



## Warehouse Employees Union No. 322



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September 23, 2019

The Honorable Levar Stoney  
900 E Broad Street, Suite 201  
Richmond, Virginia 23219

Dear Mayor Stoney:

I am contacting you regarding an urgent matter of public safety. Maury Street has an extremely high volume of traffic. This thoroughfare is used by both commuters and commercial drivers. Heavy commercial vehicles are constantly traveling up and down Maury Street. Employees working at 612 Maury Street have to cross the street to report to their jobs and again at the completion of their shift. This precarious act is performed several times a day.

The pedestrians are courting danger every time they step into the road. With each crossing, they increase the probability of a traumatic event. Crosswalks, pedestrian signs, and warning lights are a few examples of viable options which are available to this council. Moreover, the aforementioned actions could potentially offer an increased margin of public safety. Mr. Mayor and members of this honorable council, due to the serious nature of this issue, I respectfully implore you to take swift and decisive action thereby providing a safeguard for those who live and work in the community.

Thank you for granting me the opportunity to speak on this matter.

Respectfully,

Brian Peyton  
President, Teamsters Local 322

cc: The Honorable Ellen F. Robertson

Members of Richmond City Council, if you Google 614 Maury Street you will notice there is a dump truck in the picture. According to Google, the image was captured in June of 2019.

The first series of pictures were taken at Maury Street on September 17, 2019 at approximately 7:00 PM.

The final series of pictures were taken at the same location on September 18, 2019 at approximately 8:15 AM. From the included pictures we can establish that Maury Street has a high volume of traffic during the documented times and that there is a high presence of commercial vehicles on this street.



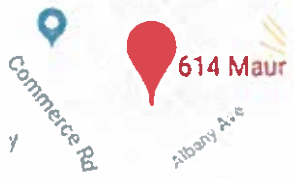
Image capture: Jun 2019 © 2019 Google

Richmond, Virginia

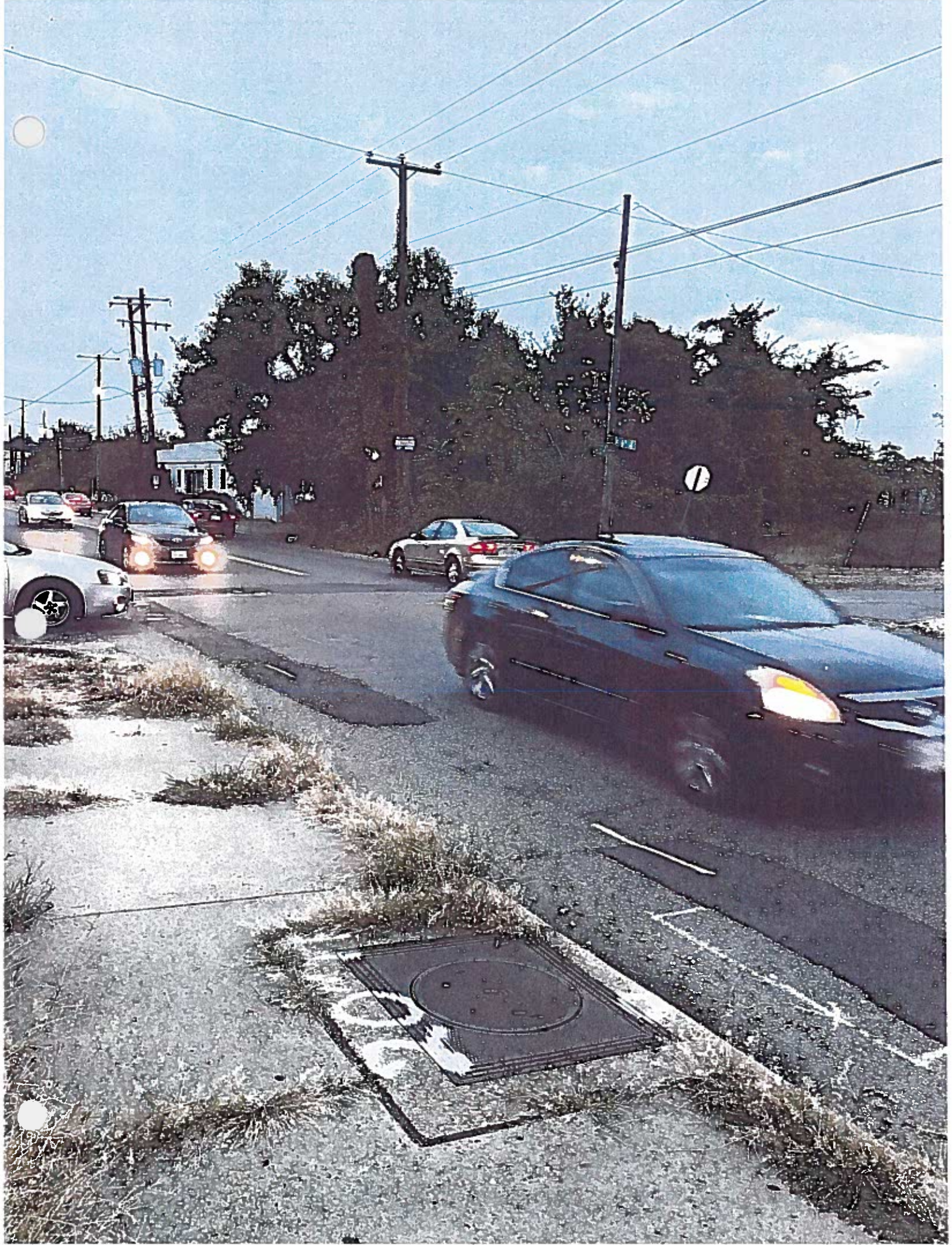
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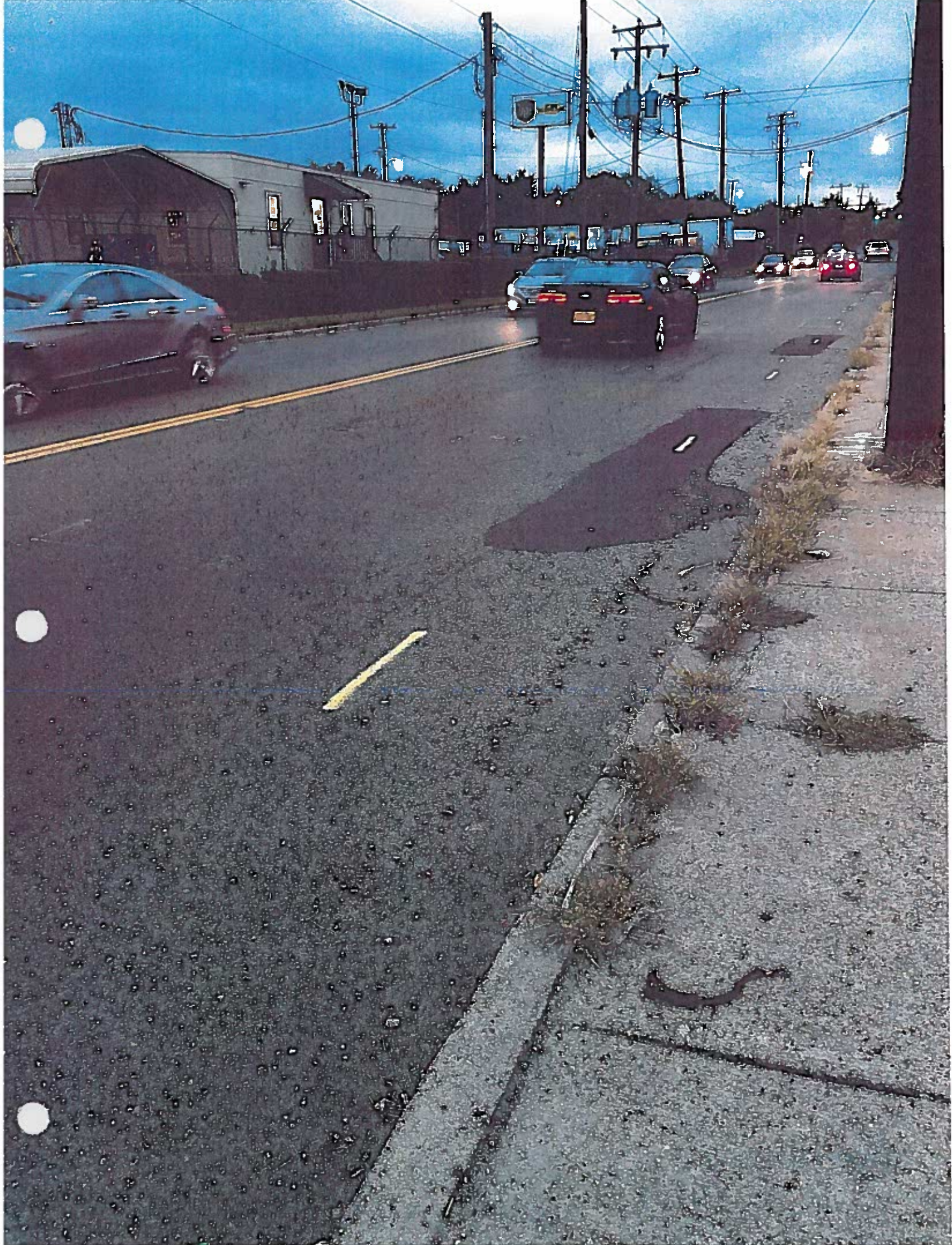
Street View - Jun 2019

