

NEW BRITAIN SAFETY ACTION PLAN

SAFETY DATA ANALYSIS TECHNICAL MEMORANDUM

Prepared for
The City of New Britain

Prepared by
Cambridge Systematics, Inc.

with
SLR Consulting
Vanasse Hangen Brustlin, Inc.

May 11, 2025



TABLE OF CONTENTS

1.	Introduction.....	1
1.1	Data Sources and Methodology	3
2.	Historical Trends Analysis	5
2.1	Long-Term Trends	5
2.2	Key Crash Trends	7
2.2.1	Crashes by Injury Severity	7
2.2.2	Crashes by Geographical Distribution and Population	9
2.2.3	Crashes by Mode	12
2.2.4	Crashes by Time of Day	13
2.2.5	Crashes by Functional Class	15
2.2.6	Crashes by Roadway Ownership	16
2.3	Emphasis Areas	17
2.3.1	Intersections.....	19
2.3.2	Roadway Departures.....	20
2.3.3	Aggressive Driving	21
2.3.4	Unrestrained Occupants	22
2.3.5	Impaired Driving.....	23
2.3.6	Distracted Driving.....	24
2.3.7	Older Drivers	25
2.3.8	Younger Drivers.....	26
2.3.9	Motorcyclists	27
2.3.10	Pedestrians	28
2.3.11	Bicyclists	29
3.	Pedestrian & Bicyclist Deep-Dive	31
3.1	Total Crashes and Severity	32
3.1.1	Pedestrian & Bicyclist Crash Locations.....	33
3.1.2	Pedestrian & Bicyclist Crash Time	35
3.2	Vision Zero Task Force Downtown Behavioral Audit	36
3.3	Video Analysis of Downtown VRU Behavior	37
3.3.1	Key Findings by Mode	38

3.3.2	Conclusions	40
3.4	Review of Police Crash Report Narratives.....	40
3.5	Other Pedestrian & Bicyclist Observations	41
4.	Automated Traffic Enforcement Safety Devices.....	42
4.1	Analysis in School Zones.....	42
4.2	Potential Locations for ATESD in School Zones.....	48
4.3	Next Steps for ATESD	48
5.	High Crash Network	49
5.1	Connecticut Roadway Safety Management System	49
5.2	Other Relevant Data Sets	50
5.3	Final High Crash Network	50
6.	Next Steps	55

LIST OF TABLES

Table 1	Safety Analysis Dataset Inventory, Ownership, and Notes.....	3
Table 2	Five E's of Safety Framework, New Britain Vision Zero Safety Action Plan	4
Table 3	Crashes by Injury Severity in New Britain, Excluding Limited Access Facilities (2019-2023)...	8
Table 4	Crashes by Functional Classification (2019-2023).....	15
Table 5	Emphasis Area Summary.....	17
Table 6	Summary of Crashes in School Zones	47
Table 7	Final High Crash Network Intersections.....	52
Table 8	Final High Crash Network Segments	54
Table 9	CTCDR Emphasis Area Queries.....	56

LIST OF FIGURES

Figure 1	Map of All Crashes in New Britain, Connecticut by Severity, 2019-2023	2
Figure 2	Long-Term Fatality and Serious Injury Trend (1999-2023)	6
Figure 3	Long-Term Fatality and Serious Injury Rate Trend per 10,000 People (1999-2023)	7
Figure 4	Geographic Crash Distrubtion (2019-2023)	10
Figure 5	Population Distrubtion (2020)	11
Figure 6	Parties Involved in Crashes (2019-2023).....	12
Figure 7	Crashes by Time of Day (2019-2023)	13
Figure 8	Fatal and Serious Injury Crashes by Time of Day (2019-2023)	14
Figure 9	Crashes by Roadway Ownership (2019-2023)	16
Figure 10	Intersection-Related Crashes (2019-2023)	19
Figure 11	Roadway Departure Crashes (2019-2023)	20
Figure 12	Aggressive Driving Crashes (2019-2023).....	21
Figure 13	Crashes with Unrestrained Occupants (2019-2023).....	22
Figure 14	Impaired Driving Crashes (2019-2023)	23
Figure 15	Distracted Driving Crashes (2019-2023)	24
Figure 16	Crashes Involving Older Drivers (2019-2023)	26
Figure 17	Crashes Involving Younger Drivers (2019-2023)	26
Figure 18	Crashes Involving Motorcyclists (2019-2023)	27
Figure 19	Crashes Involving Pedestrians (2019-2023)	28
Figure 20	Crashes Involving Bicyclists (2019-2023)	30
Figure 21	Pedestrian & Bicyclist Crash Severity (2021-2023)	32
Figure 22	Pedestrian & Bicyclist Crash Roadway Location (2021-2023).....	33
Figure 23	Pedestrian and Bicyclist Crashes (2021-2023)	34
Figure 24	Pedestrian & Bicyclist Crashes by Time of Day (2021-2023).....	35
Figure 25	Pedestrian & Bicyclist Crashes by Month (2021-2023).....	36
Figure 26	Percentage of Total Crossing Movements by Type.....	38
Figure 27	A Pedestrian Crosses the Street Diagonally to Reach a Bus Stop	38
Figure 28	An Electric Wheelchair User Crosses Using Concurrent Timing.....	39
Figure 29	Cyclists are Observed Using a Crosswalk Rather than the Marked Bike Crossing	39
Figure 30	A Skateboarder is Observed Riding into Oncoming Traffic After Crossing Diagonally	40
Figure 31	Total Crashes in School Zones (2021-2023)	43

Figure 32	Fatal and Serious Injury Crashes in School Zones (2021-2023)	45
Figure 33	Speeding Crashes in School Zones (2021-2023)	46
Figure 34	Final High Crash Network Intersections.....	51
Figure 35	Final High Crash Network Segments	53
Figure 36	CRSMS Outputs – State Intersections All Crashes	58
Figure 37	CRSMS Outputs – State Intersections VRU Crashes.....	59
Figure 38	CRSMS Outputs – Local Intersections All Crashes.....	60
Figure 39	CRSMS Outputs – Local Intersections VRU Crashes.....	61
Figure 40	CRSMS Outputs – State Segments All Crashes.....	62
Figure 41	CRSMS Outputs – State Segments VRU Crashes.....	63
Figure 42	CRSMS Outputs – Local Segments All Crashes.....	64
Figure 43	CRSMS Outputs – Local Segments VRU Crashes.....	65

1

INTRODUCTION

This technical memorandum presents a detailed analysis of safety data in the **City of New Britain, Connecticut** during the period spanning calendar years 2019 to 2023. This analysis was conducted to support the development of the **New Britain Vision Zero Safety Action Plan** (The Plan). The document is organized into the following sections, pursuant to the organization agreed to in the September 2024 **Data Collection Methodology Technical Memorandum**.

- **Chapter 1 – Introduction:** Describes the background, data sources, methodology, and objective of this memo.
- **Chapter 2 – Historical Trends Analysis:** Reviews crash data from 2019-2023 and identifies common contributing factors to crashes in New Britain such as time of day, functional class, driver behavior, driver age, and more.
- **Chapter 3 – Pedestrian & Bicyclist Deep-Dive:** Analysis of trends particularly important to vulnerable road users.
- **Chapter 4 – Automated Traffic Enforcement Safety Devices:** Analyzes school zones in New Britain to prioritize potential locations for the installation of Automated Traffic Enforcement Safety Devices, such as speed cameras.
- **Chapter 5 – High Crash Safety Network:** Overlays crash and other data to identify the High Crash Network.
- **Chapter 6 – Next Steps:** Describes the relationship between this document and upcoming Safety Action Plan tasks.

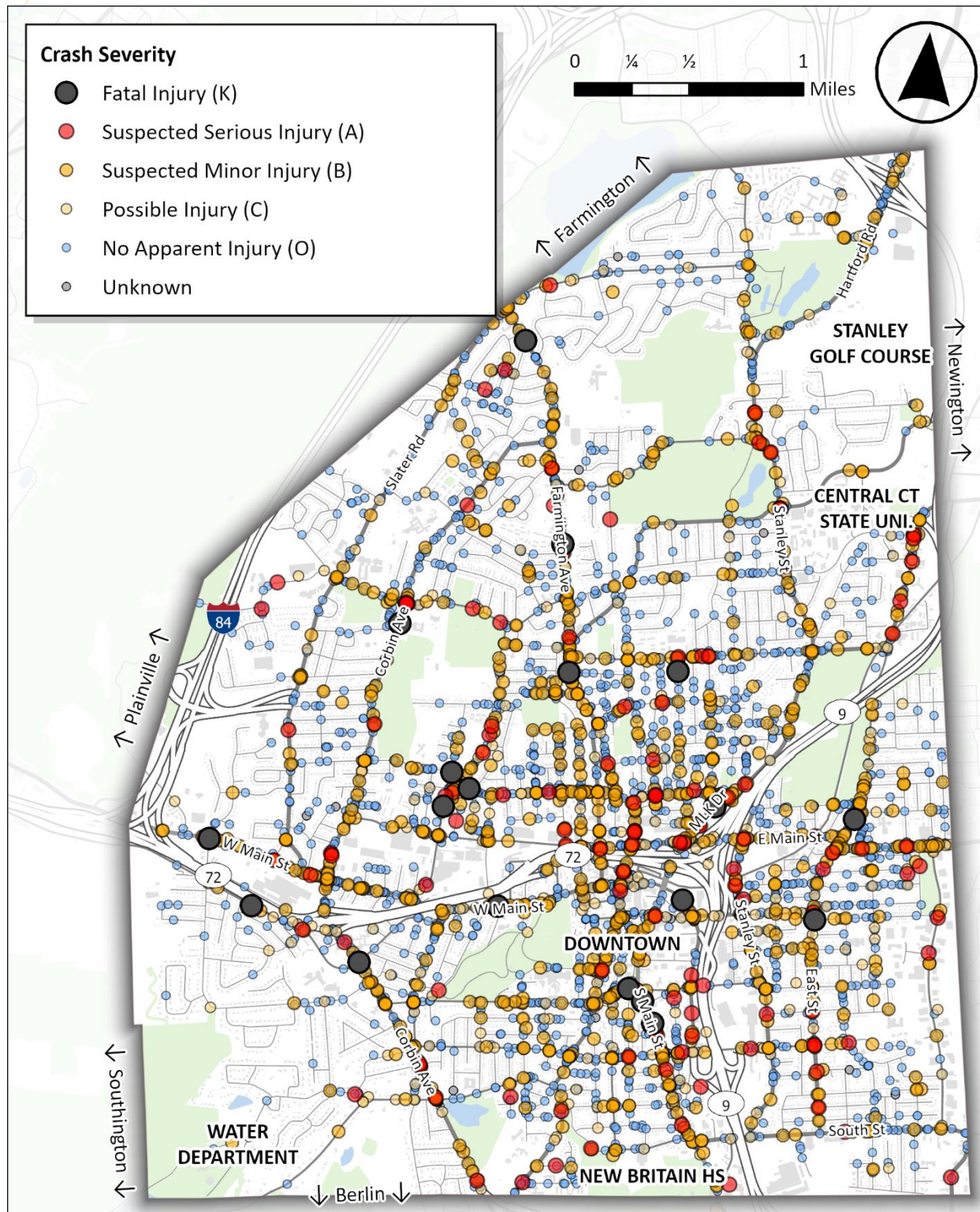
This memorandum is submitted in fulfillment of the **Safety Analysis** component of the **Safe Streets and Roads for All (SS4A) Action Plan**, the third of seven components [listed here](#). This analysis was conducted in accordance with the Federal guidance for implementing the [Safe Streets and Roads for All \(SS4A\) Grant Program](#) to ensure compliance with the [SS4A Self-Certification Worksheet](#). Together with the insights collected through the Public Outreach process, these analyses provide the basis for the remaining components of the Safety Action Plan in the following ways:

- The trends presented in Sections 2 and 3 will influence the strategies and policies introduced later in the plan; and
- The locations identified in Section 4 and Section 5 will inform the development of concept-level engineering plans.

From 2019 to 2023, there were just under 6,000 crashes in New Britain, excluding crashes on limited access facilities such as interstates, freeways, and expressways. 2.5 percent of these crashes result in a fatality or serious injury, which equates to approximately five people killed and 25 people seriously injured on New Britain's roadways each year.

Error! Reference source not found. presents an overview of all crashes, excluding Interstates, freeways, and expressways, within the City Limits between 2019 and 2023.

FIGURE 1 MAP OF ALL CRASHES IN NEW BRITAIN, CONNECTICUT BY SEVERITY, 2019-2023



Source: Connecticut Crash Data Repository, University of Connecticut.

1.1 Data Sources and Methodology

This memorandum is primarily based on the [Connecticut Crash Data Repository](#), an online database managed by the University of Connecticut. This database is compiled using information from Connecticut Unified Police Crash Reports ([PR-1s](#)) submitted to the University for all traffic collisions in the state. All the data sources used in this safety analysis, which leverages data from local, state, and federal sources, are listed below in Table 1.

