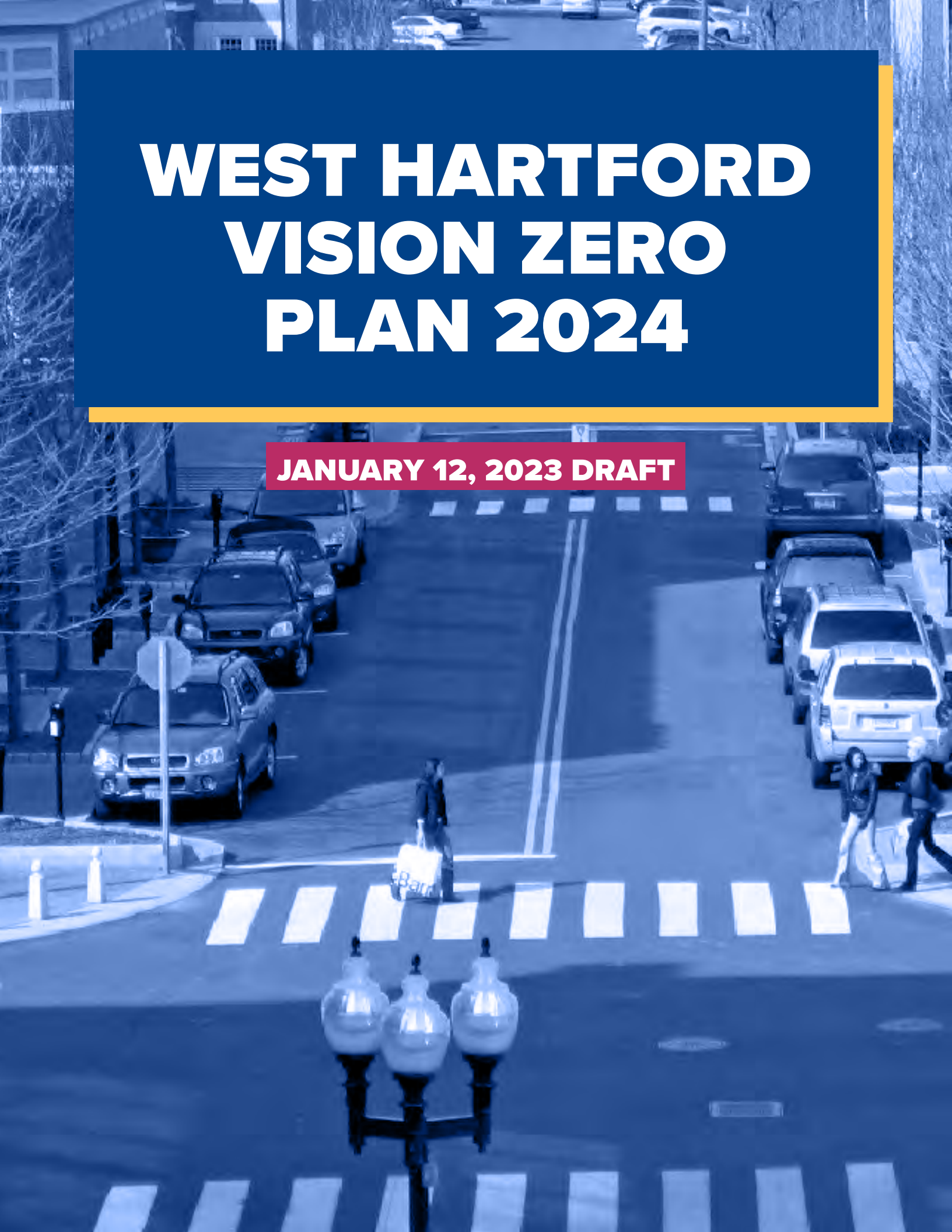

WEST HARTFORD VISION ZERO PLAN 2024

JANUARY 12, 2023 DRAFT

This plan was prepared for the Town Manager in collaboration with the Vision Zero Task Force. Assistance provided by FHI Studio with support from Toole Design.

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CONTENTS

FIGURES

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KEY TERMS

Term	Definition
Crash severity	The degree of injury from a crash, including fatality, suspected serious injury, suspected minor injury, possible injury, and property damage only.
High Injury Network (HIN)	A prioritization tool to focus on streets with crashes resulting in a high number of fatalities and serious injuries. See *Safety Assessment* for more information.
KSI crash	Crashes resulting in someone killed or seriously injured.
Quick-build	A temporary project that is fast and cheap to deploy and demonstrate the value of permanent changes.
Road Safety Audit (RSA)	A formal safety performance examination of an existing or future road intersection. See *Safe Design* for more information.
Transportation Equity Zone (TEZ)	An area identified either in a low- or moderate-income Census block group, CT Department of Energy and Environmental Protection environmental justice community, and/or US Department of Transportation equitable transportation community. See *Equity in Vision Zero* for more information.
Vision Zero Focus Area (VZFA)	A prioritization tool based on HIN, TEZ, and public comments to guide Vision Zero implementation. See *Achieving vision zero in West Hartford* for more information.
Vulnerable user	Users who are at higher risk of injury or fatality in the event of a crash, including pedestrians, cyclists, micromobility users, children, and elderly users.

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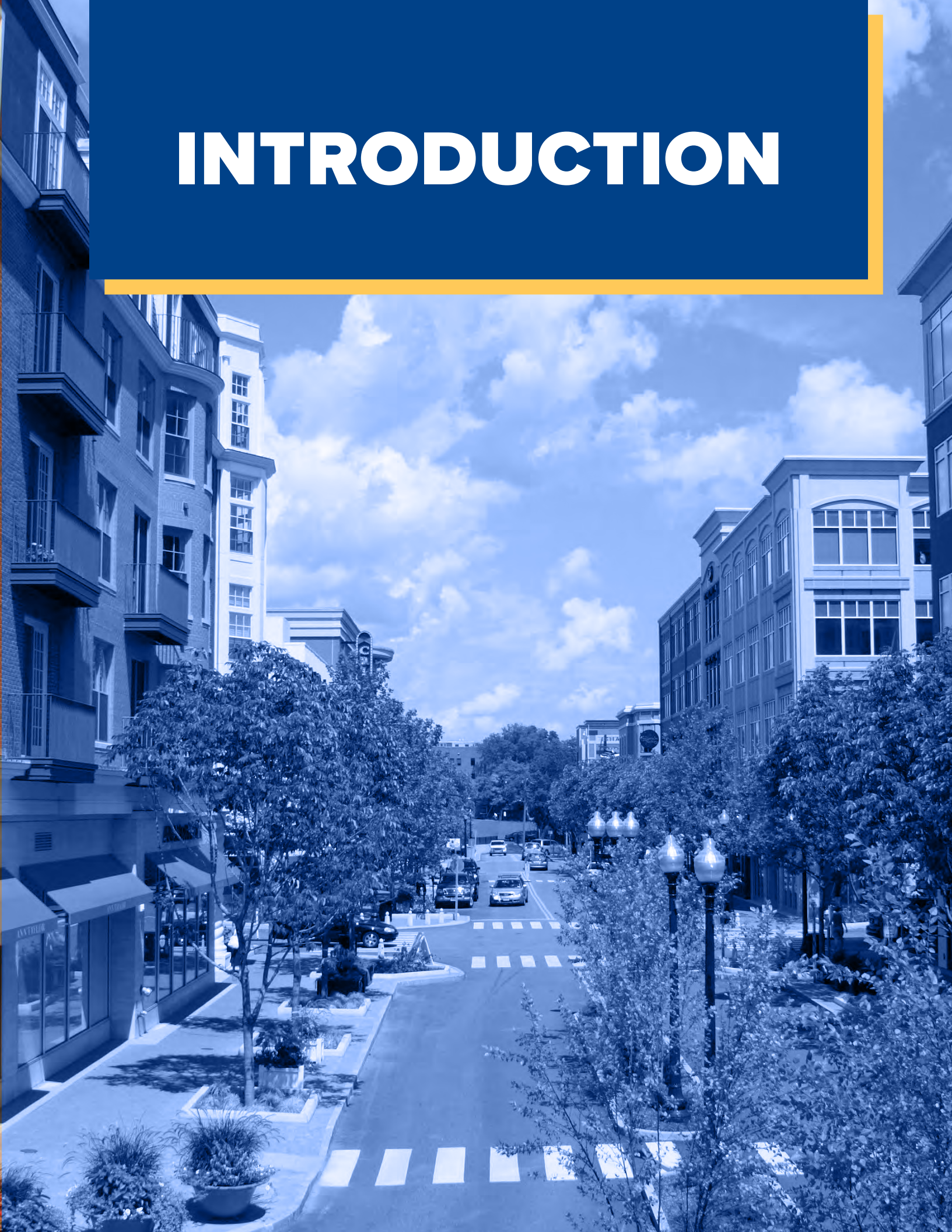
INTRODUCTION



WHAT IS VISION ZERO?

Vision Zero is a strategy to eliminate deaths and serious injuries from traffic crashes. First implemented in Sweden, cities and towns across the United States are utilizing the approach to save lives.

Key Principles

A strong Vision Zero approach includes:

Making data-driven decisions: Crashes can be prevented by proactively identifying risks and proposing data-driven solutions. Data transparency is necessary to understand problems and measure progress towards fixing them.

Building a culture of safety: Communities must embrace the principle that traffic deaths and serious injuries are unacceptable and preventable.

Designing for vulnerable users: Roadways need to be designed for people of all ages and abilities. They also need to be complete streets and include space for pedestrians, bicyclists, transit users, freight/trucks, and drivers, among others.

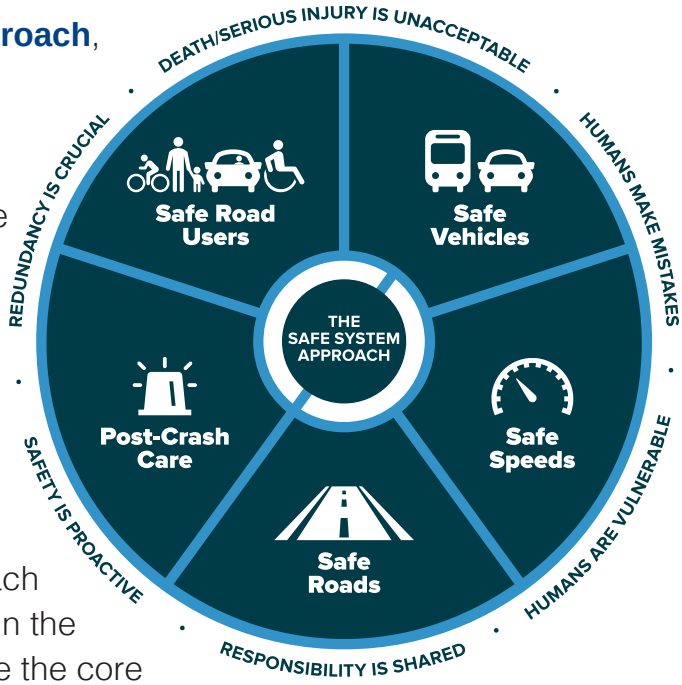
Centering equity: This includes paying close attention to the most vulnerable roadway users, rather than just drivers. It also takes into consideration how minority and underserved communities are disproportionately victims of serious crashes.

Engaging everyone: Robust public and stakeholder participation fosters a shared responsibility for safety and learn from diverse perspectives.

Focusing on Accountability: Clear, measurable short-term and mid-term goals, combined with timelines and ownership from responsible government agencies, create a framework that is easier to evaluate, fund, and build buy-in and accountability.

Safe System Approach

Vision Zero implements the **Safe System Approach**, which differs from the traditional traffic safety strategies. This approach focuses on building and reinforcing multiple layers of protection to prevent crashes from happening and minimize the harm when they do occur. This requires a focus on all the different pieces that affect crash potential including policy, street design, road users behavior, and vehicles design, among others. The Safe System Approach is widely adopted by the Federal Highway Administration (FHWA) and the Vision Zero Network. The Safe System Approach principles correspond to the elements shown in the graphic to the right. The inside of the circle are the core focus areas that will reduce serious injuries and fatalities.



Source: FHWA

Beyond the Traditional "E"s of Traffic Safety

The Es of traffic safety is a longstanding approach organized around engineering, education, and enforcement. The national Safe Routes to School Program has pioneered the use of 6 Es to drop enforcement and emphasize more proactive and just transportation systems. It is an excellent model for understanding how to achieve Vision Zero. Under this approach, communities focus on:

Engagement: Listen to community voices and build ongoing opportunities for engagement into the transportation system.

Equity: Ensure safety initiatives provide safe, healthy, and fair solutions for all.

Engineering: Improve the physical environment to address the needs of all roadway users.

Encouragement: Get people excited about safety by hosting special events, walking and biking tours, competitions, and the like.

Education: Teach about safe roadway behavior.

Evaluation: Check if your strategies are working. Evaluation activities can help set goals and establish baseline data for planning projects.

Equity Impact of Vision Zero

Traditional safety approaches frequently focus heavily on enforcement. Too often, this exacerbates racial and economic disparities in enforcement. A Safe System is more equitable because it (1) lessens the need for enforcement and (2) focuses on preventing serious crashes that disproportionately affect low income people and people of color.

A ROAD SAFETY CRISIS

Traffic crashes are a threat to safety across the United States. **In 2021, 42,939 people, including 7,388 pedestrians, were killed in traffic crashes.** On average, a pedestrian was killed every 71 minutes. Pedestrian deaths are at their highest level decades and **pedestrian deaths increased 12.5% between 2020 and 2021**.

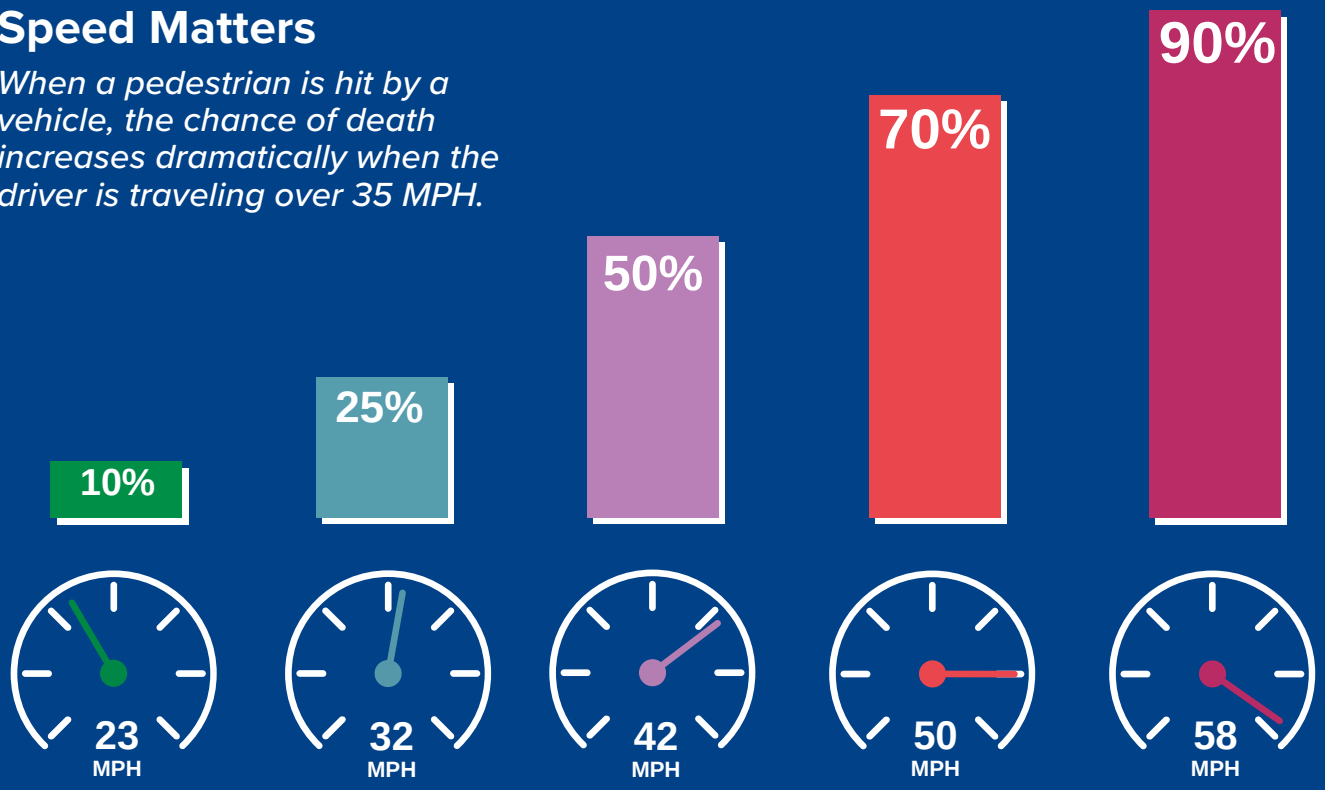
Source: National Center for Statistics and Analysis. (2023, June). Pedestrians: 2021 data (Traffic Safety Facts. Report No. DOT HS 813 458). National Highway Traffic Safety Administration.

Fatal crashes are not experienced across all members of the U.S. equally. **Traffic crashes disproportionately impact people who are Black and American Indian or Alaskan Native.** Between 2016 and –2018, the fatality rate for non-Hispanic Black Americans was 4.5 times higher while cycling; 2.2 times higher while walking; and 1.8 times higher while driving than for White Americans on a per mile traveled basis.

Disparities in Activity and Traffic Fatalities by Race/Ethnicity. Matthew A. Raifman, MPP and Ernani F. Choma, PhD. American Journal Of Preventative Medicen, June 7, 2022

Speed Matters

When a pedestrian is hit by a vehicle, the chance of death increases dramatically when the driver is traveling over 35 MPH.



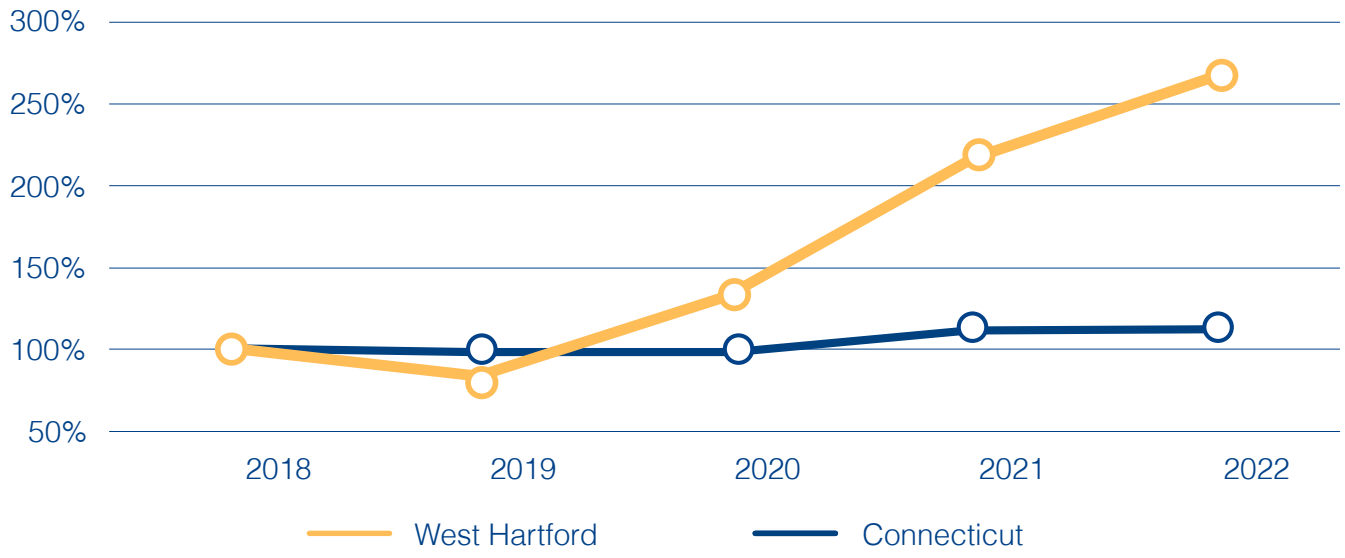
Fatality Analysis Reporting System; Early Estimates of Motor Vehicle Traffic Fatalities and Fatality Rate by Sub-Categories in 2020, DOT HS 813 118, June 2021; AAA Foundation for Traffic Safety, Impact Speed and a Pedestrian's Risk of Severe Injury or Death; National Traffic Speeds Survey III: 2015, DOT HS 812 485, March 2018.

WHY WEST HARTFORD NEEDS VISION ZERO

While fatal car crashes have decreased in the United States over the past 30 years, traffic fatalities started increasing in 2020. An estimated 368 people died in car crashes in Connecticut in 2022. This is the first time the state has recorded an average of more than one traffic fatality per day in more than a decade.

The situation in West Hartford is even more serious. **Over the past five years, 48 crashes resulted in death or serious injury in West Hartford.** This is consistent with an upward trend in fatal and serious injury crashes since 2018. As illustrated in Figure 1, **over the past four years, the number of fatal and serious injury crashes has more than doubled in West Hartford,** far outpacing the rest of the state. **More than half of the fatal and serious injury crashes in West Hartford occur on the same 17 miles of roadway**.

Figure 1. Percent Change in Number of Traffic Fatalities from 2018



In West Hartford...

56%
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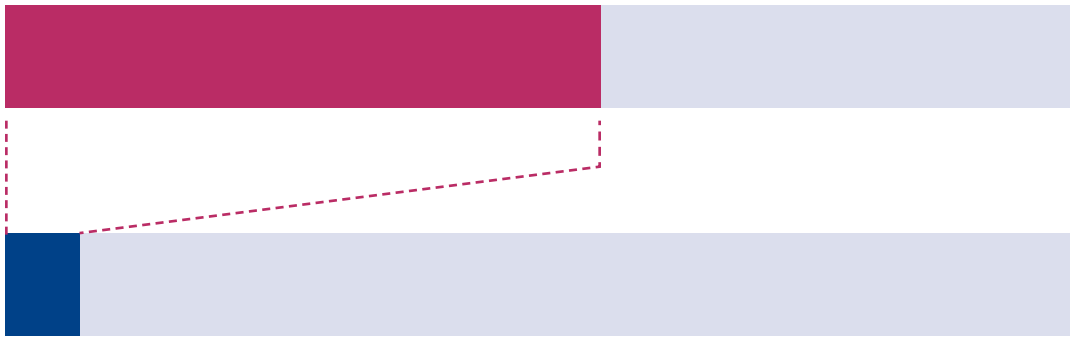


VISION ZERO SUCCESS: JERSEY CITY

Jersey City made headlines in 2022 when it accomplished what Vision Zero advocates have been championing for years: zero traffic deaths on city streets. This was accomplished through a combination of hard work and following best practices in Vision Zero.

Jersey City became the first municipality in New Jersey to adopt the Vision Zero initiative with an executive order in 2018. They established a 15-member Vision Zero Task Force that consisted of representatives from various City divisions as well as the local transportation safety advocacy organizations. Together, they developed a comprehensive plan to ensure safety for all roadway users. The plan took a data-driven and equity-focused approach. It included recommendations on:

- Safer streets
- Culture
- City practices
- Enforcement, law, and policies
- Planning and data

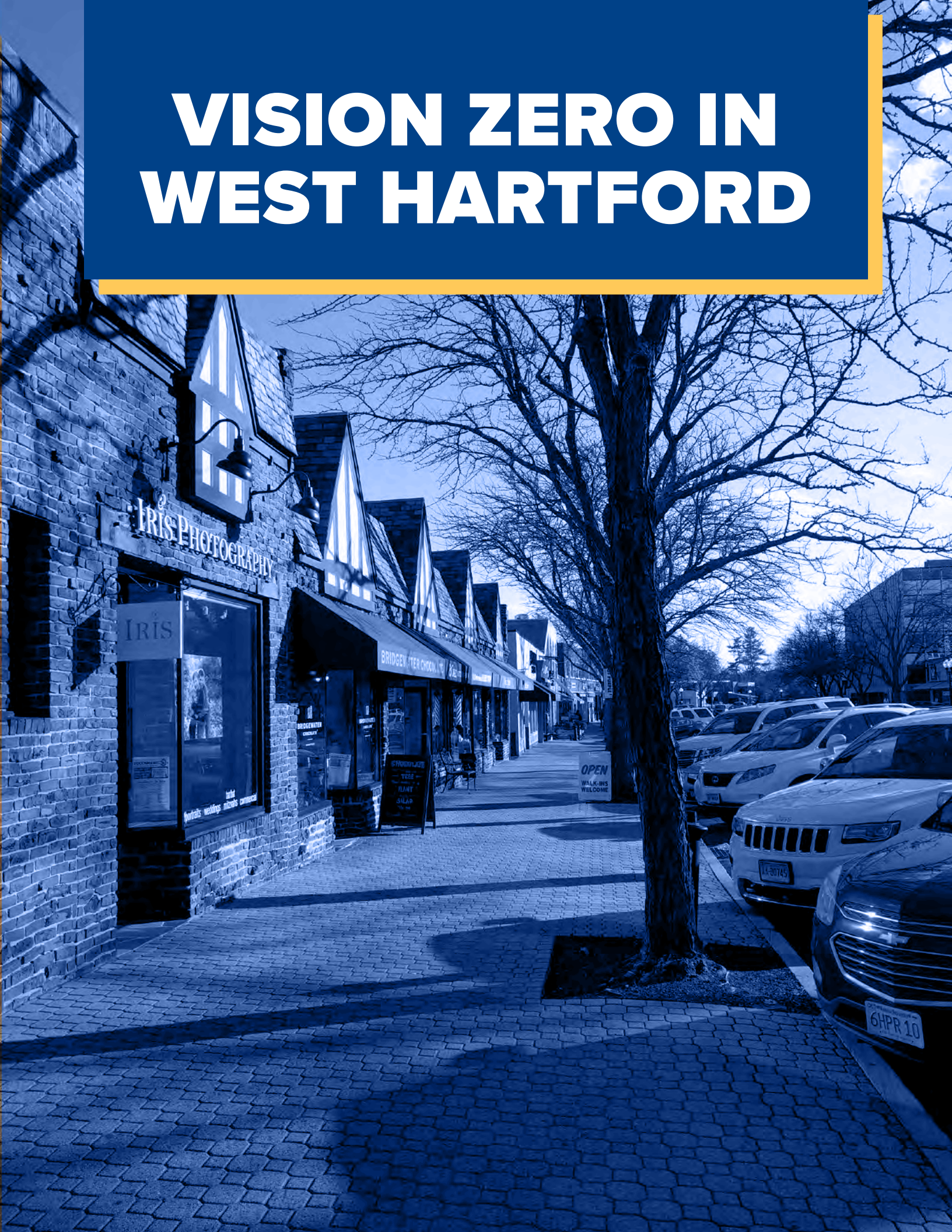
Jersey City residents and stakeholders provided feedback via surveys and workshops. The City also made a strong commitment to continuing to engage residents after the adoption of the plan.

The City's embracing of tactical urbanism (also known as quick-build projects) utilizes faster and cheaper solutions that can be deployed quickly to demonstrate the value of permanent changes. For example, the City installed small-diameter "mini-roundabouts" at two intersections, using traffic cones, planters, barrels, plastic delineators, and paint. The instant traffic circles — the city's first — forced drivers to slow down as they negotiated the crossings with pedestrians and other vehicles. The roundabouts were only up for a week. However, during their installation, the City found that traffic volumes increased even as speeds came down about 10%. The feedback from surveyed residents was overwhelmingly positive: 72% of respondents supported making the circles permanent.

The City also pilot tested ideas during lengthy transportation studies. This meant rather than waiting for studies to conclude—often a year or more—before pursuing changes, the City experimented with ideas to better inform the recommendations that would ultimately emerge when the studies finished.

The City has also continued to collaborate with its partners. The Vision Zero Task Force meets with the mayor's team every quarter to discuss progress. The City has continued to reach out to cities that have made changes they wanted to see to gain insights on how it could work in Jersey City.

VISION ZERO IN WEST HARTFORD



WEST HARTFORD'S PRINCIPLES

The Town of West Hartford is committed to eliminating roadway deaths and serious injuries by 2033. Our overarching goal is to create a transportation system and culture that supports safe, enjoyable mobility options for all, especially the most vulnerable members of our community who experience disproportionate injury and death on roadways. To this end, the Town has adopted the following five principles to guide the development and implementation of this Plan:

1. Deaths and serious injuries caused by traffic crashes are preventable;
2. Human life and health should be prioritized in all transportation systems and all aspects of transportation planning and design;
3. Human error is inevitable and transportation systems should be forgiving;
4. Transportation planning should focus on system-level changes to influence all individuals' behavior; and
5. Speed is a highly important factor in crash severity.

DEVELOPING THE PLAN

On January 10, 2023, the Town of West Hartford Town Council unanimously adopted the Vision Zero Initiative in Support of Safe, Healthy, and Equitable Mobility with the goal of eliminating fatalities and severe injuries on West Hartford streets by 2033. The Vision Zero Action Plan (the Plan) is West Hartford's roadmap to achieving zero fatalities or serious injuries. The Plan is data-driven, based on the best practices in the industry, and focused on implementation.

Task Force

The Plan was developed in close collaboration with the Vision Zero Task Force. West Hartford Mayor Shari Cantor appointed Task Force members in early 2023. The Task Force includes a mix of Town of West Hartford staff and residents. Staff included department leadership from engineering, communications, public safety, public works, equity, and the Town Manager. Residents include people with expertise in planning, media, disability rights, bicycle and pedestrian advocacy, and public health. As a result, the Plan was developed by people who will be both impacted by and responsible for implementing Vision Zero policies and actions.

The Vision Zero Task Force was charged with:

- **Providing direction** to the project team to guide the development of the Vision Zero Action Plan.
- **Acting as a liaison** to organizations and agencies, sharing information, and soliciting feedback to inform the Action Plan.

Task Force members show support for revisions to a section of the action plan.

- **Identifying actions** specific to members' organizations or agencies.
- **Conducting community engagement** beyond the scope of the project team as agreed upon by the Task Force and Town Leadership.
- **Developing the vision,** goals, policy recommendations, actions, performance measures, and recommendations to get to zero.
- **Continuing as ongoing champions** for implementation of the Action Plan actions within Task Force members' organizations or agencies, as applicable.

Plan Development Process

Plan and Policy Review

Many plans already address mobility challenges and goals in West Hartford, so the project team reviewed previous plans and policies and identified those related to Vision Zero. This work served as the foundation for the development of additional recommendations specific to Vision Zero.

- Complete Streets Policy
- Maintenance and Protection of Traffic Policy (MPT)
- 2020 POCD
- 2022 Complete Streets Annual Report
- 2016 Bicycle Facilities Plan
- 2022 Neighborhood Street Traffic Calming Program
- 2017 New Park Avenue Transit Area Study
- 2022 North Main Street Road Diet Phase 2
- West Hartford Center Infrastructure Master Plan
- 2023 Bicycle Friendly Community (BFC) Application

Action Plan

The project team worked closely with the Task Force to develop a framework of the Plan that would work for West Hartford. This included review plans from peer communities.

Goals, Strategies, and Actions

The Plan was developed iteratively. Initially, the Task Force split into subcommittees to address the four key themes in the framework: practices and policies, safe design, culture, and data. Each subcommittee had a Town liaison. The subcommittees each developed goals, strategies, and actions for their respective topic.

These early drafts went through several rounds of revisions that incorporated consultant input, feedback from departments and partners, and additional input from the Task Force.

This process empowered and centered the Task Force in the creation of tailored recommendations that meet the needs and opportunities in West Hartford. It also ensured the Task Force members understood the Plan and were ready to support its implementation.

Data Analysis and Best Practices Research

As the Task Force developed recommendations, the consultant team conducted data analysis on crash locations and types and researched best practices. The Task Force utilized this information to refine the strategies and actions. The data from this work is presented in subsequent chapters of this Plan.

WHAT'S IN THE PLAN

A chapter is dedicated to reviewing and summarizing each of the major efforts that led to the development of the Plan:

- **Safety Assessment**: Discusses the analysis of the location and types of crashes that lead to deaths and serious injuries. This section includes key statistics about death and serious injuries in West Hartford.
- **Public and Stakeholder Engagement**: Summarizes how the project team collected input from the public and stakeholders and how that information shaped the Action Items.
- **Equity Analysis**: Discusses how the Plan centered equity throughout the development process and addressed equity within the implementation of actions.

The core recommendations in the Plan are identified in *Action Plan*. This section includes the goals, strategies, and actions organized around the following four themes:

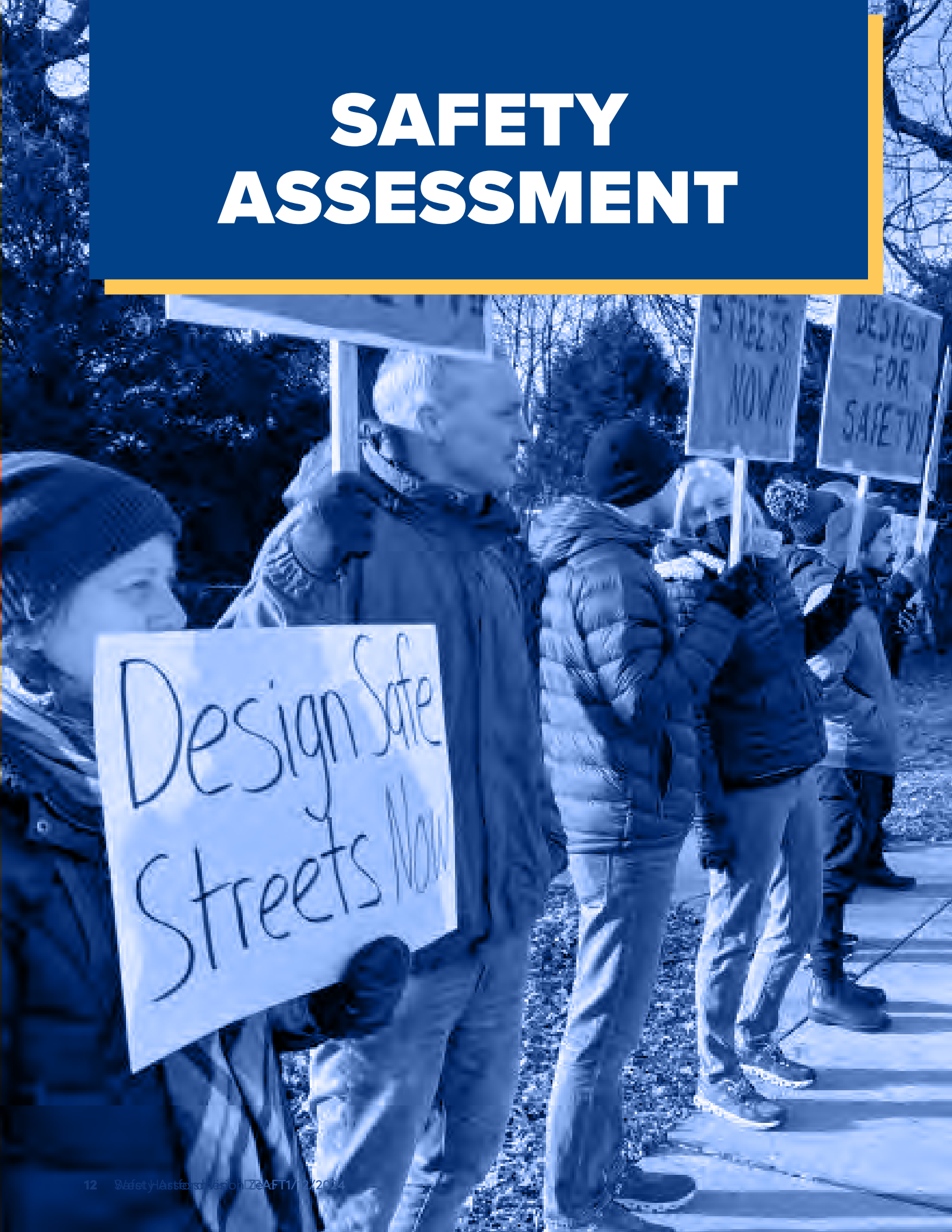
- **Practices and Policies**: The changes that need to be made to Town practices and policies to effectively implement Vision Zero.
- **Safe Design**: The specific steps that the Town and its partners will undertake to design and redesign streets for safety.
- **Culture**: The ways that West Hartford will partner with the community to develop a culture of safety in West Hartford.
- **Data**: How West Hartford will improve and diversify its data sources, collection strategies, analysis, and data reporting to make better decisions about roadway safety.

The crisis in roadway safety cannot be addressed town-wide all at once. This Plan uses **Vision Zero Focus Areas (VZFA)** to prioritize streets that:

- Are known to have high incidents of serious injuries and fatalities (see High Injury Network in the Safety Assessment).
- Were identified by the public as being particularly unsafe based on their lived experience (see Webmap Survey in Public Engagement).
- Are located in areas with a high concentration of vulnerable users (see Transportation Equity Zones in Equity).

The prioritized VZFAs are identified in *Action Plan*.

SAFETY ASSESSMENT



WHAT WE LOOKED AT

The Vision Zero Action Plan is informed by a review of five years of crash data sourced from Connecticut's Statewide Data Repository for crashes that occurred between 2018 and 2022.

Crash statistics generally report the number of incidents involving at least one pedestrian, bicyclist, or motorist.

Crash severity describes the most severe injury at least one person in the crash suffered. Categories includes: fatality, suspected serious injury, suspected minor injury, possible injury, and property damage only crashes.

Crashes that result in death or serious injury are also referred to as **KSI crashes**, or crashes resulting in someone killed or seriously injured.

A total of 5,956 crashes in this period were analyzed. This includes 48 crashes which resulted in at least one serious injury or fatality, and 1,779 crashes which resulted in less serious injuries. These crashes resulted in a total of nine deaths during this time. There was a total of 84 crashes involving pedestrians and 43 crashes involving bicyclists.

KEY FINDINGS

Severe Crashes Have Increased

Between 2018 and 2022, aggregate crash totals have decreased approximately 29% from 1,486 crashes in 2018 to 1,056 crashes in 2022. This trend outperforms trends reviewed at a statewide level which has decreased approximately 10% in this same period. **While the total number of crashes in West Hartford has decreased since 2018, the total number of crashes resulting in fatality or serious injury has increased over 150% during this same period**. The trend within West Hartford is substantially higher than statewide trends (which experienced a 14% increase during the same period) and underscores the importance of this Plan.

Figure 2. Crashes in West Hartford (2018 - 2022)

Year	KSI*	Minor Injury	Property Only	All
2018	6	435	1045	1,486
2019	5	421	957	1,383
2020	8	267	636	911
2021	13	310	797	1,120
2022	16	346	694	1,056
Total	48	1779	4129	5,956

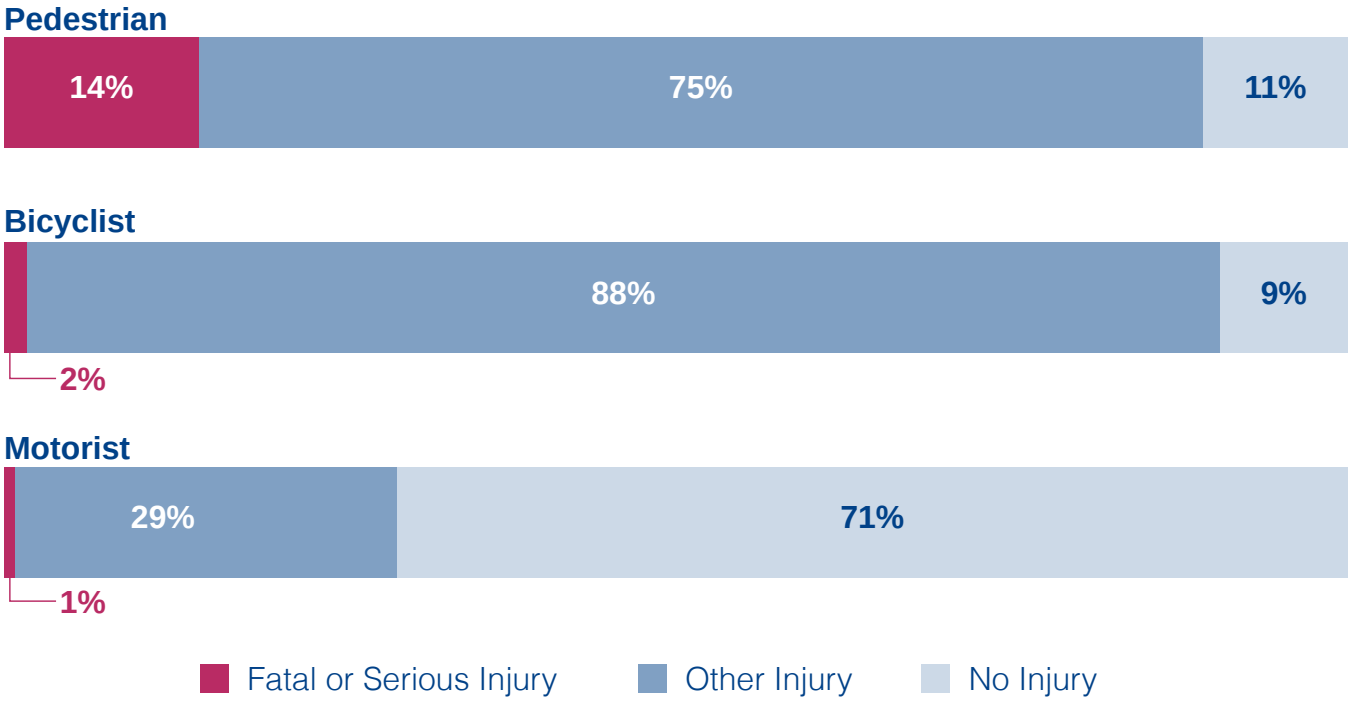
** KSI = Killed or Serious Injury*

There is Elevated Risk for Vulnerable Users

Vulnerable users are those users who are at higher risk of injury or fatality in the event of a crash. This includes pedestrians, cyclists, and micromobility users. Children and elderly users are also particularly vulnerable due to limited awareness of traffic risks, reduced mobility and reduced reaction time. As illustrated in Figure 3, **crashes involving pedestrians and bicyclists are substantially more likely to result in injury as well as serious injuries or fatalities.**

A total of 127 crashes involving vulnerable users occurred during the 5-year analysis period. While these crashes only represent approximately 2% of all crashes, crashes involving vulnerable users are overrepresented in crashes of higher severity. They account for 6% of crashes resulting in any type of injury, 27% of KSI crashes, and five of the seven crashes occurring in this period which resulted in fatality. Crashes involving vulnerable users occur at intersections accounted for 91% such crashes, with nearly 50% of these crashes occurring at two-way stop-controlled intersections and 40% occurring at signalized intersections.

Figure 3. Crash Severity by Mode



HIGH INJURY NETWORK

Vision Zero plans typically include a **High Injury Network (HIN)** to focus efforts on the streets with crashes resulting in a high number of death, serious injury, or other injury. The HIN helps identify and prioritize road segments for Road Safety Audits, facility recommendations, and additional analysis for the Plan. The HIN is based on national Vision Zero and Safety Action Plans best practices and West Hartford's unique context.

The HIN (Figure 4) developed for West Hartford includes a street network of 20.7 miles, representing 9% of West Hartford's roadway miles. The HIN includes 60% of all crashes, including 56% of all KSI crashes. The HIN also includes 69% of all pedestrian and bicyclist crashes, including 54% of all KSI bicyclist or pedestrian crashes.

The HIN was developed through an evaluation of all crashes resulting in injury and fatality. Crashes resulting in serious injury or fatality (also known as KSI crashes) were weighted 10x higher relative to other crashes resulting in lesser injuries to acknowledge the severity of these crashes. All streets within West Hartford were analyzed and included review of crash data with the following perspectives:

- Bicyclist Crashes: Predictive Bicyclist Crash Risk (based on facility type and location)
- Pedestrian Crashes: Predictive Pedestrian Crash Risk (based on facility type and location)
- Motorist Crashes: Motorist Crash Rate (crash totals relative to traffic volume)

While there are KSI crashes that occurred outside the HIN, these generally occurred in areas where there are fewer nearby crashes resulting in injury. The HIN seeks to identify and prioritize street segments which have an established trend of crashes resulting in a fatality, serious injury, or other injury.

It is anticipated that VZFA will be updated in 2027. This may result in segments being removed as improvements are made and new priority areas identified.

The full methodology is in *Appendix C*.

In West Hartford...