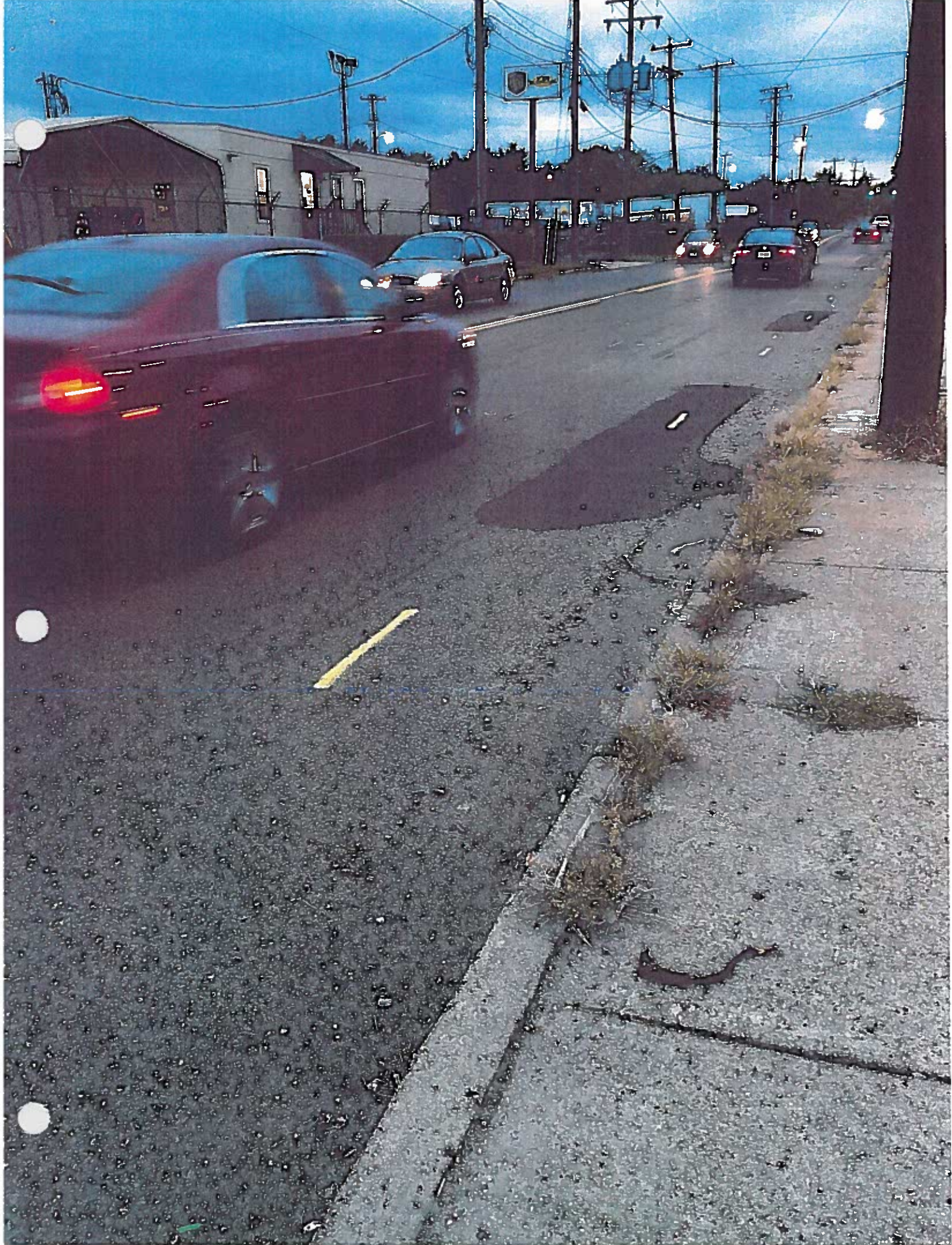
The Hudson Apartments

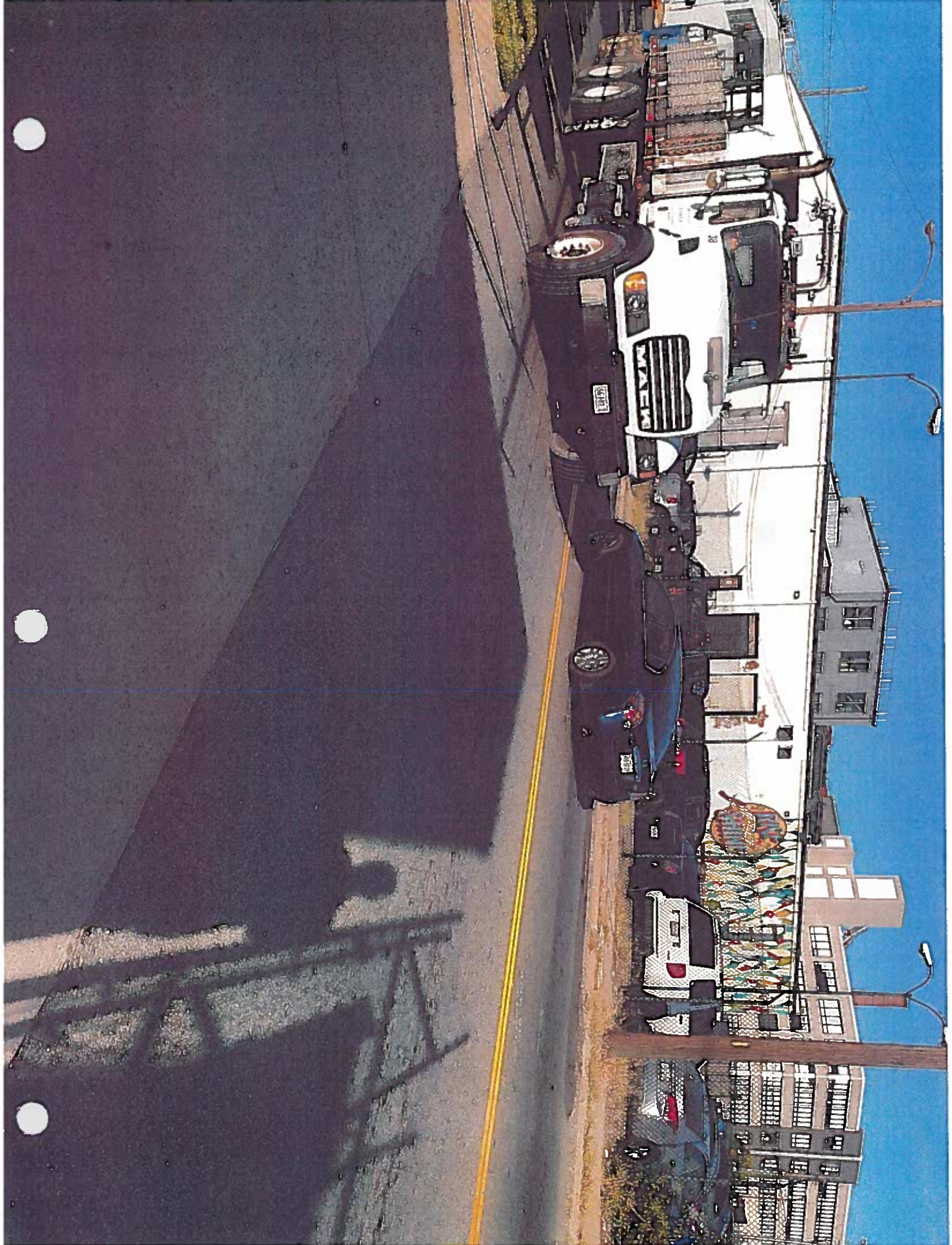


New Manchester Fla









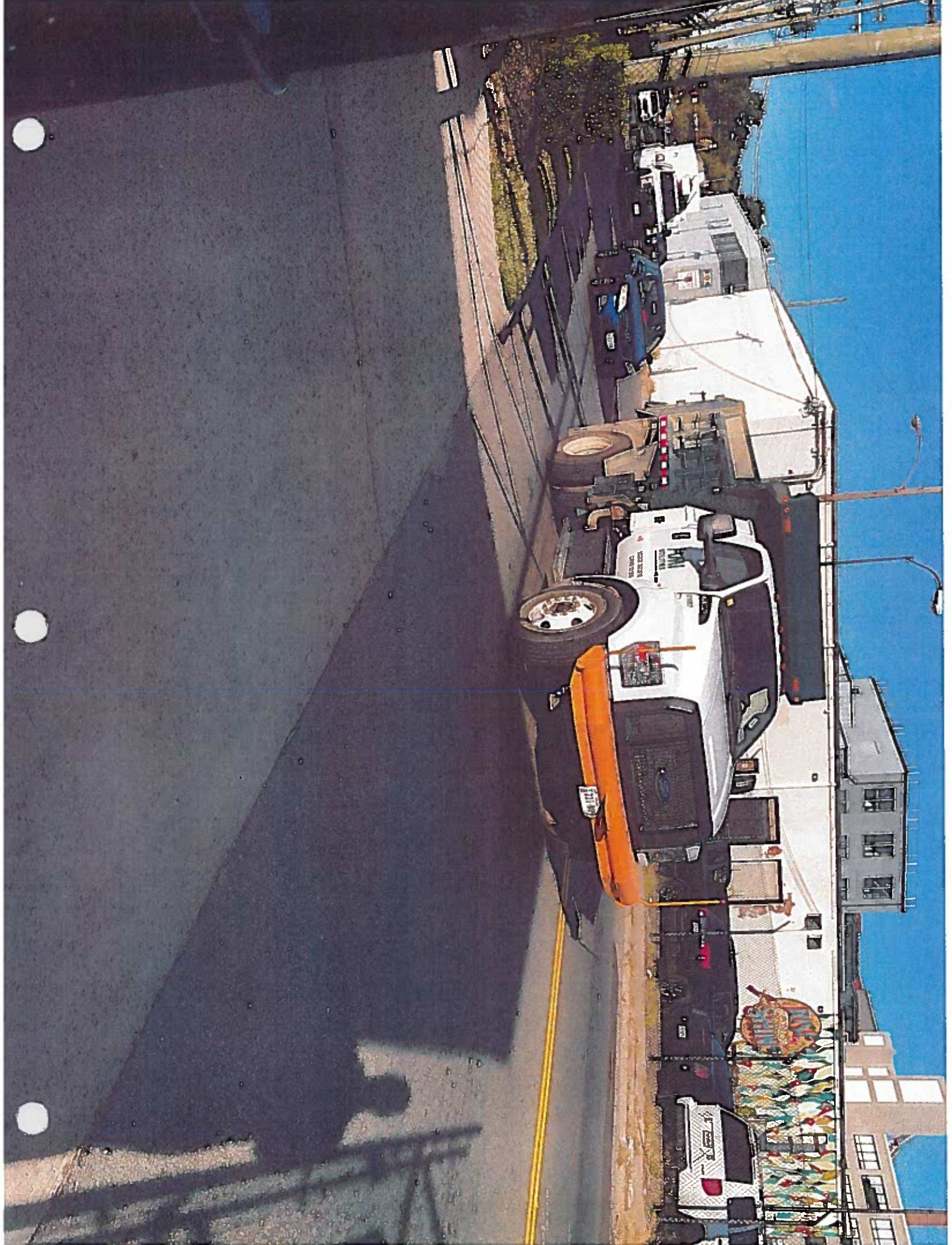


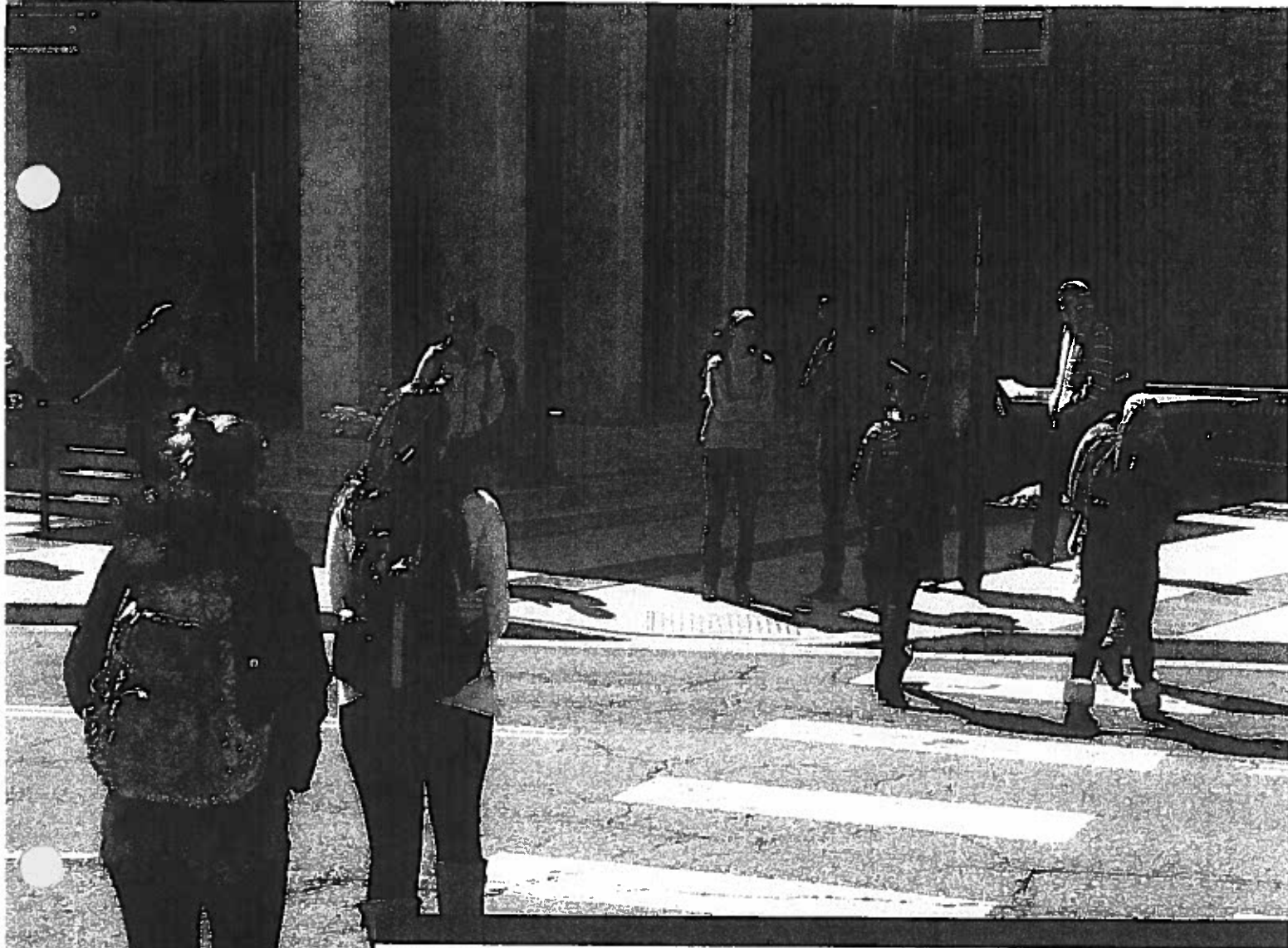
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Virginia Department of Transportation

# Pedestrian Safety Action Plan

May 2018



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## Acknowledgments

This project was led by Mark Cole, Assistant Division Administrator of the Virginia Department of Transportation (VDOT) Traffic Engineering Division, and Stephen Read, VDOT Highway Safety Planning Manager.