TABLE 1 SAFETY ANALYSIS DATASET INVENTORY, OWNERSHIP, AND NOTES

Dataset	Owner	Notes
Traffic Safety-Related Citation Data	New Britain Police Department	Data on the frequency of different types of safety-related citations issued
Bicycle or Pedestrian Counts (Link)	University of Connecticut (UConn)	
Geolocated Crash Data	UConn and Connecticut DOT (CTDOT)	Accessible through the Connecticut Crash Data Repository
One Year of Pedestrian and Bicyclist Crash Narratives	UConn and CTDOT	Provided by UConn and the administrators of the Connecticut Crash Data Repository.
Connecticut Roadway Safety Management System (CRSMS)	UConn and CTDOT	The Connecticut Roadway Safety Management System (CRSMS) is a data-driven, enterprise-level web application developed for the Connecticut Department of Transportation to implement the latest Highway Safety Manual (HSM) methods.
Fatality Analysis Reporting System (FARS)	National Highway Traffic Safety Administration (NHTSA)	FARS is a nationwide census providing NHTSA, Congress and the American public yearly data regarding fatal injuries suffered in motor vehicle traffic crashes. It contains historical fatality data from 1975 to the present.
American Community Survey (ACS)	U.S. Census Bureau	The ACS is an ongoing survey to provide annual information on Social, Housing, Economic, and Demographic characteristics of the United States. The ACS produces population and housing data on over 40 different topics, many of which are regularly used for Congressional planning and funding projects.
Connecticut Environmental Justice Screening Tool (Link)	UConn, CT Department of Energy and Environmental Protection (DEEP)	The CT EJ Screening Tool is an interactive resource that combines both community and data-driven approach that incorporates environmental burdens and demographic indicators.
Climate and Economic Justice Screening Tool (CEJST)	White House Council on Environmental Quality (CEQ)	The CEJST was removed from the CEQ website on January 22, 2025. Data from the tool was extracted to support this analysis in late 2024 prior to the tools discontinuation.
Social Vulnerability Index (SVI)	Center for Disease Control & the Agency for Toxic Substances and Disease Registry	The SVI is place-based index, database, and mapping application designed to identify and quantify communities experiencing social vulnerability
Connecticut DOT Traffic Monitoring Station Data	Connecticut DOT	Speed and volume data for count stations throughout the city
2025 Vision Zero New Britain Community Survey	City of New Britain	Performed concurrently with this data analysis

Key figures involved in the collection, evaluation, synthesis, discussion, and utilization of data to date have included:

- **The Consultant Team** | The Consultant Team refers to the personnel and resources led by Cambridge Systematics, Inc (CS). CS staff were supported by subconsultants SLR Consulting (SLR) and Vanasse Hangen Brustlin, Inc. (VHB).
- **The City** | The City refers to core staff charged with organizing and delivering The Plan.
- **The Task Force** | The Task Force refers to the 13 members of the New Britain Vision Zero Task Force, a mix of elected officials, community members, and activists charged with steering the direction of The Plan.

The Consultant Team reviewed the datasets above and cleaned the data for analysis, application to the evaluation, and potential value in future iterations of safety analysis in the New Britain. **Unless otherwise noted, all figures, charts, summary, and discussion in this memorandum do not include any crashes on Interstates, freeways, or expressways.**¹ In New Britain, this means excluding crashes along CT-9, CT-72, and I-84, facilities on which the State of Connecticut is responsible for maintaining infrastructure, implementing safety enhancements, and enforcing traffic laws. The purpose of this distinction is to ensure that all data, statistics, and analyses presented in this memorandum and related Safety Action Plan materials are focused on facilities which the City has jurisdiction to directly implement safety improvements. **The objective of this analysis is to identify a High Crash Network of intersections and road segments where safety enhancements and countermeasures should be deployed.** Improvements will be identified in a separate **Implementation Plan** using the modified version of the “Five E’s of Safety” Framework shown below.

TABLE 2 FIVE E'S OF SAFETY FRAMEWORK, NEW BRITAIN VISION ZERO SAFETY ACTION PLAN

Element	Definition and Examples
EDUCATION and ENCOURAGEMENT	Promoting safe behaviors through public awareness campaigns and other educational initiatives to encourage continuous improvements in road user behavior. ■ Public education campaigns, public service announcements, and community programs ■ In-school course content and programming to educate the next generation of road users
EVALUATION	Regular study, review, and refinement of transportation safety measures based on data driven insights to inform the development of safety improvement strategies and projects. ■ Community safety audits, “walkabouts”, and stakeholder interviews ■ Data collection through surveys and site visits
ENFORCEMENT	Strengthening compliance with safety regulations by implementing speed management strategies, school zone protections, and automated enforcement programs. ■ In-person enforcement by train police officers, first responders, and municipal agents ■ Automated enforcement using Automated Traffic Enforcement Safety Devices (ATESDs)
ENGINEERING	Enhancements to policies, designs, and construction standards and projects to promote Complete Streets principles, pedestrian-friendly infrastructure, and improved traffic control measures. ■ Implementing FHWA Proven Safety countermeasures like road diets, curb extensions, and roundabouts ■ Installing traffic control safety devices, enhanced signage, restricted turning movements, and more

¹ Crashes along interstates, freeways, and expressways were identified using the functional classification field in the crash data. If the functional class was equal to “Interstate” or “Principal Arterial – Other Freeways & Expressways”, it was excluded from the analysis.

2

HISTORICAL TRENDS ANALYSIS

The Historical Trends Analysis of crashes in New Britain reviewed crash data from 2019 to 2023 to identify the most common and highest density crash types and contributing circumstances. Crash rates were normalized by key factors such as location, mode, population, vehicle miles-traveled (VMT), or other transportation-related quantifiable measures. The primary data source for this portion of the Safety Analysis was crash data from the Connecticut Crash Data Repository (CTCDR). This historical trend analysis examines factors that have contributed to safety issues in the City of New Britain over time, as well as those that may lead to severe or fatal crashes in the future. The findings of the analysis illustrate the most common and highest density crash types and contributing circumstances in the city and inform the strategies and plans of the New Britain Safety Action Plan. **With the exception of the data presented in Section 2.1, all data in Section 2 is from the last five years of complete and available crash data from 2019 to 2023.**

2.1 Long-Term Trends

Between 1999 and 2023, the five-year rolling average for fatalities and serious injuries, combined, declined overall from about 102 down to about 22 per year. For the purposes of this analysis, the five-year rolling average was used to capture the impact of safety improvements and policy changes over time, rather than year-over-year. **In summary:**

- A ***drastic decline*** occurred over the early years of this time interval (from 1999 to around 2008) with the average annual number of fatalities and serious injuries declining over 50 percent (from about 102 to 44 in ten years).²
- This was followed by a ***slowing rate of decline***, from a five-year rolling average of about 44 fatalities and serious injuries per year in 2008, to a low of **just under 16** fatal and serious injury crashes in 2017.
- Since 2017, there has been a ***slight increase*** in the average annual number of fatalities and serious injuries, increasing from the low of **15.6** in 2017 to **21.8** in 2023, with a recent high of **23.6** in 2021.

This long-term downward trend is driven primarily by the decrease in serious injuries, not by a decrease in fatalities. This consistent with the nationwide mandate for front airbags in all cars and light trucks, which went into effect in 1998.³

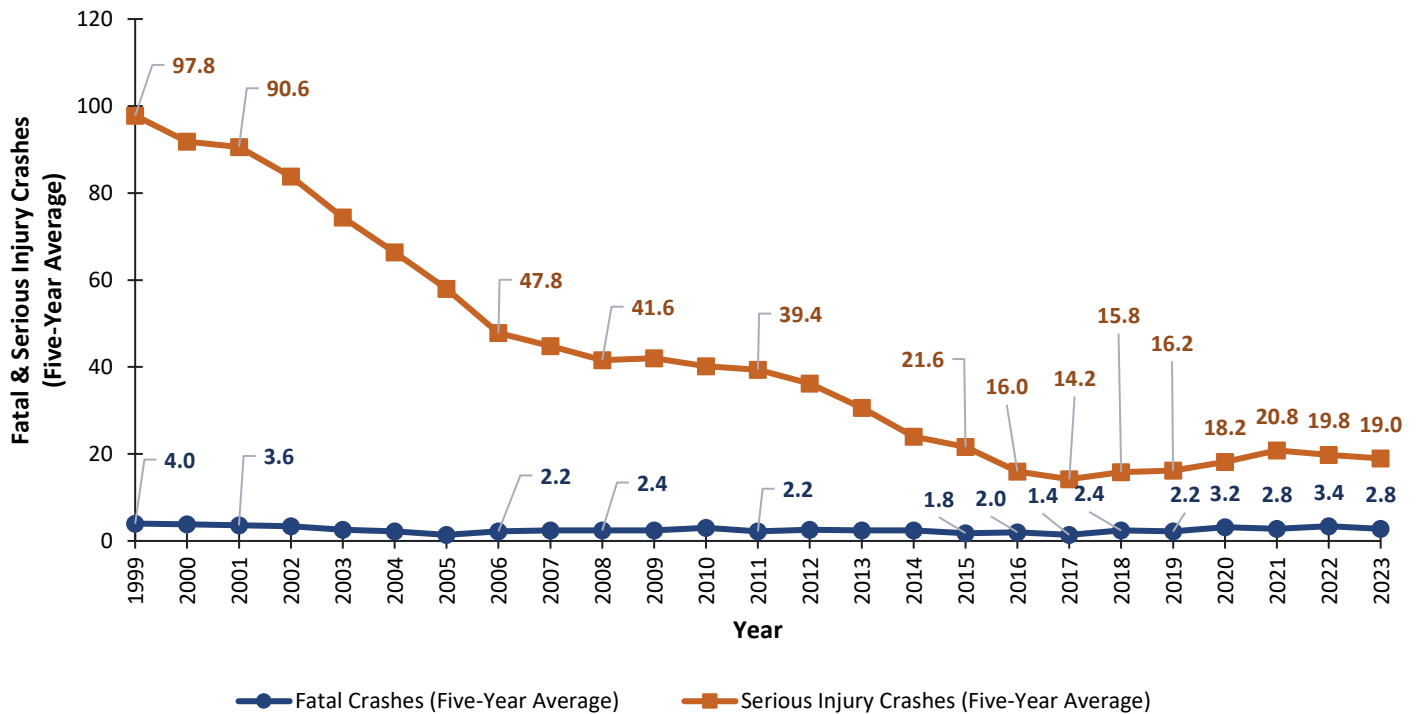
² This trend is consistent with national data over the same period. According to the National Highway Traffic Safety Administration, contributing factors to this decline may have included passenger vehicle safety enhancements, such as air bags, and increases in seatbelt use. Source: <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/811368>

³ H.R.2950 – Intermodal Surface Transportation Efficiency Act of 1991. Source: [https://www.congress.gov/bills/102nd-congress/house-bill/2950#:~:text=Directs%20the%20Secretary%20to%3A%20\(1\)%20promulgate,even%20in%20vehicles%20equipped%20with%20airbags.](https://www.congress.gov/bills/102nd-congress/house-bill/2950#:~:text=Directs%20the%20Secretary%20to%3A%20(1)%20promulgate,even%20in%20vehicles%20equipped%20with%20airbags.)

- Fatality trends over this time period have generally remained constant at 2 to 4 fatalities per year. In recent years (2015 to 2023), there has been an average of 2.4 fatalities per year.
- Serious injuries have decreased from a rolling average of **97.8** in 1999 to just over **19** in 2023.

Figure 2 shows the long-term fatality and serious injury trend based on a five- year rolling average from 1999 to 2023.

FIGURE 2 LONG-TERM FATALITY AND SERIOUS INJURY TREND (1999-2023)



Source: Connecticut Crash Data Repository, University of Connecticut.

While not listed in these figures, there are an additional 2 to 3 fatalities per year, on average, in New Britain on interstates, freeways, and expressways maintained by CTDOT.

During the period of analysis, the population in New Britain has remained relatively consistent.