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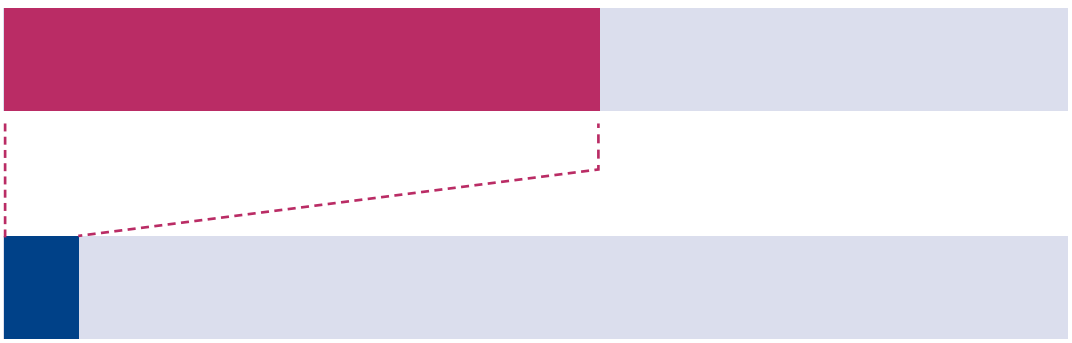
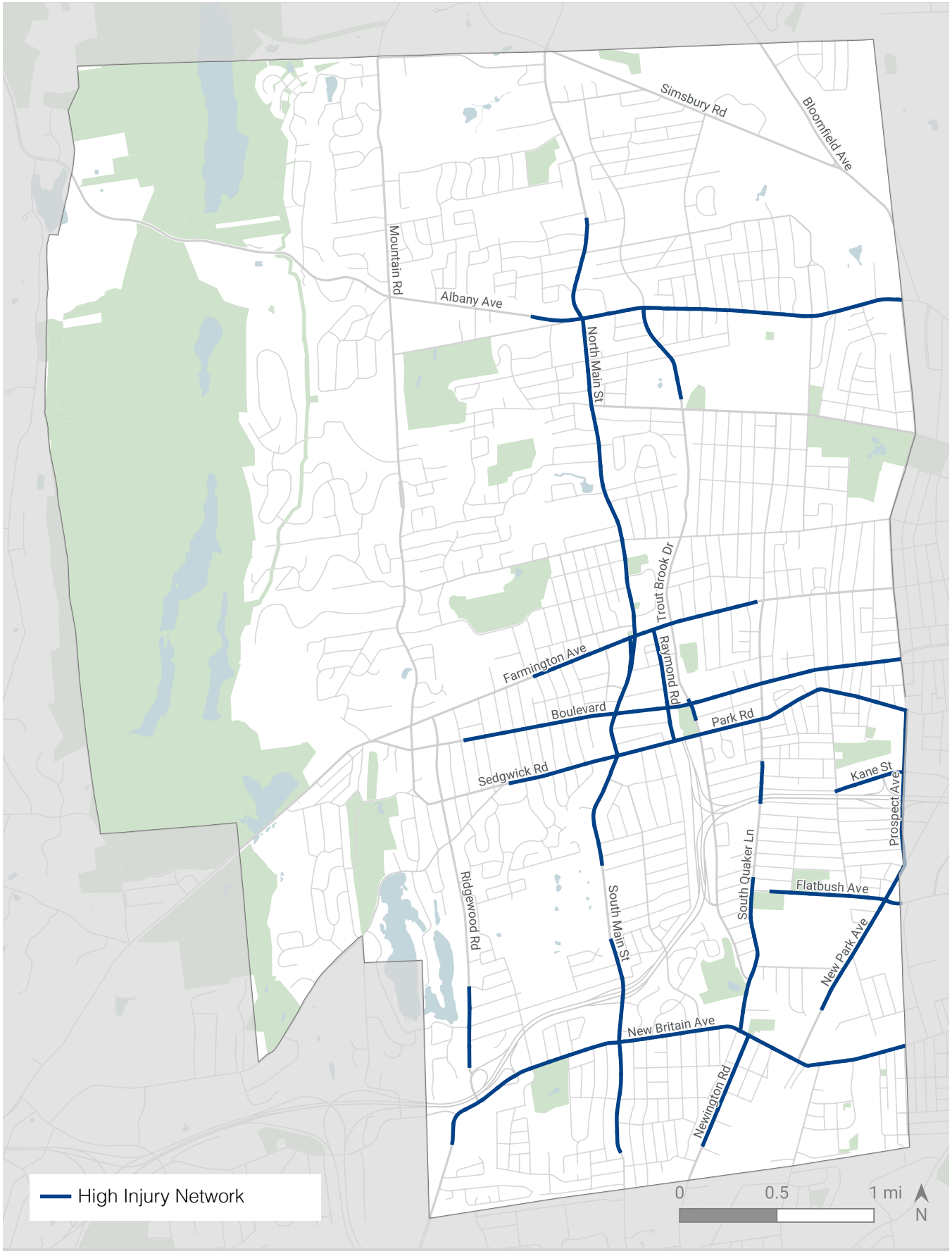


Figure 4. High Injury Network



ELEVATED CRASH RISK IN SPECIFIC NEIGHBORHOODS

Local or residential roads typically do not show up in the HIN due to their lower vehicle volumes and limited crashes at singular locations. However, a group of adjacent local roads may exhibit a recurring pattern of crashes influenced by similar factors. To identify potential locations for further study, an analysis grouped crashes on local roads together into small, sub-neighborhood areas. This analysis reviewed clusters of adjacent streets which could all have a higher incidence of crashes. This was calculated by comparing the total number of crashes occurring on local roads compared to the total length of local roadway miles in each area.

This analysis identifies areas which account for 37% of all crashes on local roads. These neighborhoods are home to approximately 13,012 residents.

Both the HIN and the local road crash analysis are included as components of the VZFAs in the Plan.

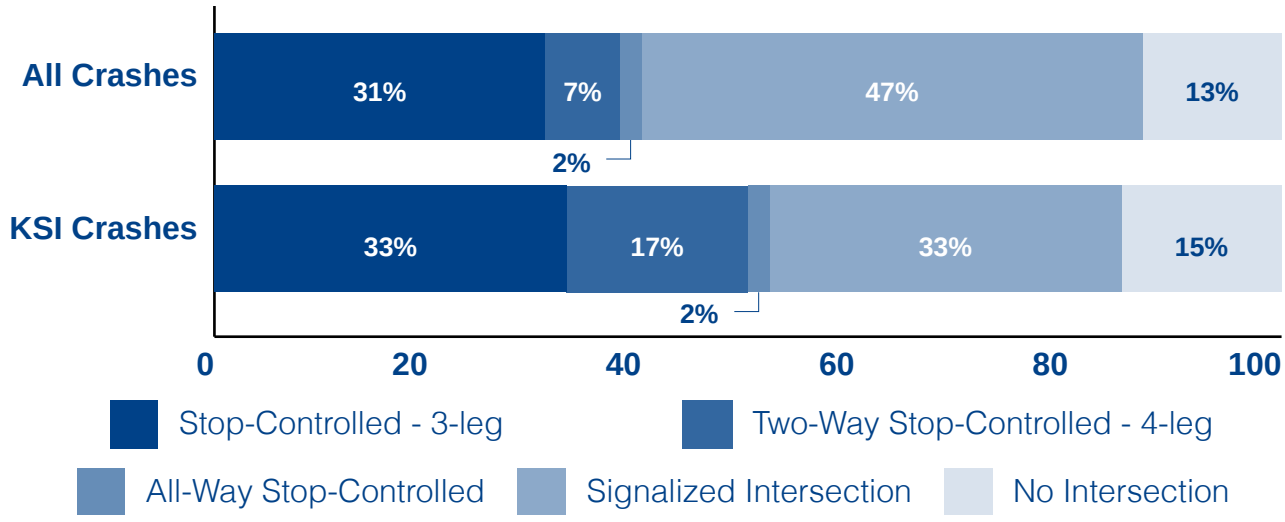
OTHER FACTORS CONTRIBUTING TO SEVERE CRASHES

Intersections and Major Driveways

Approximately 85% of all crashes occur at or proximate to intersections and major driveways. **All crashes resulting in fatality during the 5-year analysis period occurred at or near intersections or major driveways as well.**

As shown in Figure 5, 47% of all crashes occur at signalized intersections, while 40% of all crashes occur at stop-controlled intersections. While signalized intersections represent the largest proportion of all crashes, they represent a smaller proportion of KSI crashes. This indicates that crashes at signalized intersections are less likely to result in fatality or serious injury compared to other intersection types.

Figure 5. Crashes by Intersection Type



Among stop-controlled intersections, 3-leg stop-controlled intersections (a "T" intersection with only a stop-sign on the minor road) represent the highest proportion of all crashes as well as KSI crashes. This is an expected result as this is the most common intersection type in town. The analysis shows that 4-leg two-way stop-controlled intersections (a 4-leg intersection where the primary road does not stop) is overrepresented amongst KSI crashes. While this intersection type accounts for only 7% of all crashes it accounts for approximately 17% of KSI crashes. This finding shows that crashes at these location are more likely to result in severe injury or fatality compared to other intersection types.

Areas with intersections in this configuration, which are identified as part of the VZFAs, include Boulevard between South Main Street and Mountain Road, and Trout Brook Drive between Asylum Avenue and Albany Avenue among other areas. These intersections should be evaluated in particular to address safety concerns at these locations. Example countermeasures are provided later in *Implementation Support* but could include access restrictions such as half closures or through movement restrictions such as those already implemented by the town in some areas such as at the intersection of Boulevard and Whiting Lane.

Driving Under the Influence and Distracted Road Users

Crashes which involve driving under the influence or a party of the crash being distracted was found to account for 11% of all crashes and 21% of KSI crashes. This rate is even higher for crashes involving pedestrians or bicyclists. For these severe crashes (13 in total) driving under the influence was found to account for 31% of these crashes (4 crashes out of 13). Half of these crashes (2) were attributed to a driver under the influence or distracted, while half was attributed to a pedestrian under the influence or distracted.

Angle Crashes at Two-Way Stop-Controlled Intersections

As shown in Figure 6, Angle crashes between vehicles at two-way stop-controlled intersections are the most prevalent crash type (42% of all crashes) at these types of intersections. Angle crashes can be indicative of difficult turning movements due to traffic conditions or sightlines (e.g. parked vehicles or vegetation).

Head-On and Single Vehicle Collisions

As shown in Figure 7, head-on crashes and single vehicle crashes are overrepresented in KSI crashes as well. While head-on collisions only account for 2% of all crashes, they represent 13% of all KSI crashes. Similarly, single vehicle collisions account for 11% of all crashes and 17% of all KSI crashes. Countermeasures to address these types of crashes should be prioritized within VZFAs.

Crashes at Night

As shown in Figure 8, crashes occurring during dark conditions, with no lighting, were overrepresented in KSI crashes with 13% of KSI crashes occurring under these conditions relative to only 2% of all crashes. This could indicate a need for lighting to be reviewed in some areas.

Crashes involving pedestrians or bicyclists reveal a different pattern. These crashes are also more likely to occur during dark conditions but are more likely to occur in lighted areas. This could correlate to lighting being provided in areas of pedestrian activity but could also reveal a need for more or other types of lighting and/or tailored roadway design strategies in areas with streetlights with higher rates of nighttime pedestrian or bicyclist crashes.

Figure 6. Crash Type at Two-Way Stop-Controlled Intersections

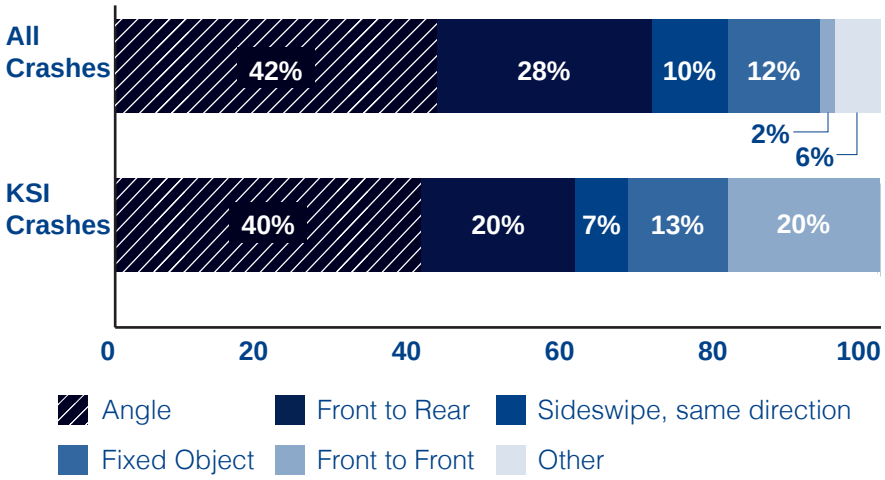


Figure 7. Crash Type for All Crashes

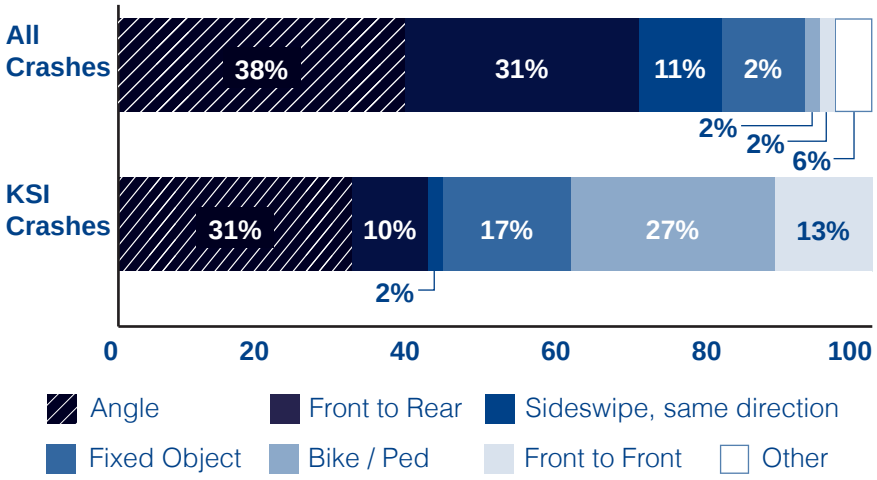
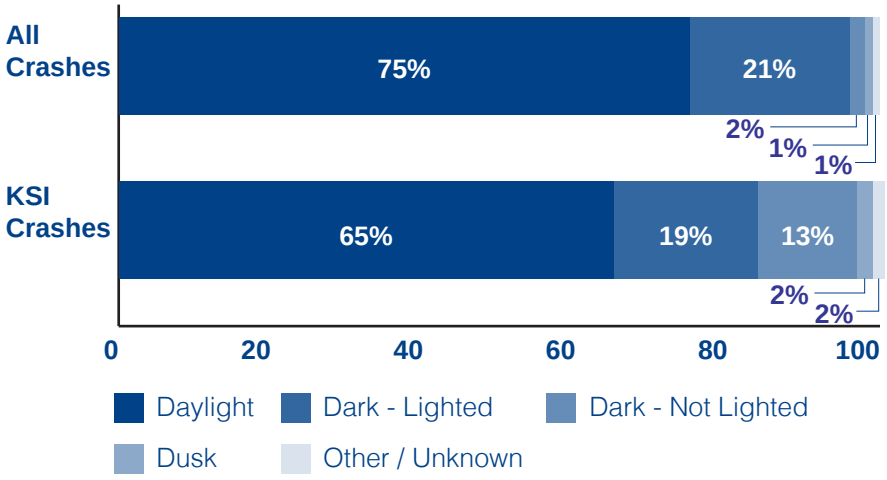


Figure 8. Crashes by Lighting Condition



PUBLIC ENGAGEMENT

WHY IT MATTERS

Public engagement raises awareness of Vision Zero and the Town's new approach to traffic safety, building the foundation of a positive safety culture. It is needed to gather public input regarding traffic safety issues and action steps specific to West Hartford. Public engagement will also carry Vision Zero forward through building consensus around recommendations within the Town and momentum to implement through shared responsibility.

Public engagement was essential to the Plan development and will be critical to its implementation. It will also be important to continue to engage people as Vision Zero progresses.

PLAN ENGAGEMENT

Members of the West Hartford community had several ways of participating in the Plan:

- A multilingual public survey.
- A webmap where participants could identify locations where they felt safe, unsafe, or have an idea related to roadway safety.
- Two public meetings, including a final meeting to present the recommendations and solicit feedback.

All Task Force meetings were noticed and open to the public. Finally, Task Force members provided supplemental engagement through their own efforts to connect with their organizations, networks, and communities.

GETTING THE WORD OUT

The project team developed digital flyers and social media posts introducing the Vision Zero Action Plan and opportunities for community input. This included notices to participate in the public survey and webmap.

The Town distributed project marketing material via their listserv, and Facebook and Instagram accounts. They also managed the project webpage, which included a Fact Sheet detailing what Vision Zero is and why West Hartford is committed to reducing deaths and serious injuries on local roadways by 2033.

Signage about the project was posted at key locations, including near survey pick-up and drop-off spots.

Local media attended many Task Force and public meetings and published several articles and video news reports about the project.

PUBLIC SURVEY

In October 2023, the Town of West Hartford launched a public survey to assess mode usage and perceptions of roadway safety. The survey was available online through the project webpage. Hard copies were available at Town Hall and the three public libraries. The survey received a total of completed 788 responses, including 783 digital and five hard copies. The survey was available in English, Spanish, Chinese, and Portuguese.

More than half of respondents identified as a middle-aged adult (ages 35-64). More than a quarter of respondents identified as seniors (aged 65 and over). Young adults and teens (aged 34 and below) composed 12% of the responses.

As a town with a large driving and walking culture, West Hartford's Vision Zero initiatives are important to ensuring the safety of all users. Of the survey respondents, more than 75% drive or take rides in private vehicles, about 66% walk, and about 50% bike regularly. Fewer than 25% ride public transit or use ADA paratransit.

Key Takeaways

The following roadway behaviors make people feel the most unsafe in West Hartford, with the percentage of respondents who answered in parenthesis:

- Drivers speeding (77%)
- Distracted driving (74%)
- Non-compliance with rules of the road (55%)

Issues by Mode

What makes people feel unsafe depends upon how they travel. The following are the top three reasons respondents identified feeling unsafe, based on travel mode.

Pedestrians

- Drivers do not yield at intersections/ crosswalks (66%)
- Do not feel visible to drivers at intersections/crosswalks (36%)
- Lack of sidewalks or walking paths (25%)

Bicyclists/Scooters/Skaters

- Lack of bike lanes and biking paths (57%)
- Bike lanes or biking paths don't have enough of a buffer from traveling vehicles (56%)
- Drivers do not yield at intersections/ crosswalks (40%)

Drivers

- Drivers do not yield at intersections/ crosswalks (46%)
- Difficult to see pedestrians, bicyclists, or oncoming drivers at intersections/ crosswalks (33%)
- Bicyclists riding in the roadway/ shoulder (30%)

A common issue among all moder users is drivers not consistently yielding at intersections and/or crosswalks. Similarly, lack of appropriate infrastructure is a common issue for pedestrians and bicyclists/scooters/skaters.

WEBMAP

A public webmap survey accompanied the written survey summarized on the previous page. The webmap asked respondents to identify areas where they feel safe, unsafe, or have an idea related to roadway safety. The webmap was available online through the project webpage with hard copies at Town Hall and the three public libraries as part of the community survey packet.

In total, the Town received 1,784 comments, and the project team identified 15 themes across all of the comments. Figure 9 illustrates the top five themes, exclusive of comments that identified specific safety issues.

Figure 10 (following page) is a heatmap that illustrates concentrations of safety concerns. This includes comments where users labeled an area unsafe or marked a location with an idea. To create the heatmap, the project team first assigned comments to any street segment within 50 feet of the comment location. Then, the team divided the street network into 1/10th-mile segments and assigned each segment with a score based on the number of comments and comment likes within ½-mile on the same street, in each direction.

This approach highlights areas where users added many comments and agreed with existing comments (there was no option for a user to dislike a comment). In the map, the darker and thicker red lines represent segments that received more comments and likes. The HIN is overlaid to reveal how historic crash data compares with the webmap survey results, or people's perception of safety along the town's roadway network.

Figure 9. Top Comment Themes

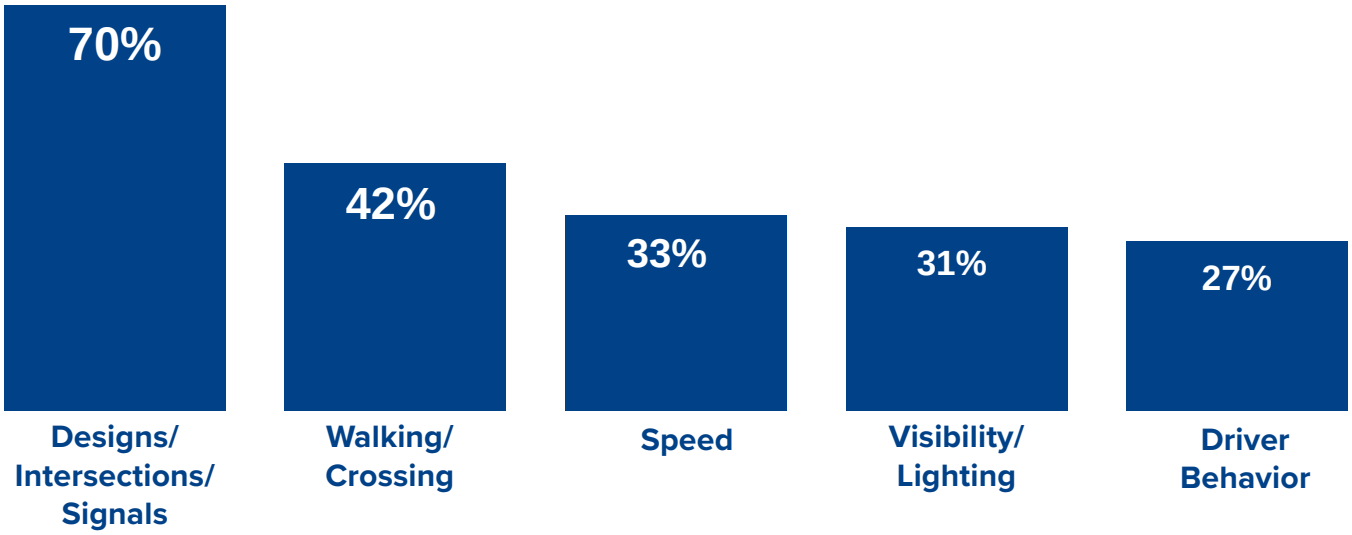
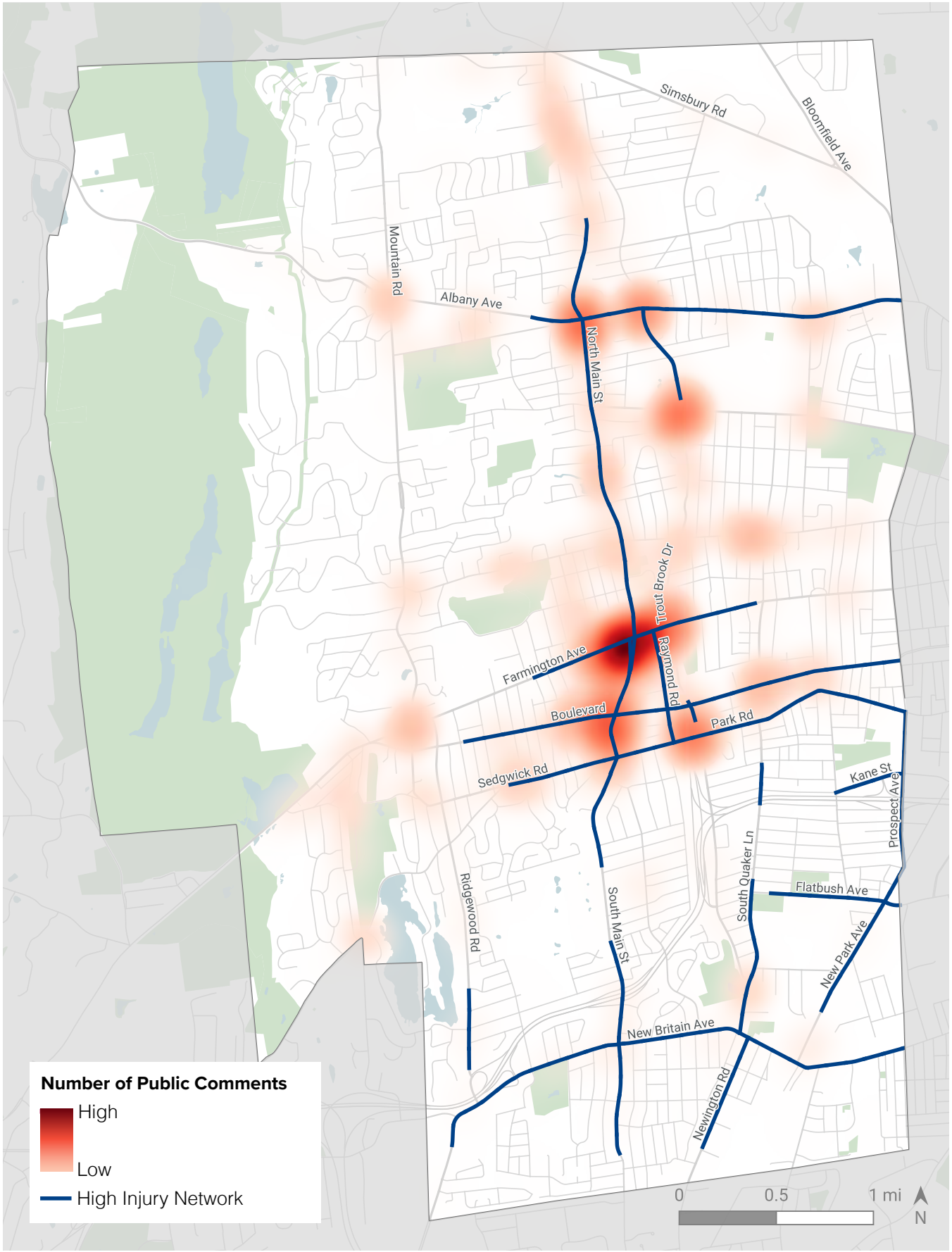


Figure 10. Heatmap of Public Comments



INTEGRATING COMMUNITY INPUT

Plan Recommendations

Public input shaped the recommendations in this Plan. Figure 11 summarizes the key themes expressed in public comments and throughout the engagement process. The Plan includes several action items that respond to concerns raised by participants, such as speeding and intersection viability. Many of these issues will be addressed as part of the Road Safety Audits, which are identified in the *Action Plan* and in the *Implementation Support* chapters.

The 20 miles of roadway segments that the public identified as being most unsafe are identified in Figure 12. The neighborhoods that represent the top 9% of local roads that the public identified as being most unsafe are shown in Figure 13. These roadway segments and neighborhoods were incorporated into the VZFA as discussed in more detail in the *Action Plan.*

Plan Implementation

The *Action Plan* includes clear direction on how the public should be engaged during implementation and subsequent updates to this Plan. In addition, the public input on the webmap will be used as a foundation for identifying safety solutions for the VZFA. Finally, the Town will continue to engage residents in the design process as it has with past roadway improvement projects.

Figure 11. Community Input Key Themes

Figure 12. Unsafe Streets from Public Input

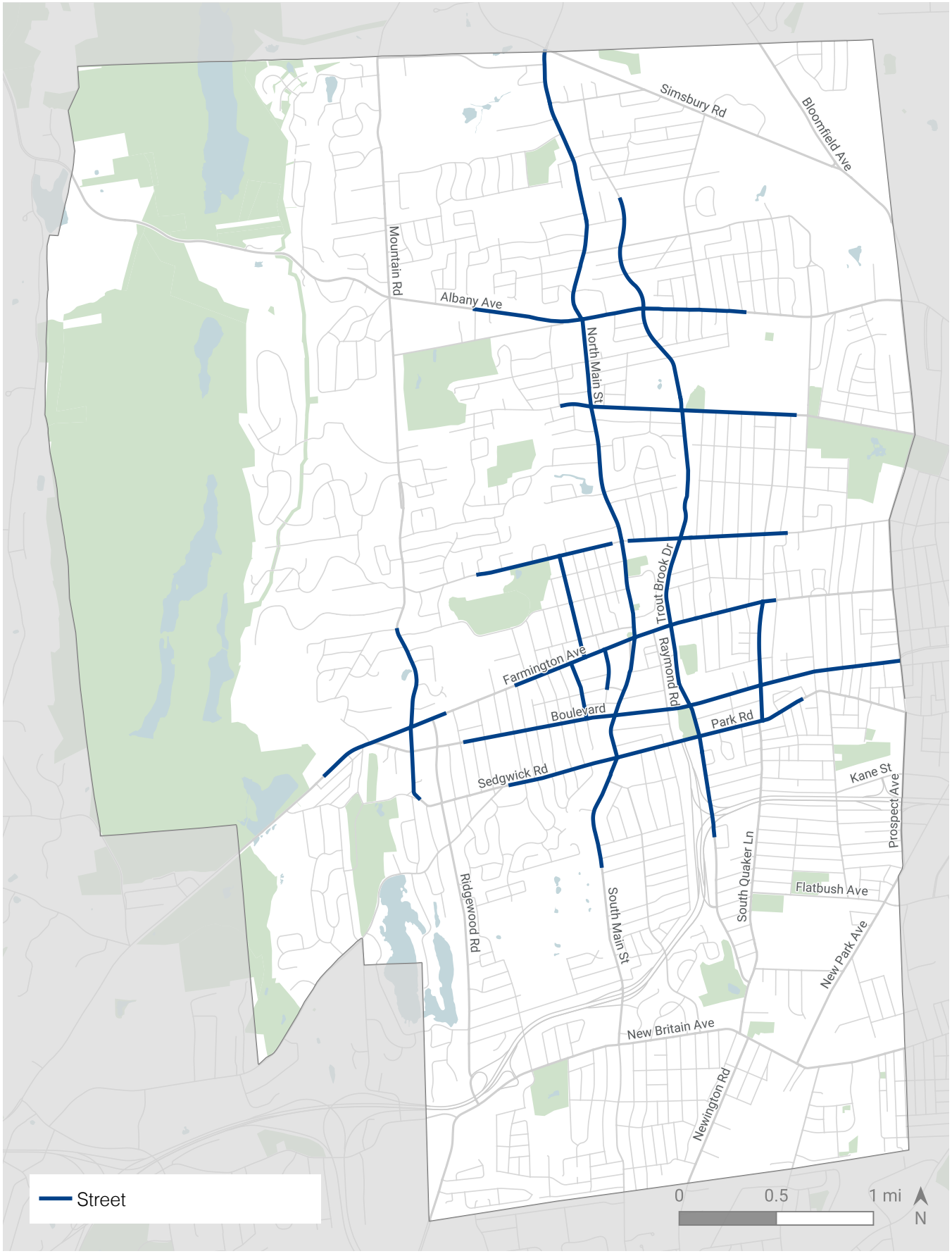
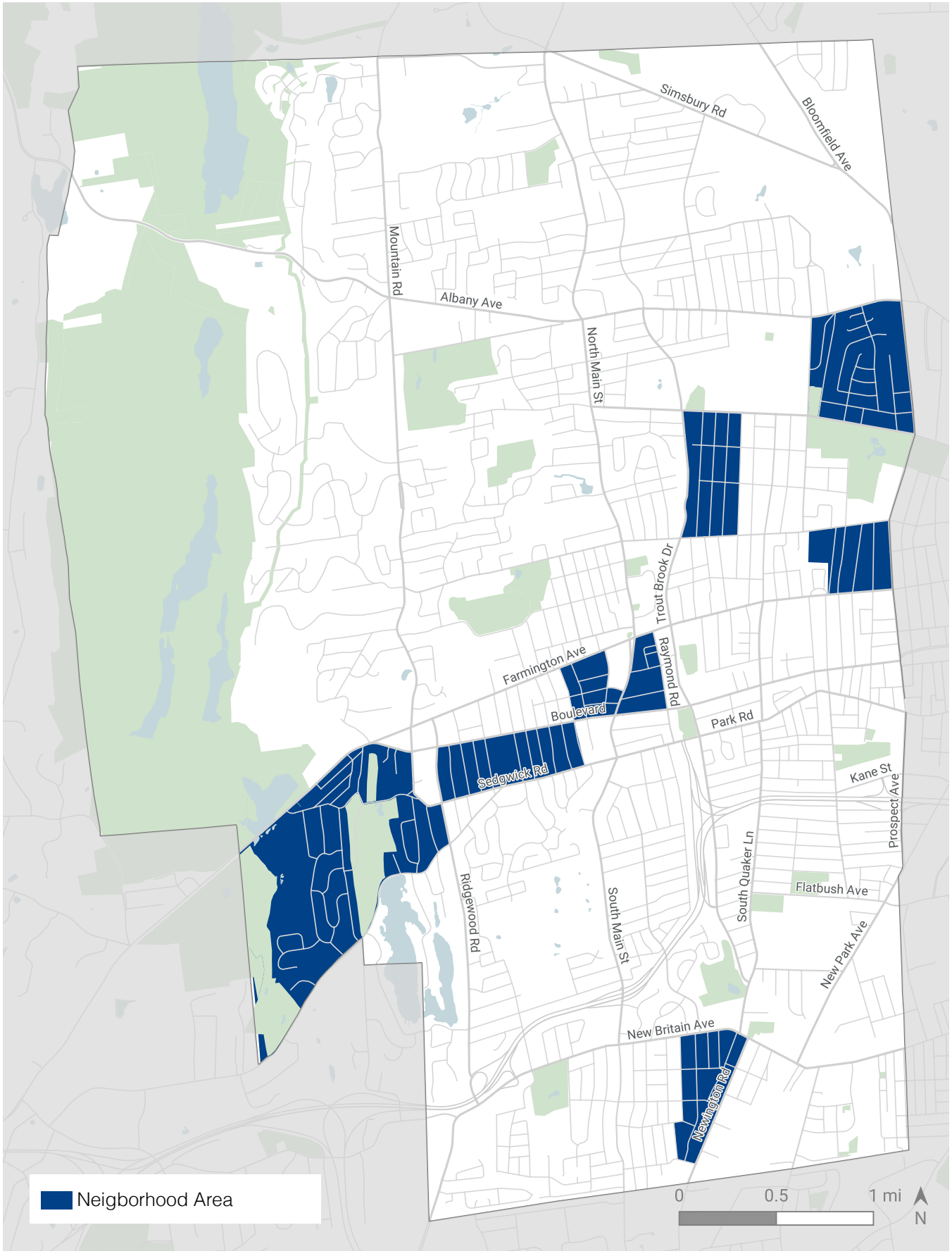
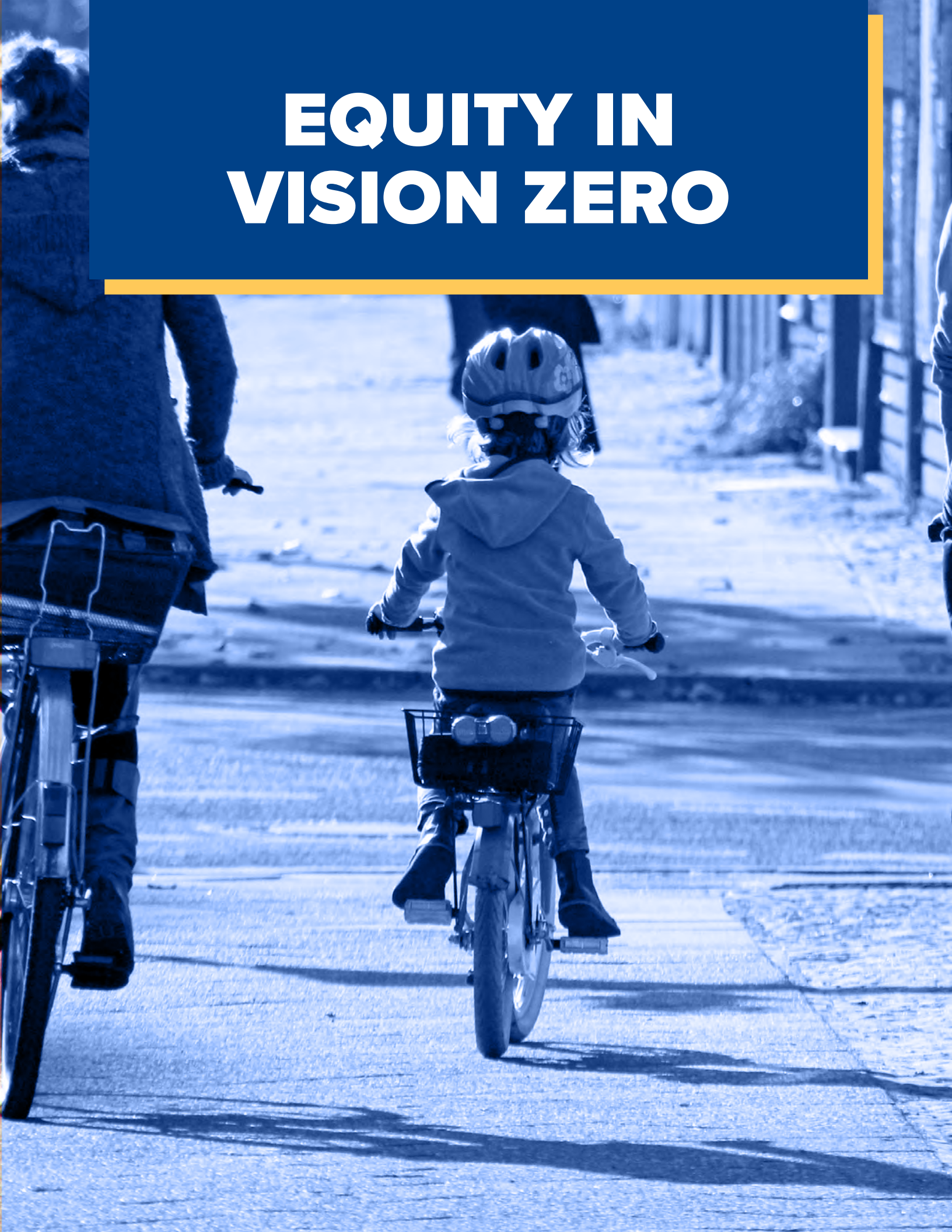


Figure 13. Unsafe Neighborhood Areas from Public Input



EQUITY IN VISION ZERO



EQUITY IN ACTION

Equity means the fair treatment and meaningful involvement of all people regardless of race, color, national origin, disability, or income during the development and implementation of Vision Zero. Unfortunately, previous planning efforts designed and built the roadway system without inclusive engagement throughout the United States. The roadway system often minimizes the needs of marginalized populations who more frequently walk or bike and who have longer commutes.[1] The result is that these communities are at a greater risk of serious injury and death.

This Plan centers equity in several ways. First, the project team recognized that systematically marginalized communities may be less likely to report traffic crashes. Moreover, members of marginalized communities are less likely to participate in community engagement efforts for lack of time, resources, and belief that their input will be valued. As a result, issues that are more likely to affect these individuals and their communities are not frequently identified through data analysis or public engagement. In response, the project team utilized Transportation Equity Zones as a key input to prioritize the VZFA (discussed in more detail in the following section).

Second, the Task Force was charged with a focus on inclusion. Task Force participants represented many backgrounds including, various races, ethnicities, and incomes levels, as well as intersecting demographics which included youth, senior, and disabled community members.

Third, the project team and Task Force considered how the implementation of each action could be accessible and equitable. Those considerations are documented in the full Action Plan found in *Appendix A*.

Finally, the Action Plan includes goals, strategies, and actions that are specifically designed to support an inclusive implementation. This includes a focus on developing materials in multiple languages, disseminating information through a variety of mediums, and collaborating with community groups to support a grass-roots awareness campaign.

KEY STATISTIC

Between 2016-2018, the fatality rate for non-Hispanic Black Americans was 4.5 times higher while cycling; 2.2 times higher while walking; and 1.8 times higher while driving than for white Americans on a per mile traveled basis.

Source: Disparities in Activity and Traffic Fatalities by Race/Ethnicity. Matthew A. Raifman, MPP and Ernani F. Choma, PhD. American Journal of Preventative Medicine, June 7, 2022

1 *Problem Has Existed over Endless Years: Racialized Difference in Commuting, 1980–2019*. Devin Michelle Bunten, Ellen Fu, Lyndsey Rolheiser, Christopher Severen. Federal Reserve Bank of Philadelphia, April 2022.

TRANSPORTATION EQUITY ZONES

Transportation Equity Zones are designed to ensure equitable application of Vision Zero recommendations and prioritization in these areas. An area is defined as a Transportation Equity Zone if identified in one of the following:

- US Department of Housing and Urban Development Low- or Moderate-Income Census Block Group.
- Connecticut Department of Energy and Environmental Protection Environmental Justice Community.
- US Department of Transportation Equitable Transportation Community Explorer.

Figure 14 shows each of these original data sources mapped. Figure 15 shows the High Injury Network overlaying the identified Transportation Equity Zones.

KEY STATISTIC

In West Hartford, Transportation Equity Zones have...

24% of roadways

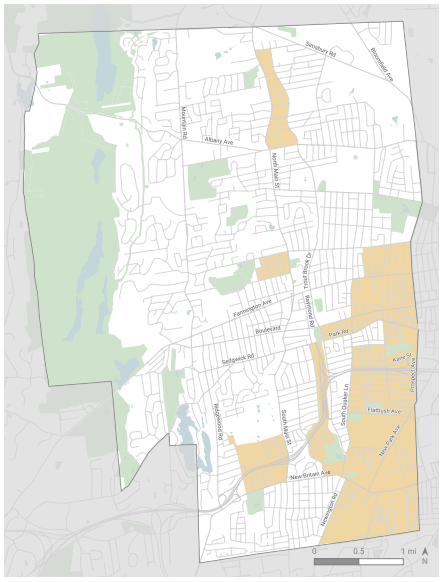
27% of population

But account for...

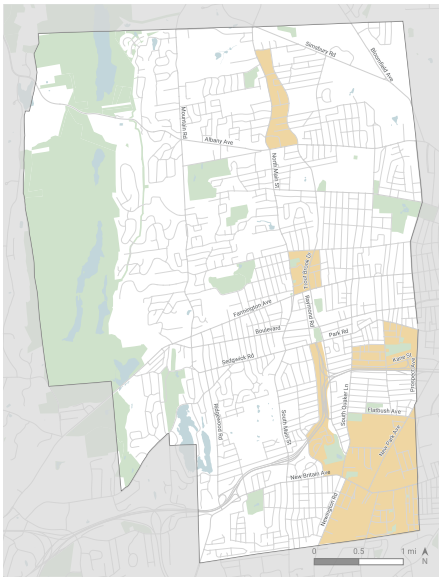
38% of deaths and serious injuries

52% of all crashes

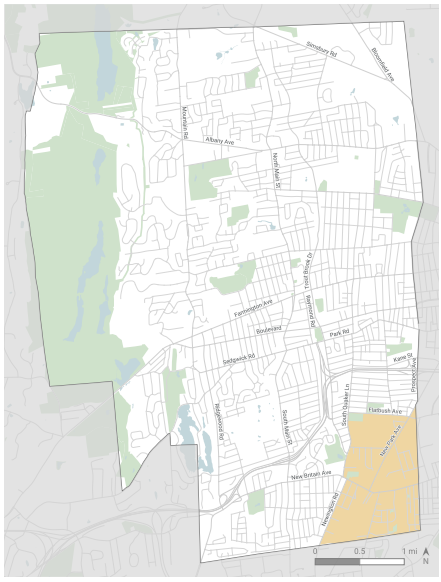
Figure 14. Data Sources Used to Identify Transportation Equity Zones



Low/Moderate Income Block Groups

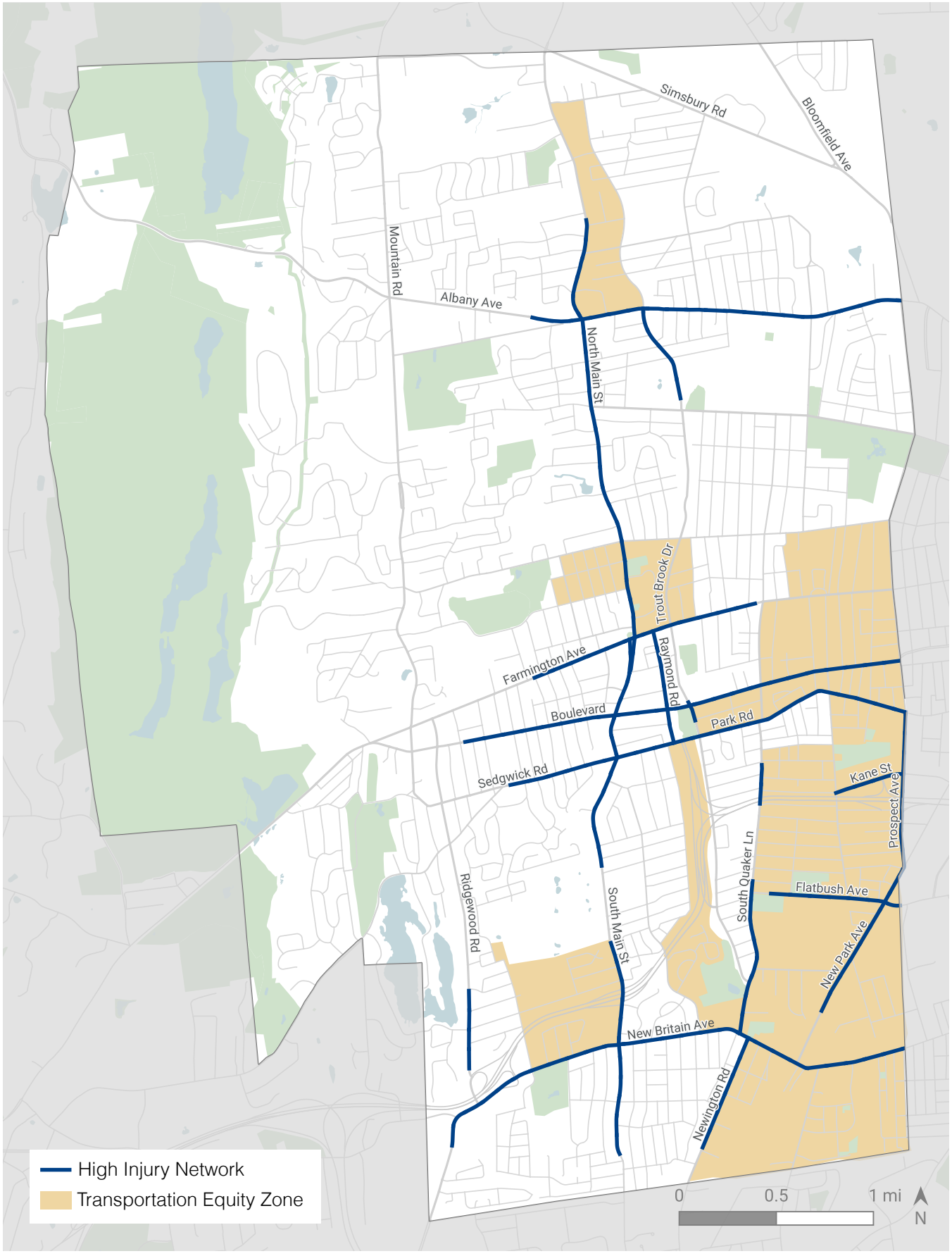


CT DEEP Environmental Justice Communities

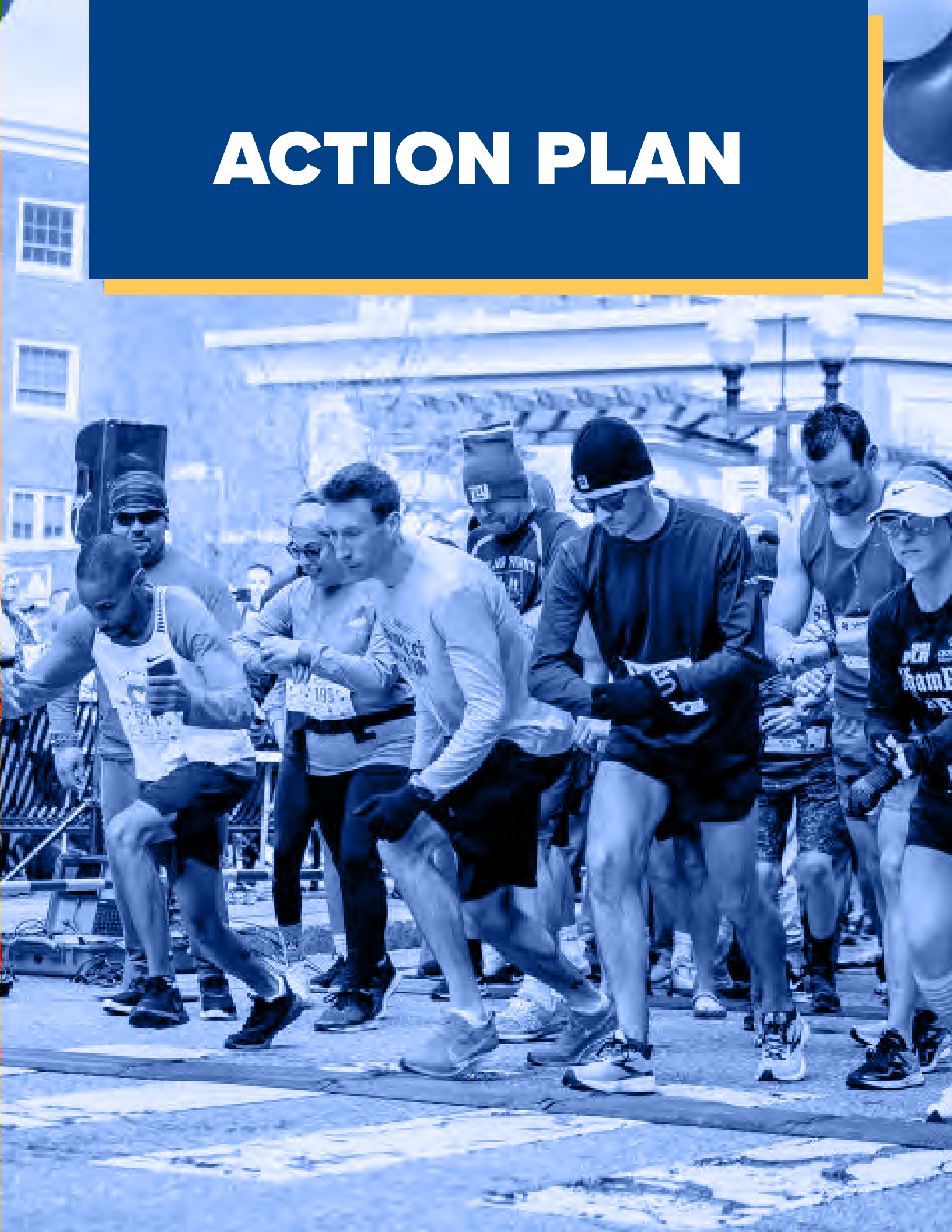


US DOT Equitable Transportation Community

Figure 15. High Injury Network and Transportation Equity Zones



ACTION PLAN



ACHIEVING VISION ZERO IN WEST HARTFORD

Background

This Action Plan incorporates the data-driven and equity-focused approach, with extensive stakeholder and community input, that has been proven to eliminate deaths and serious injuries on roadways. The Plan is consistent with, and incorporates best-practices from, the Vision Zero Network's Guidelines for an Effective Vision Zero Action Plan (December 2017). This Action Plan:

- Is built on a robust data framework and includes strategies for improving data gathering.
- Includes measurable goals with a clear timeline for implementation.
- Identifies lead and supporting agencies.
- Notes where additional funding, staffing, or legislative support is needed to implement the actions.
- Provides clear framework for measuring success and continuing to have an transparent process.
- Identifies how implementation can be accessible and equitable.