The following VDOT staff and local stakeholders also dedicated many hours to consideration of the inputs and development of the plan:

- Dave Beardsley, Former VDOT Location and Design Division
- John Bolecek, VDOT Transportation and Mobility Planning
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- Eric Stringfield, VDOT Hampton Roads District
- Chris Wells, Fairfax County
- Nhan Vu, VDOT NoVa District

The project team would like to thank those outside the steering group who also contributed to this plan.

Photos by VHB unless otherwise noted.





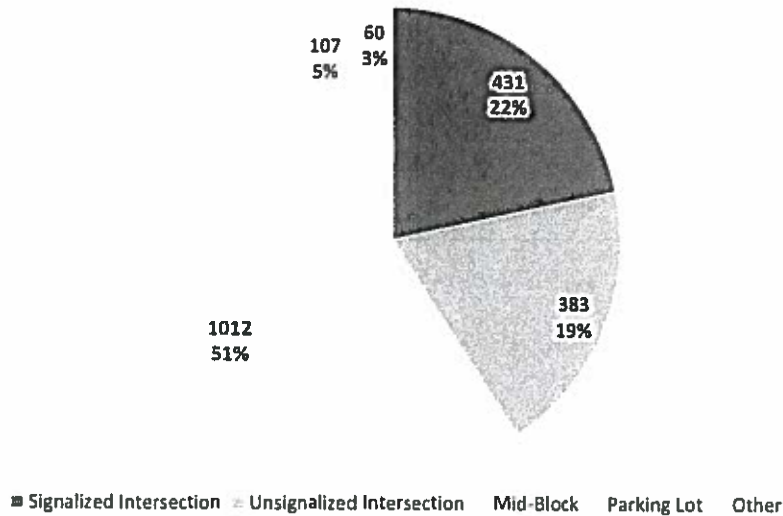
## Introduction

**Pedestrian fatalities in Virginia have increased by 19 percent since 2012**, according to the *2017 Virginia Department of Transportation (VDOT) Pedestrian Crash Assessment: Analysis of Pedestrian Crashes Occurring Between 2012-2016*. In response to the continuing increase in pedestrian fatality rates, the VDOT Traffic Engineering Division completed an inaugural statewide Pedestrian Safety Action Plan (PSAP) in early 2018. This report documents the process VDOT followed to complete the PSAP, considers ways to improve pedestrian safety, and ultimately reduce pedestrian fatalities throughout the Commonwealth.

VDOT worked with a multidisciplinary group of stakeholders to identify and address pedestrian safety concerns through a data driven approach. This approach included identifying and addressing locations with a history of pedestrian safety crashes along with proactively addressing pedestrian crash risk through the identification of priority corridors. This report complements other pedestrian safety efforts in the state, including the *Virginia 2017-2021 Strategic Highway Safety Plan*, VDOT Highway Safety Improvement Program, SMART SCALE, Transportation Alternatives Program, and Safe Routes to School program. Local, regional, and state agencies should review this report to identify and implement potential counter-measures, update design policies, and supplement other state pedestrian safety initiatives.

According to the analysis of pedestrian crashes from 2012 to 2016 in the 2017 Virginia Department of Transportation (VDOT) Pedestrian Crash Assessment, 51 percent of Virginia's pedestrian injury crashes were located at mid-block locations. Most of Virginia's pedestrian fatal crashes also occurred at unmarked or uncontrolled crossing locations, pointing to the need for improved crossing accommodations.

### Pedestrian Injury Crashes by Crossing Type



Source: 2017 VDOT Pedestrian Crash Assessment: Analysis of Pedestrian Crashes Occurring Between 2012-2016

**51%**

of pedestrian injury crashes occurred at mid-block crossing locations

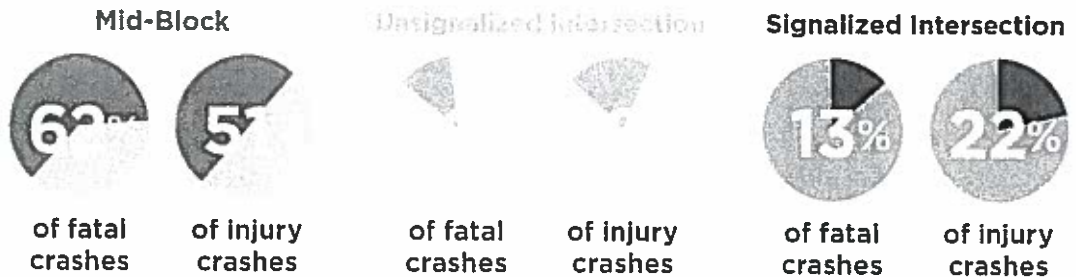
**74%**

of pedestrian injury crashes occurred at locations without a marked crosswalk

**86%**

of pedestrian fatal crashes occurred at locations without a marked crosswalk

### Location of Fatal versus Injury Crashes



## VDOT Pedestrian Safety Action Plan (PSAP) Process

The PSAP process began with an inventory of VDOT policies and pedestrian crash conditions. The team then developed a method for evaluating exposure or risk to pedestrian safety. The analysis identified top-priority crash clusters using crash data and high-risk corridors through predictive analysis. The team identified countermeasures that may improve safety at priority sites, based on crash types, development context, and roadway characteristics.

The plan also considered how pedestrian safety and countermeasures could be better integrated into project funding programs such as the Highway Safety Improvement Program (HSIP), routine maintenance activities, and public education initiatives.



1

Evaluate VDOT Policies



2

Analyze Crash History and Identify Priority Crash Clusters



3

Conduct Systemic Analysis and Identify Priority Corridors



4

Create "Cut Sheets" and Assign Preliminary Countermeasures for Priority Clusters and Corridors



5

Share Results with VDOT Districts, Local and Regional Agencies and Entities, and Other Pedestrian Safety Partners



## Policy Recommendations

Following interviews with VDOT staff, review of existing VDOT policy, and review of national best practices, the PSAP provides a set of recommended policy updates and additional guidance that may provide for more consistent application of pedestrian safety treatments. The policy recommendations are organized by the business units that lead the implementation of the policies.

### VDOT (Overall)

- ✓ Create performance metrics for achieving pedestrian safety goals in the SHSP and priorities identified in the PSAP.
- ✓ Recommend that the Office of Intermodal Planning and Investment (OIP) incorporates the findings of the PSAP into Virginia's SMART SCALE prioritization process.

### Transportation & Mobility Planning

- ✓ Form a VDOT working group or committee focusing on pedestrian safety and/or Complete Streets implementation.
- ✓ Develop training and distribute technical resources for selecting countermeasures.

### Traffic Engineering

- ✓ Create a flowchart or instructions for developing HSIP projects from PSAP-selected priority corridors or crash cluster sites.
- ✓ Update VDOT-specific guidance on countermeasure selection and treatments at uncontrolled crossings and signalized intersection crossings.
- ✓ Develop Road Diet or lane width reduction guidelines.
- ✓ Develop Pedestrian Priority Zones (PPZs) criteria and support speed-setting and design policies for high-risk corridors. Traffic Engineering should coordinate design criteria with Location and Design.
- ✓ Implement Work Zone Pedestrian and Bicycle Guidance as standards.