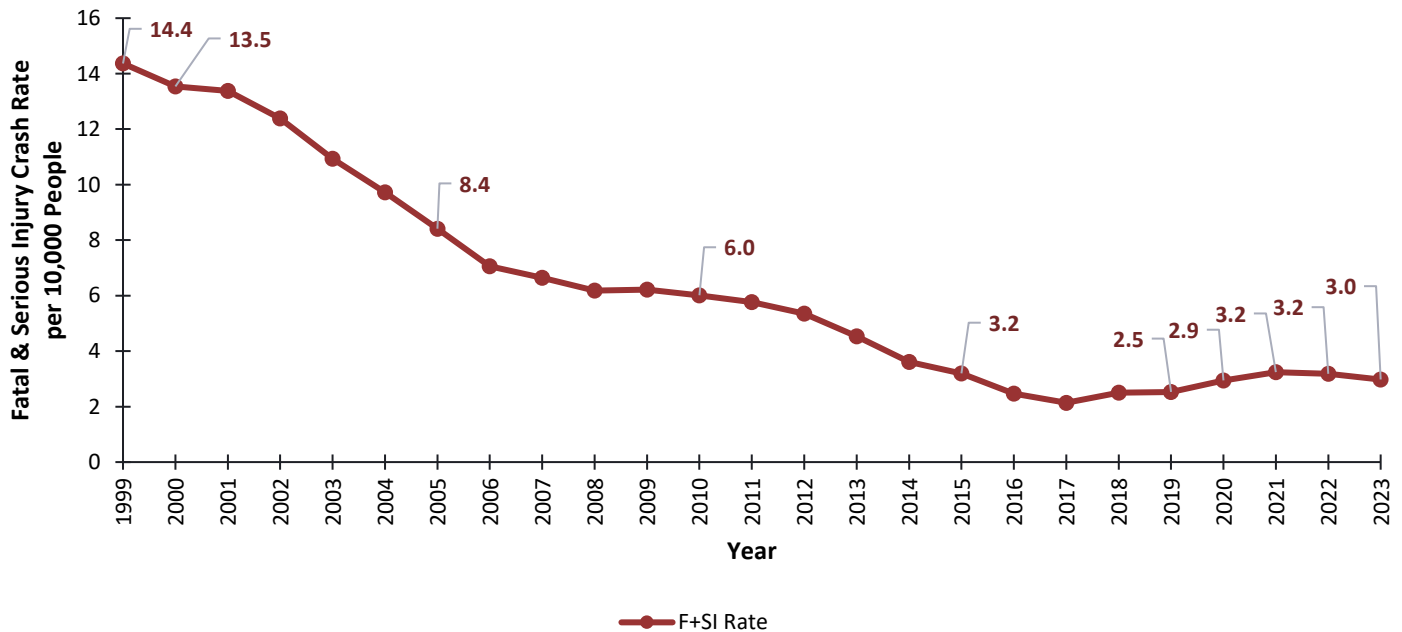
- New Britain had a population of about 70,000 in 1999, growing to about 74,000 in 2023, an increase of **5.8 percent**.
- New Britain's population has grown slower than the population of Connecticut as a whole; with the State population growing **10.2 percent** in the same time frame.
- Both New Britain and Connecticut show much slower population growth than the entire nation, which has grown about **17 percent** over the same time period.⁴

⁴ [Historical Population Change Data \(1910-2020\)](#), US Census Bureau.

- Because of the relatively constant population in the City, New Britain's fatality and serious injury rate per capita (Figure 3) has followed a similar trend to the total number of fatalities and serious injuries (Figure 2).
- The fatality and serious injury rate in New Britain have decreased from about **14.4 incidents per 10,000 people in 1999** to about **3.0 incidents per 10,000 people in 2023**, a decrease of over **70 percent**.

Figure 3 shows the long-term fatality and serious injury trend *per capita* on a five- year rolling average from 1999 to 2023.

FIGURE 3 LONG-TERM FATALITY AND SERIOUS INJURY RATE TREND PER 10,000 PEOPLE (1999-2023)



Source: Connecticut Crash Data Repository, University of Connecticut; Census Population Estimates, US Census Bureau.

2.2 Key Crash Trends

2.2.1 Crashes by Injury Severity

Table 3 summarizes crashes by injury severity based on the highest level of injury reported to be sustained in the crash using the [KABCO Injury Classification and Definition Scale](#). When studying crash data, utilizing classification systems like KABCO provides a method of categorization to compare both the severity of each incident, and the potential economic impacts of that incident on a community, state, or region.

- Less severe** crash types causing no apparent injury (O) account for the largest share of crashes in New Britain.
- Crashes that caused **fatalities** (K) or **serious injuries** (A) accounted for **2.5 percent** of crashes from 2019 to 2023, with crashes that caused **minor injuries** (B) making up another **16.6 percent**.

- Crashes that may have resulted in a **possible injury** (C) made up about **12.7 percent** of all incidents
- Crashes that resulted in **property damage only** (O) accounted for **68.2 percent** of all incidents.
- On average, New Britain has **slightly more severe crashes** than the state of Connecticut as a whole.⁵

Crashes generate both **tangible costs** (economic costs) and **intangible costs** (lost quality of life) which are borne by both parties involved in a traffic incident *and* the broader society they live in. Economic costs of a crash include items such as medical and emergency services, work productivity loss, insurance, legal costs, congestion costs, and more. Intangible costs are measured by estimating the value that people put on their lives.

Over time, the net impact of traffic incidents can generate a significant economic cost to communities in both tangible and intangible ways. Table 3 provides estimated crash costs by severity and includes both tangible and intangible costs, as estimated by the Federal Highway Administration (FHWA). These values are the [national standard for calculating the costs and benefits](#)⁶ of crash reductions in developing benefit-cost analyses to support federal discretionary grant applications.

TABLE 3 CRASHES BY INJURY SEVERITY IN NEW BRITAIN, EXCLUDING LIMITED ACCESS FACILITIES (2019-2023)

Crash Severity	Crashes	% of Total Crashes	Cost per Crash	Cumulative Crash Cost	% of Cumulative Crash Cost
Fatal Injury (K)	18	0.3%	\$14,232,204	\$256.2 M	32.2%
Suspected Serious Injury (A)	130	2.2%	\$825,300	\$107.3 M	13.5%
Suspected Minor Injury (B)	996	16.6%	\$250,110	\$249.1 M	31.4%
Possible Injury (C)	762	12.7%	\$158,256	\$120.6 M	15.2%
No Apparent Injury (O)	4,085	68.2%	\$14,994	\$61.2 M	7.7%
Total	5,991	100.0%	-	\$794.4 M	100.0%

Source: Crashes from Connecticut Crash Data Repository, University of Connecticut; Crash costs from [Crash Costs for Highway Safety Analysis](#), Federal Highway Administration.

Note: Crash costs adjusted from 2016 dollars to 2023 dollars using an inflation factor of 1.26 from the [Bureau of Labor Statistics](#).

The 5,991 crashes recorded in New Britain between 2019 and 2023 generated an estimated total cost of \$794.4M, of which 45.7 percent (\$363.5M) is attributable to fatal and severe crashes alone.

⁵ The state of Connecticut sees only 1.5 percent of crashes resulting in a fatality or serious injury, and over 75 percent result in no worse than property damage.

⁶ [Benefit-Cost Analysis Guidance for Discretionary Grant Programs | US Department of Transportation](#)

2.2.2 Crashes by Geographical Distribution and Population

New Britain residents are not the only ones using the City's roads. Home to Stanley Golf Course, Central Connecticut State University (CCSU), commercial retail and dining destinations like Westfarms Mall, Little Poland, and Downtown New Britain, and several public resources like hospitals, judiciary facilities, and more, the City's crash patterns reflect the impact of these trip generating destinations on traffic incidents.

The figures below present the city's **Geographic Crash Distribution** (Figure 4) and **Population Distribution** as measured in the 2020 Census (Figure 5). These figures largely indicate higher crash frequencies around high traffic volume, trip-generating destinations like the downtown area, commercial areas such as the Broad Street "Little Poland" area, W Main St (CT-55 & CT-175), and Hartford Road (CT-71a) approaching Westfarms Mall. These findings are consistent with academic literature studying national trends on land use and vehicle crashes, specifically as they relate to implications for vulnerable road users. In a 2021 study of hot spot corridors across the country between 2001 and 2016, researchers found many of the 65 "hot spot corridors" for pedestrian fatalities identified nationally shared characteristics that appear throughout New Britain:

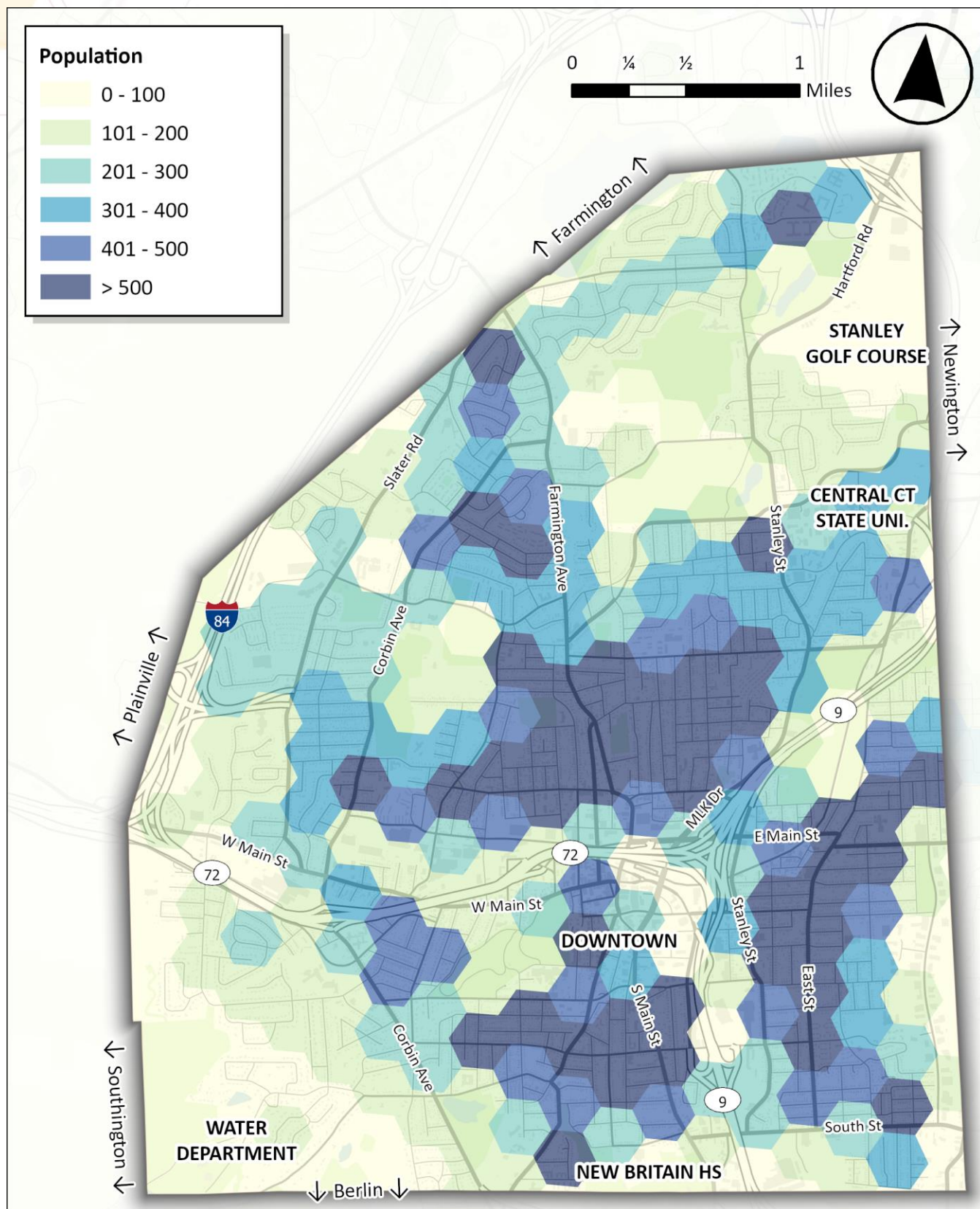
- 100 percent of identified pedestrian fatality hot spot corridors had adjacent commercial and retail land uses, which can be found throughout New Britain especially along W Main St (CT-55 & CT-175), Hartford Road (CT-71a), E Main St (CT-71), W Main St (CT-372), East St near CCSU, and Broad St;
- 97 percent were multilane roadways, with 70 percent requiring pedestrians to cross more five or more lanes, which describes Hartford Road (CT-71a) near Westfarms Mall, portions of Columbus Boulevard, Chestnut Street, and East Main Street near Downtown, and key intersections of Martin Luther King Dr, especially at Stanley and E Main; and
- 3 in 4 hot spot corridors were bordered by low-income neighborhoods, which can be found in New Britain adjacent to key routes like E Main St, Martin Luther Kin Dr, S Main St, W Main St, Stanley St, and South St.⁷

Many of the corridors listed above were identified as **areas with a high concentration of VRU crashes in the City** (see detailed figures in Appendix B), and were identified as **High Crash Network Locations detailed in Section 5, and programmed for countermeasure implementation in the broader Safety Action Plan**. However, another key characteristic that these corridors share is a **relative lack of population density**. As shown in the figures below, in general, **there are fewer crashes in areas of higher population density within the city**. These areas are generally located *between* the areas with higher crash densities, such as the densely populated neighborhoods located to the north, southwest, and east of CT-72 and CT-9.