The strategies and actions are also consistent with best practices in Vision Zero, including:

- Aligning Town policies and practices with Vision Zero and building the institutional frameworks necessary to implement the Plan.
- Prioritizing safe roadway design for all users.
- Focusing on speed management.
- Utilizing culturally sensitive and diverse engagement and education techniques.
- Using and improving data collection to better understand the causes and location of deaths and serious injuries.

The Plan is intended to address all public streets, except for I-84.

Organization

The Action Plan recommendations are a comprehensive, integrated approach to get the Town to zero deaths and life-changing injuries on its streets. They are organized around the four goal areas established by the Task Force in collaboration with Town staff:

- **Practices and Policies**: The changes that need to be made to Town practices and policies to effectively implement Vision Zero.
- **Safe Design**: The specific steps that the Town and its partners will undertake to (re)design streets for safety.
- **Culture**: The ways that West Hartford will partner with the community to develop a culture of safety in West Hartford.
- **Data**: How West Hartford will improve and diversify its data sources, collection strategies, analysis, and data reporting to make better decisions about roadway safety.

Prioritization

Vision Zero Focus Areas

This Plan uses VZFAs to prioritize the location of improvements to the street network. There are two VZFA maps:

- VZFA Streets shall be used to prioritize interventions on major roads. (Figure 18)
- VZFA Neighborhoods shall be used to prioritize interventions on residential streets in neighborhoods. (Figure 19)

VZFAs include streets and neighborhoods:

- on the High Injury Network (HIN).
- with a high concentration of input on the Webmap Survey (Public).
- within Transportation Equity Zones (TEZs).

Streets and neighborhoods that meet more than one of those criteria are given higher priority, as illustrated in Figure 16. *Appendix B* includes a list of all segments in VZFAs.

Strategies and Actions

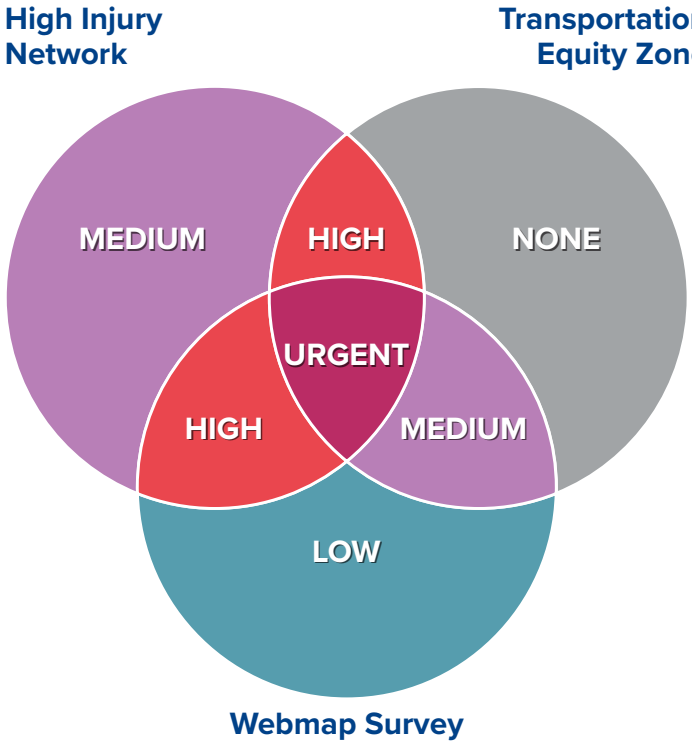
The Town and Task Force assigned a priority from high to low for each strategy and action. Actions are scored based on a combination of several factors including how needed or urgent implementation was and how big of an impact it would have. This scoring was refined based on input from lead and supporting entities.

When time and resources are limited, this prioritization system should be utilized to determine what actions and strategies should receive the most attention.

Priority does not always correspond to early implementation. Some actions may be higher priority but have obstacles that may prevent them from being executed quickly. Likewise, some lower priority items may have early implementation.

Areas not identified within VZFAs

Figure 16. Prioritizing the Vision Zero Focus Areas



Urgent *priority levels are on the HIN, highly identified by the public, and in a TEZ.***

High *priority levels are on the HIN and highly identified by the public or located in a TEZ.*

Medium *priority levels are either (1) on the HIN or (2) highly identified by the public and located in at TEZ.*

Low *priority levels are highly identified by the public but are not on the HIN or in a TEZ.*

*** Note: The most severe HIN segments are included in the urgent priority regardless of public input or location within a TEZ.*

VZFAs give direction to the Town on projects which should be prioritized for safety improvements. Other projects may be initiated with different goals such as regular maintenance, streetscaping, operational improvements, pedestrian and bicycle facility roll-out, or other goals. The Town will review opportunities for safety improvements as part of these projects.

VZFAs do not preclude traffic calming on the streets outlined in the "Neighborhood Street Traffic Calming Program."

Updating the Plan

As shown in Figure 17, implementing Vision Zero is an iterative process. The Action Plan includes recommendations to monitor and adjust implementation and the VZFAs.

Full Action Plan

The Action Plan presented in this chapter highlights the major implementation elements. *Appendix A* includes the following additional information:

- Implementation schedule from 2024 through 2031.
- Frequency of actions.
- Performance metrics.
- Accessibility considerations.
- Equity considerations.
- Additional notes and information to support implementation.

The full Plan has been provided to the Town as an editable file so it can serve as a project management tool.

Figure 17. Updating the Action Plan

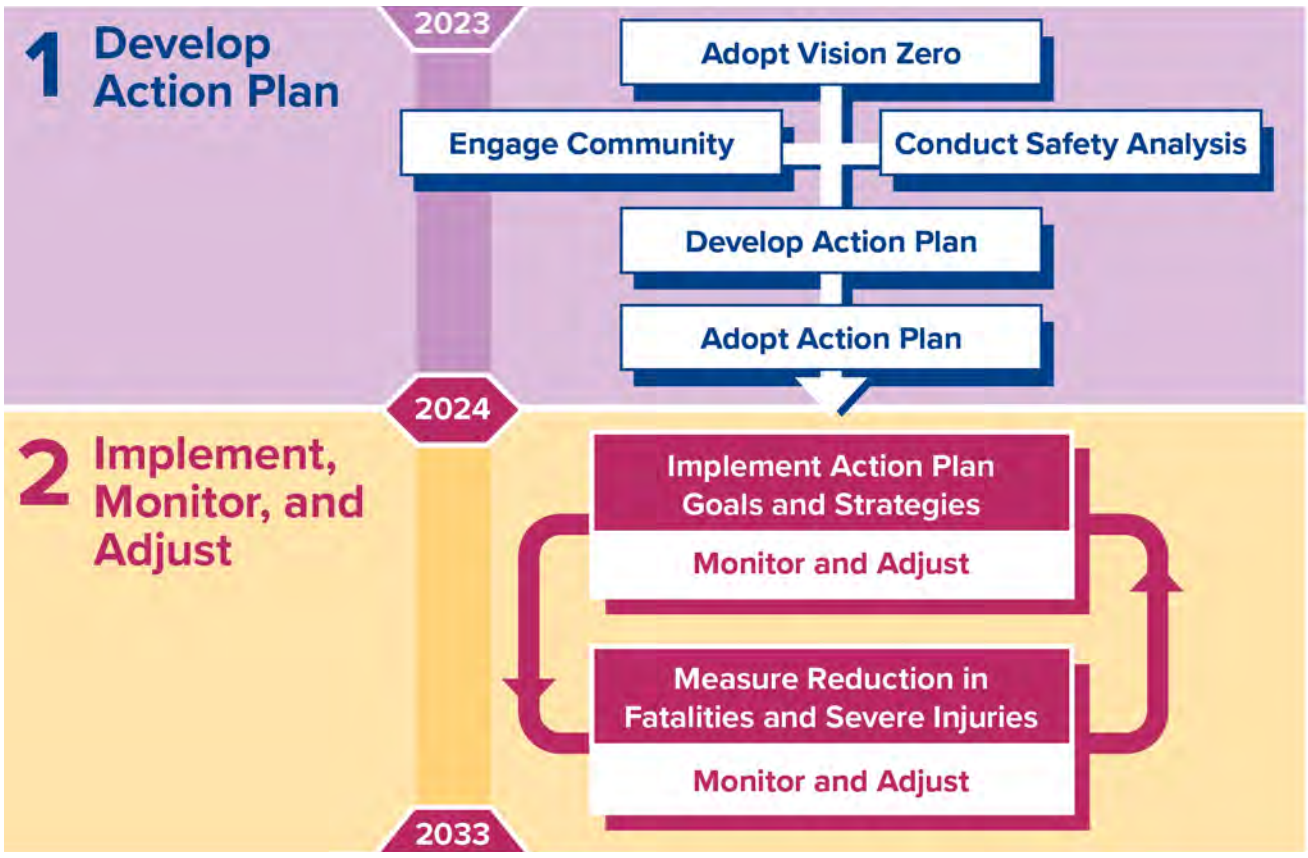


Figure 18. Vision Zero Focus Area Streets

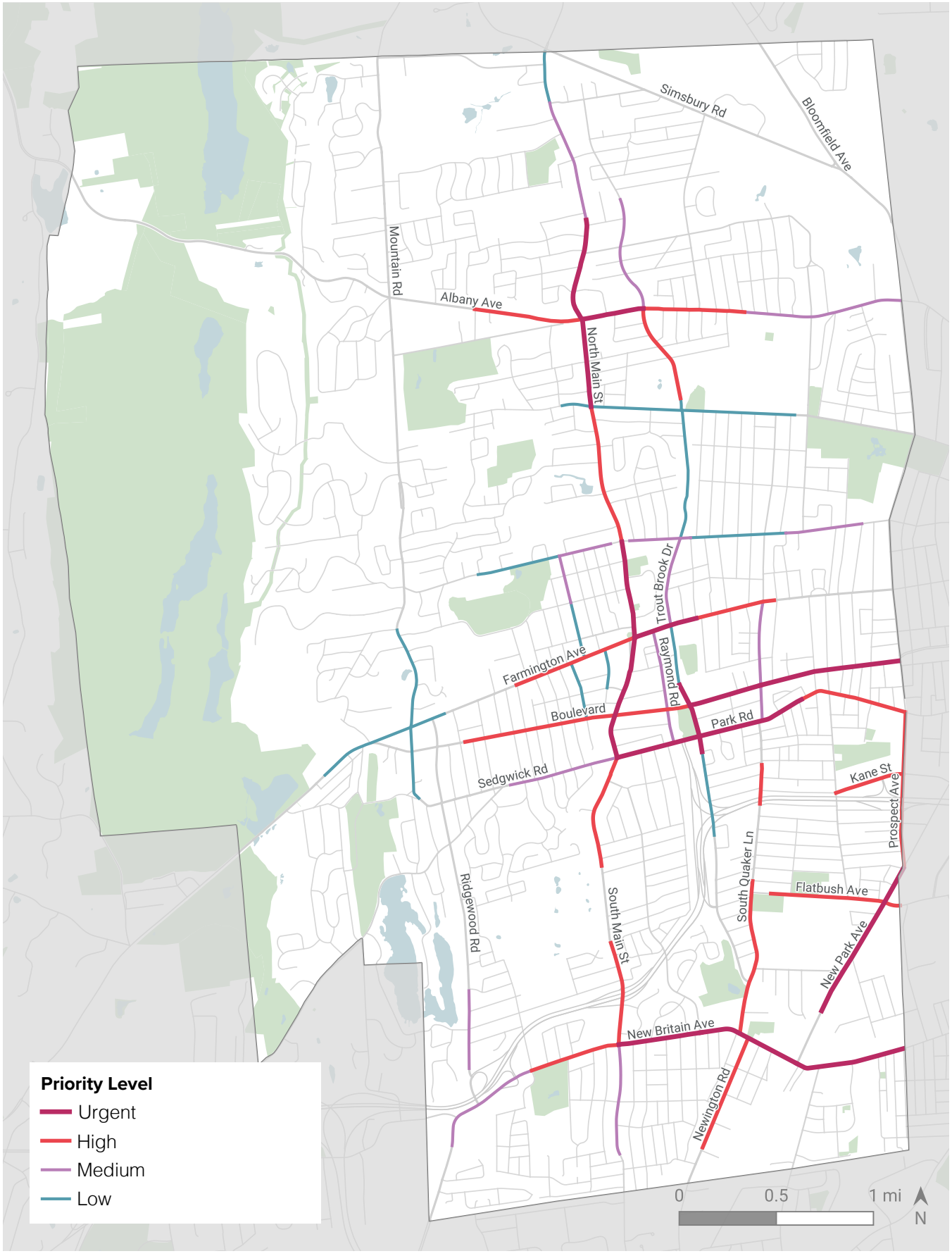
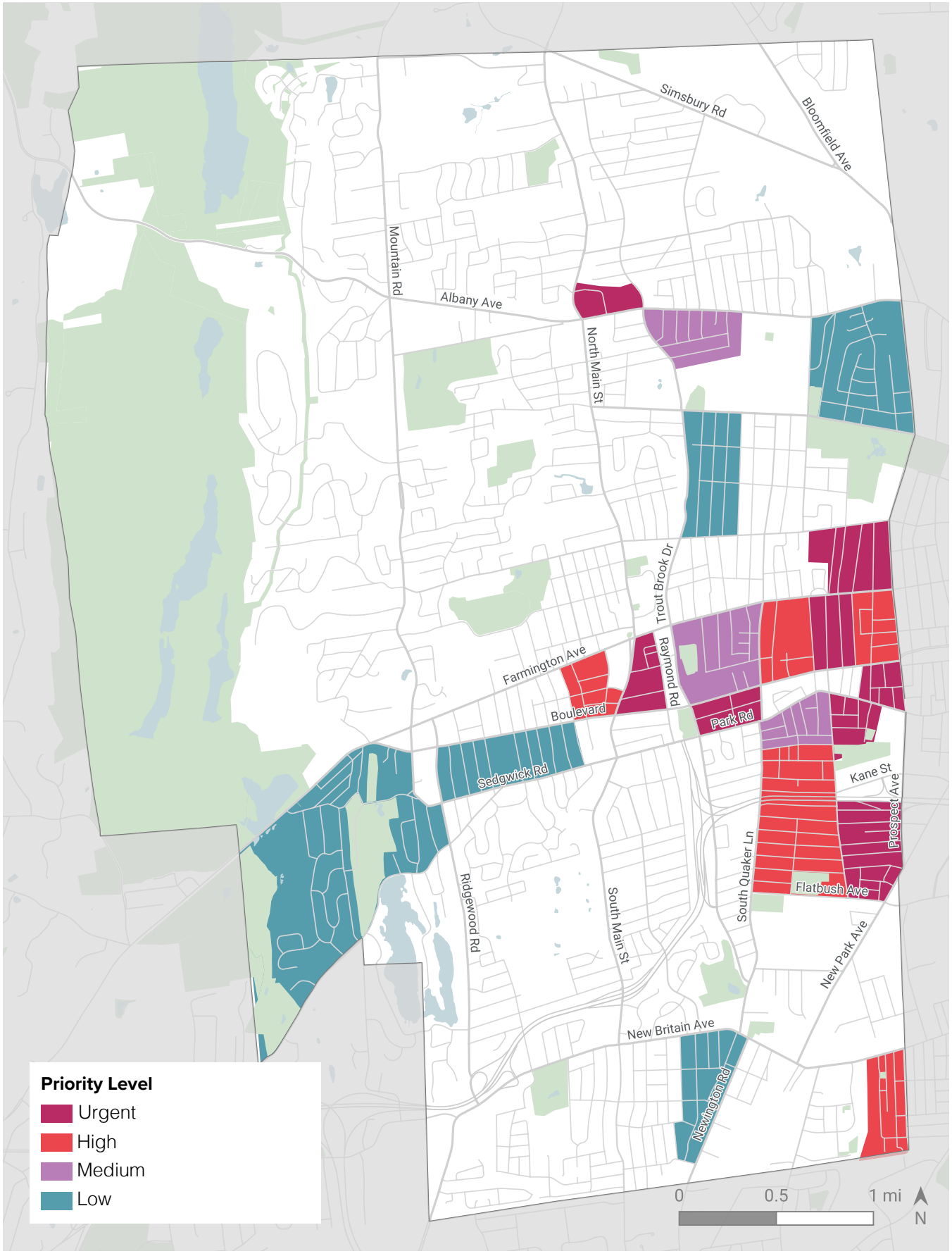


Figure 19. Vision Zero Focus Area Neighborhoods



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PRACTICES & POLICIES

Background

Effective policies, practices, and laws must be in place for the Town to implement many of the strategies identified in the other sections of this Plan. The following strategies and actions will create a proactive, safety-first framework for implementing Vision Zero. They will help the Town's departments and partnering agencies align their work to eliminate fatalities and serious injuries. The practices and policies should continue to be informed by public input and advance the Town's work on safety, data, and culture.

Goal

West Hartford will integrate the Safe System Approach to roadway design into the Town's policies and regulations.

Strategies

ID	Strategy	Priority
A	Create the institutional framework for the implementation of Vision Zero.	High
B	Establish policies and programs that will support efforts to reduce speeds, calm traffic, and increase safety for all users.	High
C	Integrate safe street design standards into zoning and subdivision ordinances.	Medium
D	Build meaningful partnerships to support new policies, practices, and projects.	Medium
E	Undertake important studies and plans.	Medium
F	Become a leader in Vision Zero in Connecticut.	Low

Practices & Policies

ID	Action	Timeframe
A	***Create the institutional framework for the implementation of Vision Zero.***	
A1	Make the Vision Zero Task Force permanent and hold quarterly status update meetings.	2024 - Ongoing
A2	Create a specific line item under Transportation & Circulation in the town's Capital Improvement Program budget that accounts for capital expenditures that advance Vision Zero. Provide dedicated funding to that line item.	Ongoing
A3	Pursue implementation grant funding to support the implementation of Vision Zero, including the Safe Streets and Roads for All (SS4A) grant.	Ongoing
A4	Establish a full-time permanent staff position responsible for overseeing the implementation of the Action Plan, annual review, data analysis, and the dashboard.	2024
A5	Conduct an annual review of the Vision Zero Action Plan. Include a work plan for projects to be undertaken in the upcoming year.	2024 - Ongoing
A6	Establish an internal Response Team to identify and implement quick-build safety countermeasures and direct enforcement and education resources at fatal crash locations.	2026 - 2029
A7	Require that all street improvement projects funded by the town include a report on how they advance Vision Zero.	2026 - Ongoing
B	***Establish policies and programs that will support efforts to reduce speeds, calm traffic, and increase safety for all users.***	
B1	Adopt a policy formalizing the use of target speed as the design approach for town projects.	2024
B2	Review of the Vision Zero Focus Areas (VZFAs) and identify locations where town speed limits can be lowered.	2024 - 2025
B3	Reduce speeds along the HIN, where warranted.	2025 - 2030

Priority	Lead	Partners	Staffing Obstacles	Funding Obstacles	Legislative Obstacles
High					
High	Town Manager	Community Development	**Yes**		
High	Community Development			**Yes**	
High	Engineering/ Police	Public Works	**Yes**		
High	Community Development			**Yes**	
Medium	Engineering		**Yes**		
Medium	Town Manager	Community Development	**Yes**	**Yes**	
Low	Engineering		**Yes**		
High					
Medium	Engineering		**Yes**		
High	Engineering		**Yes**		
High	Engineering	Public Works	**Yes**		

Practices & Policies

ID	Action	Timeframe
B4	Establish pedestrian safety zones in commercial areas with significant pedestrian activity.	2025 - 2027
B5	Initiate Neighborhood Street Traffic Calming in VZFAs.	2025 - Ongoing
B6	Update the Maintenance and Protection of Traffic Policy to include provisions for vulnerable road users. Identify that closures for these users should be the last option available particularly in school zones and pedestrian safety zones.	2024 - 2025
B7	Set a schedule for routine maintenance of road infrastructure and off-street bike facilities (e.g., sweeping, snow removal, repainting lanes, removing vegetation, and sign repair).	2027 - Ongoing
C	***Integrate safe street design standards into zoning and subdivision ordinances.***	
C1	Undertake a review of the town's zoning and subdivision ordinances to identify changes that will improve safety.	2025 - 2026
D	***Build meaningful partnerships to support new policies, practices, and projects.***	
D1	Meet annually with the Department of Transportation to identify how improvements to state roads can advance Vision Zero in West Hartford.	2024 - Ongoing
D2	Engage with CRCOG in their 2024 update to the regional Safety Action Plan to ensure West Hartford Vision Zero priorities are represented at the regional level.	2024
D3	Collaborate with CRCOG to leverage their Bipartisan Infrastructure Law (BIL) Coordinator for technical assistance in evaluating and strategically applying for funding to subsidize West Hartford's Vision Zero activities.	2024 - Ongoing
D4	Work with CRCOG and neighboring towns to create continuous bicycle and pedestrian networks to connect West Hartford to neighboring towns.	2024 - Ongoing

Priority	Lead	Partners	Staffing Obstacles	Funding Obstacles	Legislative Obstacles
High	Town Manager	Engineering/ Public Works	**Yes**		
Medium	Engineering		**Yes**		
Low	Engineering	Public Works	**Yes**		
Low	Public Works	Engineering	**Yes**	**Yes**	
Medium					
Medium	Planning & Zoning	Public Works	**Yes**		
Medium					
Medium	Community Development	Engineering	**Yes**	**Yes**	
Medium	Engineering		**Yes**		
Medium	Engineering		**Yes**		
Low	Engineering		**Yes**	**Yes**	

Practices & Policies

ID	Action	Timeframe
D5	Collaborate with the State's Vision Zero Council and the Connecticut Department of Motor Vehicles (DMV) on incorporating Vision Zero concepts into their new driver manual and license renewal mailings.	2026 - Ongoing
E	***Undertake important studies and plans.***	
E1	Develop a list of reference manuals and roadway standards that can be used to implement Vision Zero.	2025 - 2026
E2	Update the Bicycle Facility Plan.	2024
E3	Develop a Bicycle Facility Design Guide.	2024
F	***Become a leader in Vision Zero in Connecticut.***	
F1	Provide funding for two staff / Task Force members to attend one relevant conference or event to share West Hartford's experience and learn from what other communities are doing.	2026 - Ongoing

Priority	Lead	Partners	Staffing Obstacles	Funding Obstacles	Legislative Obstacles
Low	Community Development	Public Relations/ Police	**Yes**	**Yes**	**Yes**
Medium					
High	Engineering		**Yes**	**Yes**	
Medium	Engineering	Planning			
Low	Engineering		**Yes**		
Low					
Low	Town Manager			**Yes**	

SAFE DESIGN

Background

Roadway design, particularly its influence on motorist speed, is a key factor in achieving Vision Zero. Designing to reduce speeds not only decreases the risk of a crash but also decreases the risk of serious injury or death. The effects of speed are most pronounced for vulnerable road users whose risk of dying if struck by a vehicle increases dramatically with vehicle speed.

Physical changes to our streets will introduce permanent measures that will discourage dangerous, excessive, and intimidating driving and speeding. Efforts will include low-cost town-wide interventions and targeted investments in the Vision Zero Focus Areas. Safe roadway design will prioritize the needs of vulnerable road users. The action plan focuses on improvements to areas where these users may come into conflict with vehicular traffic such as intersections, crossings, and areas with missing sidewalks or bicycle facilities. These safety improvements will address existing issues while making West Hartford streets more appealing for walking and biking. The result will be fewer vehicle miles traveled, which will reduce the overall risk of injury and death.

Goal

West Hartford will adopt road design practices that prioritize safety for all users over vehicle speed and throughput. Physical design changes on roadway segments and at intersections will play an important role in reducing the number of serious injuries and deaths. More roadway users will choose alternatives to driving and, as a result, reduce the total vehicle miles traveled in the Town.

Strategies

ID	Strategies	Priority
G	Make infrastructure improvements that will make roads safer.	High
H	Reduce speeds.	High
I	Design for safe streets near schools.	Medium

KEY ACTION HIGHLIGHT: ROAD SAFETY AUDITS

A Road Safety Audit (RSA) is the formal safety performance examination of an existing or future road or intersection by a multidisciplinary team that can include engineers, planners, members of the public, and key stakeholders. RSAs are based on data and evidence, enabling communities to make informed decisions about road safety improvements. A RSA typically includes:

- Preparation and Planning: This involves gathering relevant background information such as traffic volume data, crash history, and the design of the road or intersection.
- Field Review: The team visits the site to observe traffic patterns, road user behavior, and potential hazards.
- Analysis: The audit team reviews the collected data and observations to identify safety issues. This analysis considers factors like sight distance, signage, pavement markings, pedestrian and cyclist facilities, and the behavior of different types of road users.
- Reporting: The team prepares a report detailing the identified safety issues and suggesting potential improvements. This report is usually structured to highlight immediate, short-term, and long-term recommendations.

RSAs are key to the implementation of this action plan. Initially, the Task Force had proposed many town-wide studies that would address individual issues (e.g., access to transit, sidewalk connectivity, crossing times at intersections, etc.). Although comprehensive, this approach would take significant time and resources to implement.

In contrast, utilizing the RSAs would allow the Town to:

- Focus on the most urgent segments of the Vision Zero Focus Areas (VZFA) first.
- Take a holistic approach to studying and improving streets that factored in all modes of vehicles and a wide variety of potential issues. For more information on the breadth of issues covered in the audits, see RSA Field Considerations on page 66.
- Identify immediate, short-term, and long-term recommendations in the VZFA that could be included in the work plan and advanced in subsequent years.
- Be better positioned to win grant funding for improvements.

As such, Action items G1 through G4 are interconnected and the Town should incorporate recommendations from the RSAs into the Action Plan as they are completed.

Safe Design

ID	Action	Timeframe
G	***Implement infrastructure improvements that will make roads safer.***	
G1	Conduct Road Safety Audits and/or safety assessments of areas identified in the Vision Zero Focus Areas.	2024 - Ongoing
G2	Implement quick-build recommendations within two years of conducting the Road Safety Audit.	2025 - 2026
G3	Implement short-term improvements within three to five years of conducting the Road Safety Audit.	2025 - 2029
G4	Implement long-term improvements within six to ten years of conducting the Road Safety Audit.	2027 - 3031
G5	Implement an automated enforcement (speed camera) program within Vision Zero Focus Areas to include speed enforcement and red-light enforcement.	2024 - 2025
G6	Identify and implement quick build and short-term projects that will not impact corridor planning.	2024 - 2027
G7	Prioritize the location of speed feedback signage to the Vision Zero Focus Areas.	2024 - Ongoing
G8	Construct single-lane modern roundabouts. Consider the intersections identified by the CRCOG Roundabout Study.	2026 - 2031
G9	Upon completion of the Bicycle Facility Plan, identify goals and a schedule of expansion of the bicycle network that includes continuous low-stress north-south and east-west connectivity.	2031
H	***Reduce speeds.***	-
H1	Evaluate signal timing on coordinated signal systems to ensure consistency with corridor target speeds.	2026 - 2031

Priority	Lead	Partners	Staffing Obstacles	Funding Obstacles	Legislative Obstacles
High					
High	Engineering	Community Development/ Public Works	**Yes**		
High	Engineering	Public Works	**Yes**		
High	Engineering	Public Works	**Yes**		
High	Engineering	Public Works	**Yes**		
High	Community Development	Town Manager/ Police/ Engineering/ Public Works/IT			**Yes**
High	Engineering	Public Works	**Yes**	**Yes**	
High	Engineering	Public Works	**Yes**		
Low	Engineering	Public Works	**Yes**	**Yes**	**Yes**
Low	Engineering	Public Works	**Yes**		
High					
Medium	Engineering	Public Works	**Yes**	**Yes**	

Safe Design

ID	Action	Timeframe
I	***Design for safe streets near schools.***	
I1	Expand school zone speed limit program, including reducing speeds to 20 MPH, flashing school zone speed signs, and speed feedback signage.	2026 - 2031
I2	Conduct Safe Routes to School reports for all schools within the West Hartford Public School system. Create schedule and implement short-term infrastructure and operational changes to improve safety.	2026 - 2031
I3	Identify and implement short-term, quick-build recommendations surrounding all schools.	2027 - 2031

	Priority	Lead	Partners	Staffing Obstacles	Funding Obstacles	Legislative Obstacles
	Medium					
	Medium	Engineering	Public Works	**Yes**	**Yes**	**Yes**
	Medium	Board of Education	Engineering/ Public Works	**Yes**	**Yes**	
	Medium	Engineering	Board of Education/Public Works	Yes	**Yes**	

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CULTURE

Background

While human error is inevitable, Vision Zero will be more successful if it is supported by members of the public who understand the importance of Vision Zero and the role that they play in ensuring safe streets. Motorists, bicyclists, and pedestrians each have responsibility to demonstrate safe behaviors. Vision Zero must actively engage with the public to teach traffic safety and design a safer system together. Cultural changes are evident in community action.

Goal

People in West Hartford will use roadways safely and be able to explain why it is important to do so. West Hartford will become a more informed community on road safety, yielding fewer crashes that result in serious injuries or deaths. There will be an open dialogue between the Town and residents about Vision Zero through a variety of communication mediums (website, social media, local station, etc.) that are accessible to all individuals across various backgrounds and abilities.

Strategies

ID	Strategy	Priority
J	Develop and execute a multi-media awareness campaign to educate people on safe roadway behavior.	High
K	Integrate Vision Zero education into West Hartford schools.	High
L	Establish the Town as a leader in Vision Zero best behaviors.	Medium
M	Promote non-motorized travel as a viable alternative to driving.	Low

Culture

ID	Action	Timeframe
J	***Develop and execute a multi-media awareness campaign to educate people on safe roadway behavior.***	
J1	Publish online and print public service announcements about Vision Zero.	2024 - Ongoing
J2	Maintain the West Hartford Vision Zero webpage on the town website as a central database for the Vision Zero Action Plan, progress reports, upcoming programs, related organizations, and contact methods.	Ongoing
J3	Design a campaign targeting distracted driving. (i.e., bumper sticker, PSAs, ads)	2024 - 2025
J4	Collaborate with community groups to provide workshops and educational awareness campaigns tailored to specific topics related to Vision Zero and traffic safety.	2025 - Ongoing
J5	Fully develop recognizable Vision Zero branding and marketing strategy to be used in future reports, social media posts, and outreach materials.	2024
J6	Build a multilingual Vision Zero outreach toolkit.	2024 - 2025
J7	Publish an online "Vision Zero Pledge" that allows community members to show their personal commitment to achieving zero deaths and serious injuries.	2025 - Ongoing
J8	Create and manage official West Hartford Vision Zero social media accounts to share resources and interact with community members.	Ongoing
J9	Host a workshop for professional media on how to best communicate information about traffic crashes and Vision Zero.	2024
J10	Conduct driver awareness sessions specific to Vision Zero for all town staff.	2025 - Ongoing

Priority	Lead	Partners	Staffing Obstacles	Funding Obstacles	Legislative Obstacles
High					
High	Public Relations	Equity Advancement/ Town Manager	**Yes**	**Yes**	
High	Town Manager	IT/Public Relations/ Community Development/ Engineering			
High	Public Relations	Police	**Yes**	**Yes**	
High	Public Relations	Equity Advancement/ Town Manager	**Yes**		
Medium	Public Relations	Equity Advancement/ Town Manager		**Yes**	
Medium	Equity Advancement	Public Relations	**Yes**		
Medium	Public Relations	Equity Advancement	**Yes**		
Medium	Public Relations	Town Manager/ Equity Advancement	**Yes**		
Medium	Public Relations	Town Manager/ Equity Advancement	**Yes**		
Low	Police	Public Relations	**Yes**		

Culture

ID	Action	Timeframe
K	***Integrate Vision Zero education into West Hartford schools.***	
K1	Work with students to develop a K-12 Vision Zero campaign that helps students understand the importance of road safety.	2024 - 2025
K2	Establish Vision Zero and Distracted Driving panels in schools to develop a traffic safety curriculum and oversee its implementation.	2025 - Ongoing
K3	Coordinate engagement and outreach with the development of the Safe Routes to School Program.	Ongoing
K4	Provide educational videos catered to students on Vision Zero.	2026 - Ongoing
K5	Promote designated walk/bike to school days to encourage alternative transportation modes to cars.	2026 - Ongoing
K6	Conduct information sessions with School District staff, especially school bus drivers, on safe roadway uses and their role in advancing Vision Zero.	2025 - Ongoing
L	***Establish the Town as a leader in Vision Zero best behaviors.***	
L1	Update the language in public-facing Town documents to refer to “crashes,” not “accidents.” Ensure Town staff refer to crashes instead of accidents.	2026
M	***Promote non-motorized travel as a viable alternative to driving.***	
M1	Identify key locations within the Vision Zero Focus Areas that would improve people's ability to meet their daily needs without a car. Map and integrate into prioritization framework.	2027
M2	Develop an advertising strategy to promote how safety improvements are making West Hartford a better place to walk, bike, and take transit.	2027 - Ongoing
M3	Work with major employers to promote alternative transportation modes and designated bike/walk to workdays.	Ongoing
M4	Host guided bicycle rides for new bike facilities as they open.	Ongoing

Priority	Lead	Partners	Staffing Obstacles	Funding Obstacles	Legislative Obstacles
High					
High	Board of Education/Police	Public Relations	**Yes**		
High	Public Relations	Board of Education/Police	**Yes**		
High	Board of Education/Police	Public Relations			
Medium	Public Relations	Board of Education/Police	**Yes**	**Yes**	
Low	Board of Education	Public Relations			
High	Board of Education/ School Transportation	Public Relations/ Police	**Yes**		
Medium					
Medium	Public Relations	Town Manager			
Low					
High	Engineering	Equity Advancement			
Medium	Public Relations	Town Manager	**Yes**	**Yes**	
Medium	Public Relations		**Yes**		
Low	Police	Public Relations	**Yes**		

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DATA

Background

Good data is critical to ensuring the successful implementation of Vision Zero actions. Data reveals where problems are, who is impacted, and what does and does not work. Robust and transparent data collection, measurement, analysis, and reporting are crucial to understanding the system-level changes needed to achieve Vision Zero.

Goal

West Hartford will improve and diversify its data sources, collection strategies, and analysis to make data-driven decisions. West Hartford will be accountable for its Vision Zero commitment through measurable outcomes and transparent data reporting.

Strategies

ID	Action	Priority
N	Report data to community members, Town staff, and the state.	High
O	Analyze data to improve the Town's understanding of crash patterns.	Medium
P	Improve data diversity surrounding available crash data.	Low

Data

ID	Action	Priority
N	***Report data to community members, Town staff, and the state.***	***High***
N1	Create a dashboard linked on the Vision Zero webpage to analyze the Action Plan's metrics and progress toward its goals.	High
N2	Publish project updates, progress on actions, and program updates to the data dashboard.	High
N3	Develop and publish an annual Vision Zero progress report focused on data-driven results and areas for improvement.	High
N4	Provide Town crash data about serious injuries and deaths on the data dashboard when it is made publicly available.	Medium
O	***Analyze data to improve the Town's understanding of crash patterns.***	***Medium***
O1	Update and modify the High Injury Network and Vision Zero Focus Areas.	High
O2	Track and analyze trends in contributing factors identified on the High Injury Network.	Medium
O3	Compare traffic data before and after traffic calming interventions to assess effectiveness and refine future applications.	Medium
O4	Identify nodes located near the High Injury Network that attract trips by vulnerable users (schools, parks, transit hubs, health centers, trail crossings, etc.) to help prioritize implementation.	Medium
P	***Improve data diversity surrounding available crash data.***	***Low***
P1	Solicit public input on perception of traffic safety when updates are made to the Vision Zero Focus Areas.	High
P2	Collect speed data on high crash corridors to identify where prevailing speeds exceed the posted speed limit.	High
P3	Update and promote the Town's online system for road users to report problem road areas, hazards, near misses, and the like. Publish that information on the data dashboard.	Medium

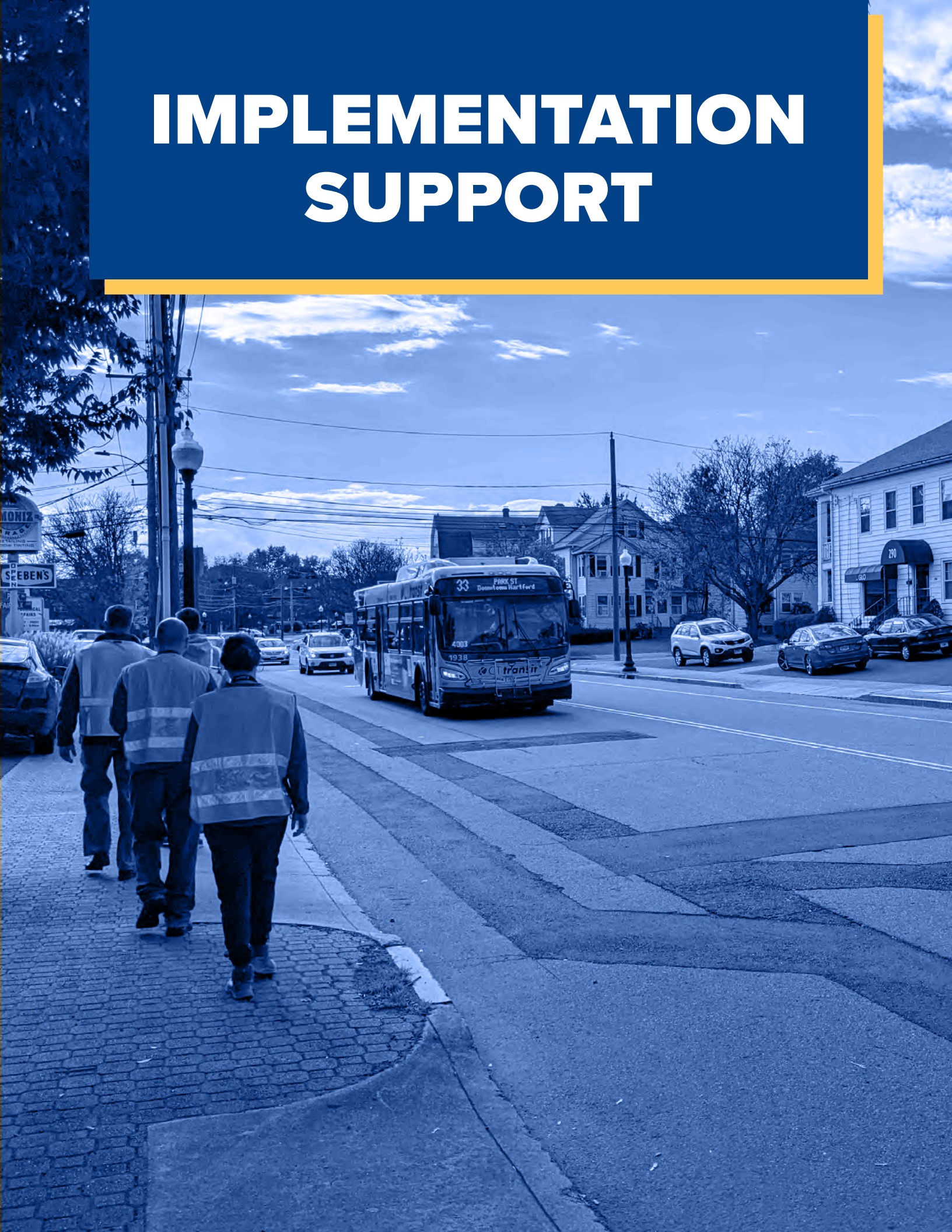
Timeframe	Lead	Partners	Staffing Obstacles	Funding Obstacles	Legislative Obstacles
2024	Engineering		**Yes**	**Yes**	
2025 - Ongoing	Engineering	Community Development			
2024 - Ongoing	Community Development	Engineering/ Police/Public Relations/Board of Education	**Yes**	**Yes**	
2025 - Ongoing	Police	IT			
2027	Engineering		**Yes**		
2026 - Ongoing	Engineering	Police	**Yes**		
2026 - Ongoing	Engineering		**Yes**		
2024	Engineering			**Yes**	
2026 & 2031	Public Relations	Engineering			
2024 - Ongoing	Engineering	Police	**Yes**		
2025	Public Relations	Public Works			

Data

ID	Action	Priority
P4	Advocate for better crash data collection Statewide. This may include improved police data collection on crash report forms, particularly for crashes involving non-motorists.	Low

Timeframe	Lead	Partners	Staffing Obstacles	Funding Obstacles	Legislative Obstacles
Ongoing	Police				

IMPLEMENTATION SUPPORT



SUPPORTING DOCUMENTS

Background

As part of its initial efforts, the Task Force identified a variety of safety concerns in West Hartford and proposed that each of these issues be studied individually. This would have resulted in more than a dozen studies, overwhelming the Town and slowing implementation. Moreover, that approach lacked a focus on VZFAs.

Instead, the project team proposed, and the Task Force embraced, an approach that would utilize **Road Safety Audits (RSAs)** and smaller roadway assessments to advance Vision Zero. In this approach, the Town would conduct regular studies on roadway segments, prioritizing VZFAs. This would allow the Town to:

- Focus their attention on the highest need areas first.
- Study roadways holistically and address the totality of issues, not just the ones identified by the Task Force.
- Identify projects for implementation more quickly.

In support of that effort, this chapter includes two important documents. The first is **RSA Field Considerations**, which can be used to identify safety issues during the RSAs. It is important to note that the list of considerations need not be static and should evolve as the Town learns from its initial RSA efforts.

The second is a **countermeasures matrix** which provides direction on interventions that could be appropriate for addressing the issues identified by the Task Force.

Performance Measures

To track progress towards Vision Zero, the Action Plan identifies several top-level performance measures to track on an annual basis.

- Number of fatal and severe injury crashes: Town-Wide (not including I-84), involving pedestrians and bicyclists, occurring within the Vision Zero Focus Areas.
- Percentage of VZFAs improved
- Number of Road Safety Audits (RSAs) Completed
- Number of Safe Routes to School Reports (SRTS) Completed
- Number of Early Action Recommendations (RSA & SRTS) Implemented
- Number of Grant Applications Submitted to Support Long-Term Recommendation Development

Additionally, the full Action Plan (located in the appendix) includes performance measures on each of the individual actions.

Data Dashboard

A Data Dashboard has been developed to visualize and explore crash trends within West Hartford. The dashboard is available on the West Hartford Vision Zero website and includes annually-updated crash information (updated by early-summer of each year) as well as featured projects recently completed or underway related to the Action Plan.

RSA FIELD CONSIDERATIONS

Pedestrian Accommodations

- Sidewalks (ADA compliant, width, grade, condition, drainage, buffer, etc.)
- Sidewalk connectivity **
- Lighting
- Amenities (benches, trash receptacles, etc.)