### Land Use

- ✓ Develop a checklist or model guidance for reviewing subdivisions or site plans for pedestrian safety.
- ✓ Update VDOT and local Traffic Impact Analysis (TIA) guidelines for pedestrian Levels of Service (LOS) to include mitigation options at uncontrolled crossings.

### Location & Design

- ✓ Implement and improve existing multimodal design guidelines, with focus on pedestrian crossing improvements.

### Maintenance

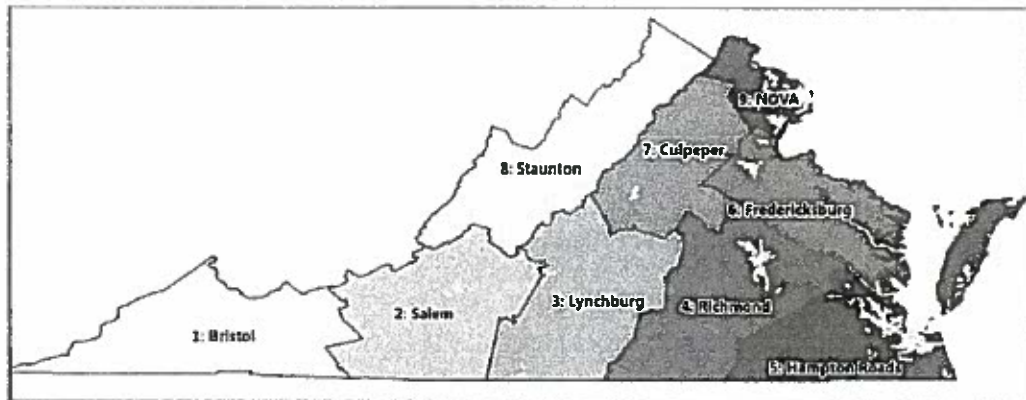
- ✓ Evaluate VDOT sidewalk maintenance policies for potential snow removal.
- ✓ Incorporate pedestrian safety treatments into routine maintenance activities, such as resurfacing and overlay projects.



## Systemic Analysis and Priority Corridors

While conditions associated with pedestrian crashes may be present along a corridor, there may not be a recorded history of reported crashes. Therefore, the PSAP also conducted a predictive systemic analysis to consider corridors that do not have a strong crash history but should be prioritized for proactive pedestrian crash countermeasure improvements based on pedestrian safety factors. VDOT compiled GIS data to complete this analysis, considering the roadway conditions and other measures of pedestrian exposure to crash injury or fatality. Most priority corridors were in developed areas, along multi-lane roadways near destinations where pedestrians may frequent. The following map shows the locations for the statewide priority corridors (highlighted in yellow) that were identified by the analysis.

Geographic Distribution of Priority PSAP Corridors



### Countermeasure Selection

VDOT considered current conditions and crash types when selecting countermeasures for each of the priority crash clusters and corridors. Priority site cut sheets show the location, describe key roadway conditions, summarize local crash types, and list countermeasure options. The conditions considered when selecting countermeasures included the following:

- Number of travel lanes
- Speed limit
- Average daily traffic (ADT)
- Presence of median or signalized crossing
- Land use context and nearby pedestrian destinations
- Presence of existing crosswalk markings
- Crash types and driver yield compliance reported
- Time of day for recorded crashes
- Location of crashes relative to crossing types (i.e. marked crosswalks)

Current research provided guidance to VDOT when selecting countermeasures according to documented conditions. The most common countermeasures recommended for priority sites included the following:

- High Visibility Crosswalk
- Curb Extensions
- Pedestrian Countdown Signal Head
- Leading Pedestrian Interval
- Advance Warning Signage
- In-Street Yield Sign
- Pedestrian Hybrid Beacon (PHB)
- Rectangular Rapid-Flashing Beacons (RRFBs) and/or other Flashing Beacons
- Pedestrian Refuge Island (Raised Median)
- Road Diet
- Sidewalk Connections
- Transit Stop Access Improvements

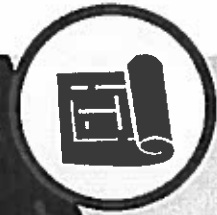
### Next Steps and Performance Measures

The PSAP also described non-engineering strategies to support physical countermeasure improvements, such as working with the Virginia Department of Motor Vehicles (DMV) to improve training for law enforcement officers. VDOT will monitor progress and implementation of the PSAP according to select performance metrics. These metrics are informed by the results of the PSAP and goals from related plans such as the *2017–2021 Strategic Highway Safety Plan (SHSP)*.

#### Proposed PSAP Performance Measures

Pedestrian Safety Goal	Performance Metric
Reduce severe injury and fatal pedestrian crashes.	Achieve a 4 percent reduction in the five-year average for severe injury and fatal crashes statewide.
	Achieve a 4 percent reduction in the five-year average for severe injury and fatal crashes by VDOT District.
Accelerate consideration of pedestrian improvements at high-exposure pedestrian priority clusters and corridors.	Annually, track percentage of the PSAP priority clusters/corridors where projects are funded by SMART SCALE, TAP, Revenue Sharing, Safe Routes to School, HSIP, or other programs.
	Annually, review opportunities to incorporate pedestrian safety improvement projects into roadway resurfacing projects.
Create policies that promote pedestrian safety.	Annually, assess pedestrian safety policy gaps and updates and track PSAP listed policies that are improved.
	Annually, increase stakeholder participation in the development of pedestrian safety policies or plans (as determined by number of meeting attendees, survey respondents, and or public comment responses).