⁷ Schneider, R. J., Sanders, R., Proulx, F., & Moayyed, H. (2021). United States fatal pedestrian crash hot spot locations and characteristics. *Journal of Transport and Land Use*, 14(1), 1–23. <https://doi.org/10.5198/jtlu.2021.1825>



FIGURE 5 POPULATION DISTRIBUTION (2020)



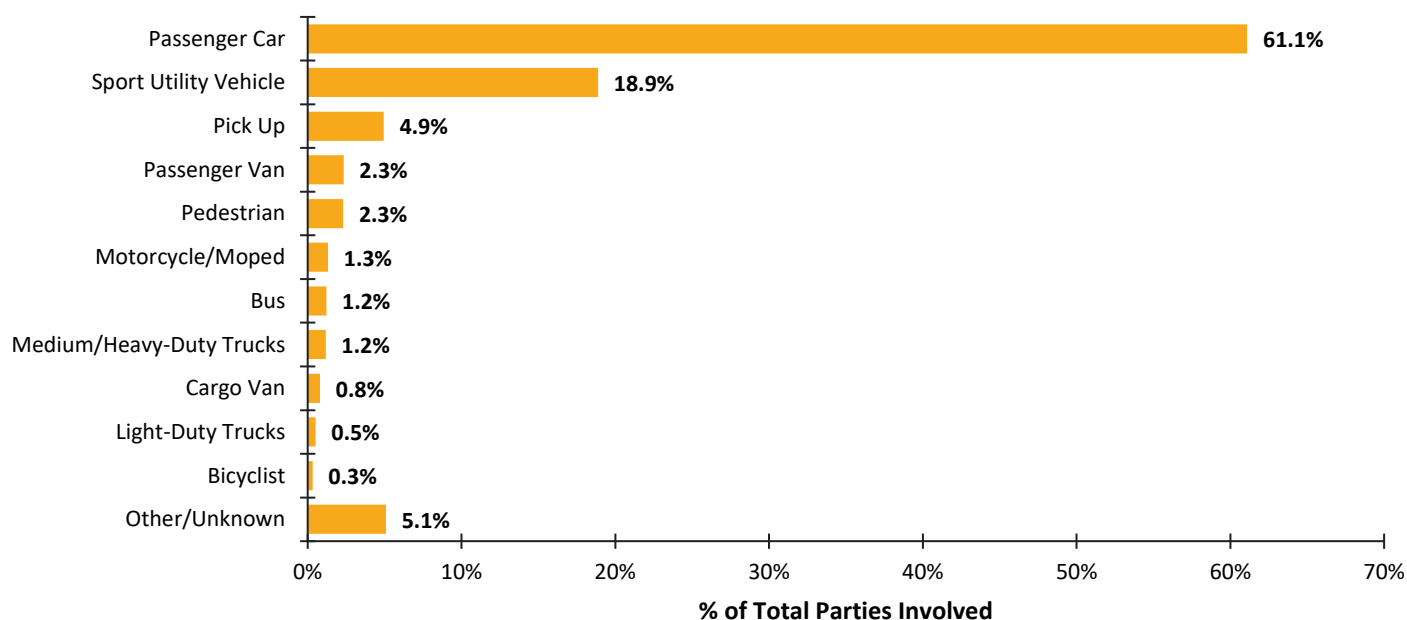
Source: 2020 Decennial Census, US Census Bureau.

2.2.3 Crashes by Mode

From 2019 to 2023, there were just over 11,380 parties involved in the 5,991 crashes in New Britain (a figure which excludes crashes on limited access facilities).⁸ Figure 6 shows the breakdown of the 11,380 parties involved in crashes in New Britain.

- About 85 percent of the time, a personal vehicle such as a passenger car, sport utility vehicle, or pick-up truck was a party involved in a crash. This is roughly the same as the proportion of involved parties in the entire state (87 percent).
- Freight-related vehicles such as cargo vans and light, medium, and heavy-duty trucks were the parties involved in a crash roughly 2.5 percent of the time, about half the proportion of freight-related involved parties in the state.
- These trends are reflective of the land use mix in New Britain; where minimal freight-intensive land uses beyond the western and eastern edges of the City mean the majority of freight traffic that passes through the city passes through on limited access roads such as I-84, CT-72, and CT-9.

FIGURE 6 PARTIES INVOLVED IN CRASHES (2019-2023)



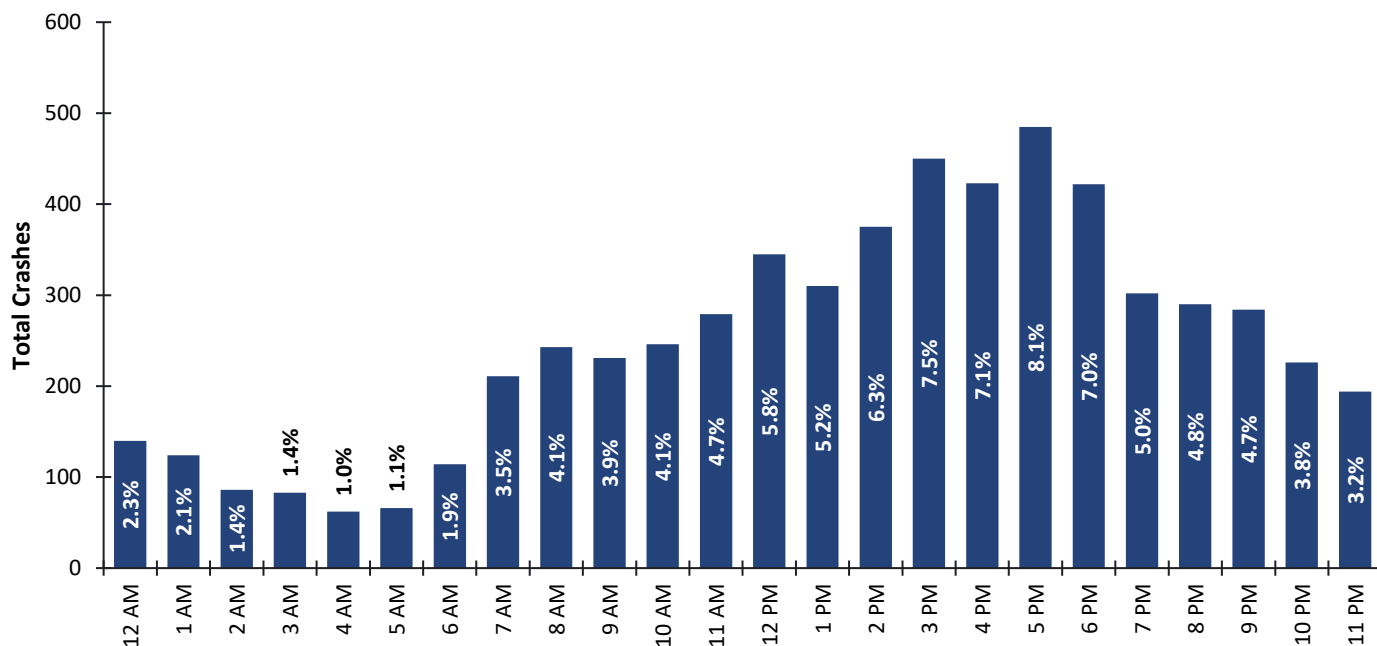
Source: Connecticut Crash Data Repository, University of Connecticut.

⁸ A “party” is defined as each entity involved in a crash; parties are normally entities such as passenger cars, buses, trucks, pedestrians, or bicyclists.

2.2.4 Crashes by Time of Day

Figure 7 shows crashes by the time of day in New Britain. The largest share of crashes occurs in the 5 to 6 PM hour.

FIGURE 7 CRASHES BY TIME OF DAY (2019-2023)



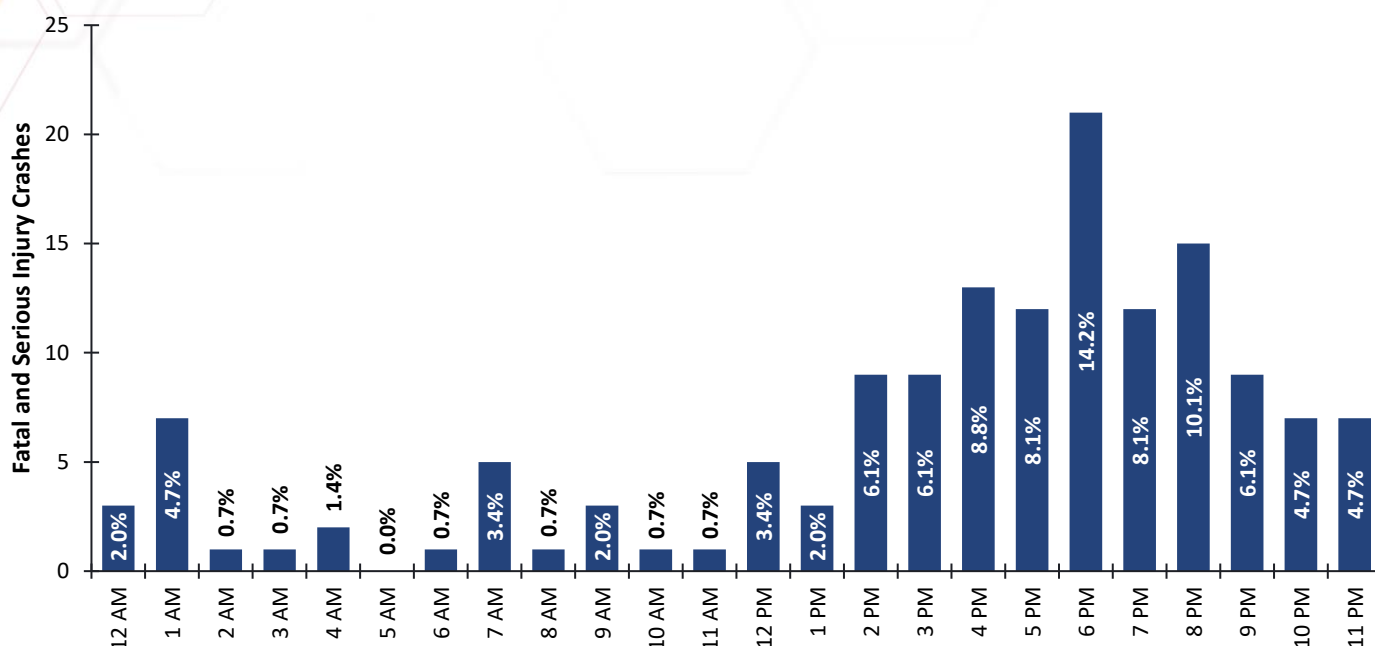
Source: Connecticut Crash Data Repository, University of Connecticut.

Key insights related to the timing of crashes include:

- Crashes may be less frequent overnight because fewer people drive overnight. However, the crashes that do occur overnight are more severe than those that occur during daylight hours.
- Between 8 PM and 6 AM, almost 3 percent of crashes result in a fatality or serious injury, but during all other hours, the rate is approximately 2 percent, **nearly a 50 percent increase in the frequency of the most severe crash types.**

To further investigate this discrepancy in fatalities and serious injuries with respect to time, Figure 8 isolates only fatal and serious injury crashes throughout the day.

FIGURE 8 FATAL AND SERIOUS INJURY CRASHES BY TIME OF DAY (2019-2023)



Source: Connecticut Crash Data Repository, University of Connecticut.

- The temporal pattern is roughly the same with the most number of more severe crashes occurring in the evening, but the evening peak is more intense than for the associated timeframe in Figure 7.
- Between 6pm and midnight, **47.9 percent** of fatal and serious injury crashes occur compared to **28.5 percent** of all crashes in the same timeframe.

These insights provide further evidence to suggest that during the evening hours, crashes are likely to become less frequent, but more severe.

2.2.5 Crashes by Functional Class

Table 4 shows the distribution of crashes and fatalities/serious injuries in New Britain according to the functional class of the road on which they occurred.

TABLE 4 CRASHES BY FUNCTIONAL CLASSIFICATION (2019-2023)

Functional Class	Typical Daily Volumes ⁹	Crashes	% of Total Crashes	Fatal & Serious Injury Crashes	% of Fatal & Serious Injury Crashes
Other Principal Arterials	7,000 – 27,000	437	13.1%	11	10.1%
Minor Arterials	3,000 – 14,000	1,554	46.5%	52	47.7%
Collectors	1,100 – 6,300	603	18.0%	29	26.6%
Local Roads	80 – 700	750	22.4%	17	15.6%
Total	-	3,344	100.0%	109	100.0%

Source: Connecticut Crash Data Repository, University of Connecticut.

Note: Totals may differ from other summaries due to missing functional class data. 2,647 crashes and 39 fatal and serious injury crashes are missing functional class information.

The most common roadway types for crashes, **excluding limited access facilities (I-84, CT-9, and CT-72)** are minor arterials (46.5 percent), and local roads (22.4 percent), with collectors (18.0 percent) and other principal arterials (13.1 percent) accounting for fewer crashes.