Pedestrian Crossings

- Crossing times and distance **
- Signage
- Pavement markings **
- Accessible pedestrian signals (APS) **
- Adequate sight distance
- ADA compliant ramps (grades, orientation, tactile warning strips, etc.)
- Pedestrian refuge at islands
- Distance between crossings **

Bicycle Accommodations

- Bicycle facilities (design, location and condition)
- Gaps **
- Separation from traffic
- Conflicts with on-street parking **
- Pedestrian conflicts
- Bicycle signal detection
- Visibility
- Roadway speed limit
- Bicycle signage / markings
- Shared lane width
- Shoulder condition / width
- Traffic volume
- Heavy vehicles
- Pavement condition
- Debris

Transit Accommodations

- Location
- Signage
- Seating / Covers
- Pedestrian connectivity **

Road Facilities

- Access points
- Drainage
- Tapers and lane shifts
- Roadside clear zone / slopes
- Guide rails / protection systems
- Capacity issues

Road Surface Condition

- Pavement (excessive roughness or rutting, potholes, loose material)
- Edge drop-offs
- Drainage issues

Intersections

- Geometry
- Sight distances **
- Traffic control devices
- Safe storage for turning vehicles
- Exclusive right turn lanes **

Signals

- Visibility
- Operation
- Timing **
- Safe placement of equipment
- Proper sight distance
- Adequate lane capacity

Signage

- Correct use
- Clear messaging
- Good placement for visibility
- Adequate retro-reflectivity

Pavement Markings

- Correct and consistent with MUTCD
- Lane widths **
- Adequate visibility
- Condition
- Snow storage
- Edgelines provided

Driver Behavior

- Compliance with speed limits **
- Sight distance adequacy
- Safe passing opportunities
- Distractions
- Unaware of pedestrians / cyclists

Miscellaneous

- Weather impacts

*** Identified by Task Force as a common or persistent issue in West Hartford.*

TYPICAL SAFETY ISSUES IDENTIFIED BY TASK FORCE

Issue	Potential Countermeasures
Speeding, especially when speeders are exceeding 35 MPH or 10 MPH above the speed limit.	Speed Limit Reduction, School Zone Speed Limit, Automated Speed Enforcement, Lane Striping Changes (Narrower Lanes), Road Diet, Neighborhood Traffic Calming, Roundabout, Bumpout, Signal Retiming, Adaptive Signals, Raised Intersection, Raised Crosswalk, Pedestrian Refuge Island (with horizontal deflection)
Excessive lane widths that encourage speeding or other dangerous behaviors	Lane Striping Changes (Narrower Lanes)
Excessive roadway capacity, especially where it may encourage unsafe behaviors	Road Diet, Right-Turn Lane Closure, Signal Retiming
Gaps in the sidewalk network, including lacking sidewalks and damaged sidewalks which make them difficult to use (especially by people with disabilities).	Sidewalks
Improper sight lines to nearby intersections and driveways	Sight Line Improvements at Corners (Vegetation and Parking)
Inadequate pedestrian infrastructure, especially at high-pedestrian crossing volume locations	Crosswalks, Mid-block Crosswalks, Rectangular Rapid Flashing Beacons (RRFBs), Pedestrian Refuge Island, Raised Crosswalk, Raised Intersection, Crosswalk Yield Lines and Other Pavement Markings, Automated Pedestrian Detection / Pedestrian Recall, Dynamic No-Turn on Red (NTOR) Signage with Pedestrian Signal Activitation, Right-Turn Lane Closure, Bumpouts, Roundabout, Road Diet, Neighborhood Traffic Calming, Automated Speed Enforcement, Automated Red-Light Enforcement, Parking Restriction Enforcement, Additional Lighting, Speed Limit Reduction, School Zone Speed Limit
Overbuilt, unnecessary, poorly designed, or poorly signalized exclusive right-turn lanes	Raised Crosswalk (across Chanelized Right-turn Lane), Dynamic No-Turn on Red (NTOR) Signage with Pedestrian Signal Activitation), Right-Turn Lane Closure, Automated Red-Light Enforcement

Issue	Potential Countermeasures
Excessive pedestrian wait times at traffic signals that induces unsafe pedestrian activity.	Signal Retiming, Adaptive Signals, Automated Pedestrian Detection / Pedestrian Recall
Missing, long, unsafe, or inadequate pedestrian crossings at intersections (especially across arterials or collectors) and mid-block.	Crosswalks (at Intersections), Mid-block Crosswalks
Improper signal timing, especially when it encourages speeding or unsafe driver behaviors (e.g., jumping signals).	Signal Retiming, Adaptive Signals
Bus stop locations that have unsafe or inconvenient pedestrian access routes from the stops to nearby destinations.	Sidewalks, Crosswalks (at Intersections), Mid-block Crosswalks, Bus Stop Relocation
Gaps in the bicycle network	Bicycle Facility (Refer to Bike Plan)
Frequent vehicular parking occurs in bicycle facilities.	Parking Restriction Enforcement

POTENTIAL COUNTERMEASURES

The following summarizes potential countermeasures that can support implementation. They are organized into the following categories:

- Pedestrian and Bicycle Countermeasures
- Countermeasures at Intersections and Driveways
- Cross Section Countermeasures
- Enforcement
- Miscellaneous Countermeasures

Countermeasures are based on review of available resources including the Federal Highway Administration's Proven Safety Countermeasures website. Additionally, the Action Plan effort includes a desktop review of the Vision Zero Focus Areas which were identified as an "Urgent" priority. Additional review of crash details in these areas as well as identification of appropriate countermeasures are included in this list. The list below is not exhaustive but rather representative of the most common countermeasures appropriate for West Hartford.

	Countermeasures	Safety Issues								
		Speeding	Pedestrian Crashes	Bicyclist Crashes	DUI & Distracted Users	Crashes at Intersections	Angle Crashes	Head-on Crashes	Single Vehicle Crashes	Crashes at Night
Pedestrian and Bicycle	Sidewalks (ADA-compliant)		Yes							
	Crosswalks - at Signal or All-Way Stop		Yes			Yes				
	Crosswalks - Mid-Block or at Two-Way Stop (Main Road)		Yes			Yes				
	Crosswalks - at Two-Way Stop (Side Street)		Yes			Yes				
	Rectangular Rapid Flashing Beacons (RRFB)		Yes		Yes	Yes				Yes
	High-Intensity Crosswalk Lighting w/ RRFB		Yes		Yes	Yes				Yes

Countermeasures		Safety Issues								
		Speeding	Pedestrian Crashes	Bicyclist Crashes	DUI & Distracted Users	Crashes at Intersections	Angle Crashes	Head-on Crashes	Single Vehicle Crashes	Crashes at Night
Ped. and Bicycle	Pedestrian Refuge Island		Yes			Yes		Yes		
	Raised Crosswalk/ Intersection	Yes	Yes		Yes	Yes				
	Bus Stop Relocation		Yes							
	Bicycle Facility (Refer to Bike Plan)			Yes						
Intersection and Driveways	Traffic Signals		Yes	Yes		Yes	Yes			
	Pedestrian Signal Heads		Yes			Yes				
	Accessible Pedestrian Signals (APS) / Countdown Timer		Yes			Yes				
	Automated Pedestrian Detection / Pedestrian Recall		Yes			Yes				
	Signal Retiming - Adequate Green / Walk Time	Yes	Yes	Yes		Yes	Yes			
	Signal Retiming - Clearance Intervals	Yes	Yes	Yes		Yes	Yes			
	Signal Retiming - Adaptive Signals	Yes	Yes	Yes		Yes				
	Protected Left Phase					Yes	Yes	Yes		
	Flashing Yellow Arrow (FYA)				Yes	Yes	Yes	Yes		
	Dynamic No-Turn on Red (NTOR) Signage with Pedestrian Signal Activation		Yes		Yes	Yes				

Countermeasures		Safety Issues								
		Speeding	Pedestrian Crashes	Bicyclist Crashes	DUI & Distracted Users	Crashes at Intersections	Angle Crashes	Head-on Crashes	Single Vehicle Crashes	Crashes at Night
Intersection and Driveways	Retroflective Backplates				Yes	Yes	Yes	Yes		Yes
	Left-Turn Lane Addition					Yes				
	Right-Turn Lane Closure		Yes			Yes				
	Intersection “Cat Track” Markings			Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Bumpouts	Yes	Yes			Yes	Yes			
	Sight Line Improvements at Corners (Landscaping & Parking etc.)		Yes	Yes		Yes	Yes			
	Systematic Application of Signage at Stop-Controlled Intersections				Yes	Yes	Yes	Yes	Yes	Yes
	Access Management - Turn Restrictions		Yes			Yes	Yes	Yes		
	Access Management - One-Way or Half-Closure		Yes			Yes	Yes	Yes		
	Access Management - Driveway / Road Full Closure		Yes			Yes	Yes	Yes		
	Roundabout	Yes	Yes		Yes	Yes	Yes	Yes		
Cross Section	Retroreflective Epoxy Pavement Markings			Yes	Yes			Yes	Yes	Yes
	Lane Striping Changes	Yes		Yes		Yes		Yes	Yes	Yes
	Road Diet	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

Countermeasures		Safety Issues								
		Speeding	Pedestrian Crashes	Bicyclist Crashes	DUI & Distracted Users	Crashes at Intersections	Angle Crashes	Head-on Crashes	Single Vehicle Crashes	Crashes at Night
Cross Section	Edge Lines / Wider Edge Lines			Yes	Yes				Yes	Yes
	Centerline Rumble Strips				Yes			Yes	Yes	Yes
	Horizontal Curve Signage and Pavement Markings				Yes				Yes	Yes
	Median Island	Yes					Yes	Yes	Yes	
Enforcement	Automated Speed Enforcement	Yes	Yes	Yes						
	Automated Red-Light Enforcement		Yes	Yes		Yes	Yes	Yes		
	DUI & Distracted User Enforcement				Yes					
	Parking Restriction Enforcement		Yes	Yes		Yes	Yes			
Misc.	Neighborhood Traffic Calming	Yes	Yes	Yes						
	Lighting - Roadway		Yes	Yes					Yes	Yes
	Lighting - Pedestrian		Yes	Yes					Yes	Yes
	Speed Limit Reduction	Yes	Yes	Yes						
	School Zone Speed Limit	Yes	Yes	Yes						
	Directional Pavement Markings				Yes	Yes				
	Directional Signage				Yes	Yes				

APPENDIX A. FULL ACTION PLAN

West Hartford Vision Zero Action Plan - REV 1/12/2024

PRACTICES AND POLICY

ID	Description	2024	2025	2026	2027	2028	2029	2030	2031+	Priority	Lead Entity	Supporting Entity	Frequency	Performance Metric	Accessibility Considerations	Equity Considerations	Staff Obs.	Funding Obs.	Legis. Obs.	Additional Information
A	**Create the institutional framework for the implementation of Vision Zero.**									**HIGH**										
A1	Make the Vision Zero Task Force permanent and hold quarterly status update meetings.	COMPLETE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	1 HIGH	Town Manager	Community Development	Quarterly	Number of meetings held per year.	Include members who have experience with improving assessibility.	Include BIPOC, disabled, senior, youth and LGBTQIA members.	X			
A2	Create a specific line item under Transportation & Circulation in the town's Capital Improvement Program budget that accounts for capital expenditures that advance Vision Zero. Provide dedicated funding to that line item.	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	1 HIGH	Community Development	-	Annually	Creation of line item; Number of dollars allocated to Vision Zero projects.	-	-		X		
A3	Pursue implementation grant funding to support the implementation of Vision Zero, including the Safe Streets and Roads for All (SS4A) grant.	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	1 HIGH	Engineering/Police	Public Works	Annually	Applications submitted; dollars awarded.	-	-	X			
A4	Establish a full-time permanent staff position responsible for overseeing the implementation of the Action Plan, annual review, data analysis, and the dashboard.	COMPLETE	-	-	-	-	-	-	-	1 HIGH	Community Development	-	Once	Establishment of position.	-	-		X		
A5	Conduct an annual review of the Vision Zero Action Plan. Include a workplan for projects to be undertaken in the upcoming year.	INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	1 HIGH	Vision Zero Advisory Committee	-	Annually	Completion of review and update of action plan	Review should include a discussion of any equity issues that have arrisen during the previous year and how they will be addressed.	Review should include a discussion of any equity issues that have arrisen during the previous year and how they will be addressed.	X			Review should identify how to (1) allocate financial resources for staffing, infrastructure, and maintenance needs and (2) make updates to the action plan based on what was learned the previous year. Workplan should be developed in reference to capital expenditures planned for Action A2.
A6	Establish an internal Response Team to identify and implement quick-build safety countermeasures and direct enforcement and education resources at fatal crash locations.	INITIATE	WORKING	WORKING	WORKING	WORKING	WORKING	WORKING	ONGOING	2 MEDIUM	Town Manager	Community Development	Ongoing	Establishment of Response Team. Number of responses and measures implemented.	-	-	X	X		
A7	Require that all street improvement projects funded by the town include a report on how they advance Vision Zero.			INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	3 LOW	Engineering	-	As needed	Establishment of policy requiring reports	Report should include where road projects have included accessibility improvements.	Report should include and Equity Report	X			
B	**Establish policies and programs that will support efforts to reduce speeds, calm traffic, and increase safety for all users.**									**HIGH**										
B1	Adopt a policy formalizing the use of target speed as the design approach for town projects.	COMPLETE	-	-	-	-	-	-	-	1 HIGH	Engineering	-	Once	Adoption of policy	-		X			This approach considers the highest-speed vehicles should operate on roadways.
B2	Review of the Vision Zero Focus Areas (VZFAs) and identify locations where town speed limits can be lowered.	INITIATE	COMPLETE	-	-	-	-	-	-	1 HIGH	Engineering	-	Once	Phase 1. Completion of review and identification of roadways. Phase 2. Percentage of reducible roadways that have had their speeds adjusted.	-	Report on percentage of locations that are within the TEZs	X			Refer to Federal Highway Administration US Limits 2 and NACTO City Limits guidance to establish consistent speed limits, taking into consideration the level of conflict and activity on streets.
B3	Reduce speeds along the HIN, where warranted.		INITIATE	WORKING	WORKING	WORKING	WORKING	COMPLETE	-	1 HIGH	Engineering	Public Works	As needed	Number of miles of roadway where speed limits have been reduced.	-	Report on percentage of locations that are within the TEZs	X			
B4	Establish pedestrian safety zones in commercial areas with significant pedestrian activity.		INITIATE	WORKING	COMPLETE	-	-	-	-	1 HIGH	Town Manager	Engineering/Public Works	As needed	Establishment of safety zones.	-	-	X			Utalize the criteria established in CT General Statutes 14-307A to idntify appropriate locations.
B5	Initiate Neighborhood Street Traffic Calming in VZFAs.		INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	2 MEDIUM	Engineering	-	One per year, as staffing and funding permit.	Completion of examination and follow up actions.	Ensure that information about the program is sufficiently advertised in the towns TEZs and in multiple languages.	Ensure that information about the program is sufficiently advertised in the towns TEZs and in multiple languages.	X			Town-initiated project should include VZFA streets and intersections that are also prone to cut-through traffic that causing injuries and/or deaths. Where appropriate including additional traffic calming measures in the program. Refer to the "Neighborhood Street Traffic Calming Program"
B6	Update the Maintenance and Protection of Traffic Policy to include provisions for vulnerable road users. Identify that closures for these users should be the last option available particularly in school zones and pedestrian safety zones.	INITIATE	COMPLETE	-	-	-	-	-	-	3 LOW	Engineering	Public Works	Once	Completion of Policy Update	-	-	X			
B7	Set a schedule for routine maintenance of road infrastructure and off-street bike facilities (e.g., sweeping, snow removal, repainting lanes, removing vegetation, and sign repair).				INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	3 LOW	Public Works	Engineering	Once	Development and implementation of schedule.	-	-	X	x		
C	**Integrate safe street design standards into zoning and subdivision ordinances.**									**HIGH**										
C1	Undertake a review of the town's zoning and subdivision ordinances to identify changes that will improve safety.		INITIATE	COMPLETE	-	-	-	-	-	3 LOW	Planning & Zoning	Public Works	Once	Completeion of review; adoption of changes.	-	-	X		X	This review should include addressing access managing standards in pedestrian safety zones.
D	**Build meaningful partnerships to support new policies, practices, and projects.**									**MEDIUM**										
D1	Meet annually with the Department of Transportation to identify how improvements to state roads can advance Vision Zero in West Hartford.	INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	2 MEDIUM	Community Development	Engineering	Annually	Number of meetings held per year.	-	-	X	X		
D2	Engage with CRCOG in their 2024 update to the regional Safety Action Plan to ensure West Hartford Vision Zero priorities are represented at the regional level.	COMPLETE	-	-	-	-	-	-	-	2 MEDIUM	Engineering		As needed	Completion of Safety Action Plan			X			

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NEW	Description	2024	2025	2026	2027	2028	2029	2030	2031+	Priority	Lead Entity	Supporting Entity	Frequency	Performance Metric	Accessibility	Equity	Staff Obs.	Funding Obs.2	Legis. Obs.	Additional Information
D3	Collaborate with CRCOG to leverage their Bipartisan Infrastructure Law (BIL) Coordinator for technical assistance in evaluating and strategically applying for funding to subsidize West Hartford's Vision Zero activities.	INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	2 MEDIUM	Engineering		As needed	Number of dollars awarded through grants.			X			
D4	Work with CRCOG and neighboring towns to create continuous bicycle and pedestrian networks to connect West Hartford to neighboring towns.	INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	3 LOW	Engineering	-	As needed	Linear miles of network improvements and/or connections added.	-	-	X	X		
D5	Collaborate with the State's Vision Zero Council and the Connecticut Department of Motor Vehicles (DMV) on incorporating Vision Zero concepts into their new driver manual and license renewal mailings.			INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	3 LOW	Community Development	Public Relations/Police	As needed	-	-	-	X	X	X	This should include coorination with the State's Vision Zero Council to identify areas where the State can amend policies and laws to advance Vision Zero. Collaboration should also include how hospitals can provide better data on serious injuries from crashes.
E	**Undertake important studies and plans.**									**MEDIUM**										
E1	Develop a list of reference manuals and roadway standards that can be used to implement Vision Zero.		INITIATE	COMPLETE	-	-	-	-	-	1 HIGH	Engineering	-	Once	Development of standards	Include references to standards that address accessibility for all roadway users.	-	X	X		The reference manual should identify appropriate safety solutions on different roadway types, including arterial and colelcted.
E2	Update the Bicycle Facility Plan.	COMPLETE	-	-	-	-	-	-	-	2 MEDIUM	Enginering	Planning	As needed	Completion of plan	-	Engage community representatives from TEZs and incorporate their transportation safety needs.				The Plan should identify feasible and appropriate bicycle facility for reasonably confident bicyclists on all streets where shared facilities are not appropriate. It should include a low-stress bicycle network appropriate for less confident bicyclists of all ages. In line with the Complete Streets Policy, on streets where no feasible or appropriate facility exists, continue documenting reasoning and the next closest alternate facility.
E3	Develop a Bicycle Facility Design Guide.	COMPLETE	-	-	-	-	-	-	-	3 LOW	Engineering	-	Once	Completion of guide	-	Engage community representatives from TEZs and incorporate their transportation safety needs.	X			The guide should include references to current state and national standards.
F	**Become a leader in Vision Zero in Connecticut.**									**LOW**										
F1	Provide funding for two staff / Task Force members to attend one relevant conference or event to share West Hartford's experience and learn from what other communities are doing.			INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	3 LOW	Town Manager	-	Once every other year	Allocation of funding; attendance at events.	-	-		X		
G	**Implement infrastructure improvements that will make roads safer.**									**HIGH**										
G1	Conduct RSAs and/or safety assessments of areas identified in the VZFA.	INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	1 HIGH	Engineering	Community Development/Public Works	2 per year, as funding and staffing permit	Number of RSAs that are completed and contain all required elements.	Include BIPOC, disabled, senior, youth and LGBTQIA member in audits. Include accessibility evaluation in audits/assesments.	Include at least one audit or assestment in a TEZ per cycle. Include BIPOC, disabled, senior, youth and LGBTQIA member in audits.	X	X		Review conditions and develop recommendations ranging from short-term to long-term. Include conceptual plans to establish community buy-in.
G2	Implement quick-build recommendations within two years of conducting the RSA.		INITIATE	COMPLETE	-	-	-	-	-	1 HIGH	Engineering	Public Works	As needed	Completion of improvements	Include in Annual Report (Action A4) which projects included accessibility improvemetns.	Include in Annual Report (Action A4) the number of project proposed and completed in TEZs.	X			Consider quick-build elements such as striping, signage, and modular vertical elements.
G3	Implement short-term improvements within three to five years of conducting the RSA.		INITIATE	WORKING	WORKING	WORKING	COMPLETE	-	-	1 HIGH	Engineering	Public Works	As needed	Completion of improvements	Include in Annual Report (Action A4) which projects included accessibility improvemetns.	Include in Annual Report (Action A4) the number of project proposed and completed in TEZs.	X	X		
G4	Implement long-term improvements within six to ten years of conducting the RSA.				INITIATE	WORKING	WORKING	WORKING	COMPLETE	1 HIGH	Engineering	Public Works	As needed	Completion of improvements	Include in Annual Report (Action A4) which projects included accessibility improvemetns.	Include in Annual Report (Action A4) the number of project proposed and completed in TEZs.	X	X		
G5	Identify and implement quick build and short-term projects that will not impact corridor planning.	INITIATE	ONGOING	ONGOING	COMPLETE	-	-	-	-	1 HIGH	Engineering	Public Works	2 per year, as funding and staffing permit		Include in Annual Report (Action A4) which projects included accessibility improvemetns.	Include in Annual Report (Action A4) the number of project proposed and completed in TEZs.	X	X		Examples of projects include timing changes, retro reflective backplates , NTOR signage- the "low-hanging fruit" which doesn't really preclude any other changes. Coordinate with CTDOT on statewide iniatives for town roads when feasible.
G6	Implement an automated enforcement (speed camera) program within Vision Zero Focus Areas to include speed enforcement and red-light enforcement.	**INITIATE**	**COMPLETE**	-	-	-	-	-	-	**1 HIGH**	Community Development	Town Manager/Police/Engineering/Public Works/IT	As needed	Development of program, # of install locations	-	Engage with TEZ community members on placing cameras. Monitor enforcement to ensure Environmental Justice communitiesa are not disproporitionately impacted. Consider less punitive solutions (e.g., speed feedback signs) where cameras create social justice concerns.		X		
G7	Prioritize the location of speed feedback signage to the Vision Zero Focus Areas.	INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	1 HIGH	Engineering	Public Works	Ongoing			Report on the distribution of signs across TEZ and non-TEZ communities.	X			
G8	Construct single-lane modern roundabouts. Consider the intersections identified by the CRCOG Roundabout Study.			INITIATE	WORKING	WORKING	WORKING	WORKING	COMPLETE	3 LOW	Engineering	Public Works	As needed	Number of roundabouts constructed	-	-	X	X		
G9	Upon completion of the Bicycle Facility Plan, idetnify goals and a schedule of expansion of the bicycle network that includes continous low-stress north-south and east-west connectivity.								INITIATE	3 LOW	Engineering	Public Works	As needed	Lane miles of bicycle routes constructed.	-	-	X			Consider connecting to schools, parks, commercial centers, and other areas that may be attractive destinations for these users.

SAFE DESIGN

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H	**Reduce speeds.**								**HIGH**												
H1	Evaluate signal timing on coordinated signal systems to ensure consistency with corridor target speeds.		INITIATE	WORKING	WORKING	WORKING	WORKING	COMPLETE	2 MEDIUM	Engineering	Public Works	1 corridor per year	Percentage of timed signals that align with corridor target speed or # of corridors with coordination	-	Engage with TEZ community members and Invite BIPOC, disabled, senior, youth and LGBTQIA residents to forum	X	X			
I	**Design for safe streets near schools.**								**MEDIUM**												
I1	Expand school zone speed limit program, including reducing speeds to 20 MPH, flashing school zone speed signs, and speed feedback signage.		INITIATE	WORKING	WORKING	WORKING	WORKING	COMPLETE	2 MEDIUM	Engineering	Public Works	1 school per year	# of schools where speed limit programs have been implemented.	-	Identify schools within the TEZs and prioritize implementation of those areas.	X	X	X		
I2	Conduct Safe Routes to School reports for all schools within the West Hartford Public School system. Create schedule and implement short-term infrastructure and operational changes to improve safety.		INITIATE	WORKING	WORKING	WORKING	WORKING	COMPLETE	2 MEDIUM	Board of Education	Engineering/Public Works	1 SRS Report every two years until complete.	Number of reports conducted	-	-	X	X	X		Consider vertical speed-control infrastructure in these areas such as raised crosswalks and/or intersections on collectors and arterials if appropriate.
I3	Identify and implement short-term, quick-build recommendations surrounding all schools.			INITIATE	WORKING	WORKING	WORKING	COMPLETE	2 MEDIUM	Engineering	Board of Education/Public Works	Multi-Year	Construction of quick-build solutions	-	Target schools with high-levels of walkers or schools on/near a highly utilized road or public transportation cooridor.	X	X			

CULTURE

NEW	Description	2024	2025	2026	2027	2028	2029	2030	2031+	Priority	Lead Entity	Supporting Entity	Frequency	Performance Metric	Accessibility	Equity	Staff Obs.	Funding Obs.2	Legis. Obs.	Additional Information
J	**Develop and execute a multi-media awareness campaign to educate people on safe roadway behavior.**									**HIGH**										
J1	Publish online and print public service announcements about Vision Zero.	INITIATE	COMPLETE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	1 HIGH	Public Relations	Equity Advancement/Town Manager	As needed	Numbrer of published announcements.	Ensure announcements are accessible (i.e. ADA compliant, multi-lingual, and published electronicly and in print)	-	X	X		Target highly visible locations for drivers (billboards, gas stations) and popular areas (parks, community centers, community hubs).
J2	Maintain the West Hartford Vision Zero webpage on the town website as a central database for the Vision Zero Action Plan, progress reports, upcoming programs, related organizations, and contact methods.	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	1 HIGH	Town Manager	IT/Public Relations/Community Development/Engineering	As needed		Ensure announcements are accessible (i.e. ADA compliant, multi-lingual, and published electronicly and in print)	-				
J3	Design a campaign targeting distracted driving. (i.e., bumper sticker, PSAs, ads)	INITIATE	COMPLETE	-	-	-	-	-	-	1 HIGH	Public Relations	Police	Once		-	-	X	X		
J4	Collaborate with community groups to provide workshops and educational awareness campaigns tailored to specific topics related to Vision Zero and traffic safety.		INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	1 HIGH	Public Relations	Equity Advancement/Town Manager	As needed	1 Workshop in 2024 and then 2 workshops per year for the following years.	Ensure announcements and meetings are accessible (i.e. ADA compliant, multi-lingual, and published electronicly and in print)	Identify specific strategies to engage BIPOC, disabled, senior, youth and LGBTQIA members. Provide targeted outreach to TEZs.	X			
J5	Fully develop recognizable Vision Zero branding and marketing strategy to be used in future reports, social media posts, and outreach materials.	COMPLETE	-	-	-	-	-	-	-	2 MEDIUM	Public Relations	Equity Advancement/Town Manager	Once		-	-		X		Branding should be updated with appropiate standards for different media types, standardized colors, and ADA accessibility.
J6	Build a multilingual Vision Zero outreach toolkit.	INITIATE	COMPLETE	-	-	-	-	-	-	2 MEDIUM	Equity Advancement	Public Relations	Once		-	-	X			
J7	Publish an online "Vision Zero Pledge" that allows community members to show their personal commitment to achieving zero deaths and serious injuries.		INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	2 MEDIUM	Public Relations	Equity Advancement	Ongoing	Number of pleges submitted	Consider providing the pledge in multiple languages.		X			The Task Force has a draft of a pledge. The Town should also review Hoboken's pledge (https://www.vzhoboken.com/)
J8	Create and manage official West Hartford Vision Zero social media accounts to share resources and interact with community members.	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	2 MEDIUM	Public Relations	Town Manager/Equity Advancement	As needed	Number of post shared, number of page views.	Ensure announcements are accessible (i.e. ADA compliant, multi-lingual, and published electronicly and in print)	-	X			
J9	Host a workshop for professional media on how to best communicate information about traffic crashes and Vision Zero.	COMPLETE	-	-	COMPLETE	-	-	COMPLETE	-	2 MEDIUM	Public Relations	Town Manager/Equity Advancement	Once every 3 years		Include non-traditional meida and representatives of media that service the non-English speaking community.	Include non-traditional meida and representatives of media that service the non-English speaking community.	X			
J10	Conduct driver awareness sessions specific to Vision Zero for all town staff.		INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	3 LOW	Police	Public Relations	Annually		-	-	X			Include a search for resources that would support formal training.
K	**Integrate Vision Zero education into West Hartford schools.**									**HIGH**										
K1	Work with students to develop a K-12 Vision Zero campaign that helps students understand the importance of road safety.	INITIATE	COMPLETE	-	-	-	-	-	-	1 HIGH	Board of Education/Police	Public Relations	Annually	Number of students egnaged	Work with students who are non-native English speakers to, where possible, create content in other languages.	Include BIPOC, disabled, senior, youth and LGBTQIA students.	X			
K2	Establish Vision Zero and Distracted Driving panels in schools to develop a traffic safety curriculum and oversee its implementation.		INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	1 HIGH	Public Relations	Board of Education/Police	Annually	Number of panels held.	Work with students who are non-native English speakers to, where possible, create content in other languages.	Include BIPOC, disabled, senior, youth and LGBTQIA students.	X			
K3	Coordinate engagement and outreach with the development of the Safe Routes to School Program.	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	1 HIGH	Board of Education/Police	Public Relations	As needed	Number of Safe Routes to School plans developed	-	Identify schools within the TEZs and prioritize implementation of those areas.				
K4	Provide educational videos catered to students on Vision Zero.			INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	2 MEDIUM	Public Relations	Board of Education/Police	As needed	Completion of videos; Number of students reached.	Work with students who are non-native English speakers to, where possible, create content in other languages.	Include BIPOC, disabled, senior, youth and LGBTQIA students.	X	X		
K5	Promote designated walk/bike to school days to encourage alternative transportation modes to cars.			INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	3 LOW	Board of Education	Public Relations	As needed	Number of engagmeent envents / efforts.	-	Identify schools within the TEZs and prioritize implementation of those areas.				

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K6	Conduct information sessions with School District staff, especially school bus drivers, on safe roadway uses and their role in advancing Vision Zero.		INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	1 HIGH	Board of Education/School Transportation	Public Relations/Police	As needed	Number of informational sesssions conducted	-	-	X		
L	**Establish the town as a leader in Vision Zero best behaviors.**									**MEDIUM**									
L1	Update the language in public-facing town documents to refer to "crashes," not "accidents." Ensure town staff refer to crashes instead of accidents.		COMPLETE	-	-	-	-	-	-	2 MEDIUM	Public Relations	Town Manager	As needed	Update of language	Create appropirate translations for these terms.	-			
M	**Promote non-motorized travel as a viable alternative to driving.**									**LOW**									
M1	Identify key locations within the VZFA that would improve people's ability to meet their daily needs without a car. Map and integrate into prioritization framework.			COMPLETE	-	-	-	-	-	1 HIGH	Engineeing	Equity Advancement	Once	Completion of analysis.	-	Incorporate an analysis of TEZs to ensure they are appropriately represented.			
M2	Develop an advertising strategy to promote how safety improvements are making West Hartford a better place to walk, bike, and take transit.			INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	2 MEDIUM	Public Relations	Town Manager	Annually	Number of advertisements placed. Estimated number of people reached	Create advertisting that is accessible (i.e. ADA compliant, multi-lingual, and published electronicly and in print)	Advertise in areas and locations that inlclude TEZs	X	X	
M3	Work with major employers to promote alternative transportation modes and designated bike/walk to workdays.	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	2 MEDIUM	Public Relations		As needed	Number of major employers participating; Number of employees participating	-	-	X		
M4	Host guided bicycle rides for new bike facilities as they open.	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	3 LOW	Police	Public Relations	As needed	Number of guided rides conducted.	-	-	X		

DATA

NEW	Description	2024	2025	2026	2027	2028	2029	2030	2031+	Priority	Lead Entity	Supporting Entity	Frequency	Performance Metric	Accessibility	Equity	Staff Obs.	Funding Obs.2	Legis. Obs.	Additional Information
N	Report data to community members, town staff, and the state.									**HIGH**										
N1	Create a dashboard on the Vision Zero webpage to analyze the Action Plan's metrics and progress toward its goals.	COMPLETE	-	-	-	-	-	-	-	1 HIGH	Engineering	-	Once	Completion of dashaboard	-	-	X	X		
N2	Publish project updates, progress on actions, and program updates to the data dashboard.		INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	1 HIGH	Engineering	Community Development	Ongoing	Publishing of report	-	-				
N3	Develop and publish an annual Vision Zero progress report focused on data-driven results and areas for improvement.	INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	1 HIGH	Community Development	Engineering/Police/Public Relations/Board of Education	Annually	Publishing of report	-	-	X	X		
N4	Provide town crash data about serious injuries and deaths on the data dashboard when it is made publicly available.		INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	2 MEDIUM	Police	IT	Ongoing	Timeliness of publishing	-	-				
O	Analyze data to improve the town's understanding of crash patterns.									**MEDIUM**										
O1	Update and modify the High Injury Network and Vision Zero Focus Area.			INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	1 HIGH	Engineering	-	Every 3 years	Updates complete	-	-	X			Prioritize improvement areas using a crash weighting system, sliding window analysis, and Safer Streets Priority Finder (SSPF) Tool.
O2	Track and analyze trends in contributing factors identified on the HIN.			INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	2 MEDIUM	Engineering	Police	As needed	Completion of assestments	-	-	X			Contributing factors should include crash type, weather conditions, road surface conditions, lighting conditions, intersection type, and driver actions.
O3	Compare traffic data before and after traffic calming interventions to assess effectiveness and refine future applications.			INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	2 MEDIUM	Engineering	-	As needed	Completion of assestments	-	-	X			
O4	Identify nodes located near the HIN that attract trips by vulnerable users (schools, parks, transit hubs, health centers, trail crossings, etc.) to help prioritize implementation.	COMPLETE	-	-	-	-	-	-	-	2 MEDIUM	Engineering	-	Once	Completion of assestments	-	-		X		
P	Improve data diversity surrounding available crash data.									**LOW**										
P1	Solicit public input on perception of traffic safety when updates are made to the Vision Zero Focus Areas.			COMPLETE	-	-	-	-	COMPLETE	1 HIGH	Public Relations	Engineering	Every 3 years	Number of respondents	Create input options that are accessible (i.e. ADA compliant, multi-lingual, and published electronicly and in print)	Include assestements of participation rates of BIPOC, disabled, senior, youth and LGBTQIA respondents.				The survey should be widely distributed, including schools, businesses, community centers, and social media.
P2	Collect speed data on high crash corridors to identify where prevailing speeds exceed the posted speed limit.	INITIATE	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	1 HIGH	Engineering	Police	Ongoing	Number of studies performed / Percentage of VZFA assessed	-	-	X			
P3	Update and promote the town's online system for road users to report problem road areas, hazards, near misses, and the like. Publish that information on the data dashboard.		COMPLETE	-	-	-	-	-	-	2 MEDIUM	Public Relations	Public Works	As needed	Completion of udpdates	-	-				
P4	Advocate for better crash data collection Statewide. This may include improved police data collection on crash report forms, particularly for crashes involving non-motorists.	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	ONGOING	3 LOW	Police	-	Once	-	-	-				

APPENDIX B. VISION ZERO FOCUS AREA SEGMENT LIST

Vision Zero Focus Area Segments and Information

Road Segment ID	South / East Terminus	North / West Terminus	Priority	Length (Mi)	High-Injury Network (HIN)	Transportation Equity Zone (TEZ)	Frequent Webmap Comments	KSI Crash Total	Minor Injury Crash Total	Crashes Involving Pedestrians	Crashes Involving Bicyclists	Weighted Crash Score	Weighted Crash Score per Mile
Albany Ave 2	North Main Street	Trout Brook Drive	1	0.32	Yes	Yes	Yes	1	49	3	0	59	185
New Britain Ave 3	South Main Street	Mayflower Street	1	0.43	Yes	No	No	1	63	0	1	73	171
North Main St 3	Asylum Avenue	Albany Avenue	1	0.45	Yes	No	Yes	3	47	3	0	77	170
New Britain Ave 4	Mayflower Street	New Park Avenue	1	0.54	Yes	Yes	No	0	86	3	1	86	159
New Britain Ave 5	New Park Avenue	West Hartford Town Line	1	0.57	Yes	Yes	No	1	79	1	2	89	157
South Main St 4	Park Road	Farmington Avenue	1	0.64	Yes	No	Yes	3	68	5	1	98	153
Park Rd 1	South Main Street	Trout Brook Drive	1	0.44	Yes	No	Yes	1	52	0	1	62	142
New Park Ave	1,200 Ft S/O Talcott Road	Prospect Avenue	1	0.85	Yes	Yes	No	2	96	13	3	116	137
Farmington Ave 3	South Main Street	Robin Road	1	0.33	Yes	Yes	Yes	1	30	5	3	40	121
North Main St 1	Farmington Avenue	Fern Street	1	0.50	Yes	Yes	Yes	1	34	3	1	44	89
Boulevard 4	South Quaker Lane	Prospect Avenue	1	0.72	Yes	Yes	Yes	3	30	3	4	60	83
Trout Brook Dr 2	Trout Brook Terrace	600 Ft N/O Boulevard	1	0.37	Yes	Yes	Yes	0	28	0	0	28	77
North Main St 4	Albany Avenue	Huron Drive	1	0.53	Yes	Yes	Yes	0	40	4	0	40	75
Boulevard 3	Trout Brook Drive	South Quaker Lane	1	0.38	Yes	Yes	Yes	1	16	1	0	26	69
Park Rd 2	Trout Brook Drive	Nesbit Avenue	1	0.56	Yes	Yes	Yes	0	23	2	1	23	41
Park Rd 3	Nesbit Avenue	Prospect Avenue	2	0.56	Yes	Yes	No	3	47	3	3	77	137
New Britain Ave 2	Berkshire Road	South Main Street	2	0.47	Yes	Yes	No	0	62	1	1	62	132
South Main St 2	New Britain Avenue	Bentwood Road	2	0.53	Yes	Yes	No	0	60	0	0	60	112
Albany Ave 3	Trout Brook Drive	Sequin Road	2	0.52	Yes	No	Yes	2	35	0	0	55	105
Prospect Ave	New Park Avenue	Park Road	2	0.81	Yes	Yes	No	0	82	3	1	82	102
Trout Brook Dr 6	300 Ft N/O Asylum Avenue	Albany Avenue	2	0.52	Yes	No	Yes	2	31	0	1	51	99
Boulevard 2	South Main Street	Trout Brook Drive	2	0.39	Yes	No	Yes	0	35	0	0	35	90
Kane St	Oakwood Avenue	Prospect Avenue	2	0.36	Yes	Yes	No	0	31	0	1	31	86
South Quaker Ln 1	New Britain Avenue	Hampton Avenue	2	0.80	Yes	Yes	No	3	37	0	1	67	84
North Main St 2	Fern Street	Asylum Avenue	2	0.72	Yes	No	Yes	2	38	0	2	58	81
Flatbush Ave	South Quaker Lane	West Hartford Town Line	2	0.67	Yes	Yes	No	1	43	4	2	53	79
South Main St 3	Rockledge Drive	Park Road	2	0.59	Yes	No	Yes	1	36	1	0	46	78
Newington Rd	Brook Street	New Britain Avenue	2	0.61	Yes	Yes	No	1	32	1	0	42	69

Vision Zero Focus Area Segments and Information

Road Segment ID	South / East Terminus	North / West Terminus	Priority	Length (Mi)	High-Injury Network (HIN)	Transportation Equity Zone (TEZ)	Frequent Webmap Comments	KSI Crash Total	Minor Injury Crash Total	Crashes Involving Pedestrians	Crashes Involving Bicyclists	Weighted Crash Score	Weighted Crash Score per Mile
Albany Ave 1	Coolidge Road	North Main Street	2	0.56	Yes	No	Yes	1	26	1	0	36	64
Farmington Ave 2	Reservoir Avenue	South Main Street	2	0.66	Yes	No	Yes	1	29	5	2	39	59
Boulevard 1	Garfield Road	South Main Street	2	0.78	Yes	No	Yes	1	34	0	0	44	56
Farmington Ave 4	Robin Road	Maplewood Avenue	2	0.41	Yes	No	Yes	0	12	0	0	12	29
South Quaker Ln 2	Wilfred Street	White Avenue	2	0.20	Yes	Yes	No	0	4	0	0	4	20
New Britain Ave 1	Westfarms Mall Driveway	Berkshire Road	3	0.61	Yes	No	No	0	53	1	0	53	87
South Main St 1	Calvin Road	New Britain Avenue	3	0.57	Yes	No	No	1	37	1	0	47	83
Albany Ave 4	Sequin Road	Prospect Avenue	3	0.82	Yes	No	No	3	31	2	0	61	75
Sedgwick Rd	Tunxis Road	South Main Street	3	0.57	Yes	No	No	1	29	0	0	39	69
King Phillip Dr	Albany Avenue	Lyman Road	3	0.60	No	Yes	Yes	1	27	0	0	37	62
Raymond Rd	Park Road	Farmington Avenue	3	0.59	Yes	No	No	0	36	3	0	36	61
Trout Brook Dr 4	Farmington Avenue	Fern Street	3	0.46	No	Yes	Yes	0	28	1	2	28	61
South Quaker Ln 3	Park Road	Farmington Avenue	3	0.61	No	Yes	Yes	1	27	1	2	37	60
North Main St 5	Huron Drive	Tumblebrook Lane	3	0.64	No	Yes	Yes	1	21	0	0	31	49
Fern St 3	Linwold Drive	Robin Road	3	0.31	No	Yes	Yes	0	13	0	0	13	41
Fern St 5	Farnham Road	Concord Street	3	0.40	No	Yes	Yes	0	15	0	0	15	38
Ridgewood Rd	I-84 Exit 40	Miles Standish Drive	3	0.40	Yes	No	No	0	7	0	0	7	17
Fern St 2	Walden Street	Sylvan Avenue	3	0.27	No	Yes	Yes	0	2	0	1	2	7
Walden St 2	Whitman Avenue	Fern Street	3	0.25	No	Yes	Yes	0	1	1	0	1	4
Trout Brook Dr 3	600 Ft N/O Boulevard	Farmington Avenue	4	0.31	No	No	Yes	0	25	1	3	25	80
Asylum Ave 1	Blue Ridge Lane	Trout Brook Drive	4	0.62	No	No	Yes	2	24	0	0	44	71
Trout Brook Dr 5	Fern Street	300 Ft N/O Asylum Avenue	4	0.73	No	No	Yes	0	31	0	0	31	43
Asylum Ave 2	Trout Brook Drive	Foxcroft Road	4	0.58	No	No	Yes	0	24	0	1	24	41
North Main St 6	Tumblebrook Lane	West Hartford Town Line	4	0.27	No	No	Yes	0	11	0	0	11	41
Lasalle Rd	Ellsworth Road	Farmington Avenue	4	0.20	No	No	Yes	0	8	2	0	8	40
Farmington Ave 1	Reservoir Avenue	Cadwell Street	4	0.70	No	No	Yes	0	22	0	0	22	31
Mountain Road	Buena Vista Road	High Farms Road	4	0.90	No	No	Yes	0	27	2	1	27	30

Vision Zero Focus Area Segments and Information

Road Segment ID	South / East Terminus	North / West Terminus	Priority	Length (Mi)	High-Injury Network (HIN)	Transportation Equity Zone (TEZ)	Frequent Webmap Comments	KSI Crash Total	Minor Injury Crash Total	Crashes Involving Pedestrians	Crashes Involving Bicyclists	Weighted Crash Score	Weighted Crash Score per Mile
Fern St 4	Robin Road	Farnham Road	4	0.49	No	No	Yes	0	14	0	0	14	29
Trout Brook Dr 1	Elm Drive	Trout Brook Terrace	4	0.43	No	No	Yes	0	6	0	0	6	14
Woodrow St	Boulevard	Farmington Avenue	4	0.30	No	No	Yes	0	4	0	2	4	13
Fern St 1	Fernbel Lane	Walden Street	4	0.43	No	No	Yes	0	4	0	0	4	9
Walden St 1	Farmington Avenue	Whitman Avenue	4	0.29	No	No	Yes	0	0	0	0	0	0

APPENDIX C. HIGH INJURY NETWORK METHODOLOGY

MEMORANDUM

January 5, 2024

To:
Duane Martin, PE – Town of West Hartford
Greg Sommer, PE – Town of West Hartford

From:
Ben Silverstein – Toole Design
Parker Sorenson, PE – FHI Studio
Shawna Kitzman – Toole Design

Re: West Hartford Vision Zero Safety Assessment Results and Methodology

Executive Summary

This memo describes the data sources and methodology used in the crash analyses performed for the Vision Zero Action Plan, including the High Injury Network (HIN) creation, contributing factor analysis, Transportation Equity Zones, and local road crash analysis.

While the total number of crashes in West Hartford, excluding I-84, has decreased since 2018, the number of fatal and serious injury crashes has increased. The project team used five years of crash data and a sliding window analysis to identify road segments with a history of pedestrian, bicyclist, and motorist crashes, and identified high-risk road segments using a predictive analysis.

The top scoring segments in each of these analyses are included in the HIN, which contains 56% of all fatal and serious injury crashes on 9% of roadway miles, with a total of 20 miles identified. While there are fatal and serious injury crashes that occurred outside the HIN, these generally occurred in areas where there are fewer nearby crashes resulting in injury. The HIN seeks to identify roadway segments which have an established trend of crashes resulting in a fatality, serious injury, or other injury.

Additionally, while local roads generally do not show up in the HIN given their relatively low vehicle volumes and numbers of crashes, the project team performed an analysis to identify areas with more local road crashes. Both the HIN and the local road crash analysis are components of the Vision Zero Focus Areas (VZFA) in the Vision Zero Action Plan.

Crash and Street Network Data Sources

The project team sourced crash data from Connecticut's Statewide Data Repository. The raw data includes all crashes in West Hartford that occurred between 1/1/2018 and 12/31/2022. Crashes that occurred on I-84, I-84 ramps, parking lots or other private property, or Prospect Avenue north of Park Road (City of Hartford jurisdiction) are not included. Crashes at the intersection of I-84 ramps and Town streets are included. Crash data on Prospect Avenue coded in Hartford were also evaluated if the crash occurred on Prospect Avenue south of Park Road or at an intersection between Town streets and Prospect Avenue north of Park Road (such as Farmington Avenue).

The Town of West Hartford provided centerline data. The project team added Annual Average Daily Traffic (AADT) data to the street centerline from Connecticut Department of Transportation (CTDOT) data, where available.

Summary Crash Trends

In the five-year study period, the total number of crashes has trended downwards across all modes, as shown in Table 1. However, crashes resulting in a fatality or serious injury have increased over the same period, as shown in Table 2.

Year	Motorist Crashes	Pedestrian Crashes	Bicyclist Crashes	Total Crashes
2018	1,453	21	12	1,486
2019	1,354	20	9	1,383
2020	890	13	8	911
2021	1,094	19	7	1,120
2022	1,038	11	7	1,056

Table 1: All crashes by mode and year[1]

Year	Motorist Crashes	Pedestrian Crashes	Bicyclist Crashes	Total Crashes
2018	5	1	0	6
2019	5	0	0	5
2020	4	3	1	8
2021	11	2	0	13
2022	10	6	0	16

Table 2: Fatal and serious injury crashes by mode and year

These crash trends are similar to statewide trends. Figure 1 on the following page shows the change in the total number of crashes over time for West Hartford and Connecticut, relative to 2018. In both cases, the total number of crashes has decreased since 2018, with West Hartford experiencing slightly greater decline. However, both the state and West Hartford have experienced an upward trend in fatal and serious injury crashes since 2018, though West Hartford's increase is much greater in relative terms, as shown in Figure 2.