# VISION ZERO

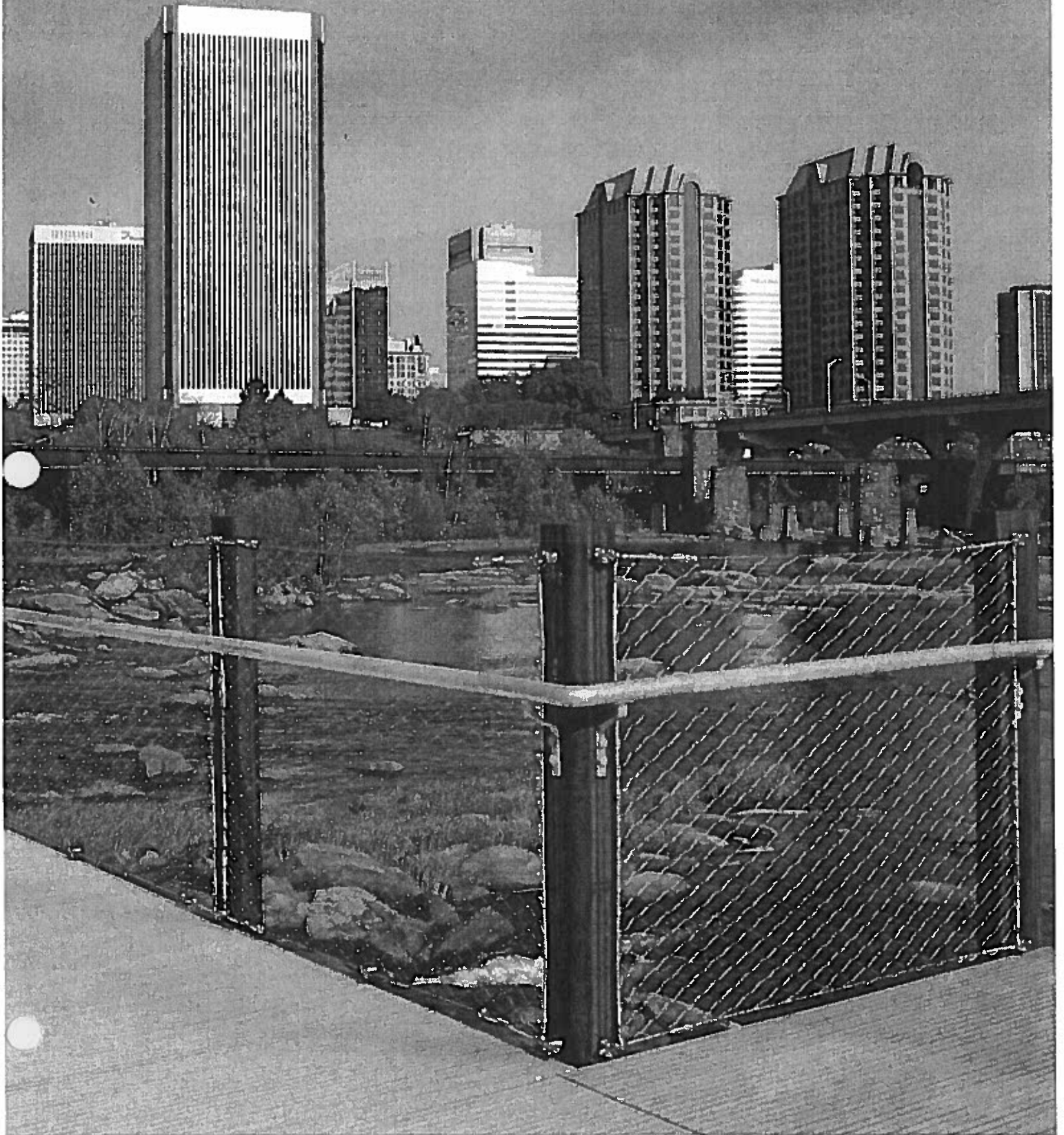
**RICHMOND, VIRGINIA**

Safer Roads for All Modes



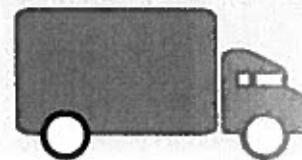
## Acknowledgments

This Vision Zero Action Plan was prepared by VHB for the Safe and Healthy Streets Commission with input from numerous partners committed to safety in Richmond, the surrounding region, and in Virginia.



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## Message From The Mayor

Each year, there are an average of 2,700 injuries and 13 deaths on Richmond city streets. This is unacceptable, and it is why I signed a pledge during my first year in office to adopt Vision Zero in the City of Richmond.

Vision Zero is a global strategy designed to change the mindset of traffic fatalities and serious pedestrian injuries as being inevitable to the belief they are preventable.

I am proud to present the Vision Zero Action Plan, our blueprint to achieve zero traffic-related fatalities and serious injuries on Richmond streets. I encourage my fellow citizens to join me in this commitment and Vision Zero effort by taking the Safe and Healthy Streets challenge.

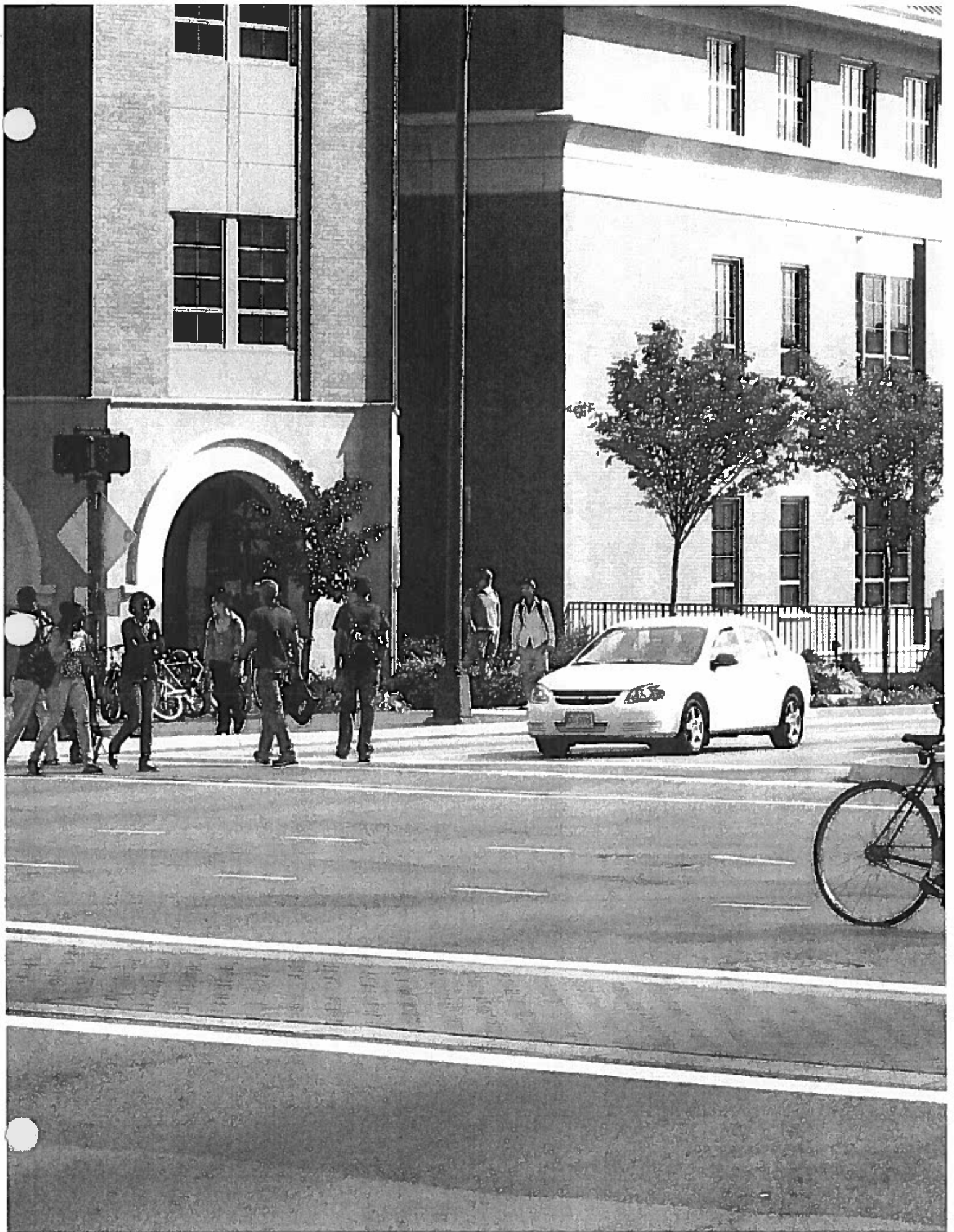
*Richmond hereby pledges to:*

- Reduce fatal and serious injury crashes
- Sustain a traffic safety culture
- Pursue appropriate changes to land use patterns and street designs
- Use a data-driven approach
- Evaluate and improve actions
- Prioritize efforts
- See transportation deaths and serious injuries as preventable

**Working together, we can reach Zero!**

— Levar M. Stoney, Mayor





## Why Vision Zero

### Vision Zero is based on five fundamental principles:



Traffic deaths and severe injuries are acknowledged to be preventable.



Human life and health are prioritized within all aspects of transportation systems.



Create transportation systems that account for human error.



Safety work should begin with systems-level changes and follow with influencing individual behavior.



Speed is recognized and prioritized as the fundamental factor in crash severity.

Vision Zero is a concept to eliminate traffic fatalities for all travel modes. Vision Zero was first initiated in Sweden in the 1990s and takes a safe systems approach to achieve safe, healthy, equitable mobility for all. A safe systems approach is holistic and requires everyone to consider the road system in its entirety from infrastructure to policies. Vision Zero has been successful in Europe and is now gaining traction in many American cities.

Over 35,000 people die on our nation's streets and highways each year and hundreds of thousands more are seriously injured. In Richmond, more than a dozen people lose their lives on city streets annually. In 2017, 22 persons died on Richmond streets. This means almost 10 persons died for every 100,000 people living in Richmond. Comparably speaking, this is one more person than the state average, four times of that of Alexandria, and over three and half times that of New York City. The price tag for these deaths is over \$200 million in societal harm. One agency or organization cannot tackle this serious public health risk alone. It is important to have a collaborative effort between engineers, enforcement, educators, emergency responders, elected officials, and everyone who use our streets.

Part of the Vision Zero approach is to affect a change in the culture of safety. While a safe system results in a design of transportation system for all people, individuals also have a responsibility to comply with the rules of the road. Communication and education techniques are needed to drive collective action, both by agencies and by individuals, for safer streets.