Crashes on minor arterials and collectors make up about 65 percent of total crashes, but **nearly 75 percent of fatalities and serious injuries**. This suggests that in New Britain, high-trafficked facilities like **Other Principal Arterials** produce **less severe crashes, on average**, compared to lower-trafficked roads such as collectors and local roads. Minor Arterials, which carry a typical daily volume of 3,000 to 14,000 vehicles, make up the largest portion of total crashes (46.5 percent) and fatal and serious injury crashes (47.7 percent) in the city. However, it is important to note that a large portion of the crash dataset is missing functional classification data. Of the 5,991 crashes analyzed on New Britain roads excluding limited access facilities, just 3,344 (55.8 percent) included functional classification data. The remaining 2,647 crashes, which included 39 fatal and serious injury crashes, do not specify the functional class of the roadway where they occurred.

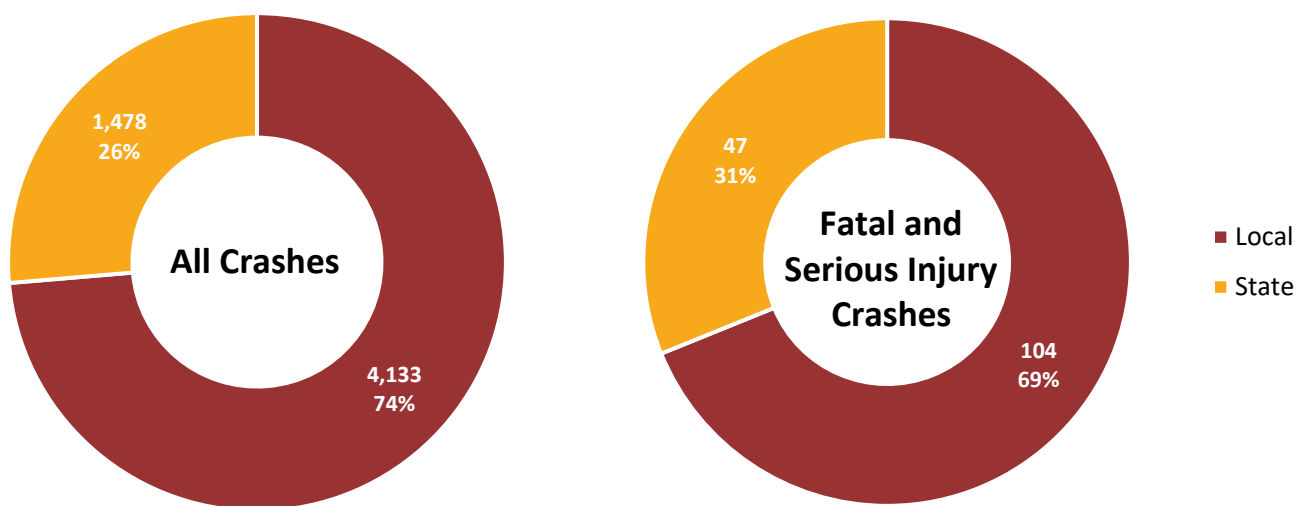
Potential explanations for this trend may include the fact that arterials and collectors often have more conflict points such as intersections where broadside (or T-bone) crashes, a particularly dangerous crash type, occur compared to limited-access roads that only have a limited number of conflict points like ramps where sideswipes, a relatively less dangerous crash type, are more likely to occur.

⁹ [Highway Functional Classification Concepts, Criteria, and Procedures 2023 Edition](#), Federal Highway Administration.

2.2.6 Crashes by Roadway Ownership

Figure 9 shows crashes and fatalities/serious injuries by roadway ownership. Roadway ownership is defined as either a locally-owned road or a state-owned road. **In the city of New Britain, there are about 14 miles of state roads (outside of Interstates, freeways, and expressways) and 170 miles of local roads¹⁰.**

FIGURE 9 CRASHES BY ROADWAY OWNERSHIP (2019-2023)



Source: Connecticut Crash Data Repository, University of Connecticut.

Note: Totals may differ from other summaries due to inconsistent roadway ownership data.

- State-owned roadways experience far more crashes per mile than local roads, with 105.5 crashes per mile for state roads and 24.6 crashes per mile for local roads. This trend may be attributable to the increased volumes on state-owned roadways, which are often busy arterials with higher volumes like CT-4, CT-372, CT-71, and CT-174, which may see as many as 14,000 vehicles each day. In contrast, local neighborhood roads may only experience a few hundred cars per day.
- State-owned roads make up approximately 26 percent of crashes and 31 percent of fatalities/serious injuries in the city (lower than locally-owned roads at 74 percent of all crashes and 69 percent of fatalities and serious injuries).

¹⁰ [CTDOT State Routes and Local Roads](#), CTDOT Open Data – Connecticut Department of Transportation.

2.3 Emphasis Areas

The Capital Region Council of Governments (CRCOG), the metropolitan planning organization in the Hartford region, last updated a [Regional Transportation Safety Plan](#) in 2023. As part of this plan, CRCOG identified the **top crash emphasis areas** for the region. This identification is a helpful framework for identifying common crash issues, analyzing contributing factors, and linking them with a set of potential countermeasures and strategies.

As part of this plan, the emphasis areas were analyzed **solely in New Britain's boundaries** and compared with the rest of the state.¹¹ Table 5 lists the number of crashes involving each respective emphasis area for both New Britain and the entire state. In tandem with overall crash figures, the table identifies the counts of crashes that resulted in a fatality or severe injury. Crash types that are notably more common in New Britain than in Connecticut relative to each geography's crash distribution are highlighted in the table.

It's important to note that a single crash may be represented in multiple emphasis areas. For instance, a crash attributable to distracted driving and involving a younger driver may have occurred at an intersection. In this case, that crash would be represented in the *Intersections*, *Distracted Driving*, and *Younger Drivers* emphasis areas.

TABLE 5 EMPHASIS AREA SUMMARY

Emphasis Area	All Crashes (2019-2023)			Fatal and Serious Injury Crashes (2019-2023)		
	Crashes	% of Total in New Britain	% of Total in CT	Crashes	% of Total in New Britain	% of Total in CT
Intersections	2,675	44.7%	39.9%	71	48.0%	39.9%
Roadway Departures	1,851	30.9%	16.3%	39	26.4%	22.3%
Aggressive Driving	1,267	21.1%	30.8%	54	36.5%	32.6%
Unrestrained Occupants	365	6.1%	5.8%	20	13.5%	17.2%
Impaired Driving	286	4.8%	3.0%	15	10.1%	13.1%
Distracted Driving	317	5.3%	5.8%	7	4.7%	5.1%
Older Drivers	843	14.1%	18.6%	17	11.5%	17.3%
Younger Drivers	1,726	28.8%	31.2%	48	32.4%	31.3%
Motorcyclists	150	2.5%	1.7%	41	27.7%	23.1%
Pedestrians	246	4.1%	1.6%	38	25.7%	17.8%
Bicyclists	38	0.6%	0.5%	0	0.0%	2.5%

Source: Connecticut Crash Data Repository, University of Connecticut.

¹¹ The CRCOG Regional Transportation Safety Plan includes an additional emphasis area, Traffic Incident Management, that was not analyzed in this report as it's not tied to a specific type of crash.

- Nearly half of all New Britain crashes happen at intersections, resulting in death or serious injury significantly more often than other crash types.
- Roadway departure¹² crashes are more common in New Britain (31 percent) than Connecticut overall (26.4 percent).
- New Britain has comparatively high rates (relative to the state average) of crashes involving:
 - Intersections;
 - Roadway Departures;
 - Unrestrained occupants;
 - Impaired Driving;
 - Motorcyclists;
 - Pedestrians; and
 - Bicyclists.
- Compared to Connecticut, New Britain also has **more fatal/serious crashes** involving:
 - Intersections;
 - Roadway departures;
 - Aggressive Driving;
 - Younger Drivers;
 - Motorcyclists; and
 - Pedestrians

It is important to note that data on aggressive driving, distracted driving, and other categories may be unreported as a result of the limitations faced by law enforcement in determining which factor(s) contributed to a crash. A more detailed explanation for each category is included in subsequent sections, but broadly, the fact that law enforcement often arrives at the scene of an incident *after* a crash has occurred limits their ability to definitively say why a crash occurred, particularly if witnesses are unavailable, or one or more parties involved in a crash abandons their vehicle at the scene.

Technical descriptions of the queries used to identify these emphasis areas are included Appendix A.

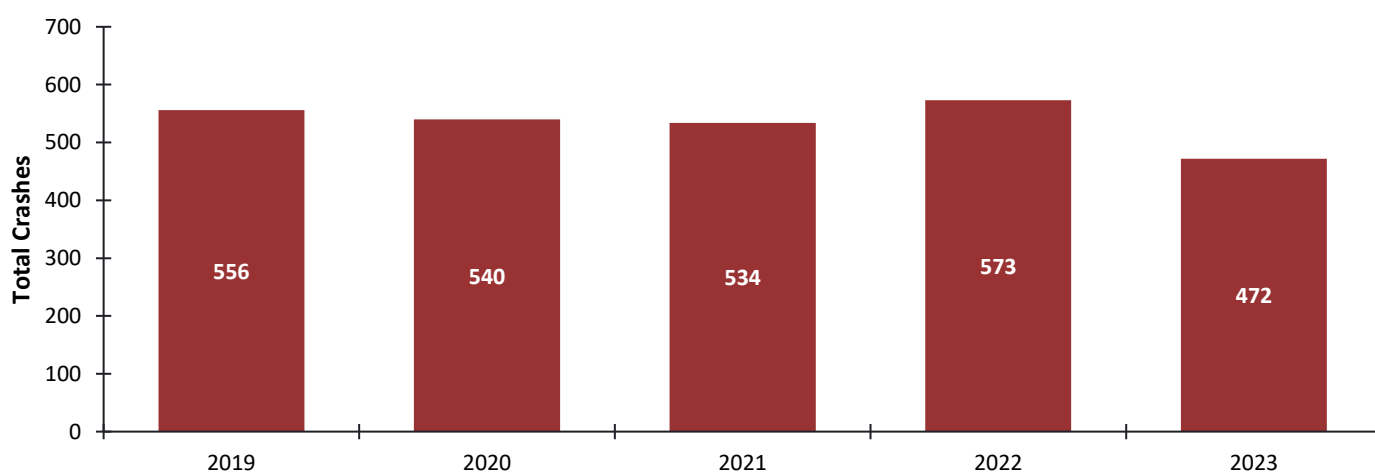
¹² Roadway departure crashes occur when a vehicle leaves the roadway by crossing the centerline or edge line, leaving the vehicle lane.

2.3.1 Intersections

Intersection crashes include those crashes that are directly located within intersections or related to the operation of intersection approaches, as identified by the reporting officer to the crash. Intersections tend to be one of the most common crash locations due to the confluence of multiple road users—such as motor vehicles, pedestrians, cyclists, and others—leading to the potential critical points of conflict among users. This potential for conflict can be exacerbated by other contributing factors, such as the other emphasis areas noted in Table 5.

Figure 10 shows intersection-related crashes in New Britain.

FIGURE 10 INTERSECTION-RELATED CRASHES (2019-2023)



Source: Connecticut Crash Data Repository, University of Connecticut.

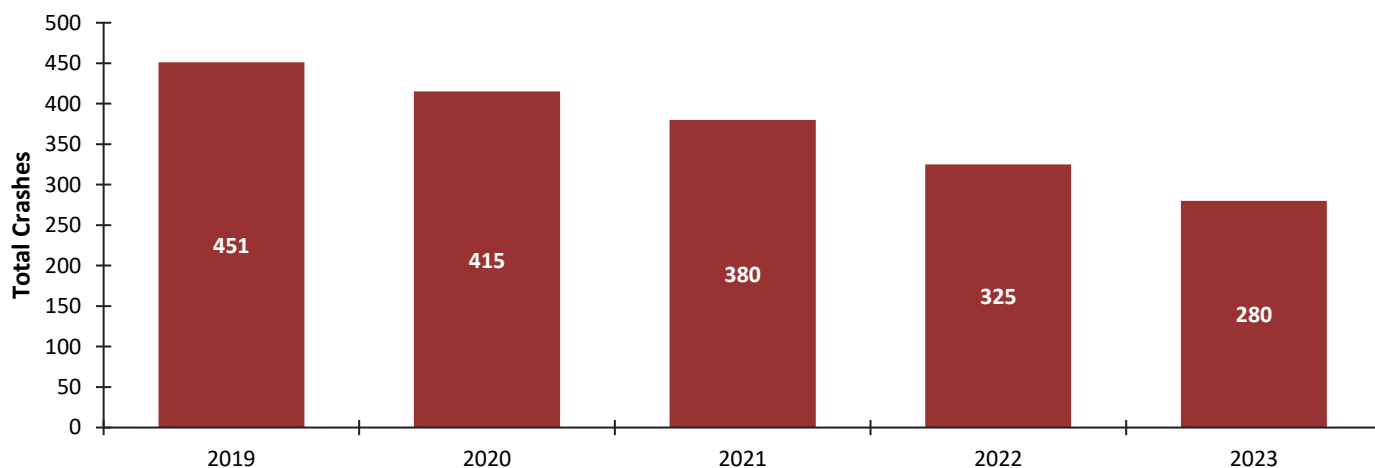
- Overall, intersection-related crashes in New Britain comprise 44.7 percent of all crashes and 48.0 percent of fatal or serious injury crashes, more common than state averages (39.9 percent in both categories).
- Over the last five years, intersection crashes have fluctuated, but they are trending slightly down, on average. In 2019, there were 556 intersection-related crashes, which decreased to 540 and 534 in 2020 and 2021, respectively.
- In 2022, these crashes surged by 7.3 percent to 573 before drastically dropping to 472 in 2023, a decline of 17.65 percent.
- Out of all emphasis areas analyzed in this report, the Intersections emphasis area was the most common contributing factor for all crashes in the City and all fatal and serious injury crashes.