[1] Fewer crashes reported in 2020 due to lower vehicle volumes after the onset of the COVID-19 pandemic

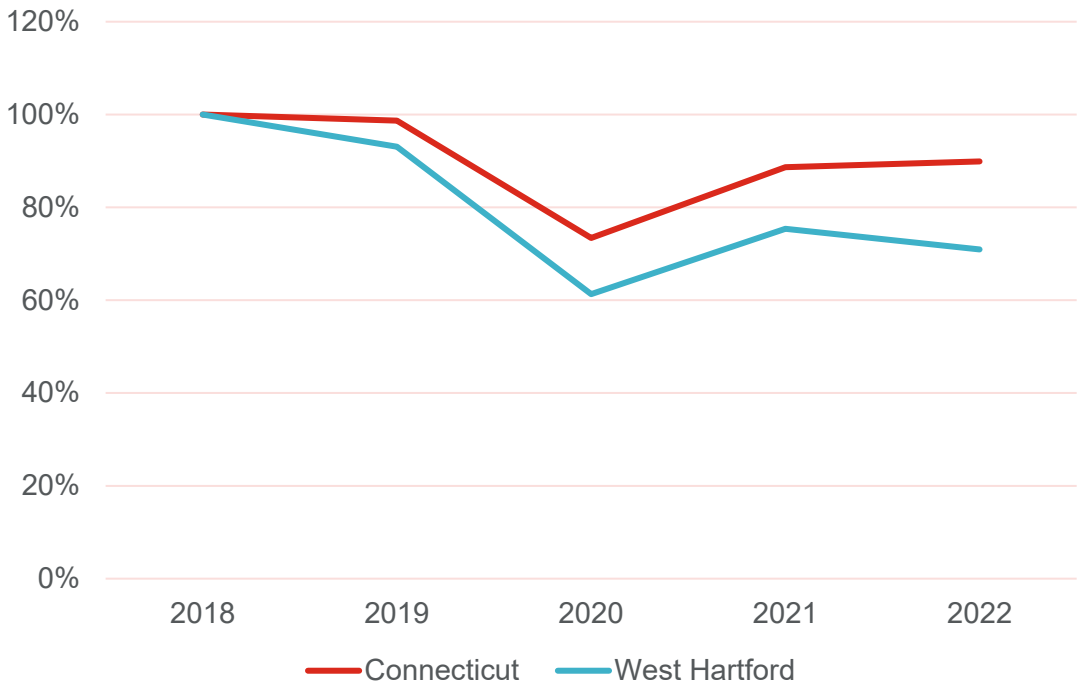


Figure 1: West Hartford and statewide change in crashes relative to 2018

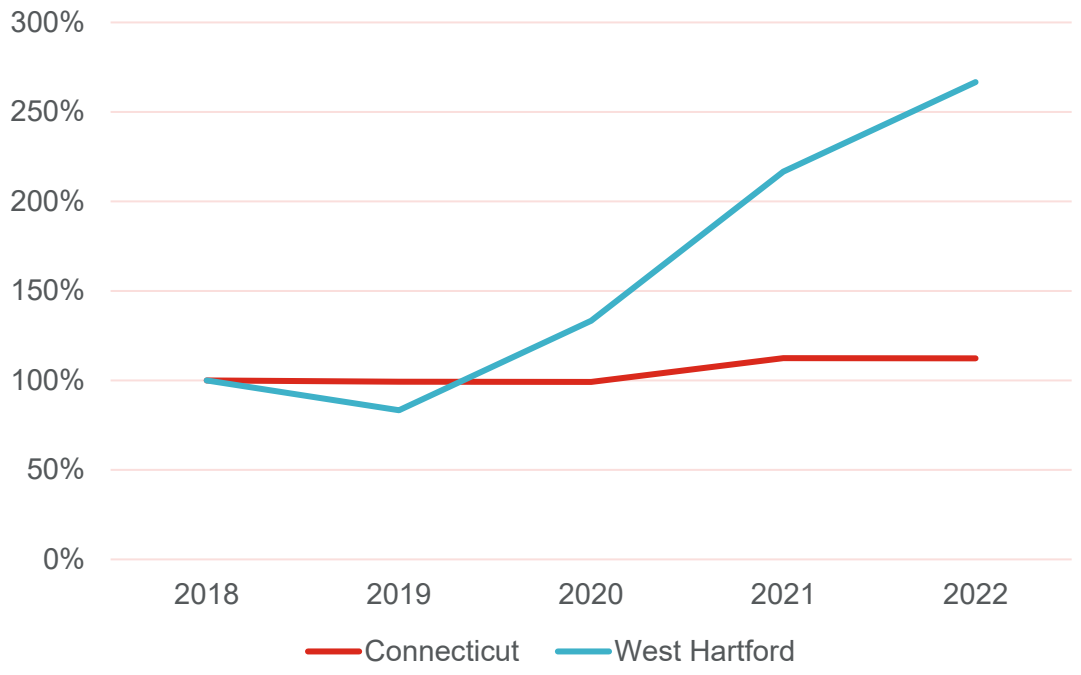


Figure 2: West Hartford and statewide fatal and serious injury crashes relative to 2018

Table 3 shows the number of crashes by collision type, separated by mode. Angle crashes were the most common collision type with 2,246 crashes, though less than 0.01% resulted in a fatality or serious injury. By contrast, there were 114 front to front collisions, 5% of which resulted in a fatality or serious injury. Seventy-one percent of all reported motorist crashes resulted in property damage only.

Motorist Collision Type	Fatality	Serious Injury	Minor Injury	Possible Injury	Property Damage Only	TOTAL
Angle	1	14	293	390	1,548	**2,246**
Front to front	1	5	28	16	64	**114**
Front to rear	-	5	219	437	1,188	**1,849**
Fixed object	-	8	86	72	470	**636**
Sideswipe, opposite direction	-	-	5	10	59	**74**
Sideswipe, same direction	-	1	29	30	596	**656**
Rear to side	-	-	4	3	62	**69**
Rear to rear	-	-	3	3	22	**28**
Other	-	-	33	17	88	**138**
Unknown	-	-	-	-	19	**19**
MOTORIST COLLISION TOTAL	**2**	**33**	**700**	**978**	**4,116**	**5,829**

Bicycle and Pedestrian Crashes	Fatality	Serious Injury	Minor Injury	Possible Injury	Property Damage Only	TOTAL
Crashes involving pedestrians	5	7	33	30	9	**84**
Crashes involving bicyclists	0	1	23	15	4	**43**
BICYCLE AND PEDESTRIAN CRASH TOTAL	5	8	56	45	13	**127**
GRAND TOTAL	**7**	**41**	**756**	**1,023**	**4,129**	**5,956**

Table 3: Crashes by collision type

Bicycle and pedestrian crashes were more likely to result in a fatality or serious injury than motorist crashes. For both modes, about 90% of all crashes result in an injury of some form, and 14% of all pedestrian crashes resulted in a fatality or serious injury, shown in Figure 3: Crash severity by mode.

As fatal and serious injury crashes make up a small percentage of the overall number of crashes, the project team factored in all crashes resulting in injury when developing the HIN. Fatal and serious injury crashes were weighted more heavily in the analysis, as described in the Crash Weighting section.

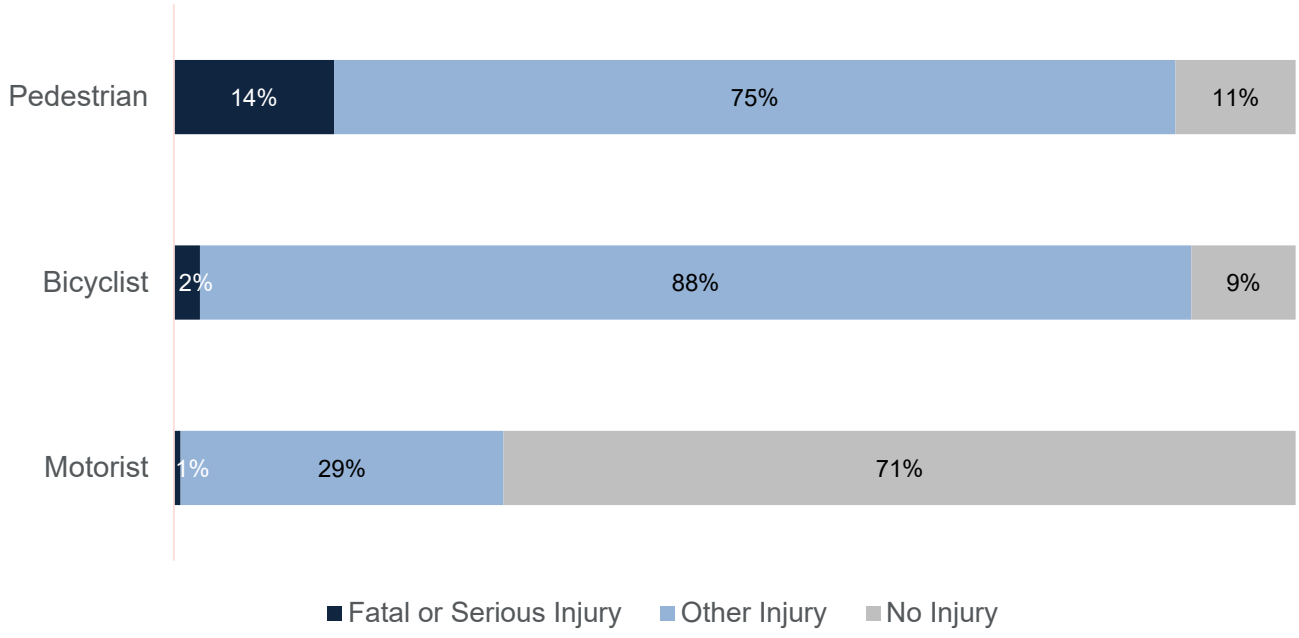


Figure 3: Crash severity by mode

High Injury Network Identification

Background

Vision Zero plans typically include a High Injury Network (HIN) to focus efforts on the streets with crashes resulting in injury. A particular focus on streets with crashes resulting in a high number of fatalities and serious injuries (sometimes referred to as KSI crashes, or crashes resulting in someone killed or seriously injured) is also considered. The HIN is not the only method to identify geographic focus areas for the West Hartford Vision Zero Action Plan; others include Transportation Equity Zones, Local Road Analysis Area, and public input captured in the webmap survey. The HIN will help identify and prioritize road segments for Road Safety Audits, facility recommendations, and additional analysis for the plan. This technical memorandum explains the methodology to create the HIN, developed based on national Vision Zero and Safety Action Plans best practices, and West Hartford's unique context.

Crash Weighting

Before identifying an HIN, the team established a weighting methodology for crashes resulting in different injury severity. This prioritizes areas where the most severe crashes occur. The weighting is based on dollar-value estimates of each injury and/or fatality by the National Safety Council (NSC) in their 2021 Average Economic Cost of Motor-Vehicle crashes by Injury Severity[2]. The NSC establishes dollar figures for a crash with one of the five severity levels as indicated in Table 4 on the following page.

[2] https://injuryfacts.nsc.org/all-injuries/costs/guide-to-calculating-costs/data-details/

Crash Severity	2021 Average Economic Cost
Fatal (K)	$1,778,000
Serious Injury (A)	$155,000
Minor Injury (B)	$40,000
Possible Injury (C)	$24,000
Property Damage Only (O)	$6,700

Table 4: Average economic cost by injury severity or crash, 2021
(Source: NSC. Note: Table modified to match crash naming convention used in this memo)

Due to a relatively few number of fatal crashes, our team combined and collectively weighted crashes resulting in serious injury and fatality (KSI) for the HIN identification. The reasoning is:

1) Crashes resulting in serious injury are the most serious crashes that do not result in fatality. Often, the factors which result in serious injury could have resulted in fatality with small changes to the circumstances of the crash or post-crash care.
2) The limited number of fatal crashes in the dataset (seven overall) would make identification of the HIN overly sensitive to any one fatal crash. By grouping KSI crashes together, there is a dataset of 48 crashes over a 5-year period for which to identify the HIN. This reduces the sensitivity of any one-off fatal crash that may not be a part of a roadway network trend.

The weighted average of each category is derived based on the number of crashes in each severity category over the 5-year dataset. Based on a total of seven fatal crashes and 41 severe injury crashes, the weighted economic cost based on the NSC would be $391,688, using the formula below:

$$\text{Average Economic Cost}_{Fatal+Serious\ Injury\ Crashes} = \frac{Number\ of\ Fatal\ Crashes * \$1{,}778{,}000 + Number\ of\ Serious\ Injury\ Crashes * \$155{,}000}{Number\ of\ Fatal\ Crashes + Number\ of\ Serious\ Injury\ Crashes}$$

Similarly, based on a total of 756 minor injury crashes and 1,023 possible injury crashes, the weighted economic cost based on the NSC data would be $30,799, using the formula below:

$$\text{Average Economic Cost}_{Minor+Possible\ Injury\ Crashes} = \frac{Number\ of\ Minor\ Injury\ Crashes * \$40{,}000 + Number\ of\ Possible\ Injury\ Crashes * \$24{,}000}{Number\ of\ Minor\ Injury\ Crashes + Number\ of\ Possible\ Injury\ Crashes}$$

The ratio of these weights are 12.7:1 ($391,688 / $30,799), rounded down to 10:1 for this analysis. The weights are shown in Table 5 on the following page.

Severity	Weight
Fatal (K), Serious Injury (A)	10
Minor Injury (B), Possible Injury (C)	1
Property Damage Only (O)	0

Table 5: Crash weighting used for HIN identification

Sliding Window Analysis

A sliding window analysis helps us understand crashes throughout a transportation network and identify roadway segments with the highest crash density, weighted by crash severity. This analysis is performed by determining the number and severity of crashes in a **half-mile window** on a roadway and shifting that window along the roadway **1/10th of a mile** at a time. An example of a sliding window analysis is shown in Figure 4 below.

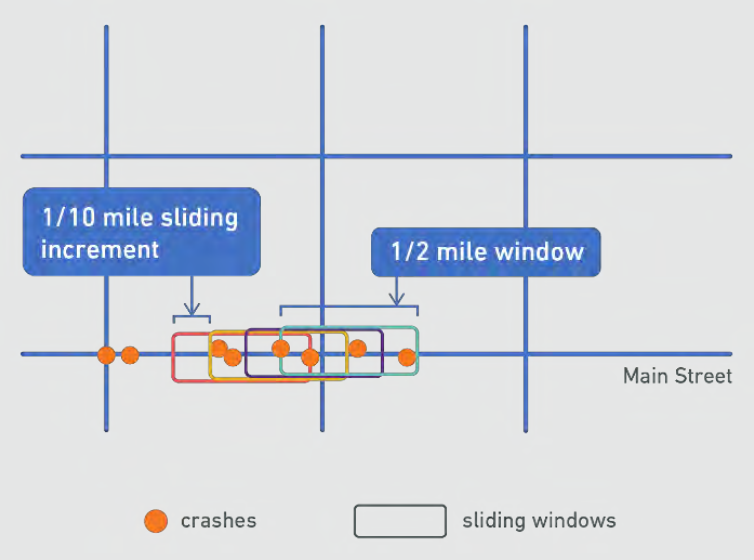


Figure 4: Visual representation of a sliding window analysis (Source: Toole Design)

This analysis assigns each 1/10th-mile roadway segment with a score based on the number and severity of injury crashes within one half-mile along the same corridor. For example, if a 1/10th-mile segment had 4 crashes within one-half mile in either direction, on the same street, and 3 of them resulted in minor injuries while 1 resulted in a serious injury, the score for that segment is calculated as follows: 3 + (1 * 10) = 3 + 10 = 13.

The scored results are illustrated in the following sliding window analysis maps for pedestrians, bicyclists, and motorists. Roadway segments with thicker and darker lines represent portions of the roadway network that have a higher concentration of overall crashes and fatal or serious injury crashes.

Figure 8 on page 11 shows the motorist crash rate, calculated by dividing the motorist score on each segment by the AADT where data is available from CTDOT. This step identifies places with high numbers of crashes relative to vehicle volumes, but not high numbers of crashes in absolute terms, and therefore may have easier engineering solutions relative to other segments.

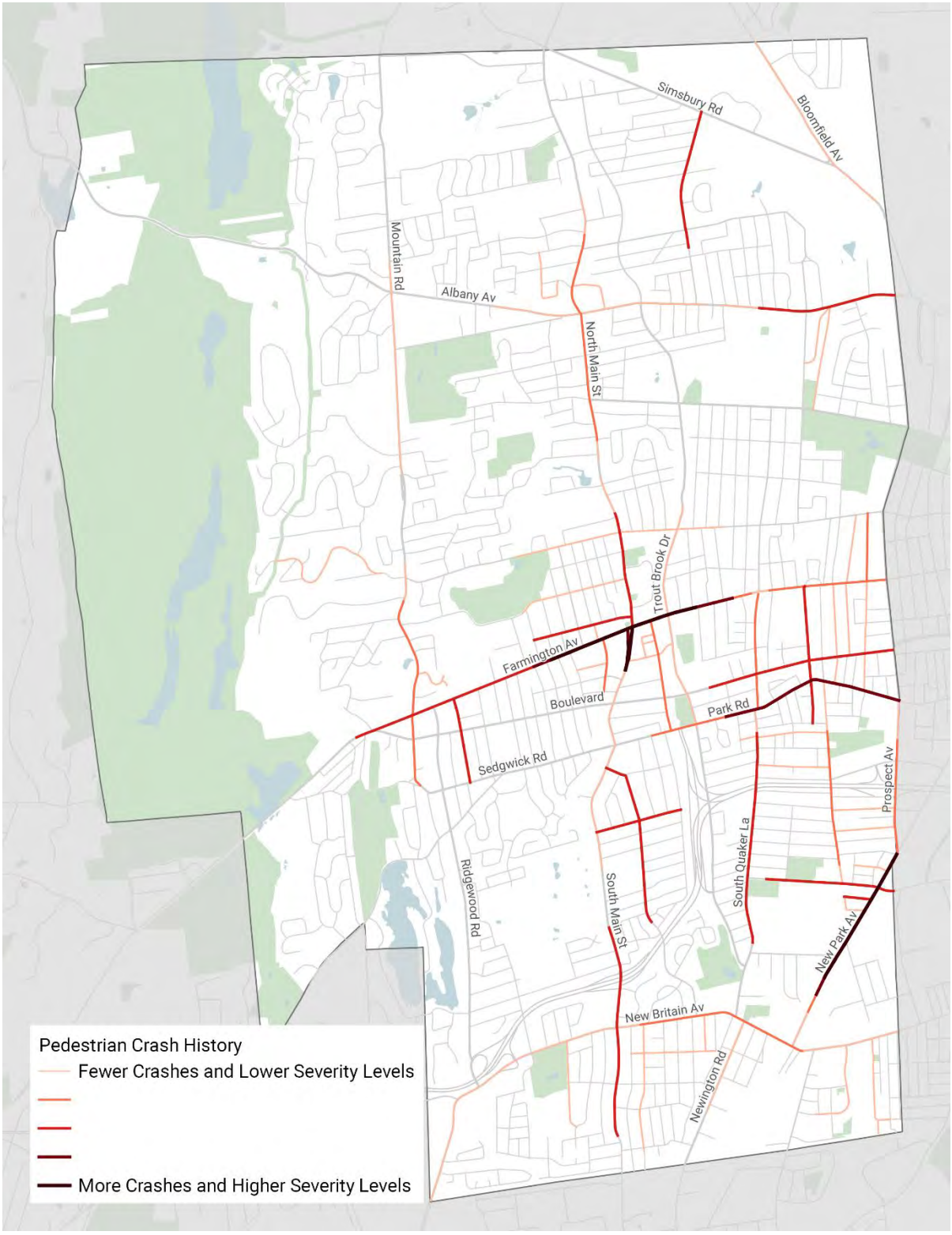


Figure 5: Pedestrian sliding window analysis results

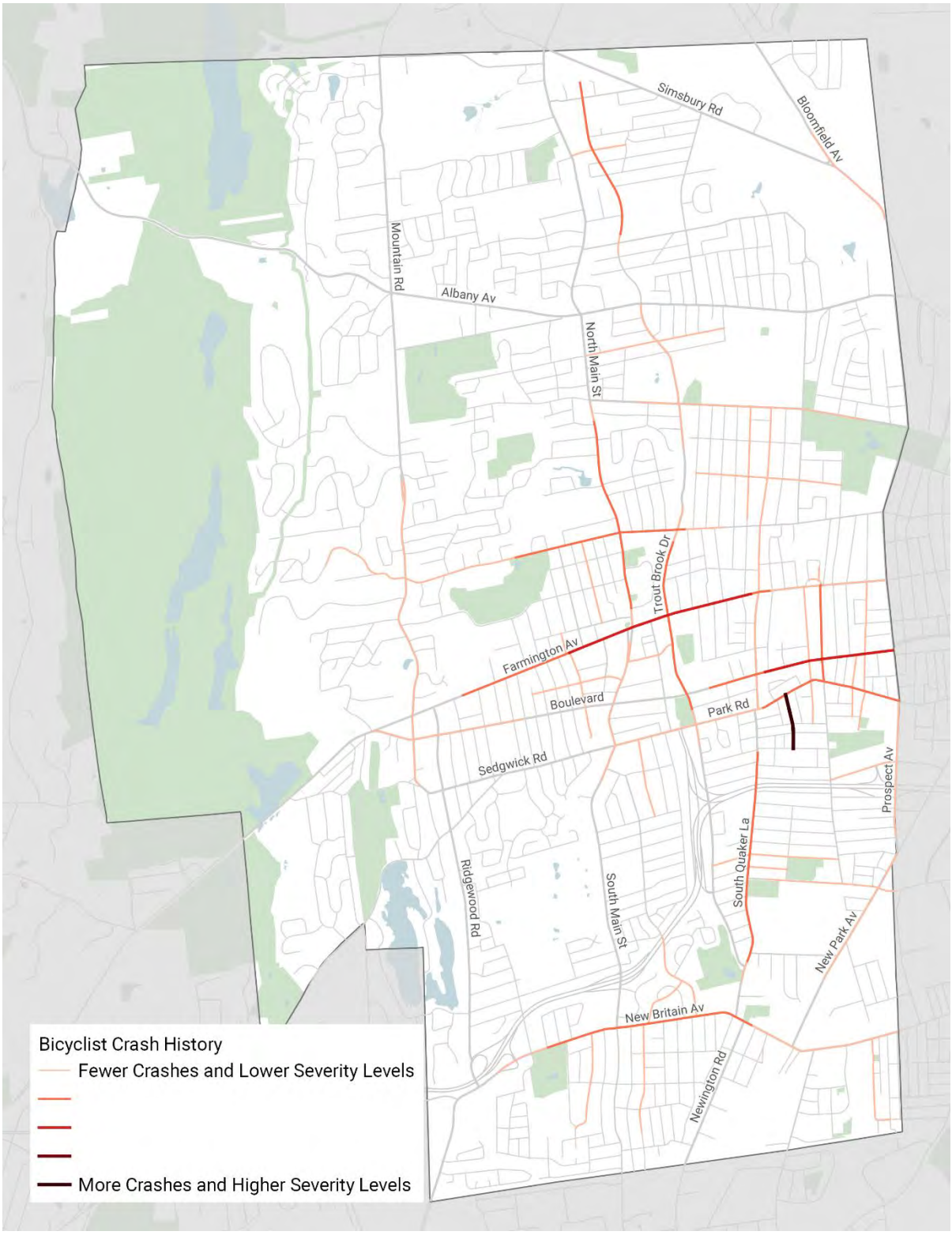


Figure 6: Bicyclist sliding window analysis results

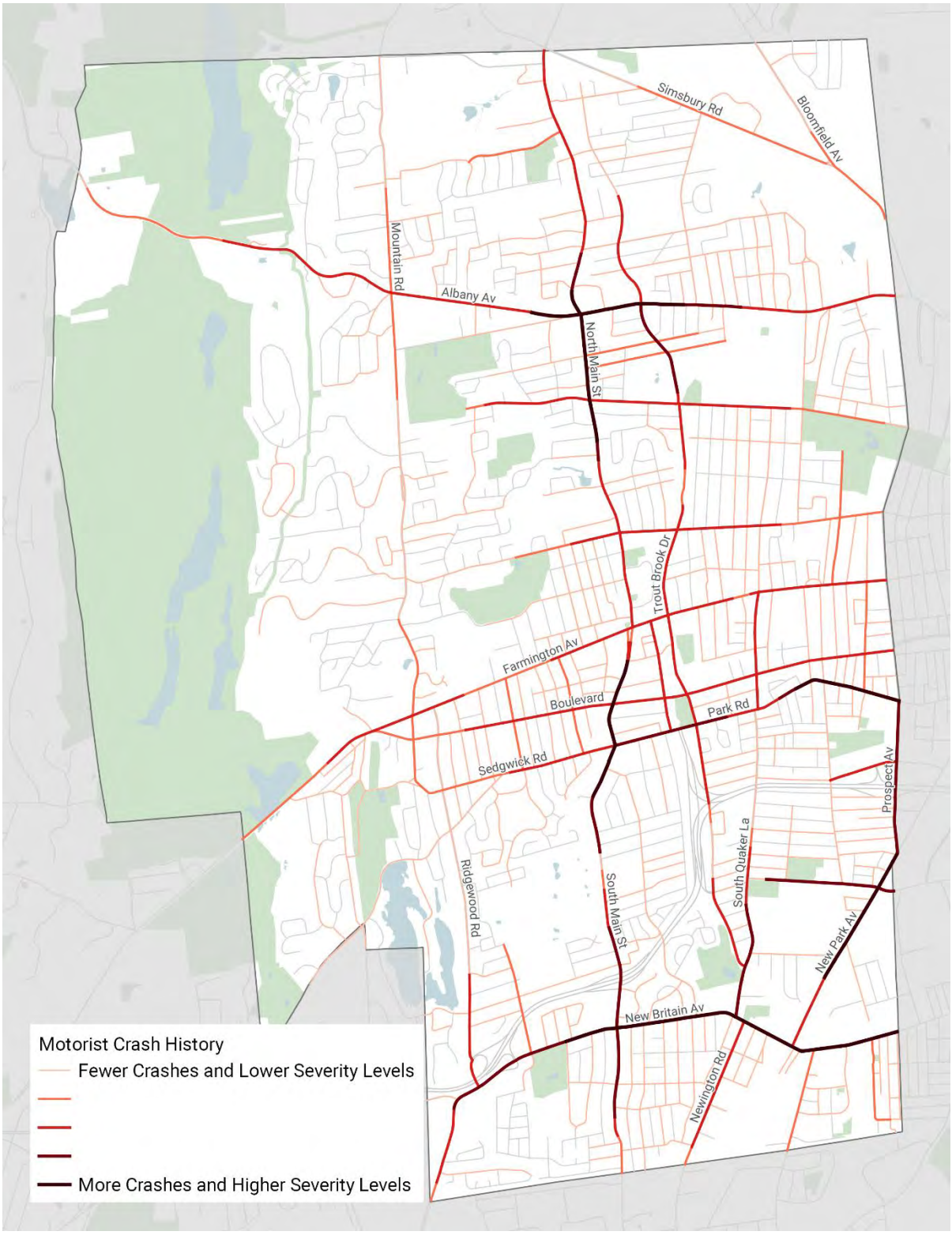


Figure 7: Motorist sliding window analysis results

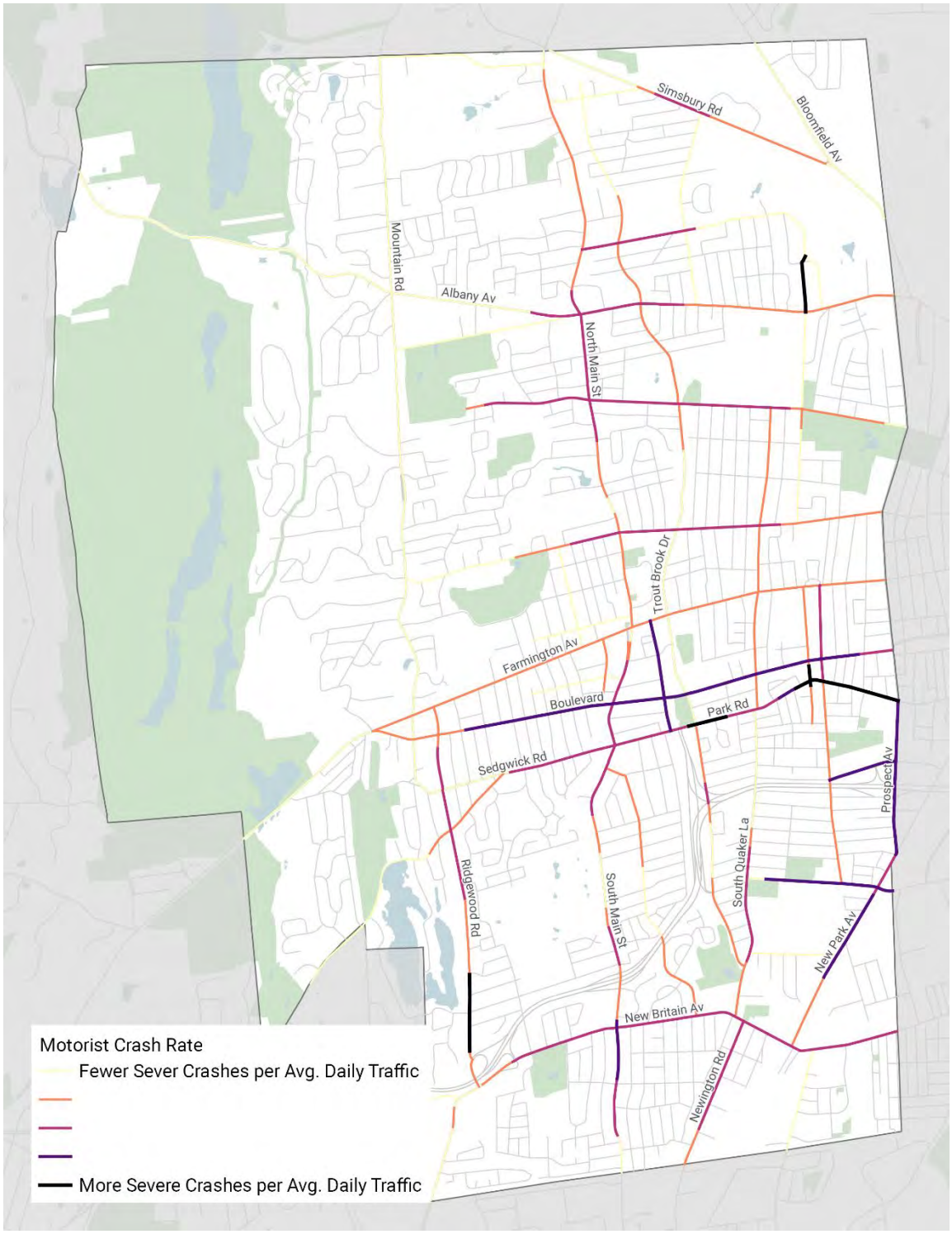


Figure 8: Motorist crash rate – Motorist score divided by AADT

Predictive Analyses

The project team used the predictive modeling capabilities of the SSPF Tool to identify higher-risk road segments. This section details the methodology and results from this analysis.

SSPF Tool Background

Toole Design, in collaboration with the City of New Orleans, University of New Orleans Transportation Institute, and New Orleans Regional Transit Authority, developed the Safer Streets Priority Finder Tool[3] (i.e., SSPF Tool). The SSPF Tool is a free, interactive, open-source resource that help transportation practitioners identify a street network throughout the U.S. that has a higher likelihood of experiencing fatal or serious injury crashes, similar to a HIN, for bicyclists and pedestrians. The network goes further than a typical HIN by factoring in areas with a disproportionate history of fatal and serious injury crashes and areas that have factors likely to contribute to future risk.

Safer Streets Model

The Safer Streets Model brings the roadway network window segments (produced in the Sliding Windows Analysis) into a Bayesian statistical framework to estimate crash risk throughout the system. This framework incorporates external information about how many crashes might be expected (called a Bayesian prior). This is based on a national model that identifies key built environment and socio-economic variables associated with pedestrian risk in urban and rural areas, alongside the observed crash history. The model estimates pedestrian and bicycle crash risk rates per mile for each road segment and crash severity type (e.g., serious injury). These values are then converted to crash cost estimates based on costs assigned to each crash severity type. The Safer Streets Model only models bicycle and pedestrian crashes. The model cannot estimate or model future motor vehicle or motorcycle crashes at this time.

[3] https://www.saferstreetspriorityfinder.com/tool/

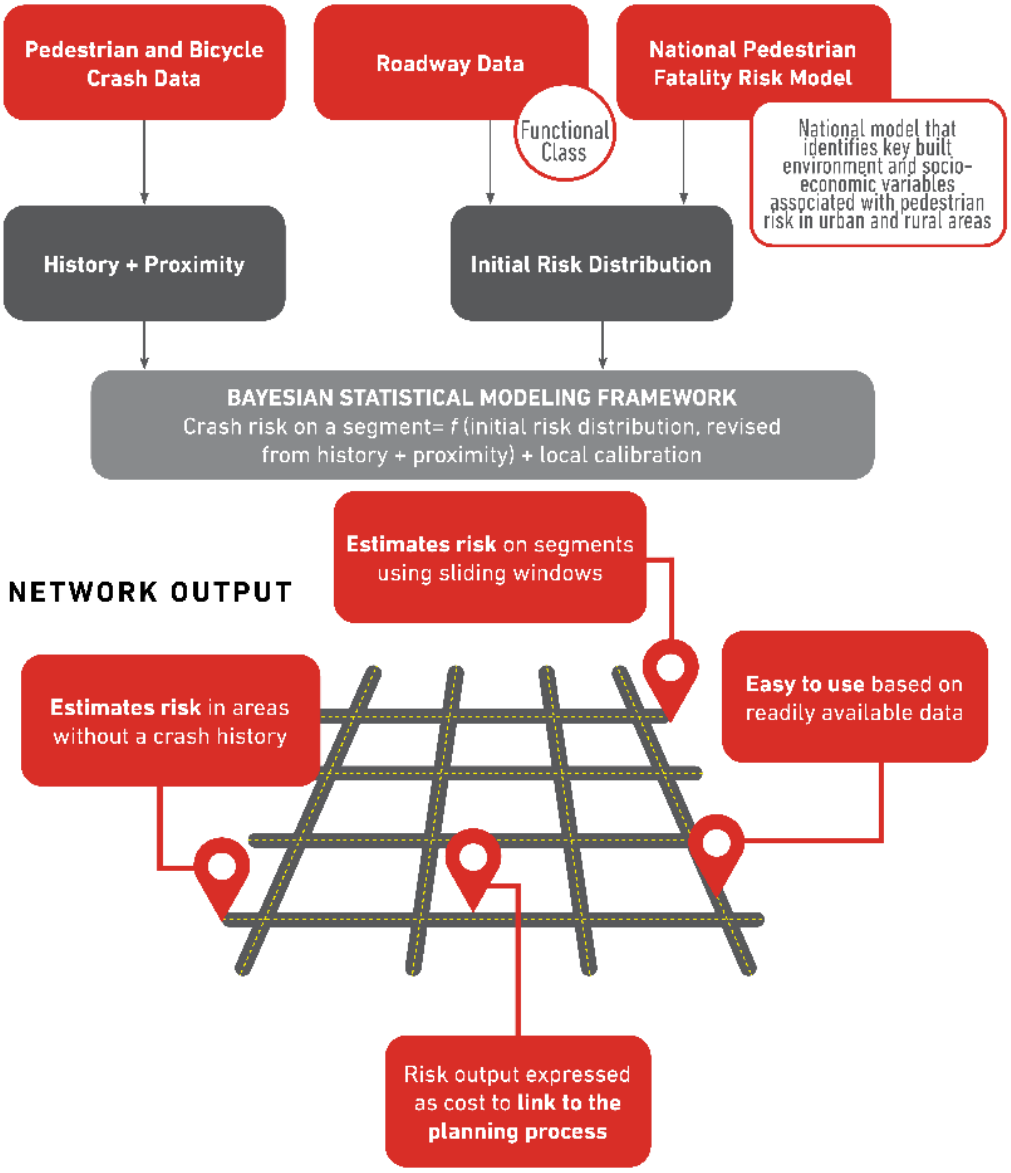


Figure 9: Safer Streets Model process diagram

The following maps show the results of the Safer Streets Model for West Hartford pedestrians and bicyclists.

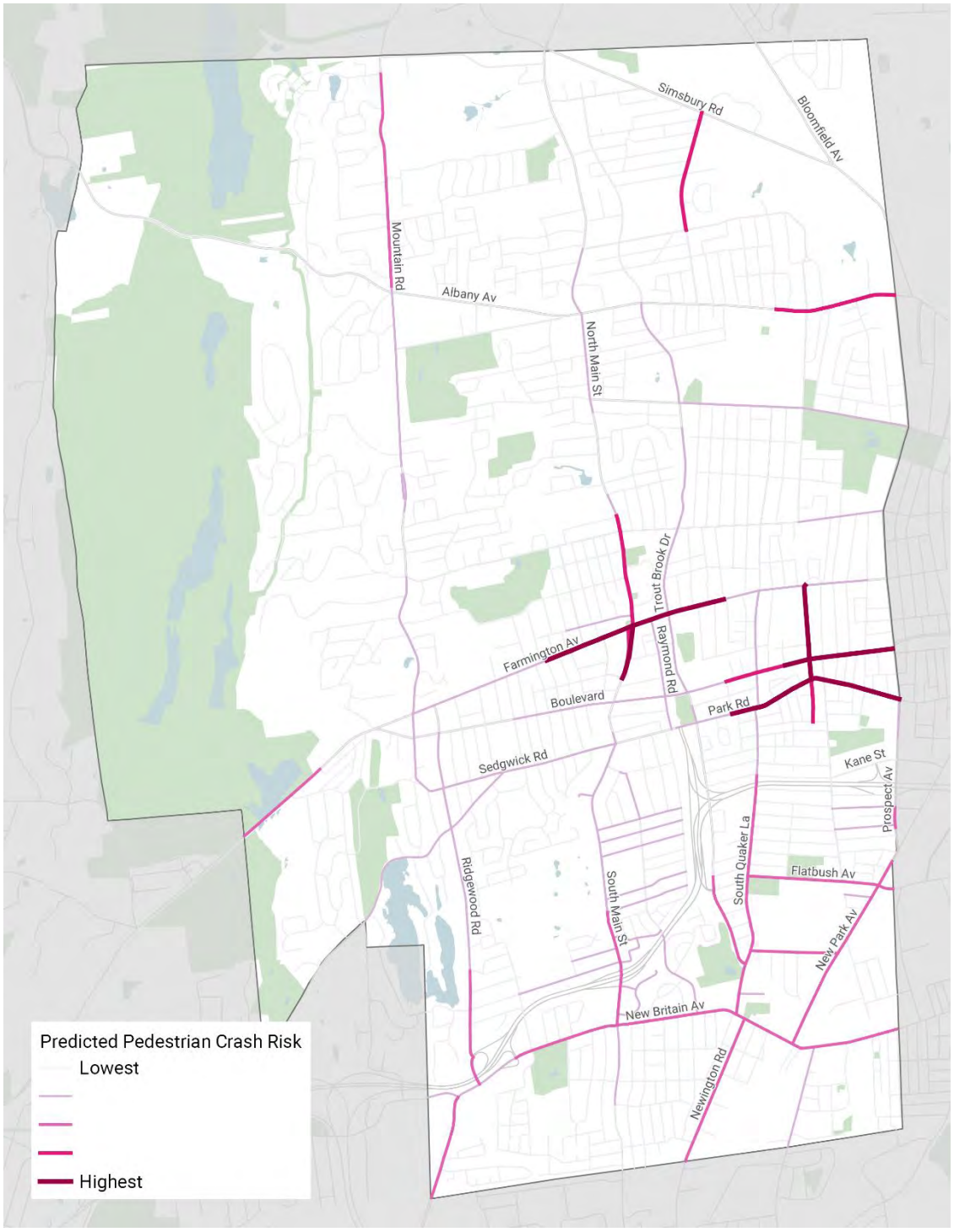


Figure 10: Pedestrian Safer Streets Model results

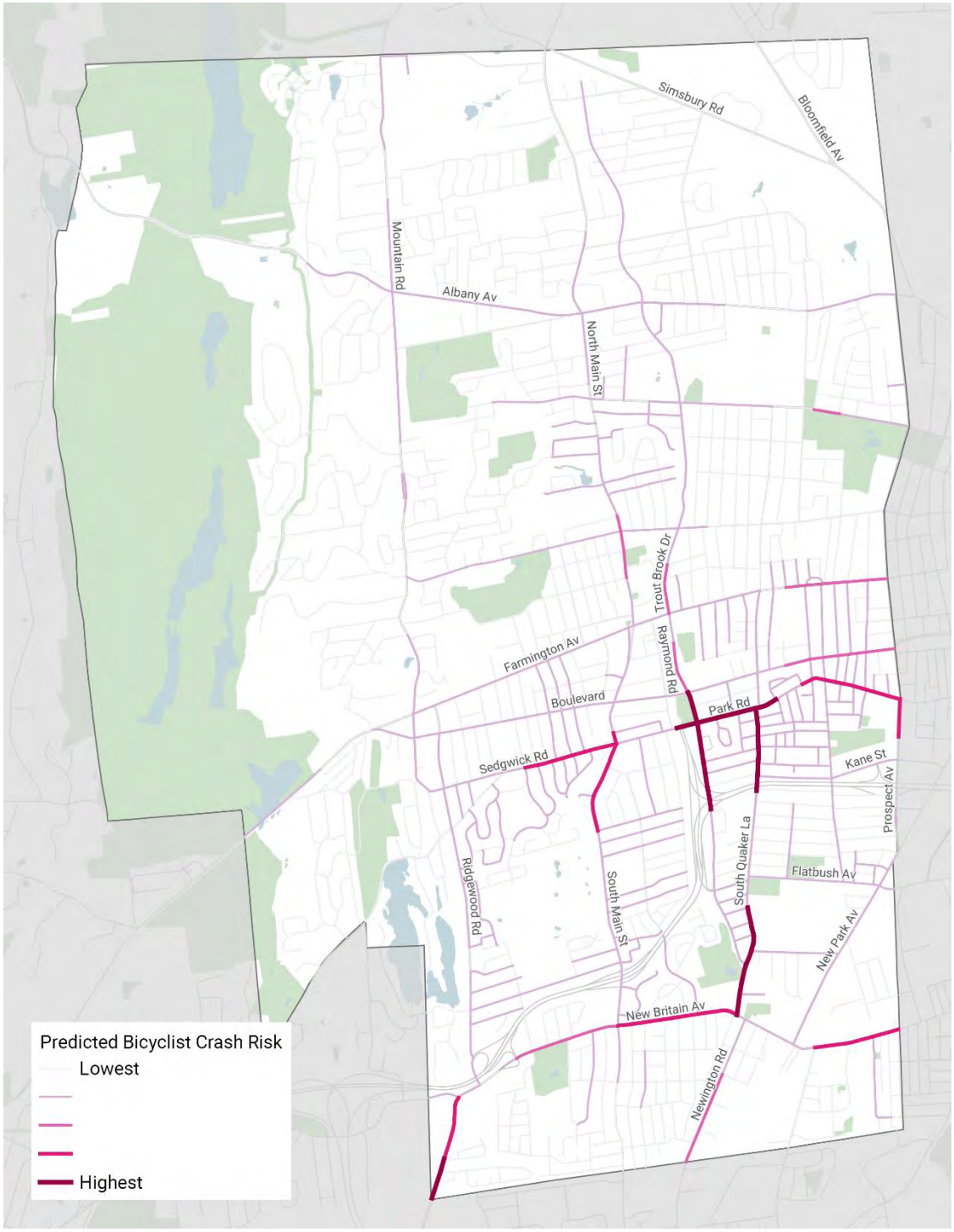


Figure 11: Bicyclist Safer Streets Model results

High Injury Network Development

The following steps describe the overall process to determine the HIN. The combination of several analyses, including sliding window and predictive analyses, are explained in more detail on pages 7 and 12, respectively.

Initial Analyses

1) Divide all West Hartford roads into 1/10th-mile segments for the initial analyses and HIN development.
2) Run sliding window analyses for each mode, which scores the 1/10th-mile segments based on the number and severity of crashes within one-half mile on the same street, using the weighting scheme described in the previous section. These analyses are described in more detail in the prior Sliding Window Analysis section.
3) Additionally, for motorist crashes, divide the score on each segment by the AADT where data is available from the Connecticut Department of Transportation. This step identifies places with high numbers of crashes relative to vehicle volumes, but not high numbers of crashes in absolute terms.
4) Perform predictive analyses for pedestrian and bicyclist modes based on street network attributes and socioeconomic factors. More detail on the predictive analyses is in the prior Predictive Analyses section. The resulting predicted risk scores for each mode are applied to the 1/10th-mile segments.

HIN Development

1) Establish a target length of the HIN based on Town and project team. While increasing the HIN length may increase the total number of crashes included in the HIN, ***it reduces the focus on the street segments with the worst crash history***. This tradeoff must be considered to select a reasonable number of street segments for which the Town can commit to addressing prioritized improvements. Working as a team, we identified **20-miles** of HIN as a manageable target over the 10-year life of the Vision Zero Action Plan.
2) Evaluating each mode separately, filter for 1/10th-mile segments with at least 2 injury crashes within ½-mile (i.e., segments where there is a nearby trend of crashes resulting in injury).
3) Using the same threshold for all six criteria, identify the percentile threshold to achieve the target HIN distance. In this case, we identified the top 60% of segments, using the same threshold for each analysis.
4) Combine all resulting segments to create the HIN, with a total length of 20 miles.

Management of the HIN should be addressed using strategies outlined in the Data section of the Vision Zero Action Plan. Regular updates, such as at 3- or 5-year intervals, should account for adjustments to the HIN as implemented actions improve roadway safety.

Figure 12 illustrates these steps to develop the HIN after completing the initial analyses.

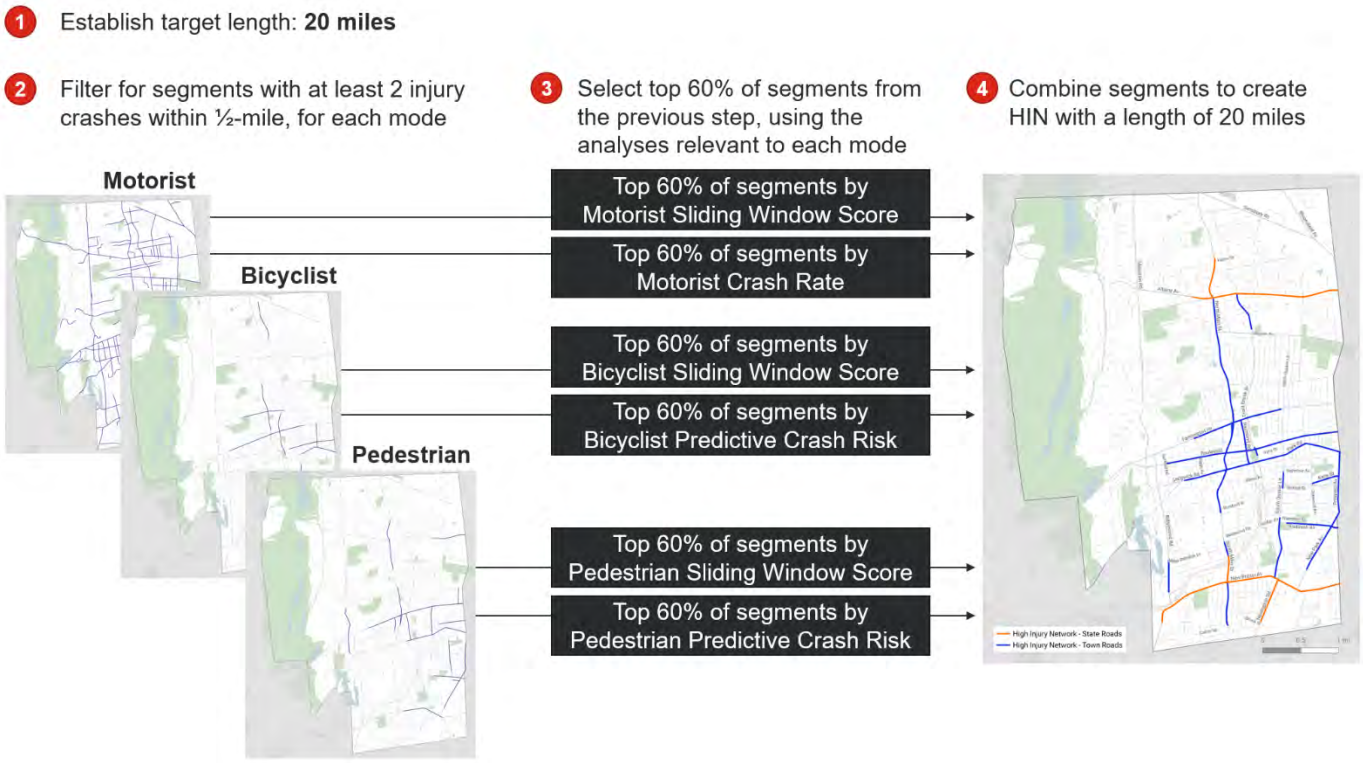


Figure 12: Visual representation of the HIN development process

High Injury Network Results

The project team created the HIN using the results of the above analyses and the HIN development methodology shown in Figure 12. Any gaps in the HIN with a length of 1/10th-mile or shorter are filled in for continuity. Additionally, short segments on streets that only had injury crashes at intersections with other HIN corridors were removed, as these intersections will be addressed by the intersecting street. Short segments on three streets met these criteria: Darcy Street (intersecting New Park Avenue), North Steele Road (short segment north of Albany Avenue), and Whiting Lane (short segment between Boulevard and Park Road).

