are experts in their neighborhood. The most effective improvements happen when these two areas of expertise are brought together to improve neighborhoods.
2. **Residents expect the city's utility and construction work to be much better coordinated.** This problem is compounded when streets are not appropriately restored after utility work. The City's Guaranteed Pavement Information System (GPIS) has eliminated many conflicts that would result in duplication and waste and allows multiple agencies and private companies to coordinate utility work. While emergency utility work will always be present, additional integration and coordination using technology and asset management can further align street work.
3. Residents may not know or care about internal processes, but do care about the effects these processes have on their lives and daily transportation experiences.
4. **Philadelphia needs more civic engagement organizations in transportation, particularly around transit.** In other cities, organizations such as Transportation Choices Coalition (Seattle), Transit Choices (Baltimore), and Transportation Alternatives (New York City) have increased civic engagement around transportation and especially transit issues in a way that results better cooperation between the public sector, businesses, social impact organizations, and residents. This coalesced support has resulted in billions of dollars of locally-funded investments in transportation.

Strategies

Engage Communities and Build Coalitions

Government works best when it is close and connected to the people it serves. Public engagement around projects needs to happen early enough in the process that meaningful feedback can be incorporated. All of this work requires additional resources but is important for successful delivery of projects and services.

Recent initiatives that successfully connected government and communities around transportation issues form a template for future community engagement. The City has staged three Philly Free Streets events, which have connected neighborhoods in reimagining the street as a public space. Indego Bike Share has become a national model in working proactively with communities to design a system that meets their needs and in which they can share a sense of ownership. The Streets Department communicates frequently via multiple traditional and social media platforms to inform residents about paving work. Recent Complete Streets projects have involved early and frequent community engagement, which has resulted in both buy-in and better projects. **By building on these efforts, the City can better deliver transportation projects and services in a more engaging, accessible, and inclusive approach.**

Streamline Project Delivery and Prioritization

Together, OTIS and the Streets Department plan for and deliver a wide variety of transportation projects. These projects include roadway paving, bridge rehabilitation, new bike infrastructure, and corridor-wide signal replacements. Project ideas come from a variety of sources including asset management systems, the Philadelphia Planning Commission's *Philadelphia 2035 Plan* and district

plans, the Commerce Department, the general public, policy makers, community groups, and many other sources. These projects follow a lengthy City and often state and federal process from conception to completion. **To improve efficiency and effectiveness, the City will streamline and improve its project prioritization and delivery process and shall:**

- Ensure that roles and responsibilities are defined;
- Incorporate national best practices at appropriate milestones;
- Increase transparency in the delivery of state of good repair projects for the public; and
- Provide enhanced community engagement at appropriate points during the planning and delivery phases.

Frameworks for prioritizing capital and operating projects help to ensure consistency in an organization between on-the-ground actions and strategic goals. A clearly defined project delivery process is a necessary component for using a project prioritization framework. Formal prioritization in maintenance, planning, and programing ensures decision making that is consistent and aligned with the CONNECT values of equity, safety, sustainability, health, opportunity, and access. OTIS and Streets operate with tightly constrained budgets, so it is critical that the projects taken on are those most aligned with the established values and goals of CONNECT to maximize the use of public funds.



Modernize Asset Management

The Streets Department is embracing stronger asset management practices, which involve the systematic gathering and storing of data on pavement and markings, signals, bridges, and other transportation assets; analyzing that data to extract information and insights; and using those insights and information to guide maintenance, operations, planning, and programming decisions that are aligned with the goals of CONNECT. Adopting and increasing the use of asset management practices will lead to: more informed decision making that is transparent and defensible; minimize life cycle costs; and programming that incorporates equity.



Innovate with Technology

Broader and more effective use of technology will be a key component of serving the public's needs and making the most efficient use of resources.

Many cities around the world have effectively deployed traffic management infrastructure that allows both the monitoring and management of street networks in real time. Recent innovation has begun to incorporate wireless communication networks and mobile device applications to yield better information and to support more options for travelers of all modes. The emerging trend of "Smart Transportation" relies on more distributed and scalable technologies that offer potential for a greater range of benefits at lower cost.

To capture these emerging technologies and innovate effectively, the Central Philadelphia Transportation Analysis Program will apply best practices to realtime congestion management protocols. To do this, we will identify high rate of return investments in technology to support more efficient fulfillment of departmental mission and extension of the life and effectiveness of assets. This will allow us to promote partnerships with other agencies for more coordinated approaches to transportation planning and traffic management and to expand coordination in the use of technologies for curbside management and enforcement involving parking, passenger loading and unloading, and goods deliveries.