#### *Vision Zero prioritizes the following policies and practices:*

- Build and sustain leadership, collaboration, and accountability to advance safety.
- Collect, analyze, and use data to identify safety concerns and opportunities for improvement.
- Prioritize actions to provide a safe and equitable transportation system for all users.
- Lead with roadway design that prioritizes safety
- Reduce target design speeds and impact speeds.
- Maximize technology advances, without overlooking low-tech solutions.

The Richmond Vision Zero Action Plan incorporates these policies and practices in a comprehensive set of strategies and actions to address safety on city streets with a goal to eliminate fatalities and serious injuries by 2030. This Action Plan is the first step in a much larger, multi-year effort toward the zero goal.





BIKE ROUTE

NO  
MOTOR  
VEHICLES

STAY  
IN  
LANE

## Richmond's Vision Zero Effort



Richmond is committed to a strong and effective Vision Zero plan. The following are components of our effort to implement a plan that will have a long-lasting effect for all transportation system users.

- **Political Commitment**

Richmond City leadership is committed to the implementation of a Vision Zero plan. Mayor Stoney unveiled the City's commitment to a Vision Zero approach on October 27, 2017. This extends from a resolution approved by City Council in March 2016 to commit to a reduction of fatalities on City streets to zero by 2030. This commitment includes the development and implementation of this Action Plan.

- **Multi-Disciplinary Leadership**

The Safe and Healthy Streets Commission (SHSC) is the advisory board guiding the development and implementation of Vision Zero in Richmond. This multi-disciplinary group, with representatives from engineering, enforcement, education, public health, and transportation safety partners meets quarterly to monitor the safety of our transportation network and develops recommendations to address safety issues. The SHSC is comprised of representatives from agencies, organizations, and citizens across the City to shepherd the implementation of Vision Zero in the years ahead.

- **Cooperation and Collaboration**

Richmond's Vision Zero stakeholder agencies and organizations number in the hundreds, and all have an ongoing opportunity to guide and shape the development and implementation of a successful Vision Zero Action Plan. Involvement of agencies, organizations, and individuals is essential to carry out the diverse strategies and actions in the Plan as no one agency has the resources to carry out every single activity. Each participant has a role and responsibility to advance different elements of the Plan.

- **Systems-Based Approach**

The City of Richmond Department of Public Works and partner agencies is committed to an approach to focus on improving the built environment and policies that will improve safety of the transportation system for all users. Street design and design speed has an impact on both the perception of safety and observed outcomes when using the transportation system. The redesign of the street design elements reduces both the number and severity of crashes for all modes. For example, applying a lower design speed for a street results in geometric changes that influences the driver to lower their speed, and in turn, reduce fatalities and injuries. This embraces the Vision Zero principle that human life and health are prioritized within all aspects of the transportation system.

- **Data-Driven**

Our plan uses crash data provided by the Richmond Police Department and the Virginia Department of Transportation to help prioritize its resources so that investments provide the most benefits, as driven by a reduction in fatalities and serious injuries. Traffic deaths and serious injuries are preventable but stakeholders must understand the complex factors of prevention to be appropriately address transportation safety.

- **Community Engagement**

Our plan was developed in consultation with agencies and organizations at the city, regional, and State levels through a series of workshops in November 2017 as well as an online survey to gauge safety priorities and concerns of stakeholders. These priorities and concerns, combined with the data analysis, form the basis of the strategies and actions in this Action Plan. The implementation of the Vision Zero plan will involve continued public engagement to involve all communities that make up the City through the SHSC. Continued engagement is needed as transportation safety in Richmond will evolve over time and priorities will also change; revisiting and modifying the strategies and actions as needed in the future is a key component of keeping a nimble Action Plan that prioritizes activities that will optimize efforts for Richmond to reach a zero goal.

- **Transparency**

Transparency is tied to responsiveness and good governance. All City agencies are committed to reporting the implementation process and progress of Vision Zero. City Council and the public will receive an annual scorecard of progress on the implementation process and will have access to a dashboard of fatality and serious injury statistics and traffic citation data prepared by the Richmond Police Department. The availability of good quality process and crash data increases civic engagement and enables Richmonders to identify issues that impact transportation safety in the City.

- **Equity**

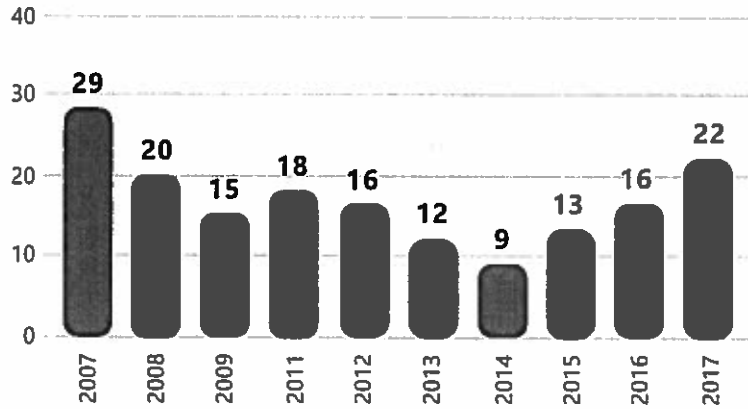
Our Vision Zero efforts take an equitable approach by establishing inclusive actions to provide safe transportation options for all road users across the City. This approach recognizes the fact that certain communities are more impacted than others. According to the American Community Survey, 7.7 percent of working Richmonders do not have access to a car to get to work, compared to 2.8 percent statewide, and 4.4 nationally. Those without access to a car must turn to other means of transportation such as public transit, bicycling, and walking. However, as transportation facilities have mostly favored the personal vehicle, there are opportunities to improve our facilities to better accommodate those who do not have access to a car. Students, people with disabilities, the elderly, young families, and other populations are among those who do not have their own personal vehicle. The implementation of the plan will prioritize resources to invest in the transportation options for these populations as well as a high injury street network that are most impacted by crashes. The City will also proactively engage with community members to better understand transportation improvements to improve their safety.

- **Action Plan**

This Vision Zero Action Plan is the culmination of outreach efforts beginning with the Mayor's pledge in October 2017 and included data analysis, research, workshops and online surveys to determine City safety priorities. This Action Plan includes a comprehensive list of actions that Richmond safety partners will pursue in the years ahead. However, in a cost constrained environment, not all actions will take place concurrently. Safety partners will identify, on an annual basis, actions from the comprehensive list for prioritization. This Action Plan includes an initial set of 12 prioritized actions for the first year of the plan. Each of the 12 prioritized first year actions have identified responsible organizations that will lead the implementation of the action and performance metrics. Each year, Richmond safety partners will conduct a similar exercise to identify partners, funding, and metrics to carry out identified prioritized actions. This is part of an evaluative approach whereby the SHSC will review and revise the actions in the plan as needed to mobilize resources to those issues with the greatest need.

## Richmond's Crash Experience

### Annual Fatalities in Richmond

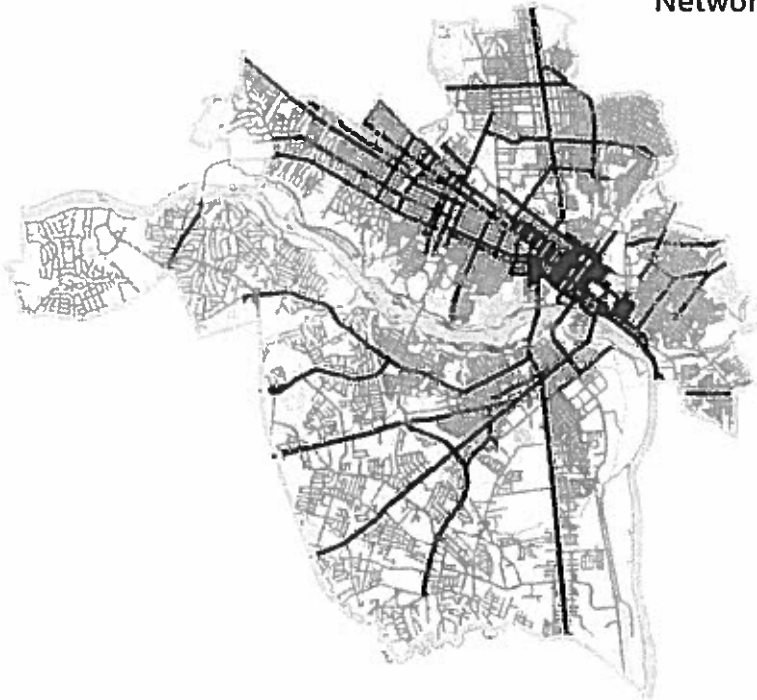


After reaching a low in 2014, the number of fatalities is rising toward the same levels as found a decade earlier.