2.3.2 Roadway Departures

Roadway departure crashes occur when a vehicle crosses an edge or center line or otherwise leaves the traveled way.

The cause of these crashes could range from weather conditions (like rain, snow, or ice) and road characteristics (such as curvature, grade, and pavement conditions) to low light and driver behavior (including distracted driving or speeding).

FIGURE 11 ROADWAY DEPARTURE CRASHES (2019-2023)



Source: Connecticut Crash Data Repository, University of Connecticut.

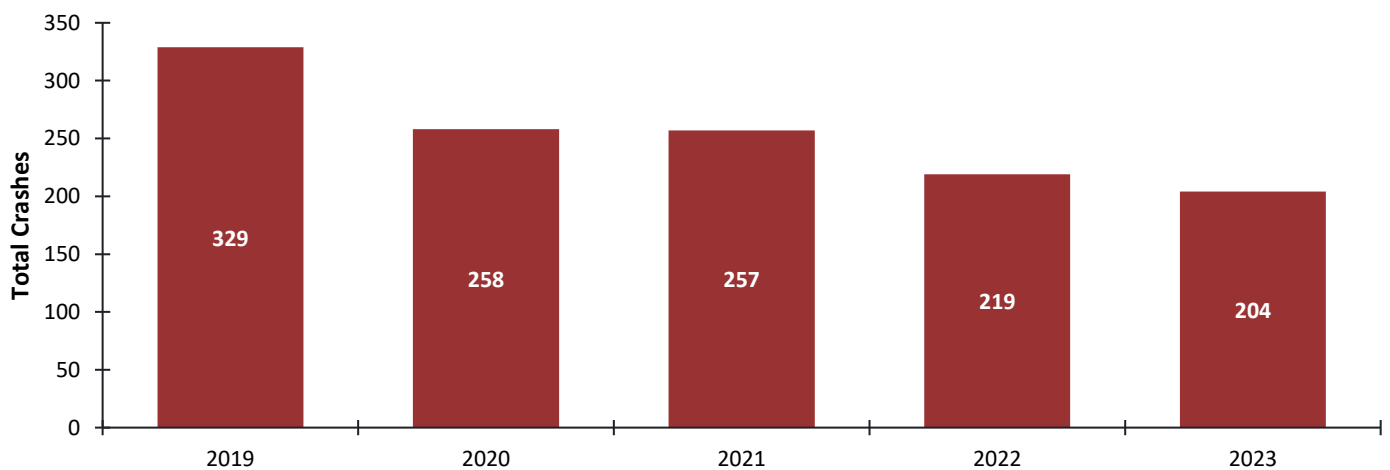
- In New Britain, 30.9 percent of crashes involve roadway departure, higher than Connecticut's overall rate of 16.3 percent.
- Roadway crashes are also responsible for 26.4 percent of crashes involving deaths or suspected severe injuries.
- As seen in Figure 11, these crashes reached their highest level in 2019, totaling 451.
- Since 2019, fatal and serious injury crashes involving roadway departures have remained fairly constant at between 7 and 9 per year.
- In 2023, there were 280 roadway departure crashes, a decline of nearly **38 percent** from 2019.

2.3.3 Aggressive Driving

Aggressive driving crashes include deliberate individual driver behaviors such as operating at unsafe speeds, disregarding traffic control devices, following too closely, or driving aggressively. These actions increase the likelihood of a crash due to operator error and may amplify the severity of any resulting collisions.

Figure 12 shows aggressive driving crashes in New Britain from 2019 to 2023. Overall, aggressive driving crashes were at their highest in 2019 (329 crashes) over this time period before decreasing in 2020, remaining relatively stable from 2020 to 2021, and decreasing to 204 crashes in 2023.

FIGURE 12 **AGGRESSIVE DRIVING CRASHES (2019-2023)**



Source: Connecticut Crash Data Repository, University of Connecticut.

Aggressive driving is a particular dangerous activity as it contributes to over 36.5 percent of all fatalities and serious injuries. These are in-line with Connecticut state rates, higher than the Connecticut average of 32.6 percent.

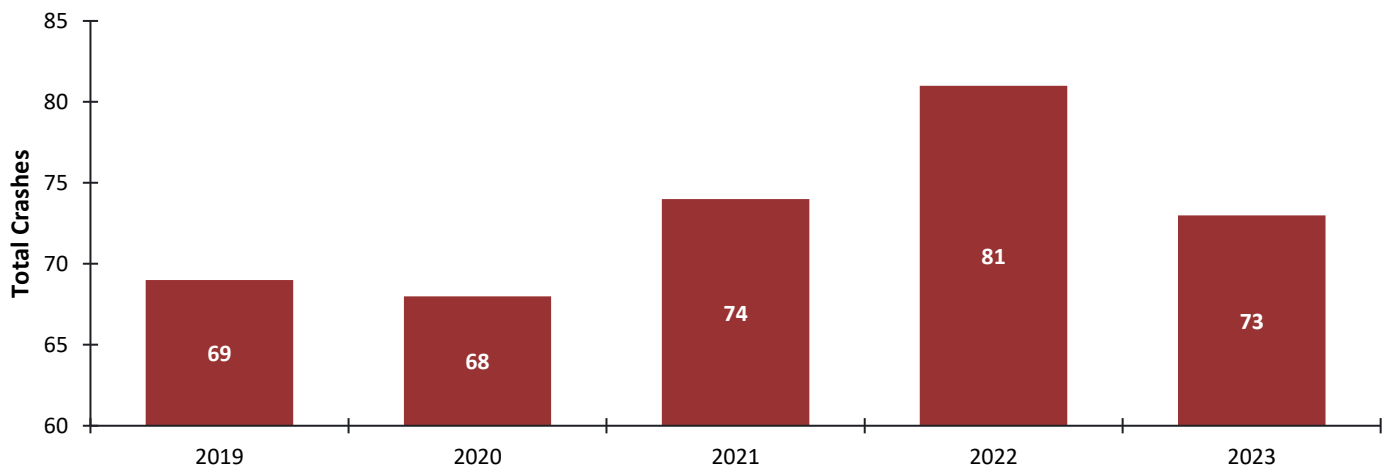
Aggressive driving may be underreported or difficult to represent accurately within the crash data set because police officers often arrive on scene AFTER a crash has occurred. Depending on the presence and number of witnesses available in the area, it may be difficult to accurately determine with certainty whether aggressive driving was a factor in a crash.

A previous version of this report separated “aggressive driving maneuvers” from “speed related factors” in classifying a crash as aggressive driving related, requiring BOTH to be present in order for a crash to be classified as influenced by aggressive driving. However, this led to a clear discrepancy between the data analysis results and the stated public perception that aggressive driving was often a factor in crashes and near-misses, as described by respondents to the Citywide Survey conducted between January and March 2025. For this reason, the underlying queries driving the data presented in this section were revised such that crashes involving “aggressive driving” now include crashes for which aggressive driving maneuvers OR speed related factors were identified as contributing to the crash.

2.3.4 Unrestrained Occupants

Unrestrained occupants involve either passengers or drivers who are not wearing seat belts, or a child not properly positioned in restraint systems. While these crashes pose little risk to external users outside the immediate occupants of the vehicle, the failure to wear a seatbelt is one of the most dangerous personal choices one can make in a vehicle. Buckling up is the single most effective thing someone can do to protect themselves in a crash.¹³ The crash numbers reflect this; in New Britain, unrestrained occupants are involved in almost 13.5 percent of fatal and serious injury crashes despite being involved in only 6 percent of all crashes. Figure 13 shows crashes involving unrestrained occupants from 2019 to 2023. The frequency of these crashes peaked in 2022 with 81 crashes.

FIGURE 13 CRASHES WITH UNRESTRAINED OCCUPANTS (2019-2023)



Source: Connecticut Crash Data Repository, University of Connecticut.

[Public Act No 21-175](#), which went into effect October 1, 2021, established the following requirements for safety belt usage:

- All vehicle operators and front seat passengers, of any age, are required to wear seatbelts;
- All rear seat passengers between the ages of 8 and 16 are required to wear seatbelts;
- All children under the age of 8 are required to utilize an age-appropriate carseat, properly secured by a safety belt;
- Secondary enforcement penalties were enacted for individuals pulled over for other infractions found to be carrying unrestrained passengers, with the option of a \$50 fine for operators over 18 and \$75 fine for those under 18.

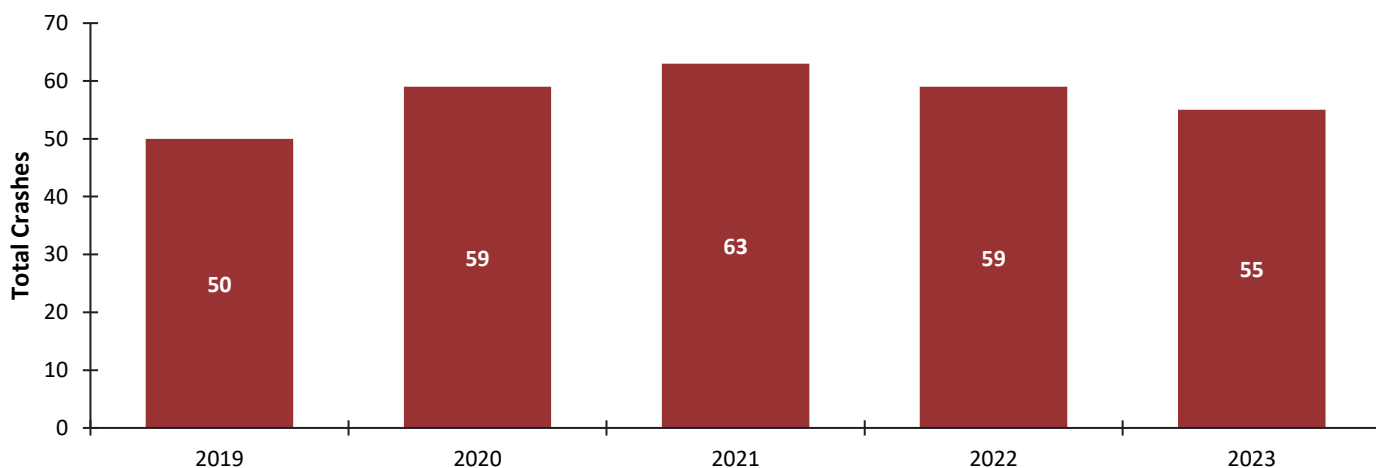
Enhancing safety to help prevent injuries from unrestrained drivers primarily involves police enforcements and education on these requirements. The fine for failing to wear a seatbelt in CT is \$92.

¹³ [Vehicle Safety: Seat Belts](#), National Highway Traffic Safety Administration.

2.3.5 Impaired Driving

Impaired driving crashes involve those in which drivers operate vehicles while experiencing alcohol (above .08 blood-alcohol-content) or drug impairment. While these types of crashes are less tied to infrastructure decisions, they can still be reduced by fostering a culture of responsible road use through support and outreach to promote safe driving practices. In New Britain, impaired driving plays a part in 4.8 percent of all crashes, which is higher than the 3.0 percent for the state of Connecticut. Figure 14 shows impaired driving crashes in New Britain. The frequency of these crashes peaks in 2021 with 63 crashes, an increase of 26 percent from 2019. After 2021, the frequency decreases to 55 crashes per year in 2023.

FIGURE 14 **IMPAIRED DRIVING CRASHES (2019-2023)**



Source: Connecticut Crash Data Repository, University of Connecticut.

In Connecticut, operating a vehicle while under the influence of drugs and/or alcohol is a criminal offense known as Driving Under the Influence (DUI), occasionally referred to as Operating Under the Influence (OUI) or Driving While Intoxicated (DWI). The relevant determining factor is whether a person’s ability to drive has been impaired, and the definitions of legal intoxication vary by age. For individuals aged 21 or older, legal intoxication is defined as a Blood Alcohol Concentration (BAC) of 0.08 or above. For those under 21, legal intoxication applies at a BAC of 0.02 or higher.