Figure 13 shows the resulting HIN. This map also identifies which of the HIN segments are state-maintained.

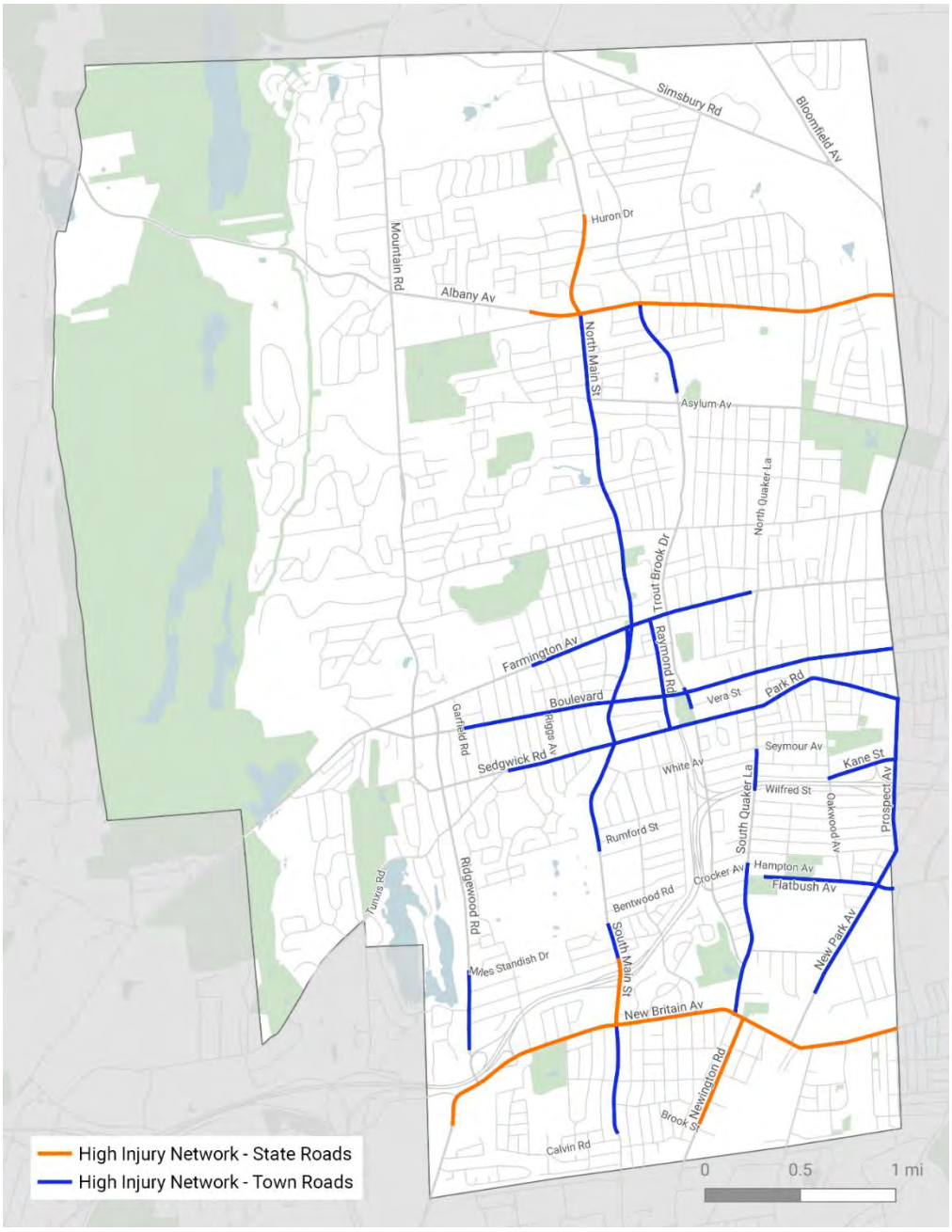


Figure 13: High Injury Network with state roads identified

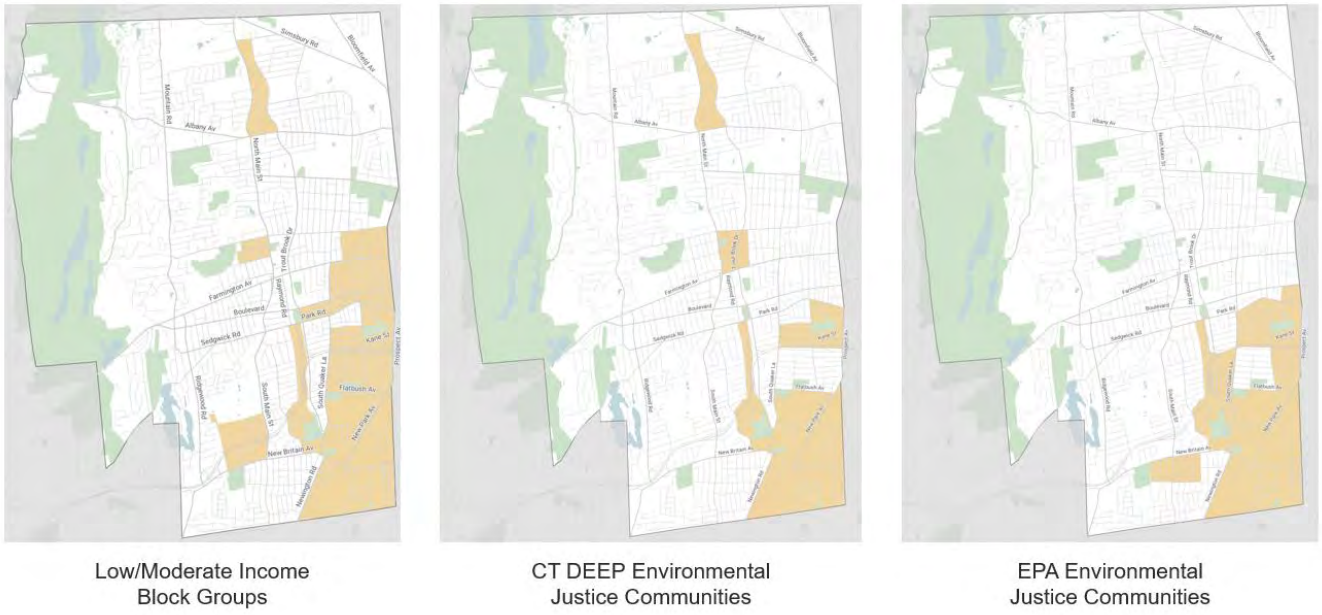
Transportation Equity Zones

Figure 15 shows the HIN overlaid on the Transportation Equity Zones. Transportation Equity Zones are designed to ensure equitable application of Vision Zero recommendations and prioritization in these areas. Transportation Equity Zones are identified if present in one or more of the following:

- US Department of Housing and Urban Development (HUD) Census Block Group of Low or Moderate Income (LMI), or;
- Connecticut Department of Energy and Environmental Protection (CT DEEP) Environmental Justice Community, or;
- US Environmental Protection Agency (EPA) Environmental Justice Community

Figure 14 shows each of these original data sources mapped.

Overall statistics show that approximately **52% of all crashes and 38% of KSI crashes occur in Transportation Equity Zones**. This compares to Transportation Equity Zones accounting for only 27% of West Hartford's population and only 24% of the town's roadway miles. **However, 52% of the HIN is within or adjacent to the Transportation Equity Zones.**



Low/Moderate Income Block Groups | CT DEEP Environmental Justice Communities | EPA Environmental Justice Communities

Figure 14: Data sources used to identify Transportation Equity Zones

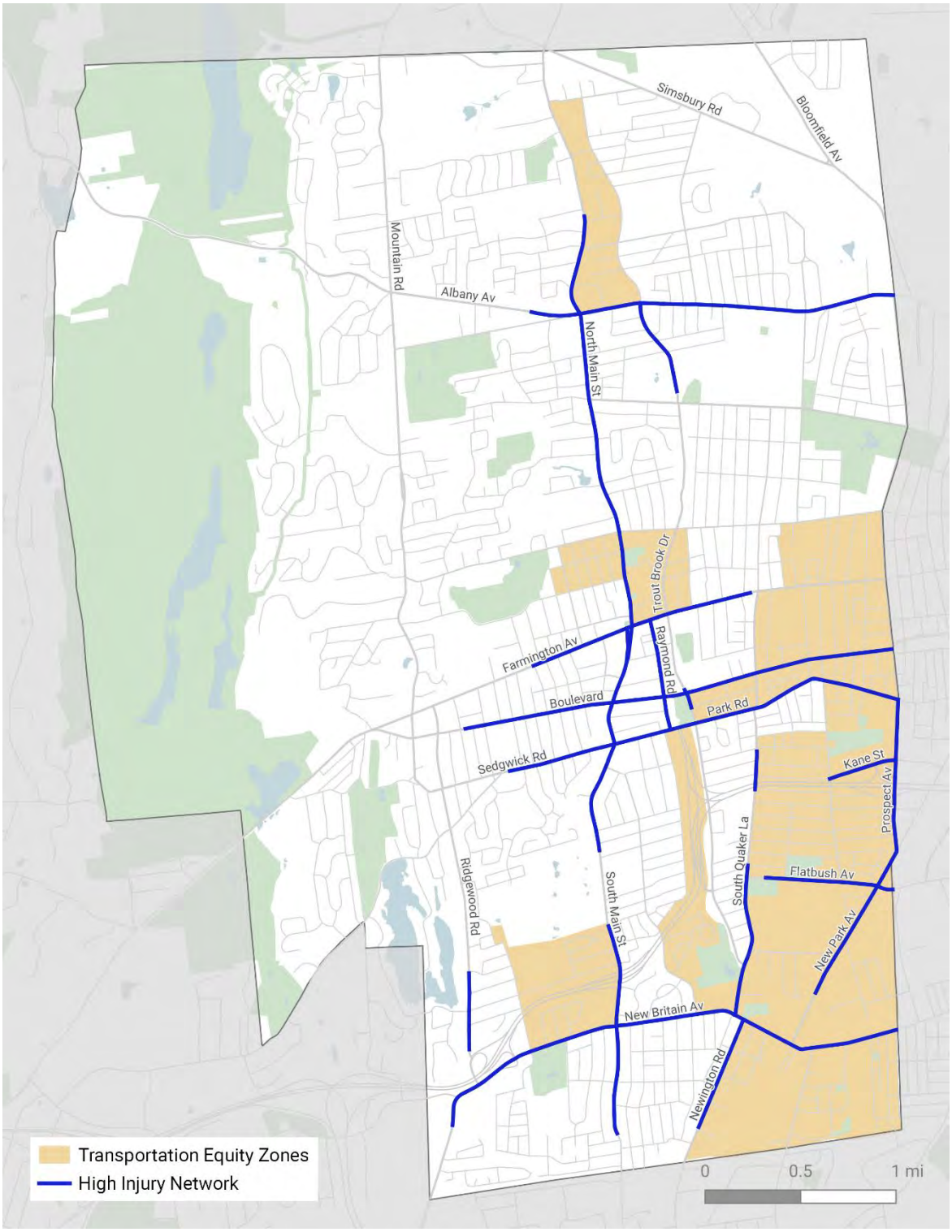


Figure 15: High Injury Network and Transportation Equity Zones

High Injury Network Crash Analysis

Summary Crash Statistics by Segment

The HIN developed for West Hartford is a composite 20.7 miles, representing 9% of West Hartford's roadway miles. The HIN includes 60% of all crashes, including 56% of all fatal or serious injury crashes. The HIN also includes 69% of all pedestrian and bicyclist crashes, including 54% of all fatal or serious injury bicyclist or pedestrian crashes. Additionally, 14 of the 20.7 HIN miles are located inside or on the border of Transportation Equity Zones (68% of the HIN).

These results are in line with best practices for identification of the HIN (more than 40% of KSI crashes on the identified HIN)[4]. While there are other KSI crashes which occur outside the HIN, these generally occur in areas where there are fewer nearby crashes resulting in injury. The HIN seeks to identify roadway segments which have an **established trend** of injury and KSI crashes. The HIN ***does not seek*** to identify all roadway segments which have experienced a KSI crash. This distinction is important as the role of the HIN is to prioritize the roadway segments with the highest crash history based on an established methodology. For example, inclusion of a roadway segment with only a single crash resulting in fatality or serious injury, but **without an established trend** of other injury crashes could result in prioritization away from those roadway segment's highest levels of both injury and KSI crashes.

Figure 16 shows all 48 KSI crashes in this analysis highlighted with other injury crashes (grey dots) and the HIN. Note that the other 21 KSI crashes that occur outside the HIN are generally in areas with fewer crashes.

[4] https://highways.dot.gov/sites/fhwa.dot.gov/files/2022-10/California%20HIN_Case%20Study_Final%20Draft.pdf

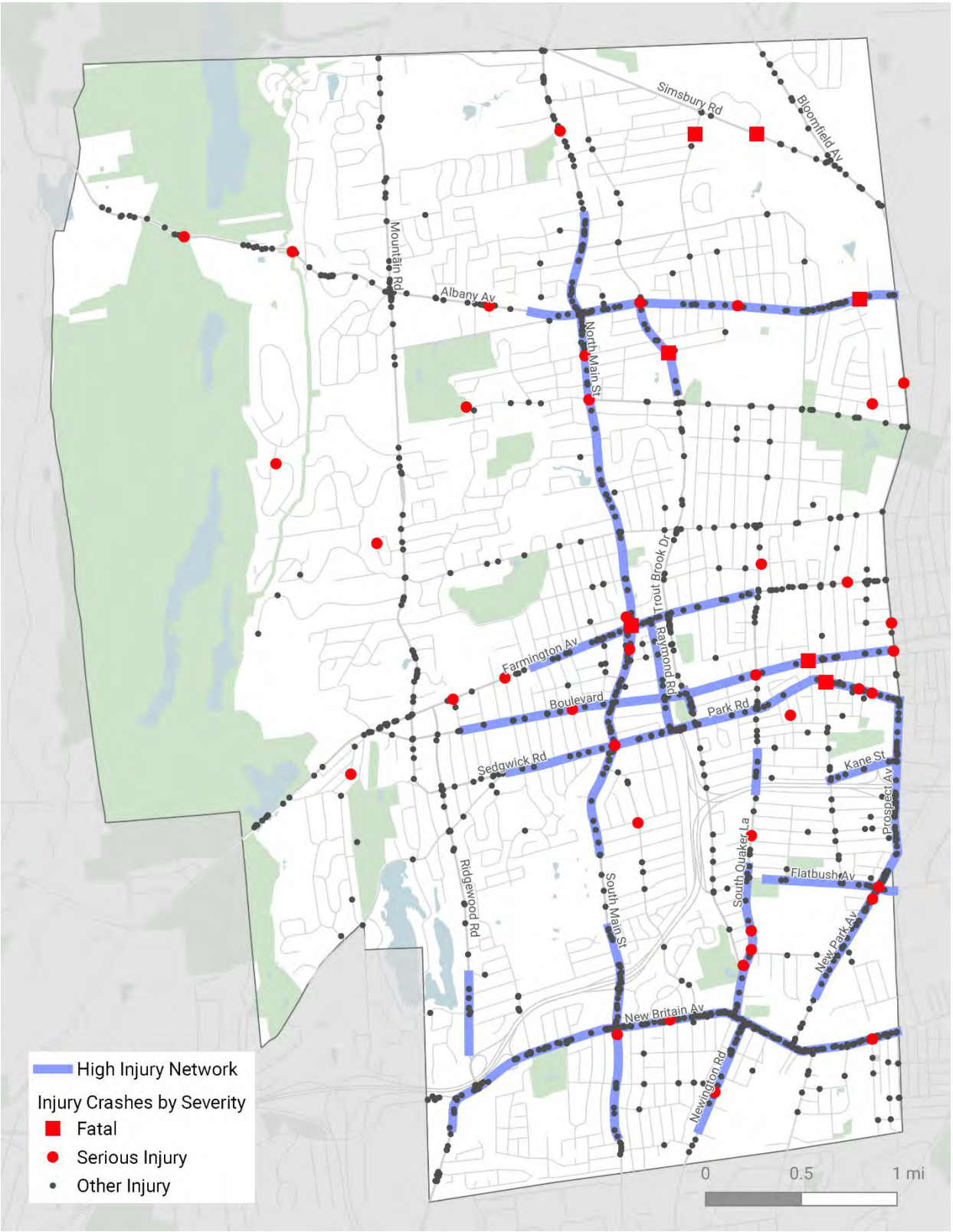


Figure 16: High Injury Network and injury crashes

The project team also divided longer HIN corridors into segments of about one mile to create segments addressable by a Road Safety Audit and Vision Zero Action Plan strategies. Figure 17 shows the individual HIN segments labeled and color-coded.

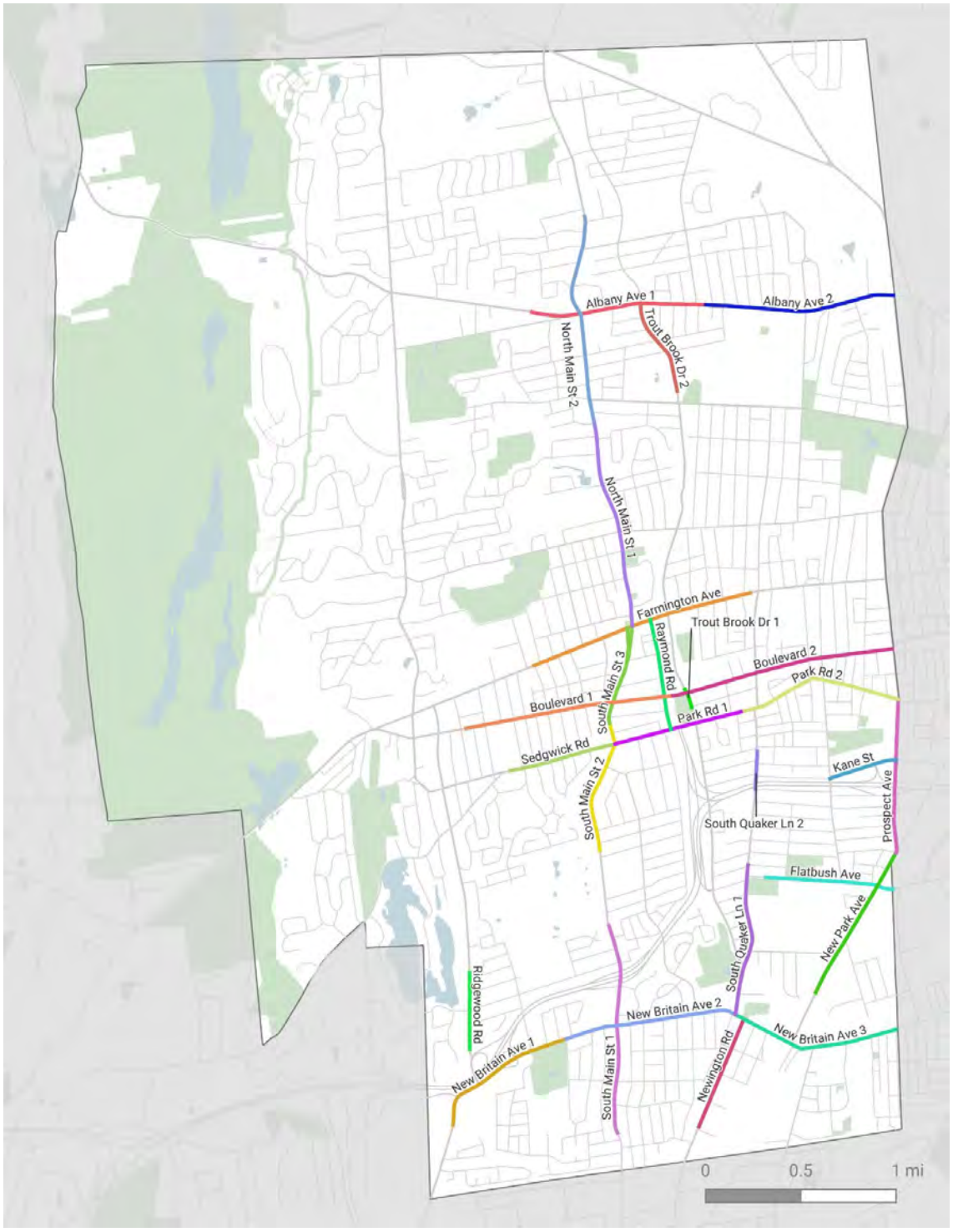


Figure 17: HIN segments

Table 6 lists all HIN segments shown in Figure 17, along with the number of crashes by injury severity. Crashes at intersections between two segments are counted in both. The segments are sorted based on the weighted severity score, as described in the Crash Weighting section on page 5 (ten times the number of fatal or serious

injury crashes, plus the number of other injury crashes). The colors indicate the extent of each segment, especially to distinguish those that are contiguous, and do not bear further meaning.

HIN Segment	From	To	Fatal/Serious Injury Crashes	Other Injury Crashes	Weighted Severity Score	Length (miles)	Owner-ship
New Britain Ave 3	South Quaker Ln	Hollywood Ave	1	121	131	0.9	State
New Britain Ave 2	Wolcott Rd	South Quaker Ln	1	106	116	0.9	State
New Park Ave	0.2 mi. south of Talcott Rd	Prospect Ave	2	89	109	0.8	Town
North Main St 2	Hickory Ln	Huron Dr	3	75	105	1.1	Town/State
Park Rd 2	South Quaker Ln	Prospect Ave	3	57	87	0.9	Town
Prospect Ave	New Park Ave	Park Rd	0	82	82	0.8	Town
South Main St 1	Calvin Rd	Boswell Rd	1	69	79	1.1	Town/State
Albany Ave 1	Woodbury Ln	Mohegan Dr	1	60	70	0.9	State
Boulevard 2	Raymond Rd	Prospect Ave	3	40	70	1.2	Town
Farmington Ave	Riggs Ave	North Quaker Ln	1	56	66	1.2	Town
South Main St 3	Meadowbrook Rd	Farmington Ave	2	46	66	0.7	Town
Albany Ave 2	Mohegan Dr	Prospect Ave	3	35	65	1.0	State
South Quaker Ln 1	New Britain Ave	Hampton Ave	3	34	64	0.8	Town
Boulevard 1	Garfield Rd	Raymond Rd	1	53	63	1.1	Town
Park Rd 1	South Main St	South Quaker Ln	1	53	63	0.7	Town
New Britain Ave 1	Westfarms Mall/ Corbin's Corner Mall Signal	Wolcott Rd	0	58	58	0.8	State
North Main St 1	Farmington Ave	Hickory Ln	1	42	52	1.1	Town
Flatbush Ave	Charter Oak Blvd	Newfield Ave	1	41	51	0.7	Town
South Main St 2	Rumford St	Meadowbrook Rd	1	40	50	0.7	Town
Trout Brook Dr 2	0.1 mi. north of Asylum Ave	Albany Ave	2	30	50	0.5	Town
Newington Rd	Brook St	New Britain Ave	1	31	41	0.6	Town
Sedgwick Rd	Sedgwick Middle School	South Main St	1	27	37	0.6	Town
Raymond Rd	Park Rd	Farmington Ave	0	35	35	0.6	Town
Kane St	Oakwood Ave	Prospect Ave	0	31	31	0.4	Town
Trout Brook Dr 1	Vera St	Boulevard	0	15	15	0.1	Town
Ridgewood Rd	I-84 Ramp	Miles Standish Dr	0	7	7	0.4	Town
South Quaker Ln 2	Wilfred St	White Ave	0	4	4	0.2	Town

Table 6: HIN segments

Table 7 shows the number of injury crashes on each segment by year. The segment “North Main St 1” contains most of the North Main Street Road Diet project, and in 2022 this segment saw fewer injury crashes (5) than in 2021 (11) and 2019 (9). While this segment is currently on the HIN based on the five-year injury crash history, if the downward trajectory in injury crashes continues, it may no longer qualify for the HIN.

HIN Segment	2018	2019	2020	2021	2022
Albany Ave 1	12	18	5	14	12
Albany Ave 2	9	5	6	8	10
Boulevard 1	17	14	10	7	6
Boulevard 2	13	9	6	6	9
Farmington Ave	16	13	9	12	7
Flatbush Ave	8	9	6	8	11
Kane St	9	9	2	6	5
New Britain Ave 1	13	14	9	9	13
New Britain Ave 2	23	29	14	14	27
New Britain Ave 3	28	30	20	21	23
New Park Ave	23	19	15	15	19
Newington Rd	9	4	6	6	7
North Main St 1	12	9	6	11	5
North Main St 2	13	20	10	14	21
Park Rd 1	12	13	10	9	10
Park Rd 2	12	8	18	11	11
Prospect Ave	20	22	16	15	9
Raymond Rd	8	10	5	5	7
Ridgewood Rd	1	1	2	1	2
Sedgwick Rd	7	8	4	4	5
South Main St 1	17	17	11	11	14
South Main St 2	7	13	7	9	5
South Main St 3	7	13	7	10	11
South Quaker Ln 1	5	13	7	8	4
South Quaker Ln 2	1	1	0	1	1
Trout Brook Dr 1	4	3	2	2	4
Trout Brook Dr 2	7	7	3	8	7

Table 7: Injury crashes by year on HIN segments

Contributing Factor Analysis

The project team also reviewed a series of factors recorded in the crash report data to identify factors contributing to fatal and serious injury crashes and crashes involving bicyclists or pedestrians. The following series of charts show the share of all crashes in the Town in each factor category relative to fatal or serious injury (KSI) crashes and bicycle or pedestrian crashes, where relevant.

One factor recorded in crash reports is the manner of collision impact, or in other words, how the parties in the crash collided with one another. A comparison of the share of all crashes relative to KSI crashes is shown in Figure 18. Fixed object crashes (a crash between a single motorist and a stationary object, such as a utility pole or tree) and front-to-front crashes are overrepresented in KSI crashes. Front-to-front crashes make up less than 2% of all crashes but 13% of KSI crashes. Similarly, fixed object crashes make up 11% of all crashes and 17% of KSI crashes. The two most common collision types, angle crashes and front-to-rear crashes, together make up 69% of all crashes but 41% of KSI crashes.

In crashes involving bicyclists or pedestrians, the manner of collision impact is typically not recorded and is instead simply recorded as a “bike/ped” crash. These crashes are highly overrepresented in KSI crashes, as crashes involving bicyclists or pedestrians make up only 2% of all crashes but 27% of KSI crashes.

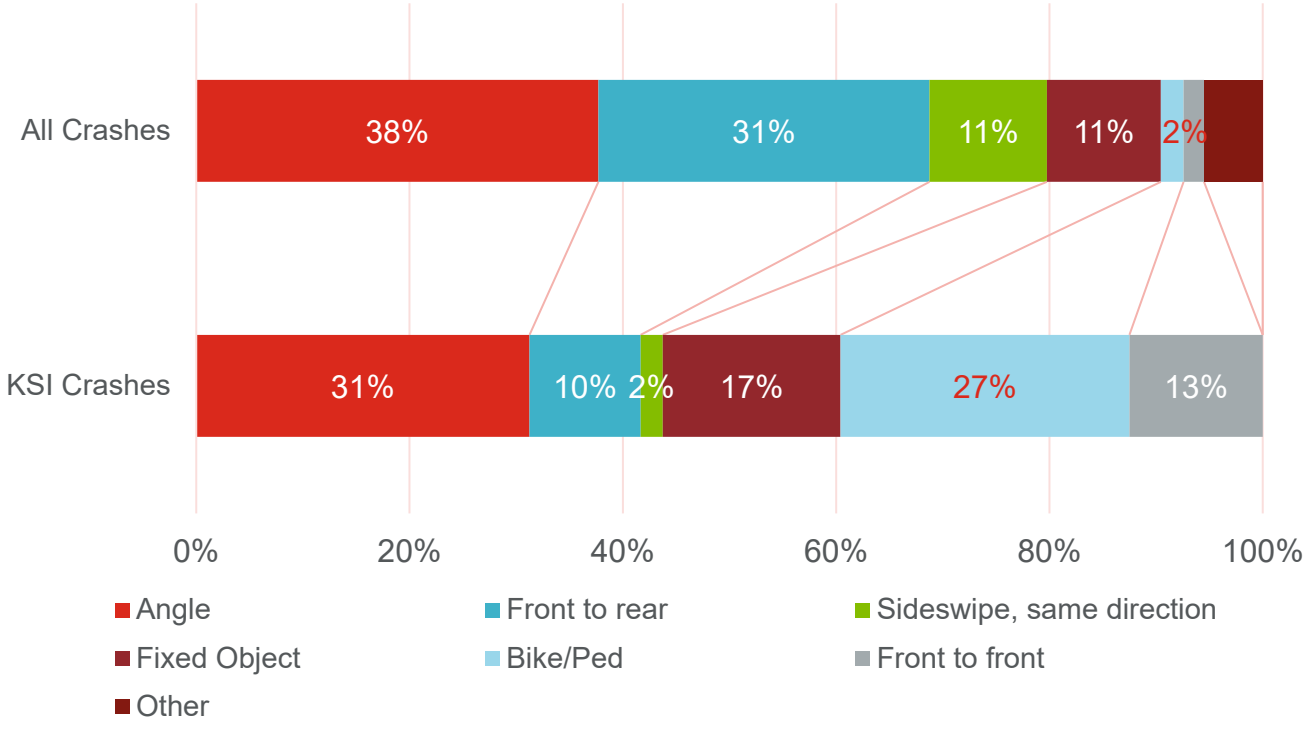


Figure 18: Crashes by recorded manner of collision impact

Figure 19 on the following page shows the share of crashes by reported weather conditions, with an additional comparison between all crashes and crashes involving bicyclists or pedestrians. Poor weather conditions do not appear associated with higher severity crashes, as a higher percentage of KSI crashes and bicyclist or pedestrian crashes occurred during clear conditions than all crashes.

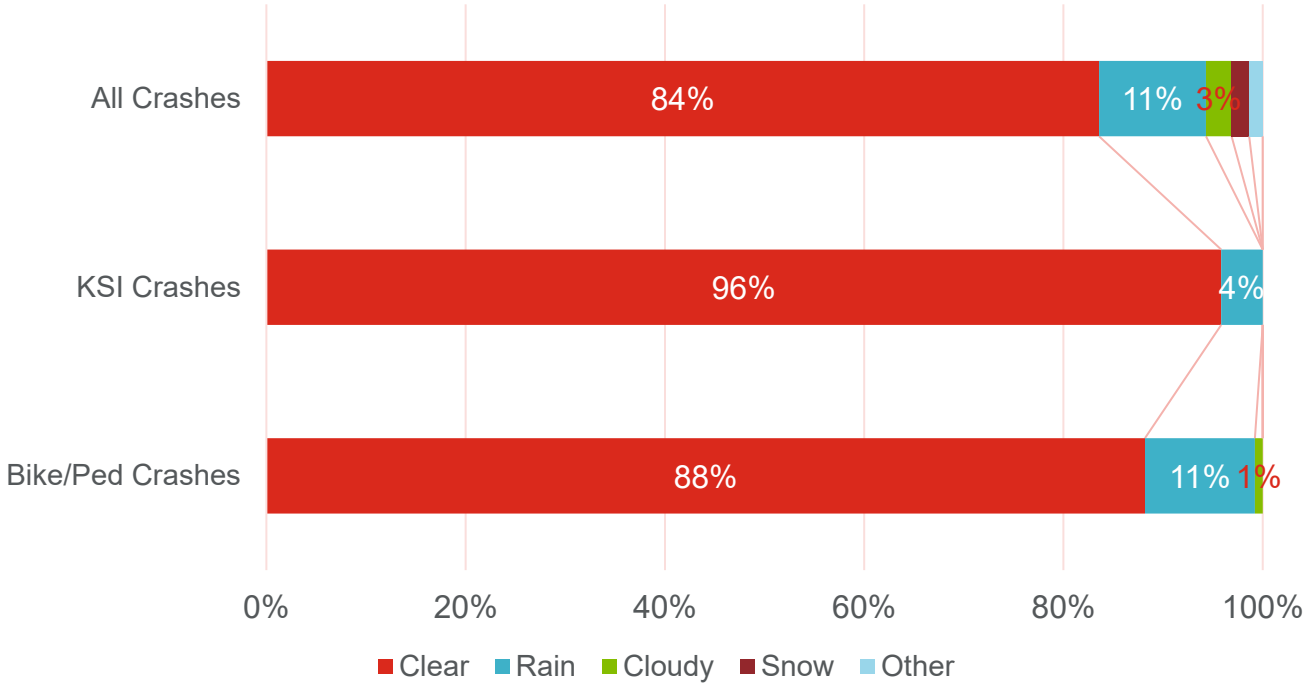


Figure 19: Share of crashes by reported weather conditions

Similarly, the reported road surface conditions do not appear to be associated with higher severity crashes, as shown in Figure 20. For example, 4% of KSI crashes and 13% of bicyclist or pedestrian crashes occurred on wet pavement conditions relative to 16% of all crashes. One possible explanation is that motorists may travel more slowly in poor conditions, which may reduce severity levels of crashes that occur under these conditions.

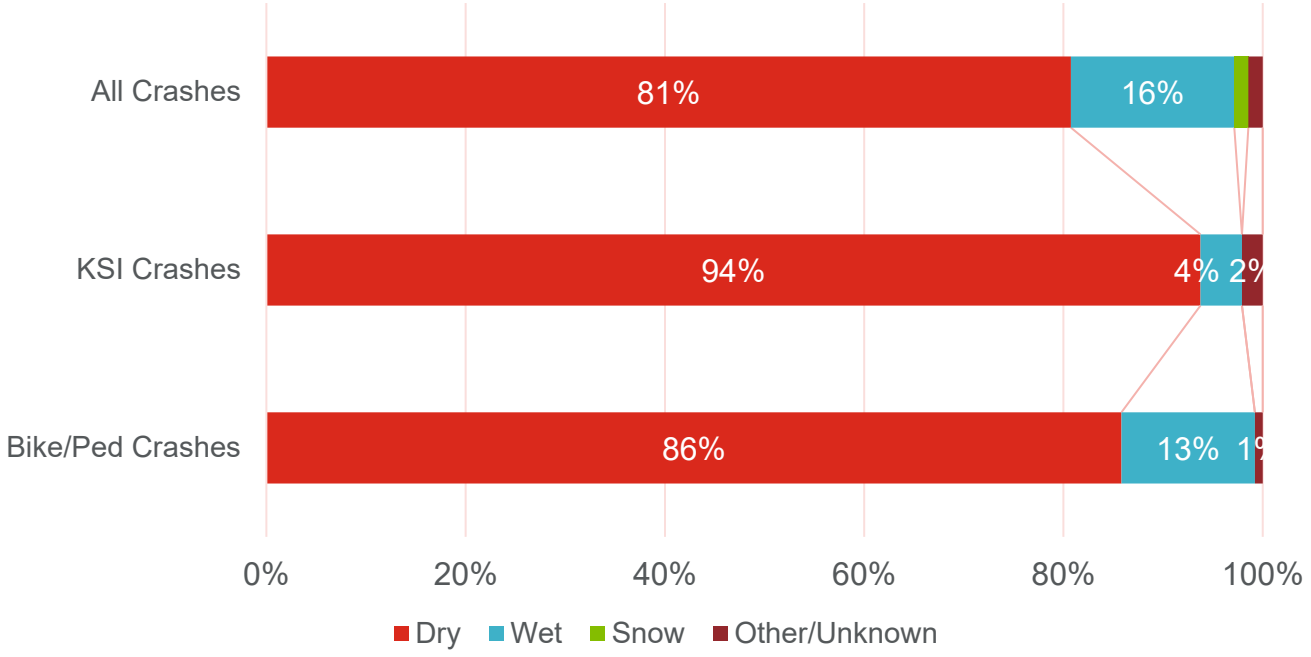


Figure 20: Share of crashes by reported road surface conditions

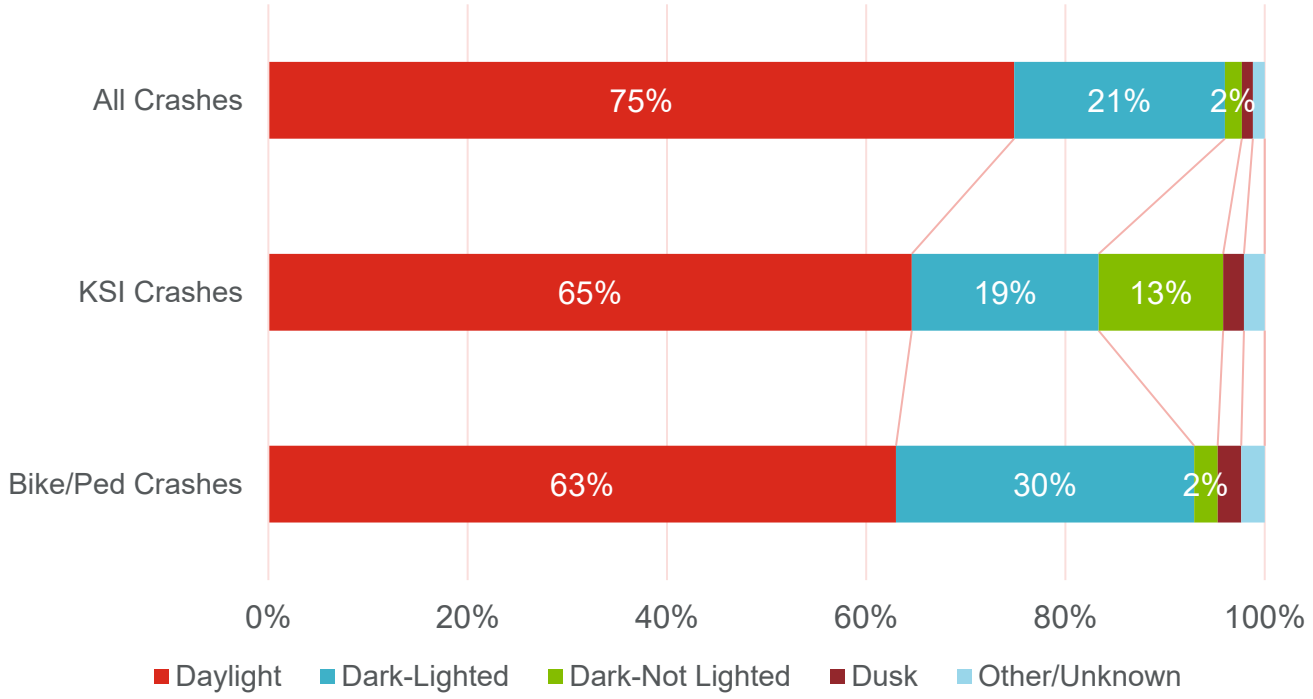


Figure 21: Share of crashes by reported lighting conditions

Figure 21 shows the breakdown of crashes by reported lighting conditions. Crashes occurring during dark conditions, with no lighting, were overrepresented in KSI crashes, with 13% of KSI crashes occurring under these conditions relative to only 2% of all crashes. This could indicate areas that need adequate lighting. Crashes involving bicyclists or pedestrians reveal a different pattern: crashes occurring under dark conditions but with lighting were overrepresented in crashes involving these road users, with 30% of bicyclists or pedestrians occurring under these conditions. This may reveal a need for more or other types of lighting and/or tailored roadway design strategies in areas with streetlights with higher rates of nighttime bicyclist or pedestrian crashes.

Crashes were geographically categorized based on proximity to intersection in ArcPro as it was found that the intersection field in the crash metadata was generally unreliable. Intersections were classified as a 3 or 4-leg two-way stop-controlled intersection, an all-way stop-controlled intersection, or a signalized intersection. 1,205 intersections were identified, with the breakdown of intersections identified in the table below. In general, two-way stop-controlled intersections were the most common intersection type representing 87% of all intersections.

Intersection Type	Number of Locations	%
Two-Way Stop-Controlled – 3-Leg	915	76%
Two-Way Stop-Controlled – 4-Leg	132	11%
All-Way Stop Controlled	45	4%
Signalized Intersection	113	9%
Total	**1,205**	

*Note – A single intersection may be represented by one or more points. For example, an intersection with a divided median (e.g. South Main Street at Farmington Ave) may count as 2 locations for this analysis.

Crashes at intersections, regardless of type, represent over 85% of all crashes, as shown in Figure 22. Crashes at two-way stop-controlled intersections were overrepresented in KSI and bike/ped crashes. Crashes at these intersections represented approximately 38% of all crashes but represented 50% of KSI crashes and bike/ped crashes. In particular, crashes at 4-leg two-way stop-controlled were particularly overrepresented amongst KSI crashes. Crashes at these intersections represented only 7% of all crashes while they represented 17% of all KSI crashes. While crashes at signalized intersections represented nearly 50% of all crashes, they represent a substantially smaller number of KSI crashes with only 33% of KSI crashes occurring at signalized intersections. Similarly, only 39% of bike/ped crashes occur at these locations. This finding indicates that while crashes may be more common at the relatively small number of signalized intersections, they are more likely to be less serious than crashes at other intersection types. Crashes on segments (not at intersections) were slightly overrepresented in KSI crashes, with 15% of KSI crashes occurring on segments relative to 13% of all crashes.

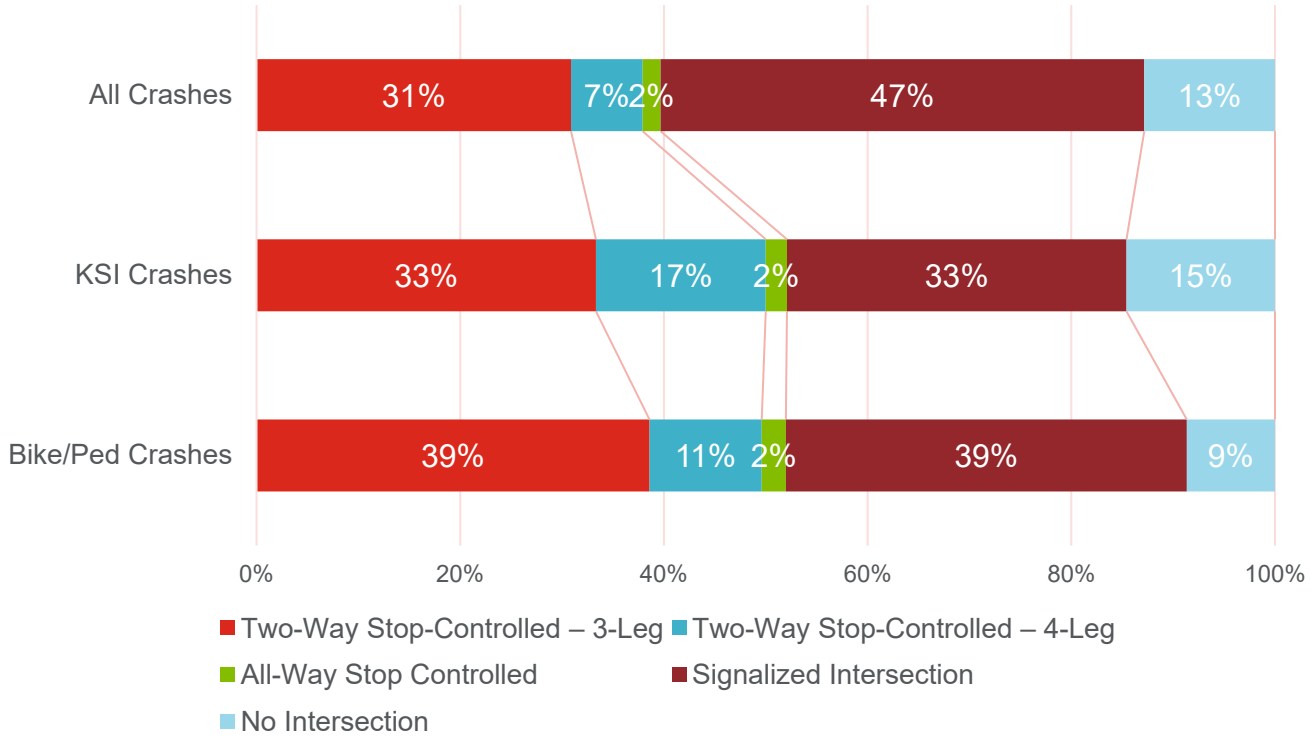


Figure 22: Share of crashes by intersection type

Crashes by manner of impact at two-way stop-controlled intersections were reviewed and reported in Figure 23. Angle crashes are the most common manner of impact at these intersections, while head-on, front-to-front collisions were over-represented amongst KSI crashes.