Vision Zero Safety Truck



Plan for a Clean Fleet

The City of Philadelphia owns and operates more than 6,000 vehicles, which represent a great opportunity to lead by example in implementing the core values of CONNECT. Nearly all of the City's fleet burns fossil fuels for energy. The Office of Fleet Management is leading efforts to support the City's clean energy goals by having purchased 17 electric vehicles for the Police Department in 2017 and issuing a request for proposals for a mobile solar electric vehicle charging station in August 2018. OTIS manages a Fleet Sub-Committee as part of its Vision Zero implementation strategy, works with City departments to "right-size" vehicle procurement for needed tasks, and encourages use of the City's carshare account.

To further move toward a Clean Fleet strategy, the Office of Fleet Management and the Office of Sustainability received a Pennsylvania Department of Environmental Protection grant in spring 2018 to assess options for developing a clean fleet strategy, which would include focusing on vehicle procurement, safety, and transit and carshare opportunities for employee trips. Further Clean Fleet planning is underway, and a full strategy should be completed in 2019.

Efficient Government Outcomes

By focusing on the Efficient Government strategies by 2025, we can:

1. Increase resident satisfaction for street repair services in the Philadelphia Resident Survey from 50% Excellent/Good/Fair to 60%.
2. Increase the percent of connected signals repaired and online within 60 days from 36% to 75%.
3. Increase annual paving to 131 miles or more.
4. Maintain the percent of City owned and maintained bridges in good repair at 70% or greater.

How an Efficient Government Increases Equity

Those who have been marginalized most consistently are often those most challenged in getting responsive government. To correct this requires an abundance of intention. CONNECT seeks to shift project delivery through the Engage Communities and Build Coalitions strategy, instead of simply conducting outreach to check off boxes on the way to predetermined outcomes. This means finding the places and events to invite people to share their ideas and to take part in shared transportation experiences like Philly Free Streets or transportation themed Philly Clean-up events. Furthermore, CONNECT seeks to undertake a strategy to Streamline Project Delivery and Prioritization, with explicit weight placed on projects that address the needs of marginalized and underserved communities.

Efficient Government Strategies and Deliverables

Engage Communities and Build Coalitions

Deliver By End of 2020

Continue to engage community about people-powered transportation through Philly Free Streets

Continue to work with Indego Community Ambassadors to connect neighborhoods to government

Hire a community outreach staffer to increase outreach to communities about Vision Zero

Hold a transportation summit and “ride transit days” to enhance civic dialogue and engagement

Work with new and existing Transportation Management Associations to enhance partnerships with businesses

Establish an outreach and digital civic engagement strategy for transportation initiatives

Deliver By End of 2025

Hold additional transportation summit(s) to enhance dialogue and engagement

Work with partners to hold workshops and other forums on effective transit

Streamline Project Delivery and Prioritization

Deliver By End of 2020

Streamline a data-driven capital project prioritization process that aligns with the goals of CONNECT

Use the prioritization process to inform a list of projects to respond to outside funding opportunities

Produce a business plan for the Streets department to guide internal process improvements

Modernize Asset Management

Deliver By End of 2020

Update sign and parking regulations for Center City with partners

Identify new technologies and products to improve service and extend asset life cycles

Review and compile data collection policies, standards, and practices in order to improve asset indexes and standards to monitor performances

Investigate use of LIDAR to collect asset condition data.

Regulate utility work consistent with PennDOT standards on freshly paved streets to reduce degradation and preserve high quality surfaces

Deliver By End of 2025

Develop an asset management manual for the Streets Department to follow and implement

Develop and implement plan to integrate asset management systems into maintenance, operational, programming, and planning decisions

Innovate with Technology

Deliver By End of 2020

Integrate best practices on realtime congestion management into the Central Philadelphia Transportation Analysis Program

Update legislative and policy agendas to prioritize solutions that fit contemporary circulation and parking patterns including the role of TNCs

Update concept of operations for Traffic Operations Center and citywide signal and traffic sensor integration to achieve more effective real time managements

Establish 5G management and support program to leverage use of 5G technologies in the ROW and foster equitable deployment

Complete migration of work order management processes to common electronic platforms

Deploy GPS across sanitation and highway maintenance fleets and integrate into management of crew routing, crew deployment, snow operations, and public snow information for more efficient deployment of resources and better accountability

Deliver By End of 2025

Develop an asset management manual for the Streets Department to follow and implement

Develop and implement plan to integrate asset management systems into maintenance, operational, programming, and planning decisions

Plan for a Clean Fleet

Deliver By End of 2020

Complete Clean Fleet Plan and begin implementation

Deliver By End of 2025

Fully implement Clean Fleet Plan



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- 44 Gibbs, ibid.
- 45 PennDOT Vehicle Registration Data
- 46 Data from Streets Department
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- Cover - SEPTA
- p. 6 - Urban Engineers
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