Vehicle operators arrested for a DUI, or convicted of a DUI by a court, maybe be subject to license suspensions. According to the Connecticut DMV, “in most cases, the mandatory 45-day driver’s license suspension—during which you cannot drive—will begin 30 days after the arrest date. The license suspension is based on the arrest information. It is also separate from any penalties or requirements that may be imposed as a result of the court case.”¹⁴ Reinstatement requires the installation of an ignition interlock device (IID) for a period of six months to 3 years depending on the offense, age of the vehicle operator, and date of any previous license revocations.

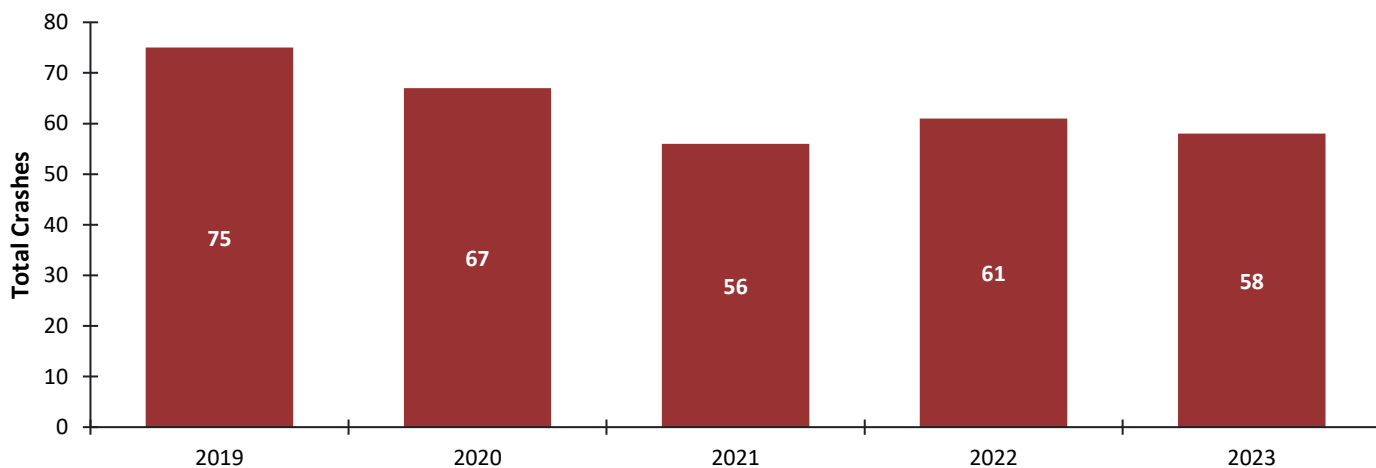
¹⁴ [Driving Under the Influence: Laws & Penalties | CT.gov](#)

2.3.6 Distracted Driving

Distracted driving crashes involve any motorist whose attention is diverted by a variety of activities. Common sources of distraction include cell phone use, eating, drinking, or adjusting the radio. In New Britain, distracted driving crashes make up around 5 percent of all crashes and 5 percent of fatalities and serious injuries, which is similar to the rate in all of Connecticut. Despite the increase of text messaging, GPS navigation, and other technologies in vehicles vying for drivers’ attention, distracted driving crashes have generally decreased in New Britain over the past five years, as seen in Figure 15. These crashes have decreased from 2019 to 2023, going from 75 in 2019 to 58 in 2023, a decrease of almost 23 percent.

Similar to the challenges described in documenting aggressive driving, distracted driving is likely to be an underreported factor in crashes because officers arrive at the scene after an incident has occurred. In the interest of self preservation, individuals involved in a crash where distracted driving was a factor may be disinclined to admit to distracted driving in an effort to avoid additional fines or insurance claim complications.

FIGURE 15 **DISTRACTED DRIVING CRASHES (2019-2023)**



Source: Connecticut Crash Data Repository, University of Connecticut.

Enhancing safety to prevent distracted driving requires utilizing essentially all the tools mentioned under the other sections of this report, and crashes that occur related to distracted driving are typically associated with crash covered in with an emphasis on Police Enforcement. According to the CTDOT Highway Safety Office, “it is difficult to fully identify the role distracted driving plays in crashes due to the way crash data is collected in Connecticut.” In 2021 alone, 5,400 crashes in the state were attributed to distracted driving.¹⁵

¹⁵ [Distracted Driving](#)

Pursuant to Connecticut General Statutes Section 14-296aa, it is illegal in the State of Connecticut to use handheld cell phones or mobile electronic devices while operating a motor vehicle. That includes the following limitations and exceptions:

- It's illegal to use these devices while you are stopped in traffic or at a stop light.
- Drivers 18 and over can use phones with a hands-free accessory.
- Drivers under 18 cannot use a phone even with a hands-free accessory.
- Exceptions: emergency situations and drivers who are police officers, firefighters or ambulance drivers performing their official duties.
- Mobile electronic devices include phones, pagers, personal digital assistants, laptop computers, gaming systems, digital video players and digital cameras.

Any person found to be in violation of these distracted driving rules is subject to a first offense penalty of \$200, which rises to \$375 for a second violation and \$625 for a third or subsequent violation.¹⁶ The State maintains a number of resources to educate road users on the dangers of distracted driving and present serious injuries and deaths as a result of distracted driving, including the CTDOT Office of Highway Safety's Drive to Save Lives Website [\[LINK\]](#).

2.3.7 Older Drivers

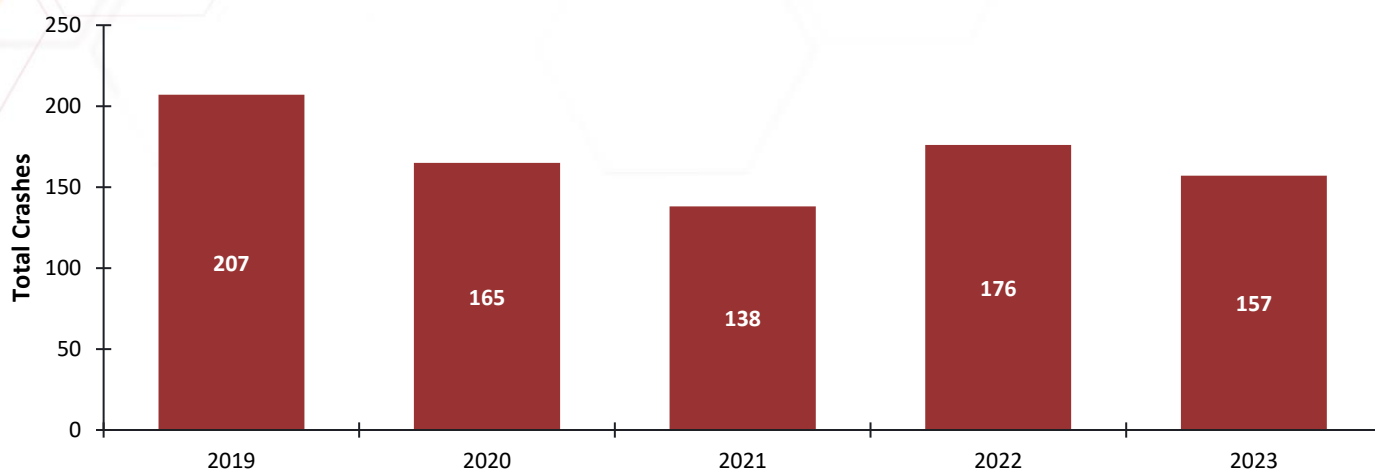
Older driver crashes involve drivers who are 65 years old or older. Aging drivers can often suffer from declining vision, changes in perception, or lower psychomotor performance which can all affect their reaction times when responding to sudden changes in roadway conditions. Given the increased elderly population compared to historical populations¹⁷ and the increases in medical technology, aging drivers will only continue to be an issue into the future.

- As of 2022, the American Community Survey (ACS) reports that 13 percent of New Britain is over 65 years old.
- From 2019 to 2023, older drivers were involved in approximately 14.1 percent of all crashes in New Britain and 11.5 percent of all fatalities and serious injuries, approximate to their population share.
- In New Britain, older driver crashes peaked in 2019 with 207 crashes, as seen in Figure 16, before decreasing by 1/3 to 138 in 2021. This was followed by a 27 percent growth in older driver crashes to 176 in 2022 before reaching an approximate balance between the preceding two years at 157 in 2023.

¹⁶ [Connecticut General Statutes § 14-296aa. \(2024\) - Use of hand-held mobile telephones and mobile electronic devices by motor vehicle operators and school bus drivers prohibited or restricted. Exceptions. Penalties. Amounts remitted to municipality. Record of violation. :: Title 14, Chapter 248 - Vehicle Highway Use :: 2024 Connecticut General Statutes :: U.S. Codes and Statutes :: U.S. Law :: Justia](#)

¹⁷ [U.S. Older Population Grew From 2010 to 220 at Fastest Rate Since 1880 to 1890](#), U.S. Census Bureau.

FIGURE 16 CRASHES INVOLVING OLDER DRIVERS (2019-2023)

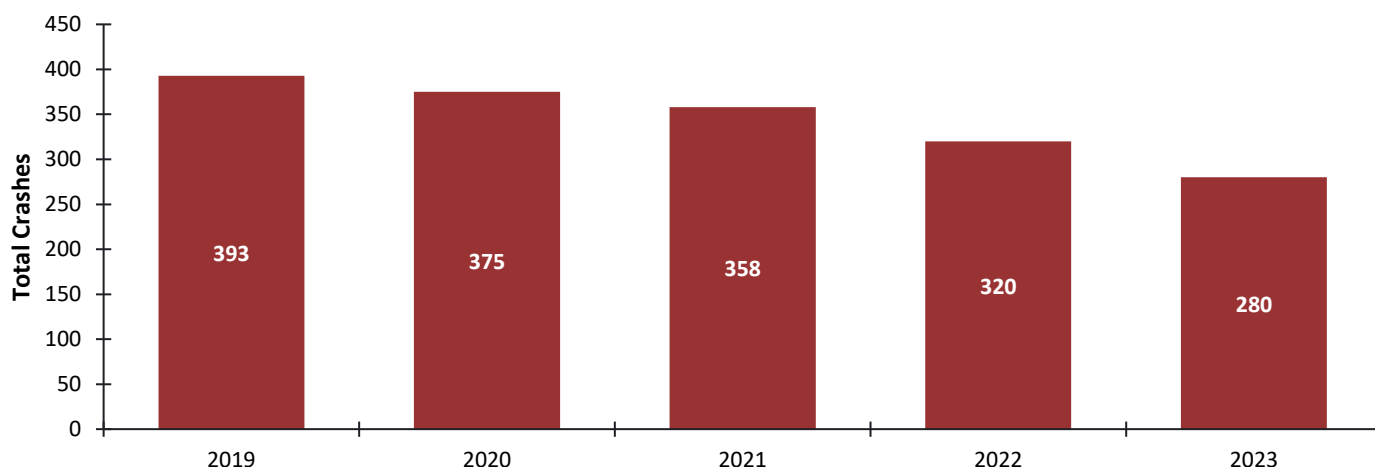


Source: Connecticut Crash Data Repository, University of Connecticut.

2.3.8 Younger Drivers

Younger driver crashes involve drivers who are 25 years old or younger. In general, younger drivers frequently exhibit higher-risk behaviors, such as aggressive driving, and have less experience than other drivers.

FIGURE 17 CRASHES INVOLVING YOUNGER DRIVERS (2019-2023)



Source: Connecticut Crash Data Repository, University of Connecticut.