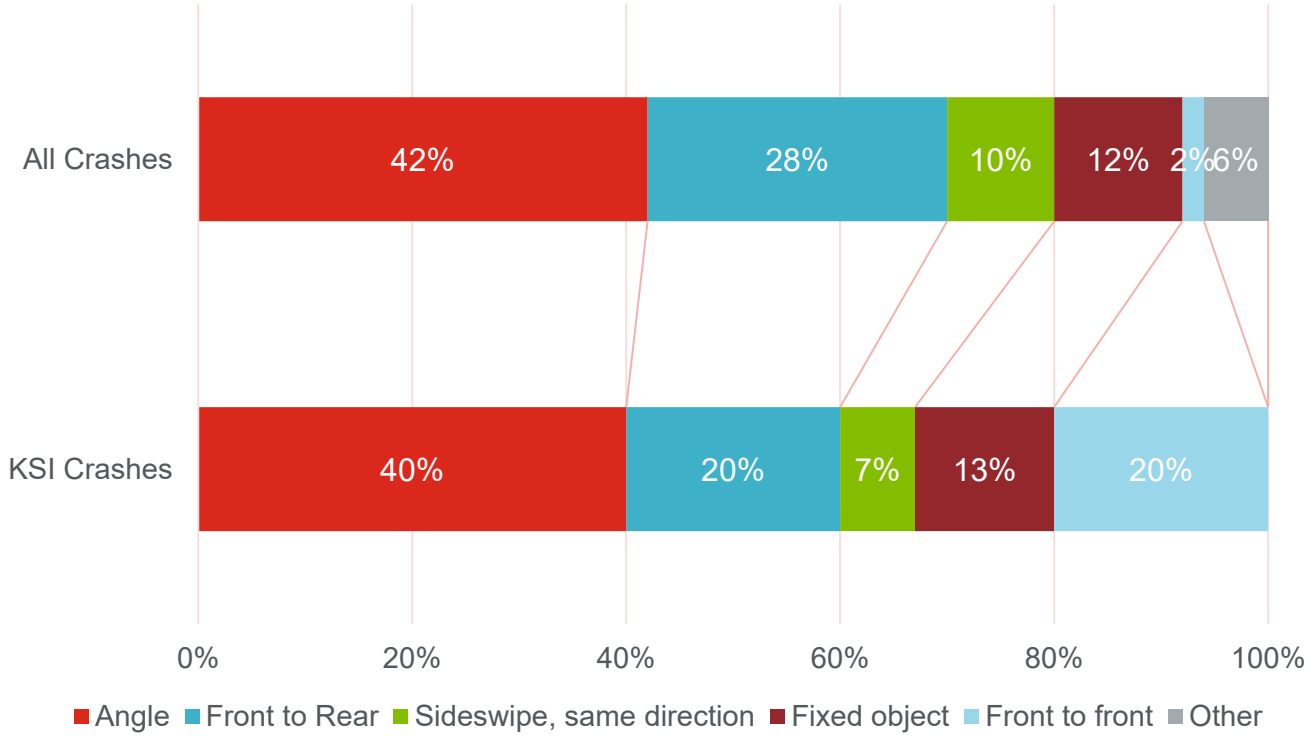


Figure 23: Crashes by recorded manner of collision impact at two-way stop-controlled Intersections

In crash reports, the responding officer will record information about the parties' actions before the collision. Recorded actions overrepresented in KSI crashes are when a motorist “failed to yield right-of-way” or when a motorist “failed to keep in proper lane”. Actions by motorists overrepresented in bicyclist or pedestrian crashes are when the motorist “failed to yield right-of-way”, as well as “overtaking cyclist” and “operated motor vehicle in inattentive, careless, negligent, or erratic manner.”

In crashes involving bicyclists or pedestrians, the crash report also contains actions before the crash. While the most frequently recorded item is “no improper action,” there are other actions recorded that place partial responsibility on the bicyclist or pedestrian. For example, when an “improper action” was recorded in pedestrian crashes, the most common actions identified are “in roadway improperly (standing, lying, working, playing)”, “failure to obey traffic signs, signals, or “failure to yield right-of-way”.

Crashes which included one or more participants identified as under the influence (DUI) or distracted were reviewed and summarized in Figure 24. Crashes involving DUI or distracted participants were overrepresented in KSI crashes. In particular, crashes with one or more individuals noted with DUI were most overrepresented in KSI crashes with only 3% of all crashes involving DUI while 10% of KSI crashes involve DUI. Of the 13 KSI crashes involving vulnerable users, 2 of these included participants noted as distracted and 2 of these included participants noted as DUI. In the 2 DUI crashes, 1 crash included a DUI attributed to the driver while 1 crash included a DUI attributed to a pedestrian. In the 2 crashes with participants noted as distracted, 1 crash was noted with a distracted driver while the second crash was noted with a distracted pedestrian.

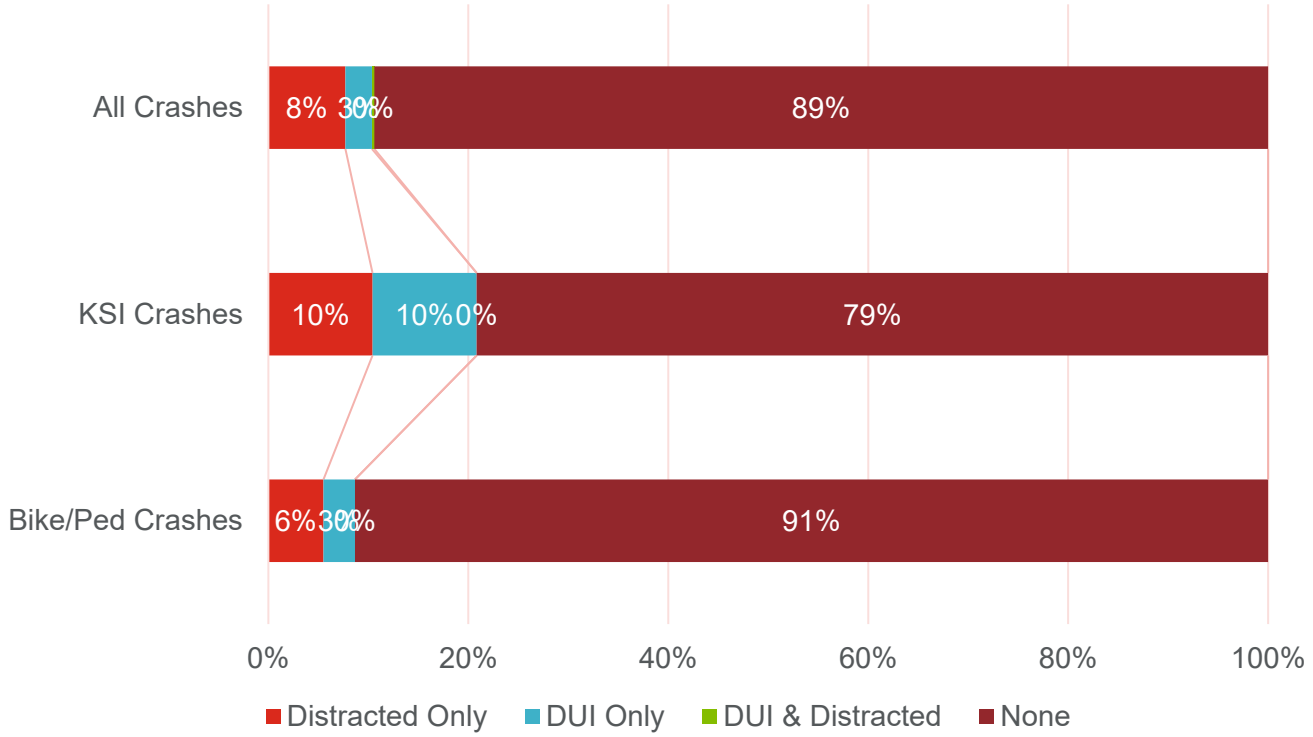


Figure 24: Crashes by DUI or Distracted Status of One or More Crash Participant

Local Road Crash Analysis

Local, or residential, roads generally do not show up in the HIN given their relatively low vehicle volumes and numbers of crashes. However, local roads may still be addressed by the Vision Zero Action Plan. To identify potential locations for further study, the project team performed an analysis of crashes on local roads, grouped together into small, sub-neighborhood areas. The team calculated the number of crashes on the local roads along with the total length of local roadway miles in each area. Figure 25 shows this analysis, highlighting areas in which local road crashes are overrepresented relative to the local roadway miles.

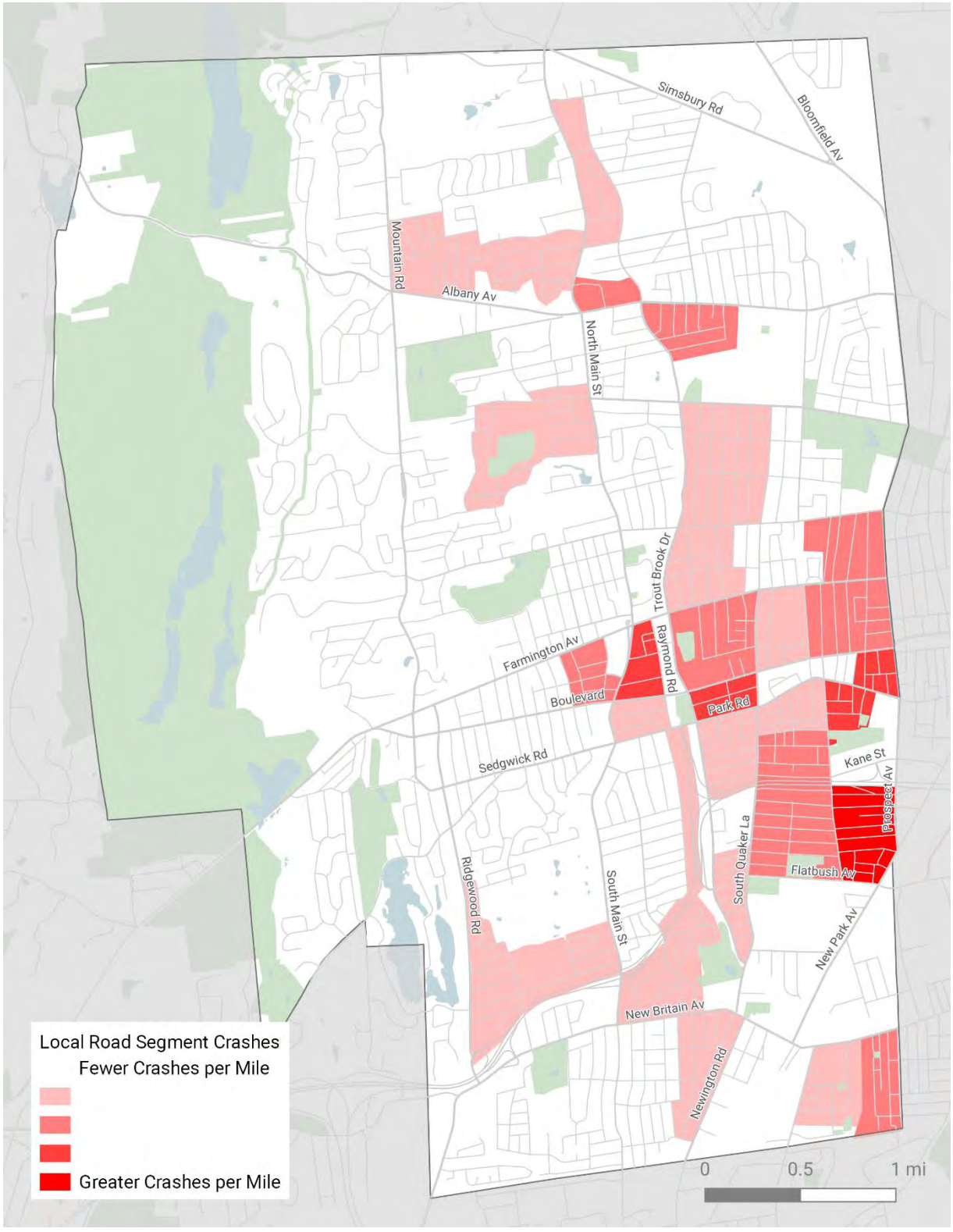


Figure 25: Local road crashes per local roadway mile

APPENDIX D. SURVEY AND WEBMAP ANALYSIS SUMMARY

WHVZ SURVEY AND WEBMAP ANALYSIS SUMMARY

In October 2023, the West Hartford Vision Zero team conducted a public survey to assess mode usage and perceptions of roadway safety town wide. The public survey was accompanied by an interactive webmap survey. The webmap survey asked members of the public to comment on specific locations and allowed participants to categorize their comment as a “safe location”, “unsafe location” or a “safety / improvement idea” as well as provide direct comments in an open text box.

These are summarized individually in the sections below.

SURVEY SUMMARY

The survey was available online through the project webpage, as well as hard copies at Town Hall and the three public libraries. The survey received a total of completed 788 responses, including 783 digital and five hard copies. Although the survey was available in English, Spanish, Chinese, and Portuguese, all responses collected were in English.

This survey summary identifies key issues and solutions. We've captured all write-in survey responses in our analysis. For more specific data, please review the supplemental data at the end of this appendix.

Cross Tabulation

Please refer to the “Cross Tabulated Survey Results” in the supplemental data at the end of this appendix for a more in-depth analysis of age demographic and issues/solution responses.

Demographic Summary

More than half of respondents identified as a middle-aged adult (ages 35-64). More than a quarter of respondents identified as seniors (aged 65 and over). Young adults and teens (aged 34 and below) composed of 12% of the responses.

As a town with a high driving and walking culture, West Harford’s Vision Zero initiatives are important to ensuring the safety for all users. More than 75% of the public drive or take rides in private vehicles, about 66% walk, and about 50% bike regularly. Fewer than 25% ride public transit or use ADA paratransit.

Issues Summary

This is a summary of traffic issues by mode (walking, driving, biking/scootering/skating).

Two-thirds of pedestrians feel unsafe because drivers do not consistently yield at intersections and/or crosswalks. Almost half feel unsafe because of the lack of visibility of intersections/crosswalks.

More than half of bikers/scooters/skaters feel unsafe because of the lack of bike infrastructure and buffering from cars. Almost half feel unsafe because drivers do not consistently yield at intersections and/or crosswalks.

Almost half of vehicle users feel unsafe because other drivers do not consistently yield at intersections and/or crosswalks. A similar number feel unsafe due to the lack of visibility at intersections and/or crosswalks. More than 25% feel unsafe because of bicyclists riding in the roadway and/or shoulder.

A prevailing issue is driver recklessness, with nearly 75% of respondent citing this concern. Reckless driving captures speeding, distracted driving, and/or disregard for the rules of the road.

Solutions Summary

Infrastructure Solutions

About half of respondents support redesigning roadways to reduce speeds and improving intersection and/or crosswalk safety for pedestrians and bicyclists to ease traffic safety concerns.

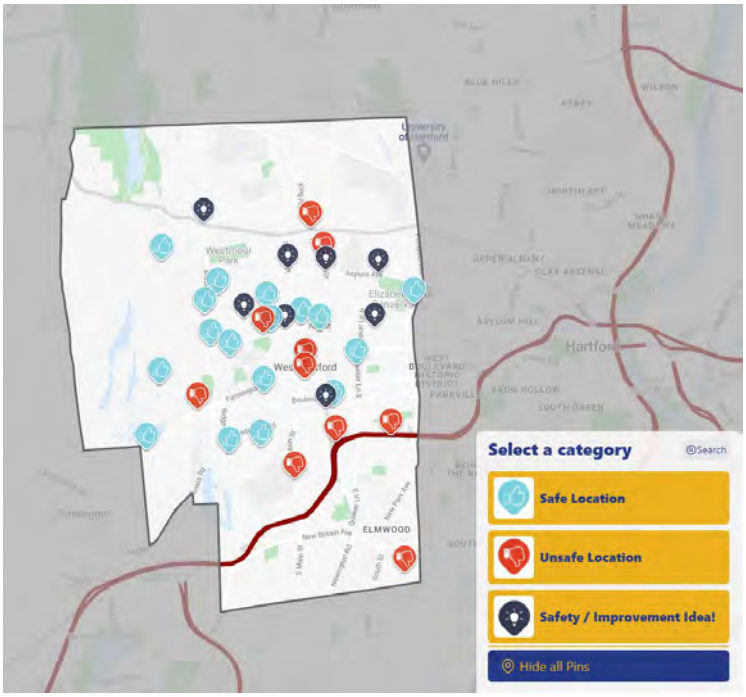
Programmatic Solutions

More than two-thirds of respondents believe that enforcement through behavioral programming, rule enforcement, and speed management will ease traffic safety issues.

WEBMAP SURVEY SUMMARY

In October 2023, the West Hartford Vision Zero team conducted a public webmap survey, which accompanied the survey summarized above. The webmap asked respondents to identify areas where they feel safe, unsafe, or have an idea related to roadway safety. The webmap was available online through the project webpage, and as hard copies at Town Hall and the three public libraries as part of the community survey packet.

Figure 1: A screenshot of the webmap survey



Analysis Methodology

To decipher the community's input, we identified frequently used key words in the webmap (downloaded as a .csv file). We included a variety of spellings, punctuation, and tenses for common terms. For example, the list includes child, child care, childcare, children, daycare, preschool, and young. We then organized key words into themes to conduct our analysis. Each comment was then flagged if any of its contents matched the key words for a theme. A single comment could match to multiple themes.

Overall Statistics

Total comments received: 1,784
Total themes identified: 15
Comments with at least one theme: 1,546
Average number of themes per comment: 3.6
Median number of themes per comment: 3

Identifying Themes

Item	Theme	Key Words
1	Access/ Destinations	Access, activities, baseball, buy, buying, cafe, café, commercial, commercial area, connect, connected, connecting, connection, driveway, driveways, fields, football, games, grocery, grocery store, hockey, JCC, library, locations, mall, museum, park, parks, path, paths, pickleball, playground, plaza, practice, restaurant, restaurants, rink, shared use path, shop, shopping, shopping district, shopping plaza, shops, sport, sports, store, stores, synagogue, target, trail, trails, UConn, YMCA
2	Biking	Bicycle, bicycles, bicyclists, bike, bike lane, bike ride, bikers, bikes, biking, cycle, cycles, cycling, cyclist, cyclists, separated bike lane, shared lane marking, sharrow, trike
3	Children/Schools	Campus, child, child care, childcare, children, daycare, elementary, elementary school, high school, hs, kid, kids, middle school, preschool, school, schools, students, young
4	Designs/ Intersections/ Signals	Alignment, barrier-protected, barriers, blinking, bollards, Bridge, buffer, bump, bumps, chicane, clear, conflicts, convert, corner, corners, curbs, divider, elevation, entrance, exit, exits, extend, facilities, flashing, flexpost, flexposts, four-way, green light, hawk, highway, humps, infra, infrastructure, install, installation, intersection, intersections, island, islands, lane, lane marking, lane markings, lanes, markings, median, medians, narrow, narrowing, on street, one way, one-way, on-street, overpass, painted, raised, ramp, red light, redesign, redesigned, restrict, right turn, right-turn, rotaries, rotary, roundabout, roundabouts, RRFB, sharrows, shoulder, sign, signage, signal, signalized, signals, signs, steep, stop, stop light, stop sign, stoplight, stoplights, stripes, tight, traffic calming, traffic circle, traffic light, turn, turns, warning, widen, widened, yellow light, yield sign, yields

Item	Theme	Key Words
5	Driver Behavior	Aggressive, attention, cell phone, cellphone, cutting, discourage, distracted, drivers, idling, ignore, ignoring, impatient, merge, merging, mobile phone, overtaking, pass, passing, phone, phones, respect, risky, swerve, text, texting, turning, *yeild*, yield
6	Enforcement	Automated enforcement, automatically, camera, cameras, cop, cops, enforce, enforced, enforcement, guards, illegal, obey, police, pull over, radar, red light camera, red light cameras, redlight camera, red-light camera, redlight cameras, red-light cameras, rules, speed camera, speed cameras, speeding ticket, ticket, ticketing
7	Maintenance/ Green	Bush, bushes, condition, faded, faded paint, faded pavement markings, garbage, grass, ice, landscaping, maintain, maintenance, meadow, overgrown, paint, pavement, pavement marking, pavement markings, planters, plantings, pothole, potholes, repaint, repaints, repainted, repave, shrubs, snow, trash, tree, trees, trees/shrubs, trimmed, weeds, winter
8	Parking	Deliveries, delivery, double parked, double parking, meter, parked, parking, parking meter
9	Safety	Parked, parking, parking meter, accident, accidents, calm, collision, collisions, crash, crashes, danger, dangerous, emergency, hazard, hit, killed, pickup truck, pick-up truck, pickup trucks, pick-up trucks, ran over, risk, run over, safely, safer, safety, scary, SUV, SUVs, trucks, unsafe
10	Speed	Exceed, fast, faster, fly, flying, guard, limits, mph, race, reduce, slow, speed, speeders, speeding, speeds, speedway
11	Traffic/ Congestion	Backups, block, blocking, busy, congested, congestion, cut through, cut through traffic, cut-through, cut-through traffic, shortcut, traffic, volume, volumes

Item	Theme	Key Words
12	Transit	Bus, bus stop, bus stops, buses, transit
13	Visibility/Lighting	Dark, day, daylight, hard to see, invisible, light, lighting, lights, looking, night, seen, sight, visibility, visible, vision
14	Disabilities/Older Adults	Accessibility, accessible, ADA, blind, cane, curb ramp curb ramps, deaf, disability, disabled, elderly, families, older, older adult, parents, ramp, ramps, stroller, wheelchair
15	Walking/Crossing	Cross, crossed, crossing, crossings, crosswalk, crosswalks, mid-block, ped, pedestrian, pedestrians, peds, playing, runners, running, sidewalk, sidewalks, walk, walkable, walkers, walking, walks, walkway, xing

Theme Breakdown*

Comment Theme	Total	Percent
Designs/Intersections/Signals	1,232	69.06%
Walking/Crossing	751	42.10%
Speed	589	33.02%
Visibility/Lighting	561	31.45%
Safety	547	30.66%
Driver Behavior	482	27.02%
Traffic/Congestion	444	24.89%
Maintenance/Green	433	24.27%
Access/Destinations	412	23.09%
Biking	236	13.23%
Children/Schools	210	11.77%
Parking	138	7.74%
Enforcement	123	6.89%
Transit	114	6.39%
Disabilities/Older Adults	103	5.77%

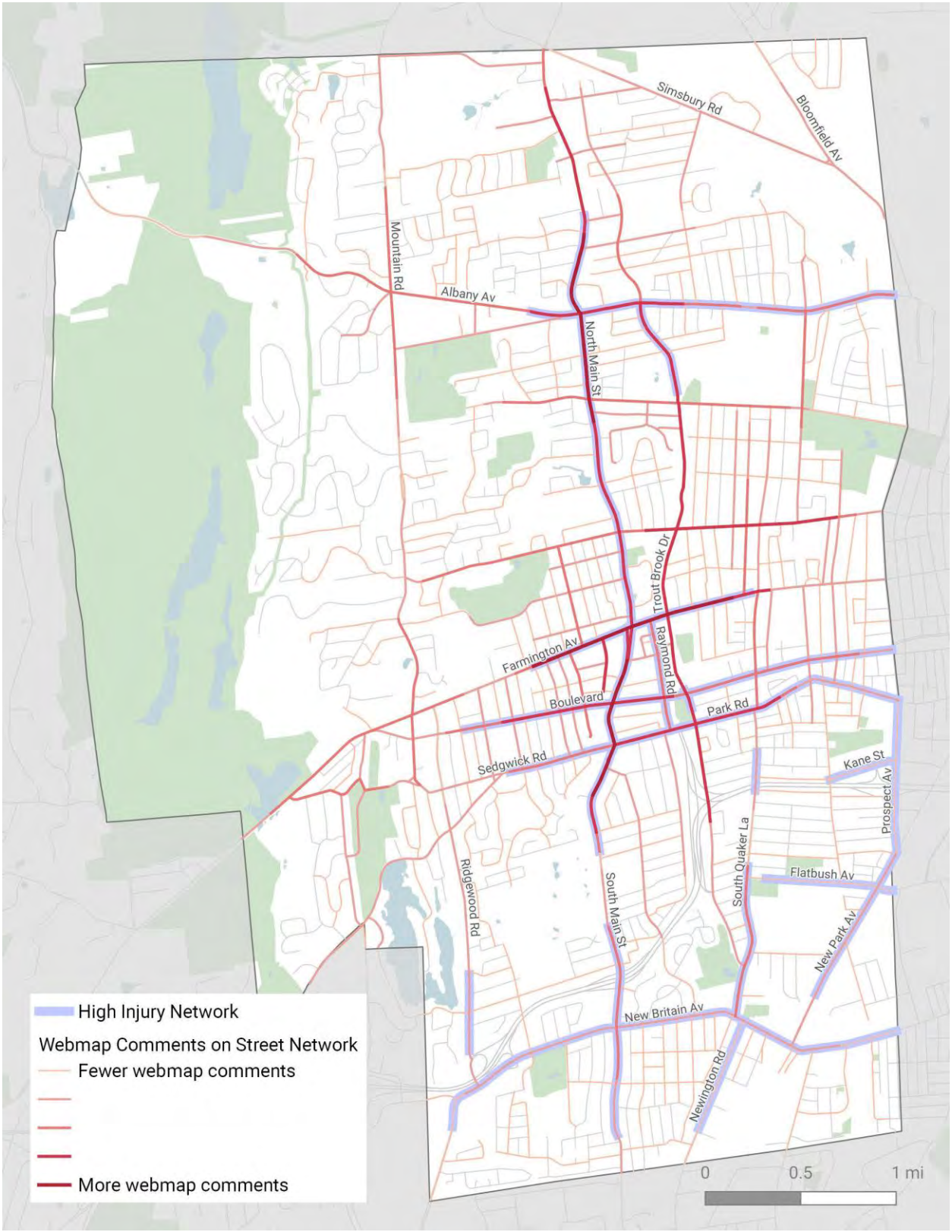
* Note: Since each comment could have more than one theme, the total value of this table will exceed the number of comments received.

Comment Heatmap

The map on the following page is a network-based heatmap reflecting the number of comments received through the webmap survey. This includes comments where users labeled an area *unsafe* or marked a location with an *idea*. To create the heatmap, the project team first assigned comments to any street segment within 50 feet of the comment location. Then, the team divided the street network into 1/10th-mile segments and assigned each segment with a score based on the number of comments and comment likes within ½-mile on the same street, in each direction. This mirrors the crash analysis process summarized in a separate appendix.

This approach highlights areas where users added many comments and agreed with existing comments (there was no option for a user to dislike a comment). In the map, the darker and thicker red lines represent segments that received more comments and likes. The High Injury Network (HIN) is overlaid to reveal how the HIN, which is based on historic crash data, compares with the webmap survey results, or people's perception of safety along the town's roadway network.

Figure 2: Heatmap of webmap comments on street network



Supplemental Data – Additional Survey Results

Issues

Which of the following roadway factors make you feel most unsafe as a pedestrian on roads in West Hartford?

- **Drivers do not yield at intersections/crosswalks (65.8%, 524)**
- **Do not feel visible to drivers at intersections/crosswalks (36.3%, 289)**
- **Lack of sidewalks or walking paths (25.1%, 200)**
- Not enough time to cross the road (19.1%, 152)
- Inadequate maintenance of sidewalks and walking paths (17.5%, 139)
- Sidewalks or walking paths don't have enough of a buffer from traveling vehicles (16.6%, 132)
- Other (14.6%, 116)
  - **Driver recklessness (speeding, not following rules of road)**
  - Poor sidewalk/crosswalk conditions (faded crosswalks, no pedestrian infrastructure, potholes)
  - Traffic
- Difficult to see oncoming drivers at intersections/crosswalks (12.6%, 100)
- Lack of separation from bicyclists on shared use paths (12.6%, 100)
- I generally feel safe with current roadway factors (9.2%, 73)
- Inadequate lighting (8.4%, 67)
- Sidewalks or walking paths are too narrow (5.5%, 44)

Which of the following roadway factors make you feel most unsafe as a person who uses a bicycle, scooter, or skates on roads in West Hartford?

- **Lack of bike lanes and biking paths (56.7%, 208)**
- **Bike lanes or biking paths don't have enough of a buffer from traveling vehicles (56.4%, 207)**
- **Drivers do not yield at intersections/crosswalks (39.8%, 146)**
- Bike lanes or biking paths are too narrow (27.5%, 101)
- Intersections/crosswalks and bicyclists are not visible enough or highlighted to drivers (16.9%, 62)
- Other (16.3%, 60)
  - **Driver recklessness (drivers speeding, inattentiveness)**
  - Poor bike infrastructure (lack of separation from cars and peds, no bike lanes, streets narrow)
  - Traffic calming infrastructure unsafe/little to none
- Difficult to see oncoming drivers at intersections/crosswalks (9.3%, 34)
- Lack of separation from pedestrians on shared use paths (8.2%, 30)
- Inadequate maintenance of bike lanes and biking paths (6.8%, 25)
- Not enough time to cross the road (5.4%, 20)
- I generally feel safe with current roadway factors (4.9%, 18)
- Inadequate lighting (3.3%, 12)
- Difficult to see pedestrians at intersections/crosswalks (2.5%, 9)

Which of the following roadway factors make you feel most unsafe as a driver or person who travels by vehicle on roads in West Hartford?

- **Drivers do not yield at intersections/crosswalks (45.8%, 361)**
- **Difficult to see pedestrians, bicyclists, or oncoming drivers at intersections/crosswalks (33.4%, 263)**
- **Bicyclists riding in the roadway/shoulder (30.1%, 237)**
- Other (27.7%, 218)
  - **Reckless driving (aggressive driving, drivers speeding, not following rules, distracted drivers)**
  - **Bikers/pedestrians not following rules**
  - **Confusing road infrastructure**
  - Lack of enforcement
  - Lack of road maintenance
  - Lack of traffic calming measures
- Lack of separation from bicyclists (26.9%, 212)
- Lack of warning and visibility for upcoming intersections/crosswalks (22.3%, 176)
- Inadequate maintenance of roadways (16.9%, 133)
- Inadequate lighting (8.8%, 69)
- Lack of separation from pedestrians (6.7%, 53)
- I generally feel safe with current roadway factors (6.7%, 53)

Which of the following behaviors make you feel most unsafe on roads in West Hartford?

- **Drivers speeding (77.0%, 611)**
- **Distracted driving (73.6%, 584)**
- **Non-compliance with rules of the road (54.9%, 436)**
- Drivers failing to yield to pedestrians or bicyclists (38.5%, 306)
- Impaired driving (with alcohol, marijuana, etc.) (10.5%, 83)
- Other (Please specify) (8.1%, 64)
  - **Reckless driving (aggressive or distracted driving, drivers speeding, not following rules)**
  - Bikers/Pedestrians not following rules of roads
  - Lack of maintenance
- I generally feel safe with current behaviors (2.9%, 23)

Solutions

Which of the following **roadway changes** do you think would have the greatest impact on improving road safety in West Hartford?

- **Redesigned roadways to reduce speeds (e.g., narrower roadways, speed humps) (54.3%, 431)**
- **Improved intersection/crosswalk safety for pedestrians and bicyclists (44.5%, 353)**
- **Modified signal timing to improve safety for everyone (35.3%, 280)**
- Improved existing bicycle facilities, such as protected bike lanes (30.1%, 239)
- Improved visibility of pedestrians, bicyclists, and drivers (28.7%, 228)
- Installation of buffers (such as landscaping) between sidewalks and roadway (27.0%, 214)
- Better maintained roads, sidewalks, bikeways, or paths (22.4%, 178)
- Other (Please specify) (22.3%, 177)

  - **Traffic enforcement (camera enforcement, more policing, roadway safety laws, speed limits/enforcement, ticketing of offenders)**
  - **Traffic calming/new signals and road design (separation of bikers and peds from cars, improving intersection infrastructure and visibility, reconfigured lane design, roundabouts)**
  - Separation of modes (between bikers, peds and drivers)
  - Maintenance of roadway (pothole repair, management of overgrown vegetation)
- Installation of more sidewalks (21.4%, 170)
- Installation of more bicycle facilities (14.7%, 117)
- Improved lighting (13.2%, 105)
- Improved pedestrian environment serving transit stops (8.3%, 66)
- I generally feel safe on roads in West Hartford (2.4%, 19)

Which of the following **behavior programs** do you think would have the greatest impact on improving road safety in West Hartford?

- **More enforcement of traffic laws (e.g., red light camera enforcement) (67.9%, 539)**
- **More speed management (e.g., appropriate speed limits, speed cameras) (66.8%, 530)**
- **Education to increase awareness of the rules of the road and address behaviors to increase safety for roadway users (36.0%, 286)**
- Education to reduce distracted driving (23.0%, 183)
- Other (Please specify) (21.4%, 170)
  - **Enforcement (cameras, citations, police enforcement)**
  - **Redesigning roads (Designing roads to suit non-automotive uses, implement road diets and/or traffic calming)**
  - Education of rules of road (for bicyclists, pedestrians, and drivers)
    - Some respondents doubt the efficacy of education because they believe those who'd benefit the most will not participate, and education may not be as effective as other means.
  - Better intersection infrastructure
  - More public transit
  - Better roadway maintenance
- None of the above (5.4%, 43)
- Education to reduce impaired roadway users (4.9%, 39)

Supplemental Data – Cross Tabulated Survey Results

Age Demographics

	#	%
17 or younger	7	1%
18 to 34	86	11%
35 to 49	224	29%
50 to 64	238	31%
65 or older	208	27%
Total (completer	763	

Age Analysis

Older Adults		
65+	208	27.26%
Middle Aged Adults		
35-64	462	61%
Teens and Young Adults		
34 and younger	93	12.19%

Question 1:

Modes Used

	Walk	Bike/Scooter/Skate	Public Transit	ADA	Drive	Taxi/Uber
All of the time	85	13	3	1	266	0
Most of the time	80	17	5	0	344	2
About half the time	202	44	8	0	120	6
Occasionally	380	291	99	4	48	312
Never	41	423	673	783	10	468

Modes Used by Age Group

All of the time

34 or younger	13	3	1	1	29	0
35 to 64	51	8	2	0	156	0
65 or older	18	2	0	0	74	0

Most of the time

34 or younger	2	0	0	0	2	0
35 to 64	40	9	2	0	205	1
65 or older	19	3	1	0	90	0

About half the time

34 or younger	26	8	2	0	18	2
35 to 64	113	29	5	0	69	1
65 or older	56	4	1	0	31	2

Occasionally

34 or younger	30	31	17	0	12	51
35 to 64	237	207	54	1	26	195
65 or older	102	43	26	3	10	57

Never

34 or younger	5	46	71	92	0	39
35 to 64	21	209	399	461	6	265
65 or older	13	156	180	205	3	149

Question 2:

Perception of Safety by Pedestrians

	Intersections/cross walks and pedestrians are not visible enough or highlighted to drivers	Not enough time to cross the road	Drivers do not yield at intersections/cross walks	Difficult to see oncoming drivers at intersections/crosswalks	Lack of sidewalks or walking paths	Sidewalks or walking paths are too narrow	Sidewalks or walking paths don't have enough of a buffer from traveling vehicles	Lack of separation from bicyclists on shared use paths	Inadequate maintenance of sidewalks and walking paths	Inadequate lighting	Driving recklessness and unlawfulness (from other category)
34 or younger	42	21	61	15	23	10	17	9	18	10	12
35 to 64	164	74	309	51	129	29	84	56	75	43	39
65 or older	73	54	137	26	39	4	26	30	41	11	13
Total # Identified	279	149	507	92	191	43	127	95	134	64	64
% of Total Responses	**37%**	**20%**	**66%**	**12%**	**25%**	**6%**	**17%**	**12%**	**18%**	**8%**	**8%**

Question 3:

Perception of Safety by Bikers/Scooterists/Skaters

	Intersections/cross walks and bicyclists are not visible enough or	Not enough time to cross the road	Drivers do not yield at intersections/cross walks	Difficult to see oncoming drivers at intersections/crosswalks	Difficult to see pedestrians at intersections/cross walks	Lack of bike lanes and biking paths	Bike lanes or biking paths are too narrow	Bike lanes or biking paths don't have enough of a buffer from traveling	Lack of separation from pedestrians on shared use paths	Inadequate maintenance of bike lanes and biking paths	Inadequate lighting	Driving recklessness and unlawfulness (from Other category)
34 or younger	7	3	11	3	1	40	16	32	4	7	1	10
35 to 64	43	11	106	22	3	134	71	142	19	17	8	14
65 or older	10	4	20	6	5	28	10	26	5	1	2	4
Total # Identified	60	18	137	31	9	202	97	200	28	25	11	28
% of Total Responses	**8%**	**2%**	**18%**	**4%**	**1%**	**26%**	**13%**	**26%**	**4%**	**3%**	**1%**	**4%**

Question 4:

Perception of Safety by Drivers

	Difficult to see pedestrians, bicyclists, or oncoming drivers at intersections/cross walks	Lack of warning and visibility for upcoming intersections/cross walks	Drivers do not yield at intersections/cross walks	Lack of separation from pedestrians	Lack of separation from bicyclists	Bicyclists riding in the roadway/shoulder	Inadequate maintenance of roadways	Inadequate lighting	Driving recklessness and Unlawfulness (from other category)
34 or younger	38	24	35	6	32	29	18	8	14
35 to 64	139	96	206	38	109	113	85	41	81
65 or older	77	47	107	7	66	85	26	16	26
Total # Identified	254	167	348	51	207	227	129	65	121
% of Total Responses	**33%**	**22%**	**46%**	**7%**	**27%**	**30%**	**17%**	**9%**	**16%**

Question 5:

General Perception of Safety by Age Group

	Distracted driving	Impaired driving (with alcohol, marijuana, etc.)	Drivers speeding	Drivers failing to yield to pedestrians or bicyclists	Non-compliance with rules of the road	Driving Recklessness and Unlawfulness (from other category)
34 or younger	65	12	65	47	45	8
35 to 64	350	47	361	181	238	38
65 or older	147	18	163	68	137	16
Total # Identified	562	77	589	296	420	62
% of Total Responses	**74%**	**10%**	**77%**	**39%**	**55%**	**8%**

Question 6:

Physical Improvements Posed by Age Group

	Improved intersection/crosswalk safety for pedestrians and bicyclists	Improved visibility of pedestrians, bicyclists, and drivers	Installation of more sidewalks	Installation of buffers (such as landscaping) between sidewalks and roadway	Improved pedestrian environment serving transit stops	Installation of more bicycle facilities	Improved existing bicycle facilities, such as protected bike lanes	Redesigned roadways to reduce speeds (e.g., narrower roadways, speed humps, etc.)	Modified signal timing to improve safety for everyone	Better maintained roads, sidewalks, bikeways, or paths	Improved lighting
34 or younger	50	34	22	41	14	29	39	55	33	24	7
35 to 64	196	119	119	126	38	73	134	253	150	107	66
65 or older	98	68	22	36	12	13	59	108	86	39	28
Total # Identified	344	221	163	203	64	115	232	416	269	170	101
% of Total Responses	**45%**	**29%**	**21%**	**27%**	**8%**	**15%**	**30%**	**55%**	**35%**	**22%**	**13%**

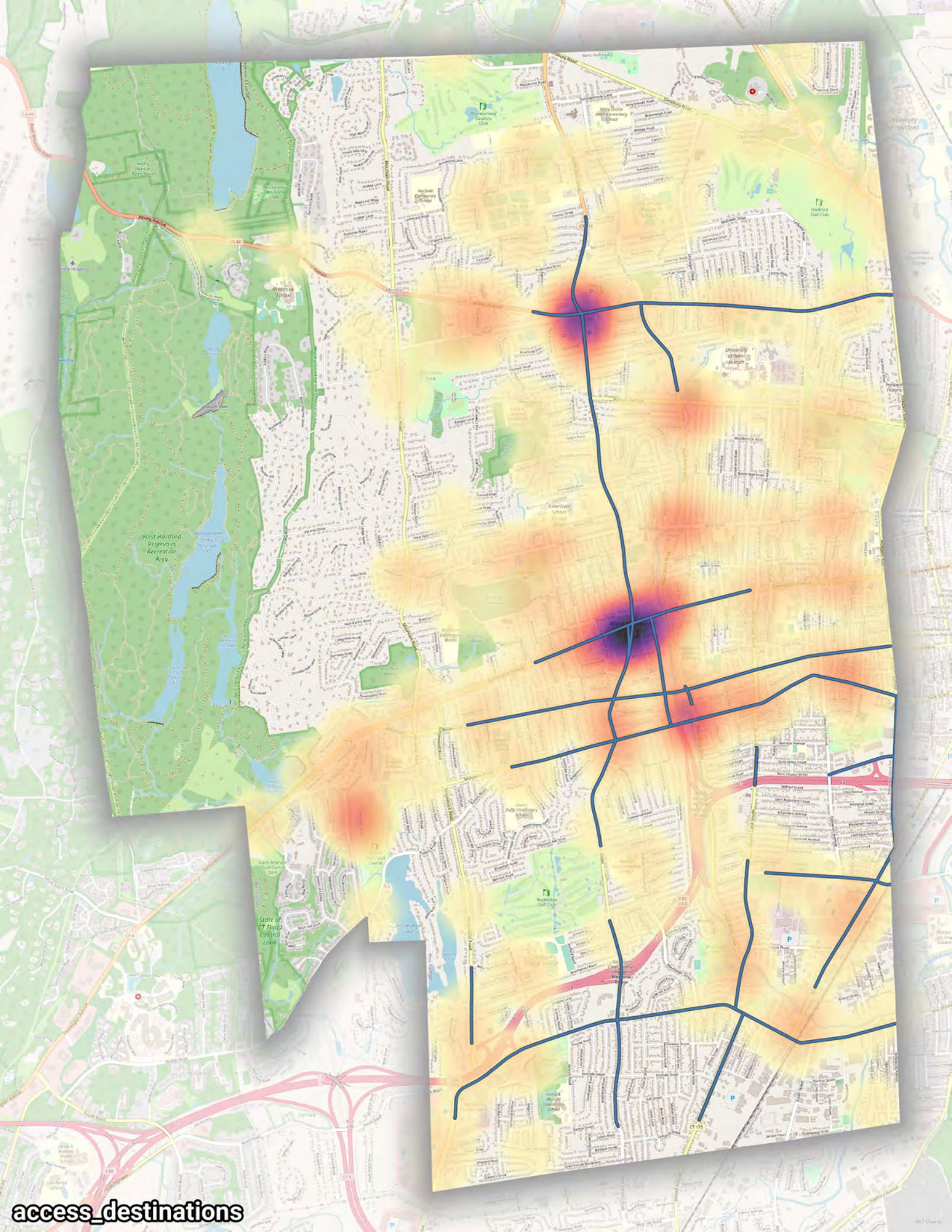
Question 7:

Program Improvements Posed by Age Group

	Education to reduce impaired roadway users	Education to reduce distracted driving	Education to increase awareness of the rules of the road and address behaviors to increase safety for	More speed management (e.g., appropriate speed limits, speed cameras)	More enforcement of traffic laws (e.g., red light camera enforcement)
34 or younger	10	23	39	66	55
35 to 64	20	108	145	307	318
65 or older	8	44	95	140	145
Total # Identified	38	175	279	513	518
% of Total Responses	**5%**	**23%**	**37%**	**67%**	**68%**

Supplemental Data –Thematic Heatmaps from Webmap Survey

The supplemental data includes heatmaps of each comment theme. The theme is labeled in the lower left of each map.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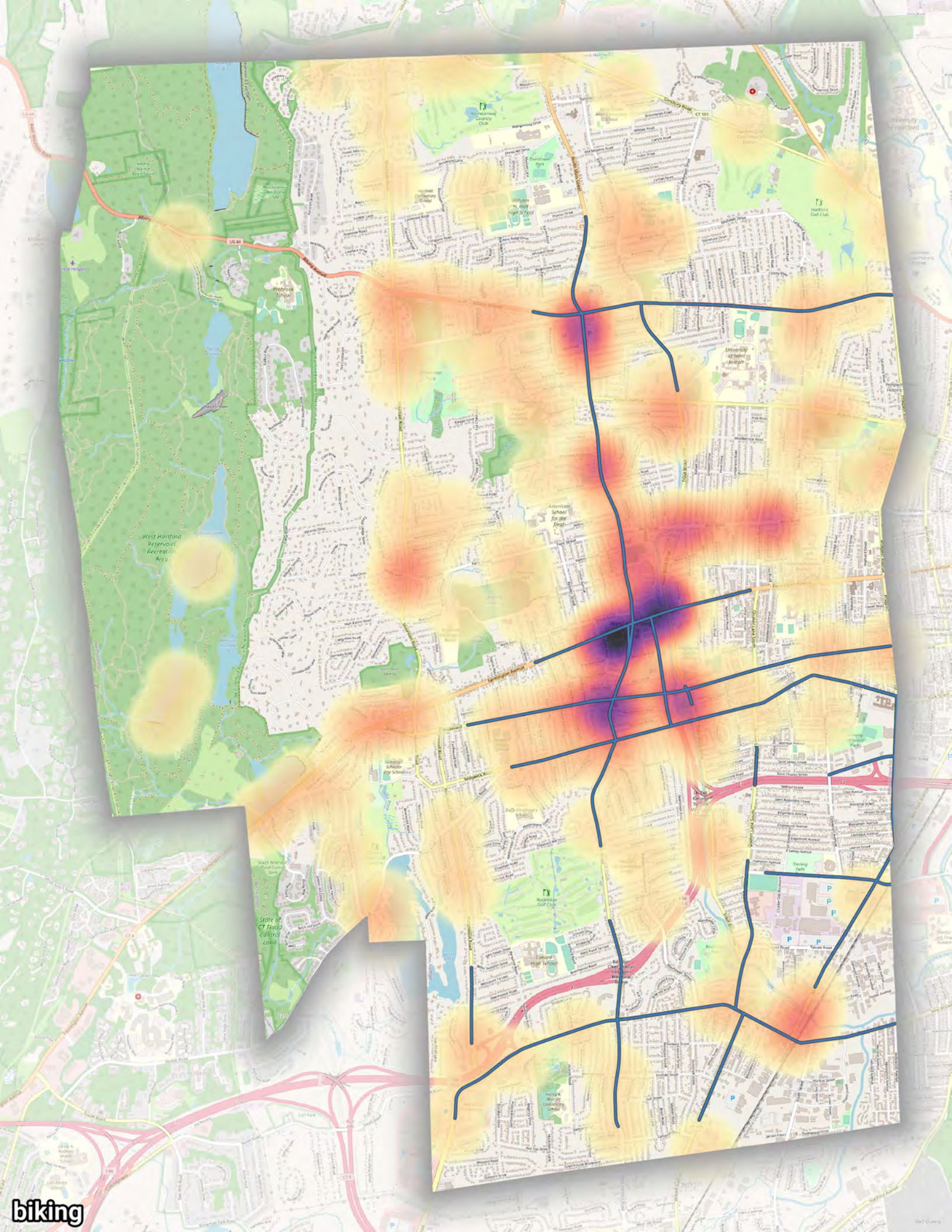
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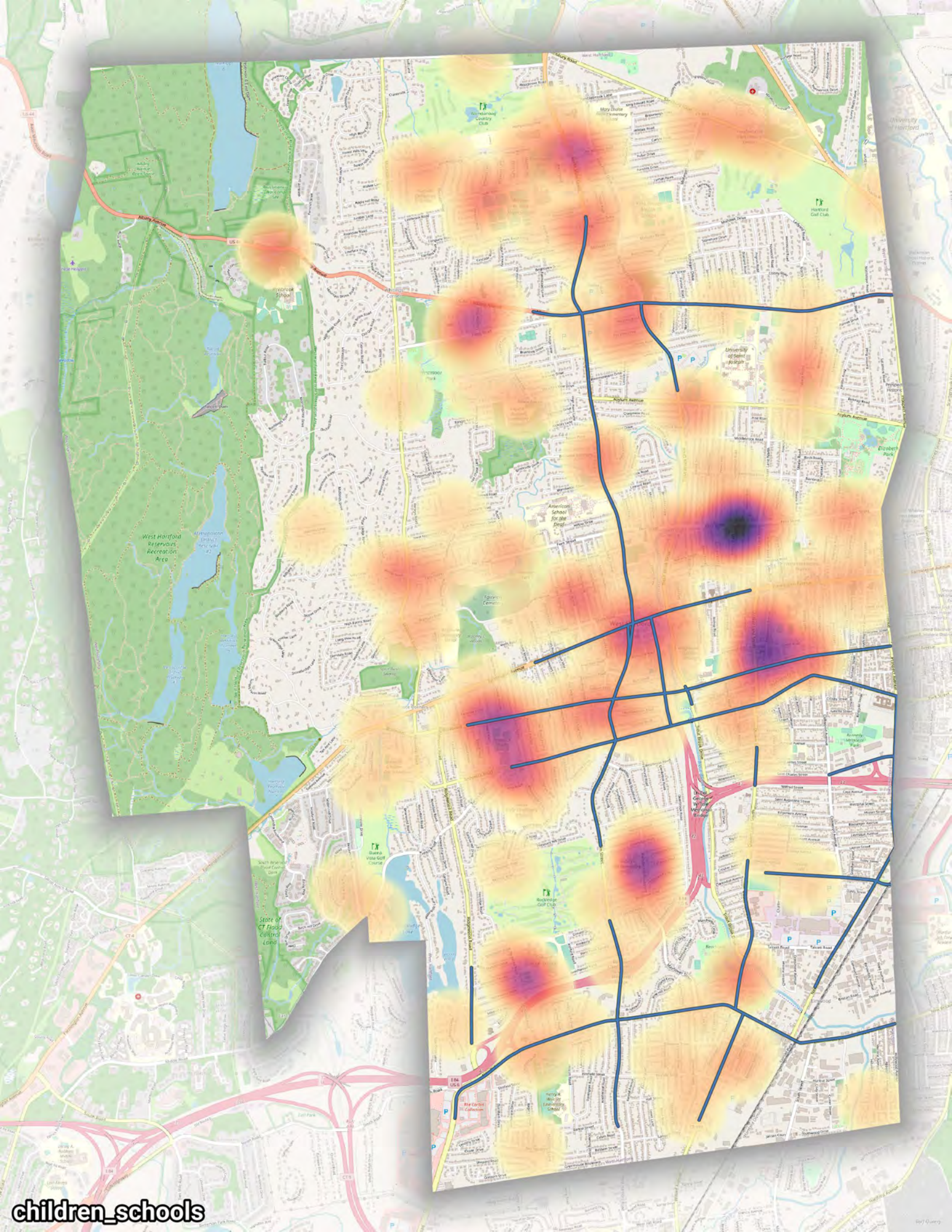