A Vision Zero effort includes an evaluation of traffic crash data. The development of this Action Plan included an analysis of traffic data provided by the City of Richmond through the Virginia Department of Transportation. City staff and the Richmond Police Department have long monitored and analyzed traffic crashes in the City to develop data-driven safety actions that provide the greatest impact for all road users.

Crashes occur on our roads every day with most of them not resulting in fatalities or serious injuries. Vision Zero principles recognize that crashes will happen, however, they should not result in the loss of life or a life altering injury. If crashes are to occur, the severity of injuries must be minimized. This Vision Zero Action Plan includes strategies and actions that focus on fatalities and serious injuries.

### Richmond High Injury Street Network Map

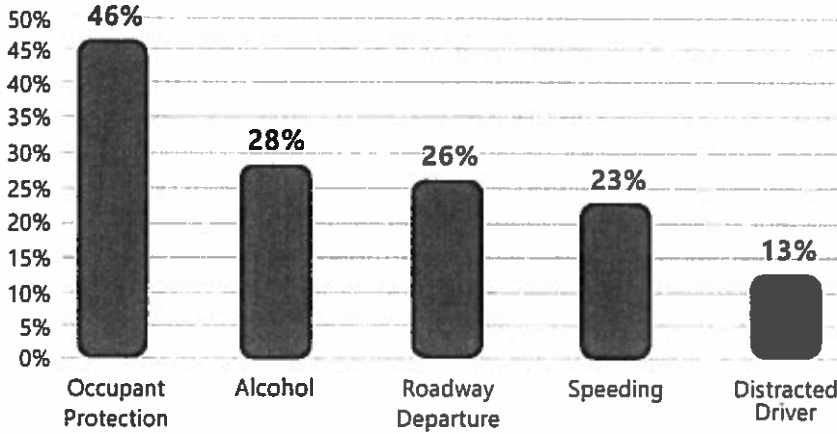


Fatal and serious injuries on our streets are not limited to one location – fatal and serious injury crashes happen across the City, with greater frequency on roadways with more traffic. These streets, particularly those carrying a large volume of vehicles are also wider with more travel lanes. The adjacent map shows Richmond's High Injury Street Network. The highlighted streets represent 16 percent of all road mileage in Richmond and account for 58 percent of all fatal and serious injury crashes. This indicates transportation safety investments in these locations can address the corridors with a greater likelihood of crashes.

*Source: Virginia Department of Transportation, 2011-2016*

### Factors in Fatalities

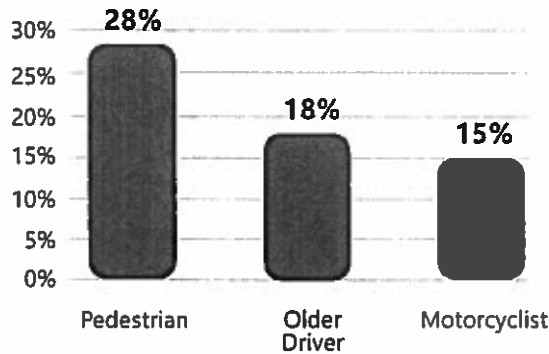
Why are people dying in crashes on our roads? The causes of these crashes are complex and varied. When a crash is reported, law enforcement documents the circumstances of the crashes using a standard reporting form called a FR-300. These forms show that some factors or circumstances are present in multiple fatal crashes including the lack of restraint use by occupants, drunk driving, vehicles running off the road, distracted driving, and speed. A crash may have multiple contributing factors. The quality of the data from these forms depends on how consistently law enforcement officers complete them. Misspellings, incomplete fields, and missing data contribute to lower data quality. The Richmond Police Department works to rectify these inconsistencies to improve data used for safety analysis. Other data sets such as those from public health help to augment data available to evaluate safety outcomes.



Source: Virginia Department of Transportation, 2011-2016. Distracted driving statistics may be incomplete or underreported.

### Fatalities by Type of Road User

When looking at the type of road user killed in a crash, over one-quarter are pedestrians. Almost two-fifths are older drivers.



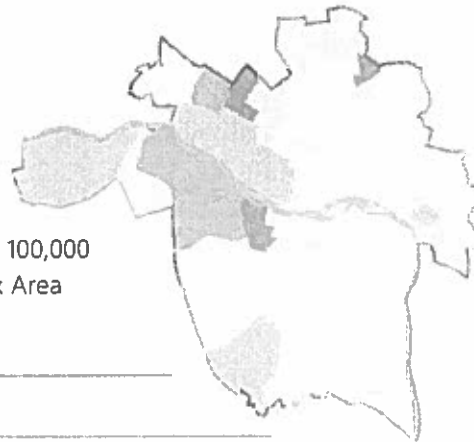
Source: Virginia Department of Transportation, 2011-2016

### Pedestrian Crashes 2011 to 2016



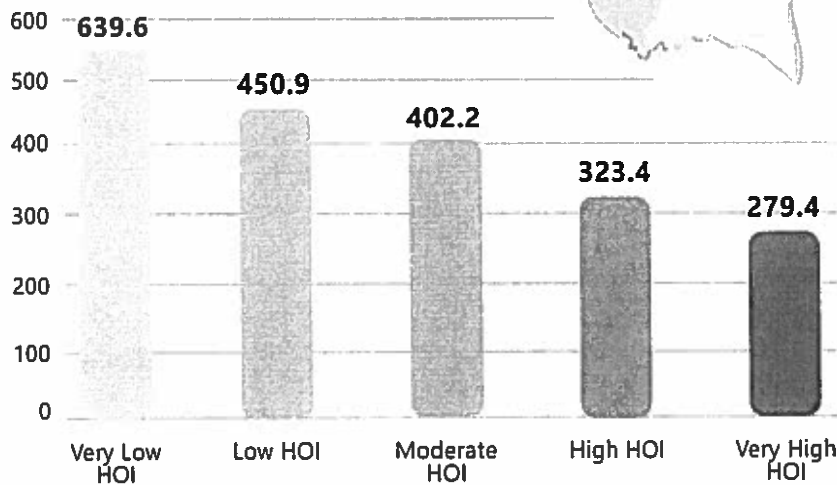
Pedestrian fatalities in Richmond are disproportionately high when compared to other localities within Virginia. On per population basis, Richmond has more fatalities than urban localities such as Alexandria, Hampton, and Portsmouth. There is a higher exposure and activity of pedestrians compared to rural communities elsewhere in the Commonwealth. Pedestrian fatalities and serious injuries have occurred across the City, with greater numbers in areas of greater pedestrian activity in the downtown area and on and connecting to the Virginia Commonwealth University (VCU) campus. Half of all pedestrian fatalities and serious injuries occur at intersections. When Richmond drivers intersect with greater numbers of pedestrians, the vulnerable user loses, sometimes fatally.

### Health Outcomes



The Virginia Department of Health uses a Health Opportunity Index (HOI) as a composite measure of the social, economic, educational, demographic, and environmental factors that relate to a community's well-being. This includes indicators of neighborhood walkability and access to transportation; two factors directly relevant to Vision Zero. Areas in the City with a "very low" HOI experience a fatality and injury rate 2.65 times higher than areas with a very high HOI. Investments in transportation safety in these communities may contribute to the overall health outcomes of residents in areas with the greatest need. It will be necessary for the City and Vision Zero stakeholders to continue to determine which factors have the greatest influence on crash rates and the resulting injuries and fatalities in these specific communities.

Fatality and Injuries Rate per 100,000 by Health Opportunity Index Area  
Colors on map reflect graph



Source: Virginia Department of Health