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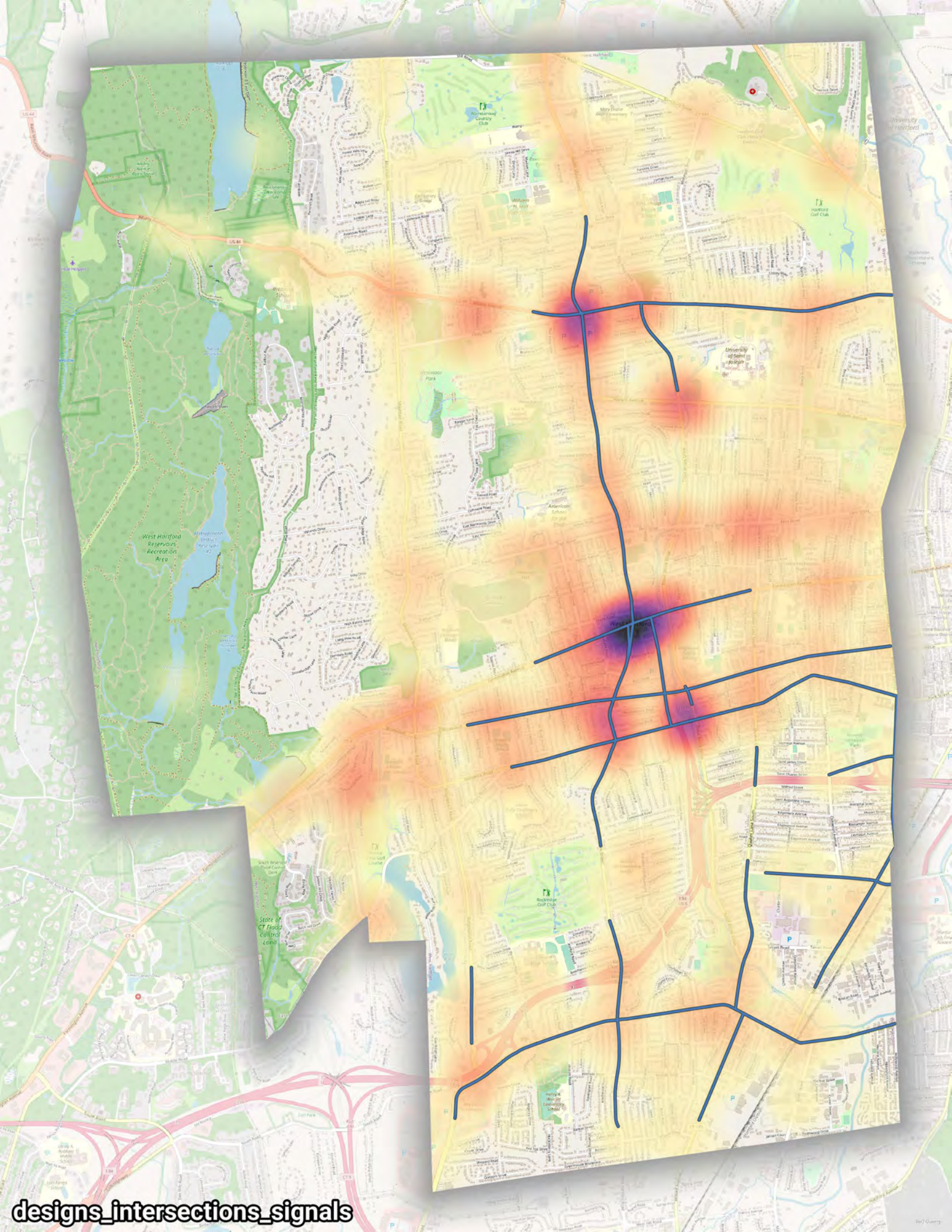
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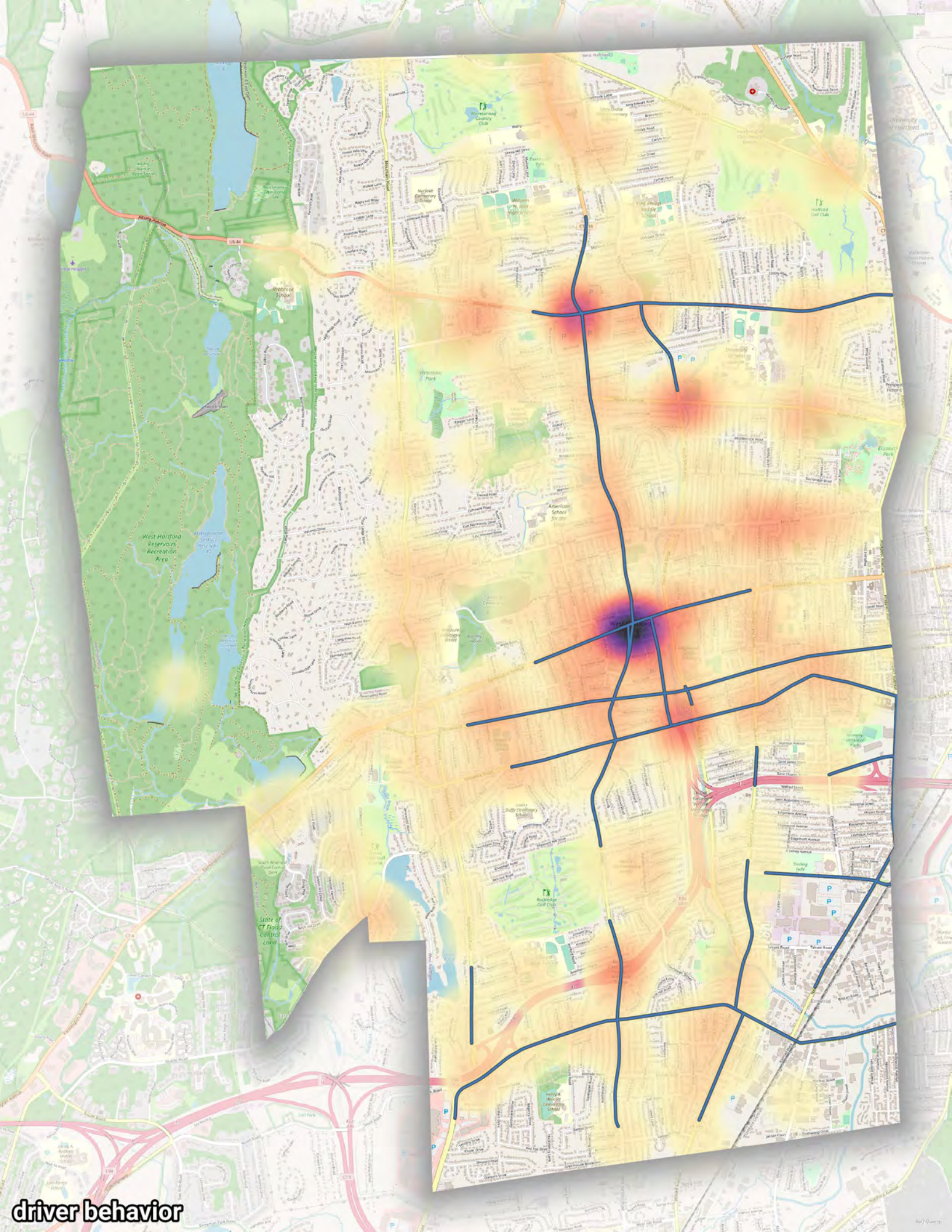
University of Saint Joseph
Hartford Golf Club
Rockledge Golf Club
State of CT Flood Control Land
designs_intersections_signals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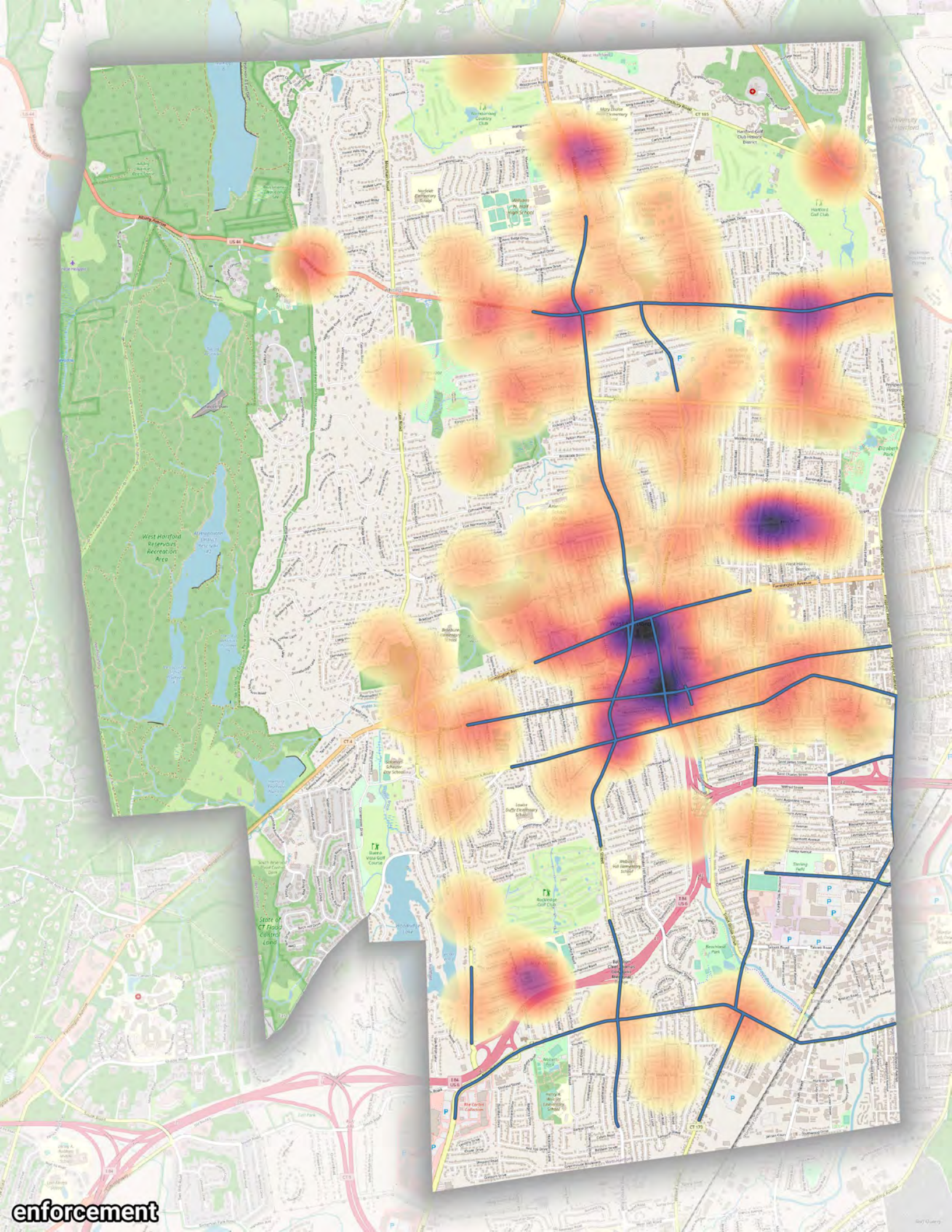
Westmoor Park
Elizabeth Park
Rockledge Golf Club
Hartford Golf Club
Prospect Hill Cemetery
Mountain Road
Albany Avenue
US 44
Bishop Woods
Metropolitan District Trout Hatchery
State of CT Flood Control Land
driver behavior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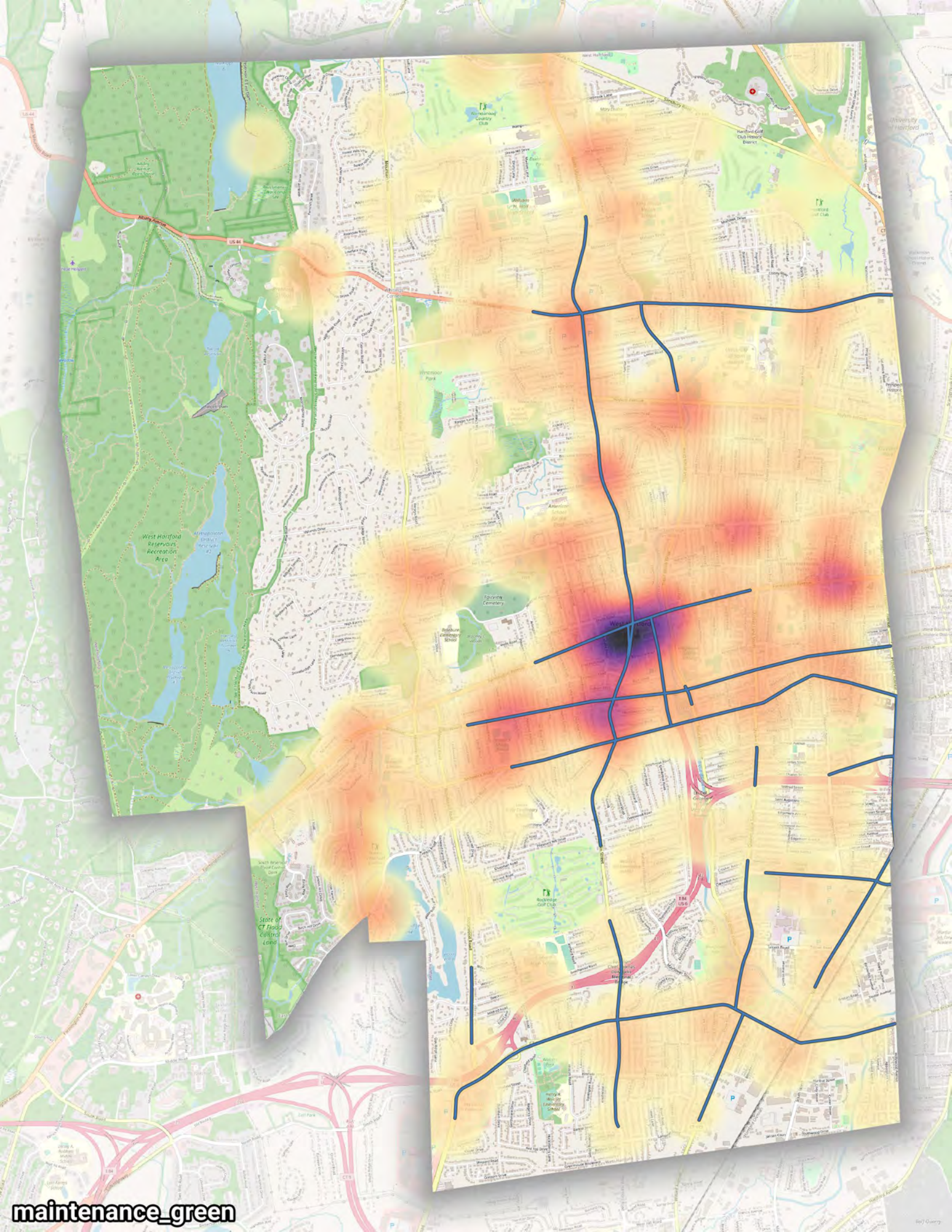
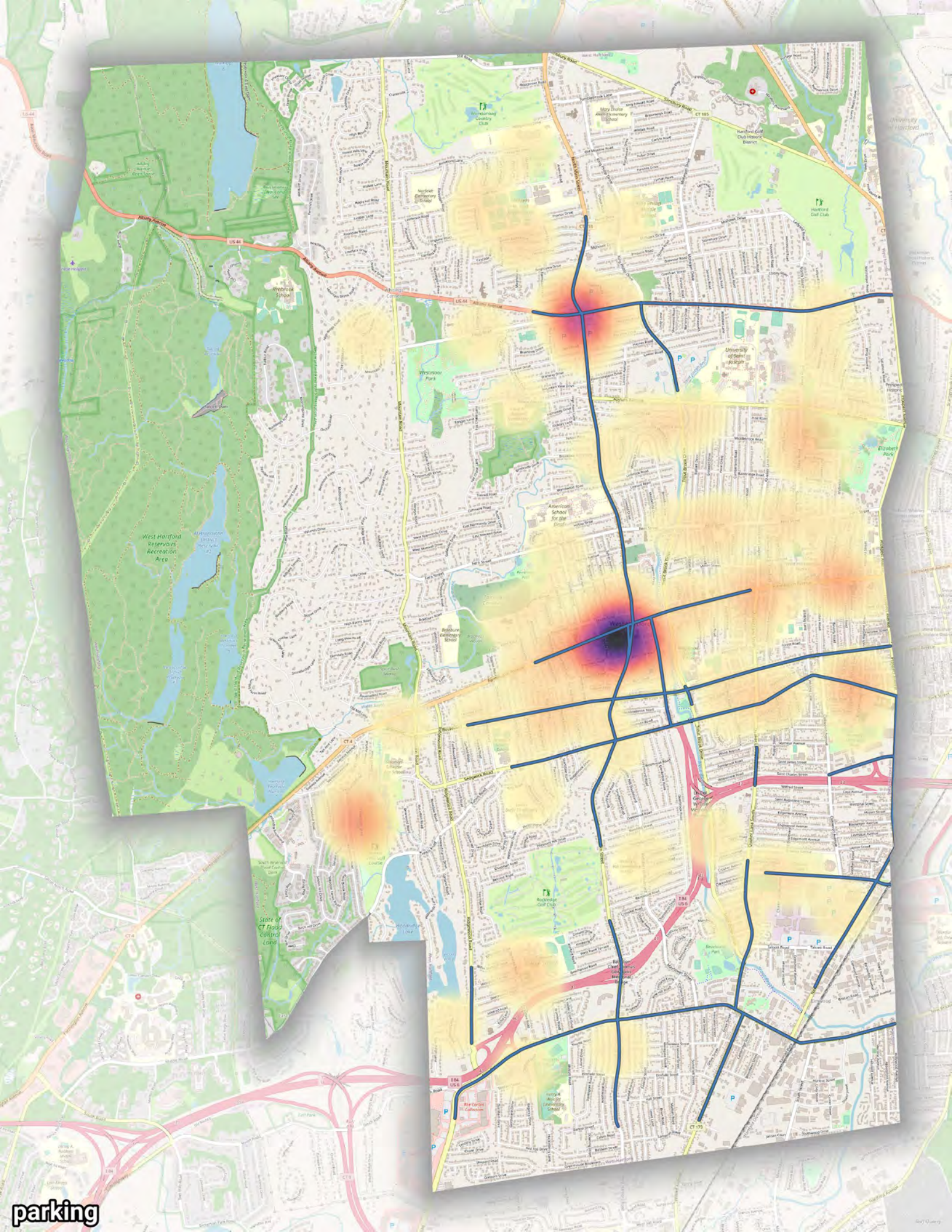
enforcement


West Hartford Reservoirs Recreation Area
Fairview Cemetery
State of CT Flood Control Land
maintenance_green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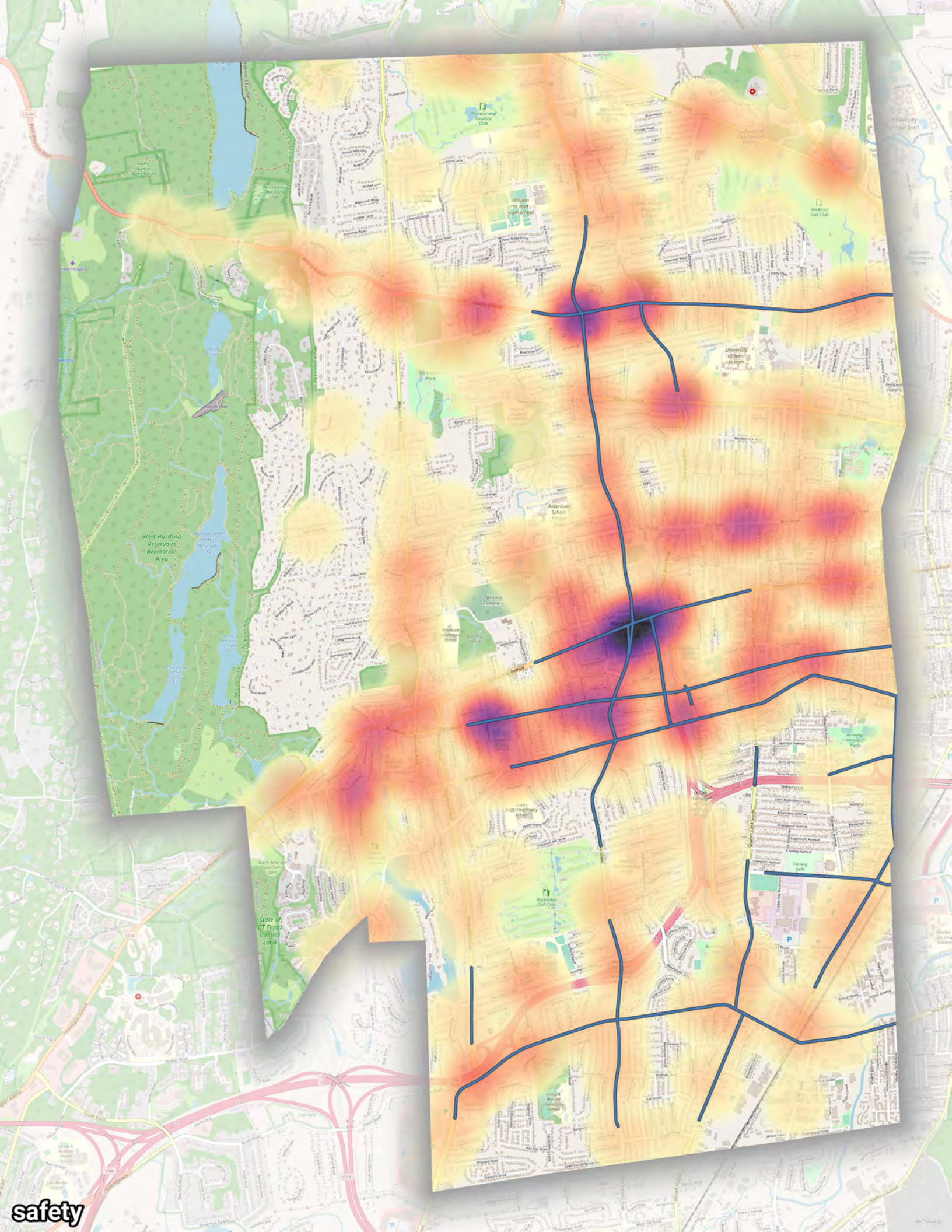
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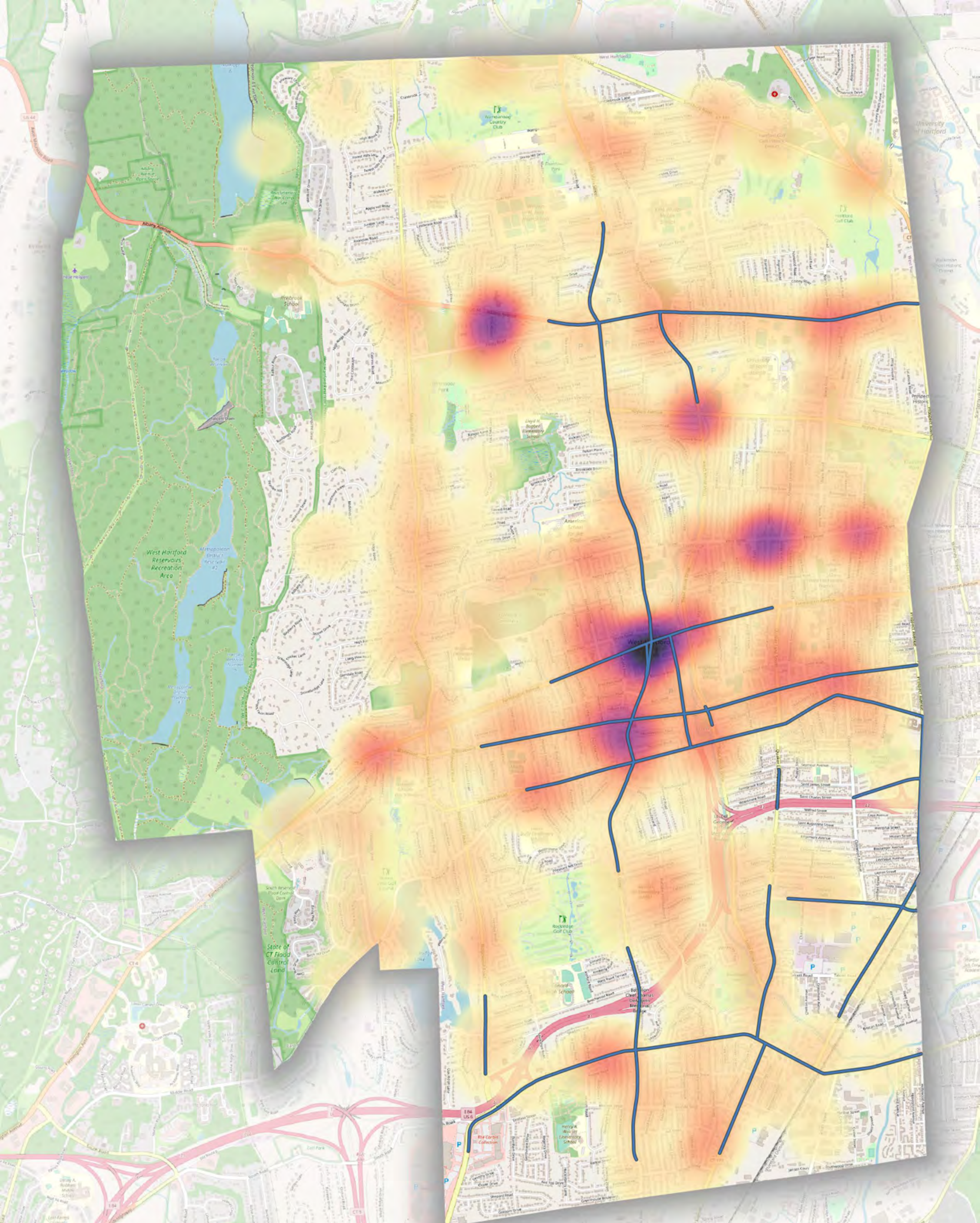
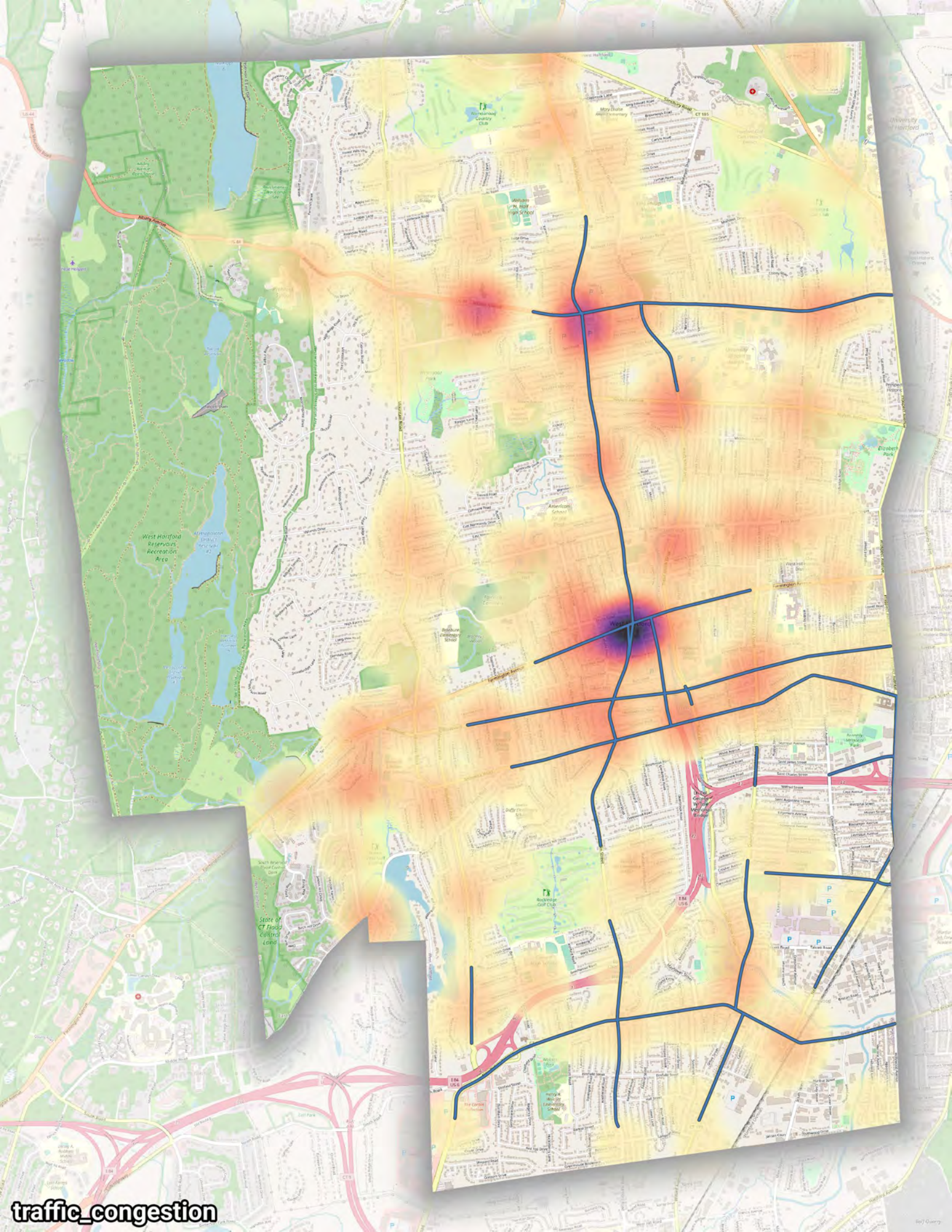
Fairview Cemetery
Rockledge Golf Club
State of CT Flood Control Land
safety


West Hartford Reservoirs Recreation Area
Rockledge Golf Club
State of CT Flood Control Land

speed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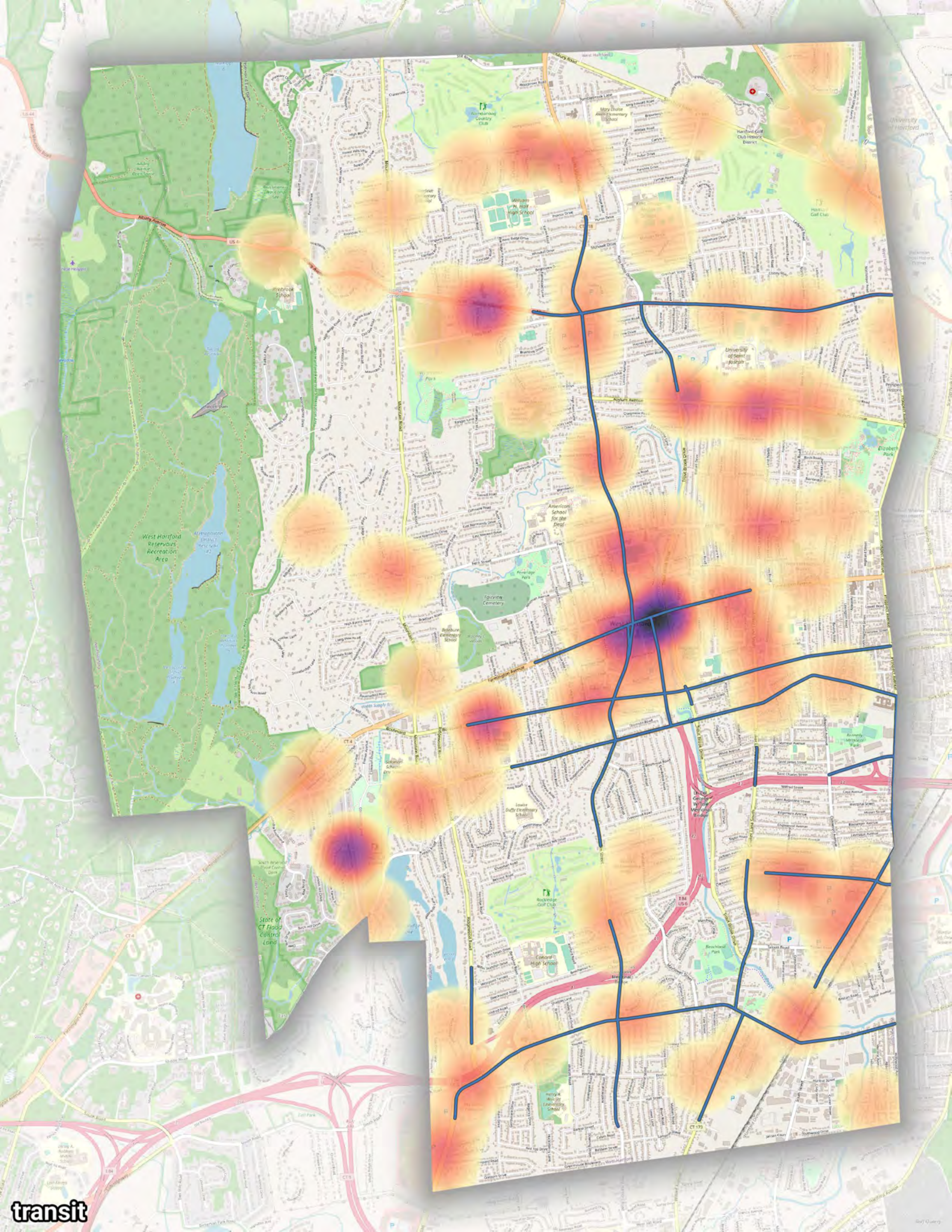
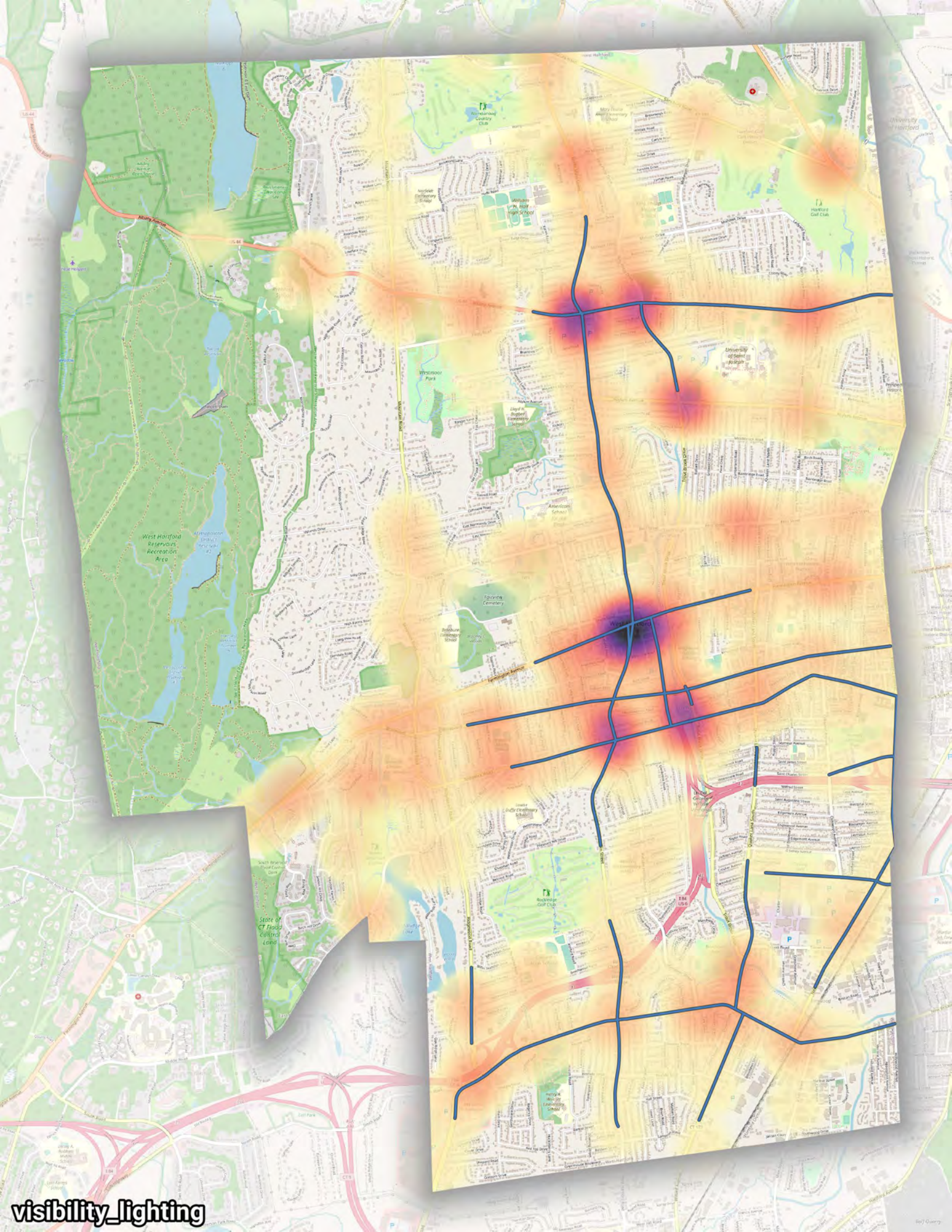

West Hartford Reservoirs Recreation Area
William H. Hall High School
University of Saint Joseph
American School for the Deaf
Fairview Cemetery
Elizabeth Park
Rockledge Golf Club
Conard High School
Beachland Park
University of Hartford
Hartford Golf Club
State of CT Flood Control Land

transit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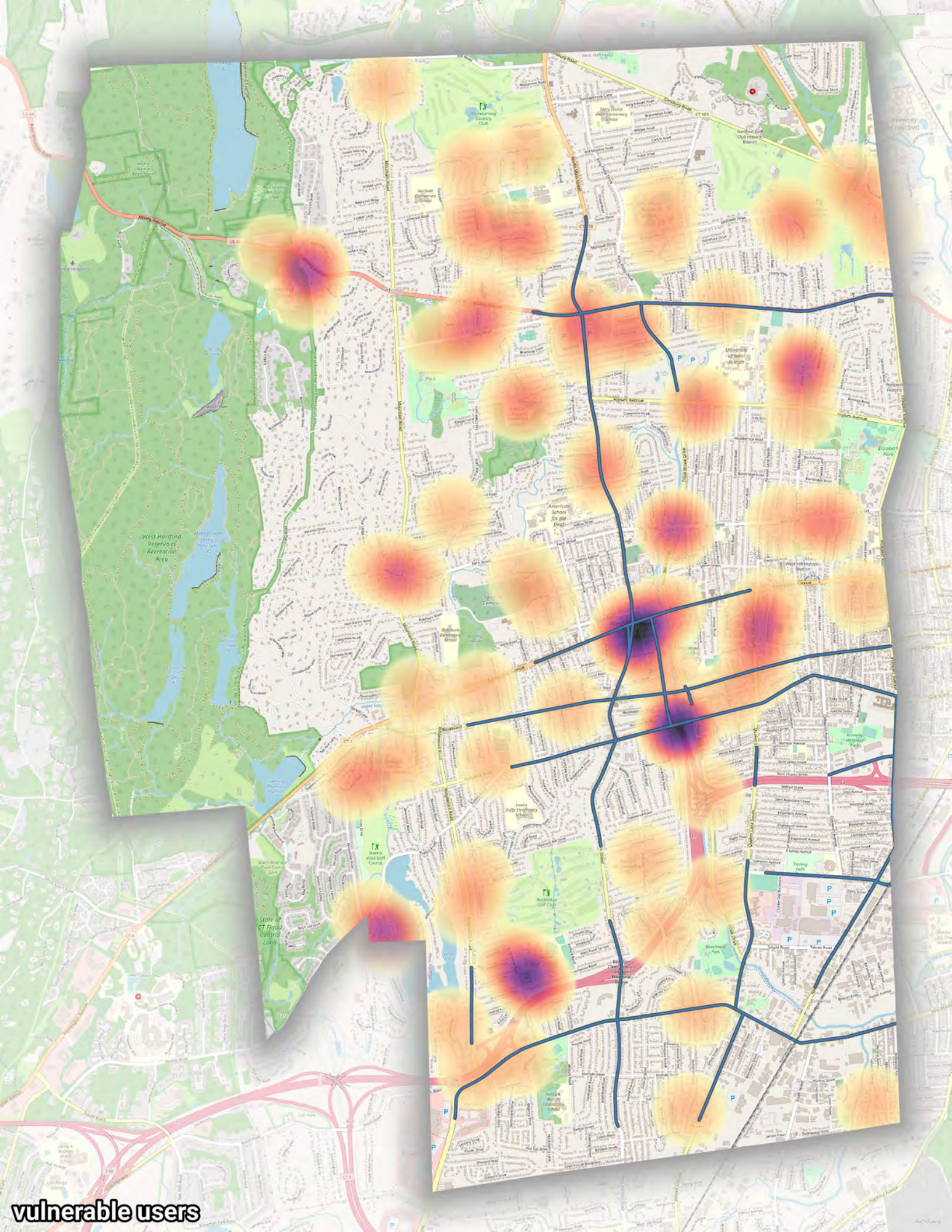
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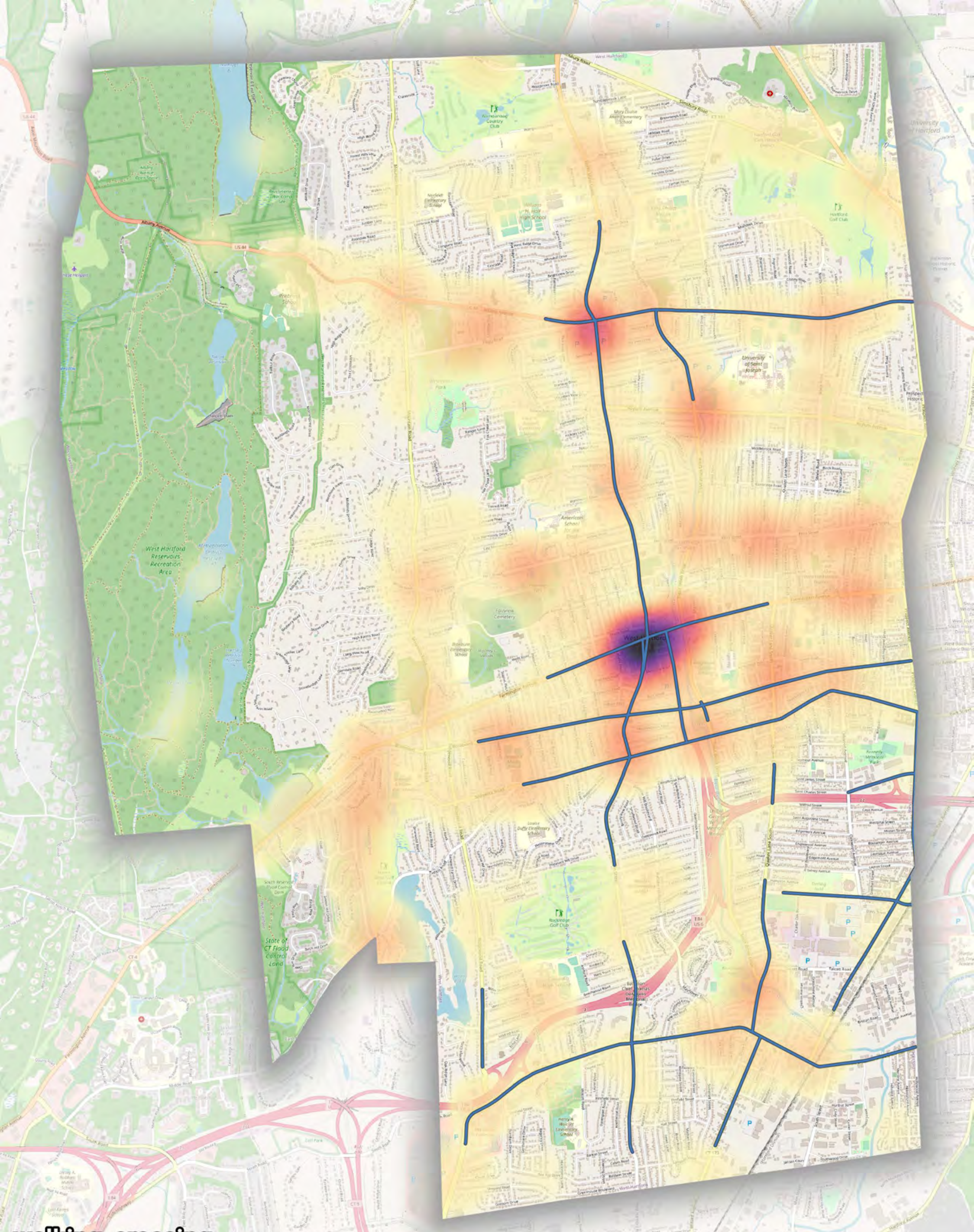

walking_crossing