- Younger drivers are involved in 28.8 percent of crashes and 32.4 percent of all fatalities and serious injuries despite making up a larger proportion of the population, around 38 percent.
- For each fatality or serious injury crash, there is almost a 1 in 3 chance a younger driver was involved.
- Despite the prevalence of these crashes, crashes involving younger drivers have generally declined since 2019;

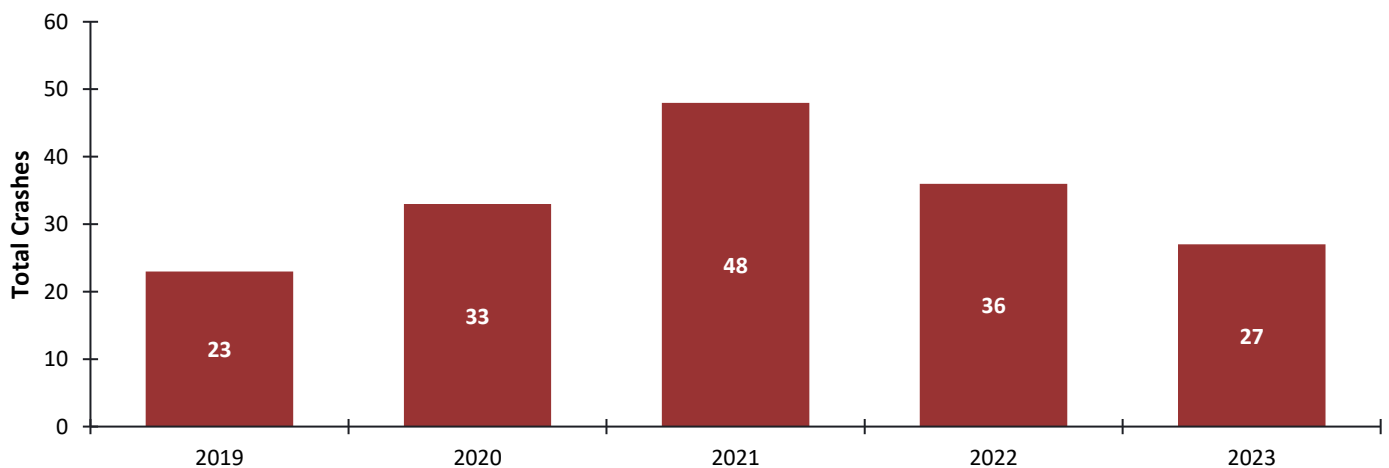
- Crashes involving Younger Drivers in the analysis period peaked in 2019 (393 crashes) and have decreased by 29 percent to 280 crashes in 2023.

Improving safety and reducing crashes specifically for younger drivers (25 and younger) must involve increased education. One program that could be further utilized is [CTDOT's Safe Route to School \(SRTS\) Program](#), which trains students about the dangers a person faces as a driver and/or vulnerable road user, and ways to protect themselves.

2.3.9 Motorcyclists

Crashes involving motorcyclists are of particular concern because motorcycles are more difficult to operate than passenger vehicles, requiring more physical skill. Motorcycles also offer little protection in crashes, with helmets (when worn) often being the only protection a rider will have. Currently, the state of Connecticut has a partial helmet law with only riders under 18 or anyone with a training permit required to wear helmets.¹⁸ **Of all fatal and serious injury crashes involving motorcycles, only 15 percent had motorcyclists wearing helmets, indicating a strong correlation between the severity of the crash and helmet usage.**

FIGURE 18 CRASHES INVOLVING MOTORCYCLISTS (2019-2023)



Source: Connecticut Crash Data Repository, University of Connecticut.

- NHTSA estimates that, per mile traveled, motorcyclists are about 26 times more likely than passenger car occupants to die in traffic crashes¹⁹. This effect is seen when comparing the number of crashes and the number of fatalities/serious injuries in New Britain; despite only making up 2.5 percent of crashes in the city, motorcyclists make up over 27.7 percent of all fatalities and serious injuries.

¹⁸ [Motorcycle Helmet Laws](#), Connecticut General Assembly.

¹⁹ [Traffic Safety Facts](#), National Highway Traffic Safety Administration.

- A crash involving a motorcyclist is much more likely to be dangerous or life-threatening compare to other crashes.
- Motorcycle crashes peaked in 2021 with 48 crashes, more than doubling in frequency compared to 2019.

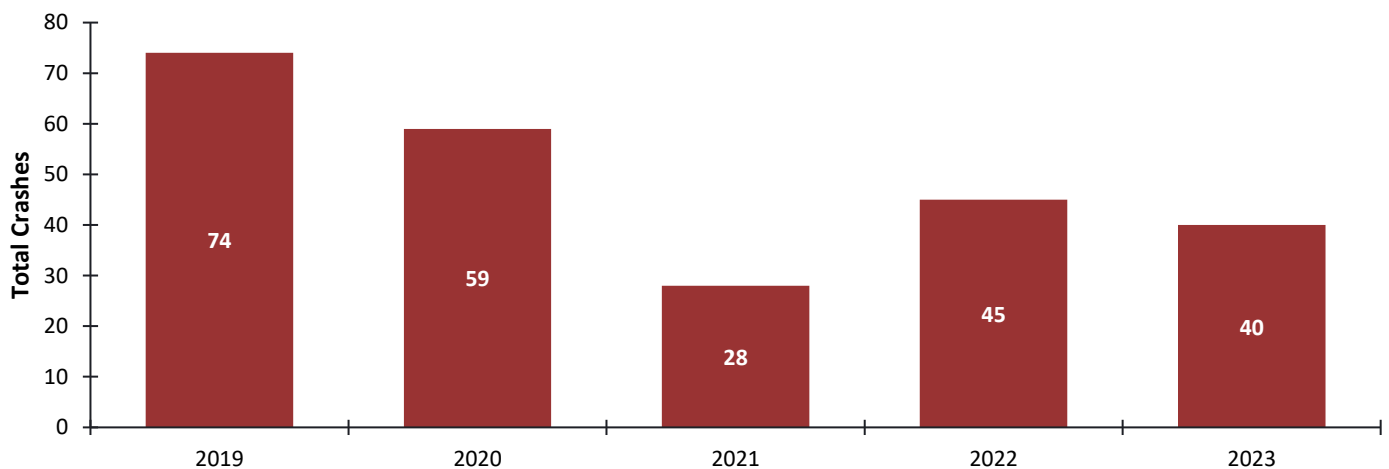
The CTDOT Office of Highway Safety maintains resources to educate road users about motorcycle safety accessible here: [Motorcycle Safety](#). The Connecticut Rider Education Program ([CONREP](#)) includes on-bike and written instructions and testing, which is mandatory to securing a motorcycle endorsement required to operate a motorcycle legally in CT. Tunxis Community College, located near New Britain in Farmington, CT, is one of several available CONREP training sites.²⁰

2.3.10 Pedestrians

Pedestrians face unique challenges and a higher risk of injury compared to other road users. While walking offers significant health and environmental benefits, these users are more prone to severe injuries and fatalities when involved in collisions with motor vehicles. Similar to the motorcyclists emphasis area, pedestrians make up a relatively small number of crashes in New Britain (4.1 percent), but a much larger proportion of fatalities and serious injuries (25.7 percent). Both rates are significantly higher than the same rates for the state of Connecticut (1.6 percent and 17.8 percent, respectively).

Figure 19 shows crashes involving pedestrians from 2019 to 2023.

FIGURE 19 CRASHES INVOLVING PEDESTRIANS (2019-2023)



Source: Connecticut Crash Data Repository, University of Connecticut.

- From 2019 to 2021, the number of pedestrian-involved crashes decreased heavily from 74 to 28, a decrease of over 62 percent. This trend is likely attributable to the impacts of the COVID-19 pandemic, which led to reductions in road user activity across virtually all modes. Areas like New Britain where both population density, street connectivity,

²⁰ [Where can I find CONREP training sites near me?](#)

and COVID incidence were comparatively high, pedestrian activity was found to be driven down during the pandemic.²¹

- From 2021 to 2023, as pandemic restrictions eased, this trend reversed, with a slight rise in the prevalence of crashes involving pedestrians, ending the study period with 40 crashes in 2023.

Section 3 contains more in-depth information on pedestrian crashes.

2.3.11 Bicyclists

Bicyclists face similar transportation safety challenges as pedestrians. Bicyclists may be even more at-risk compared to pedestrians as bicyclists often share the road with vehicles when there is no separate bicycle infrastructure from vehicles. **In New Britain, the bicyclists emphasis area contains by far the fewest number of crashes and fatalities/serious injuries in the year studied.** Only 0.6 percent of crashes involve bicyclists, and there were no fatalities or serious injuries from 2019 to 2023.

For several reasons, the relatively low number of crashes available in the study's dataset presents a challenge for drawing meaningful conclusions on bicyclist crash trends. It's common for bicycle crashes that do not also involve a motor vehicle to go unreported, which means the crash is not captured in the State's dataset. Additionally, the low incidence of bicyclist-involved crashes may be attributed to the City's dedication to building and improving bicycle infrastructure following the completion of a [2013 bicycle connectivity masterplan](#). In the 12 years since the plan was completed, the City has built a robust network of in road and separated bicycle facilities, and over the 5-year period studied here (2019 to 2023) has seen notable growth in bicycle ridership. Core objectives of this bicycle infrastructure build out have included:

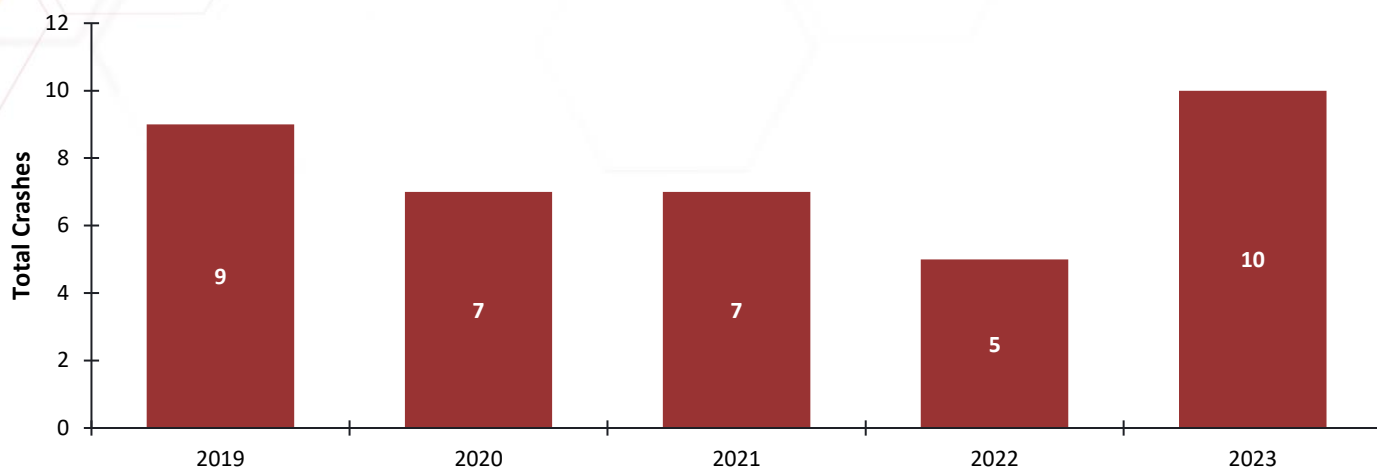
- This involves establishing safe bike routes between all the City's parks;
- Improving access to bicycle-safe routes to both City Schools and CCSU; and
- Establishing intermodal connectivity between bicycles, transit, and other modes, including the CTFastrak bus line.

Figure 20 shows bicyclist crash trends in the city, which experienced a relatively downward trend from 2019 to 2022 before increasing by 66 percent in 2023. However, this large increase may not be indicative of a consistent increasing trend in bicyclist crashes; rather, it may be simply be an outlier due to the small amount of data available.

Section 3 contains more in-depth information on bicyclist crashes.

²¹ Park K, Singleton PA, Brewer S, Zuban J. Pedestrians and the Built Environment during the COVID-19 Pandemic: Changing Relationships by the Pandemic Phases in Salt Lake County, Utah, U.S.A. Transp Res Rec. 2023 Apr;2677(4):448-462. doi: 10.1177/03611981221083606. Epub 2022 May 11. PMID: 37153183; PMCID: PMC10149492.

FIGURE 20 **CRASHES INVOLVING BICYCLISTS (2019-2023)**



Source: Connecticut Crash Data Repository, University of Connecticut.

3

PEDESTRIAN & BICYCLIST DEEP-DIVE

A full picture of New Britain's progress towards comprehensive transportation safety is incomplete without studying the distinct aspects of pedestrian and bicycle crashes in the city. The City tasked the Consultant Team to perform a deep-dive into bicycle and pedestrian crashes based on their concerns regarding the adherence to traffic laws and general safe practices by both vulnerable road users and vehicle drivers.

The City had concerns that vulnerable road user crashes continued to occur, and in some cases were even increasing in number, in areas where the City had already invested substantial resources in vulnerable road user safety. Dating back to the completion of the May 2013 [Complete Streets Master Plan for Downtown New Britain](#) and the April 2013 [Bicycle Connectivity and Traffic Calming Study](#), the City made major investments in Complete Streets and livability to improve the safety and connectivity of its bicycle and pedestrian networks. This investment has been focused in the downtown area, but also includes over 55 miles of bicycle lanes and multi-use trails. The investment also included:

- Right-sizing roads for all users utilizing road diets
- Streetscape and traffic calming enhancements to increase vulnerable road user safety and lower vehicle speeds
- Improving pedestrian facilities for sidewalks and crosswalks
- Installing additional bicycle infrastructure such as green intersection treatments
- Upgrades to traffic signals and pedestrian crossing signals
- Installing Rapid Rectangular Flashing Beacons (RRFBs) at mid-block pedestrian crossings

As of 2025, this investment totals over \$75 million and includes projects completed, in design, or under construction.

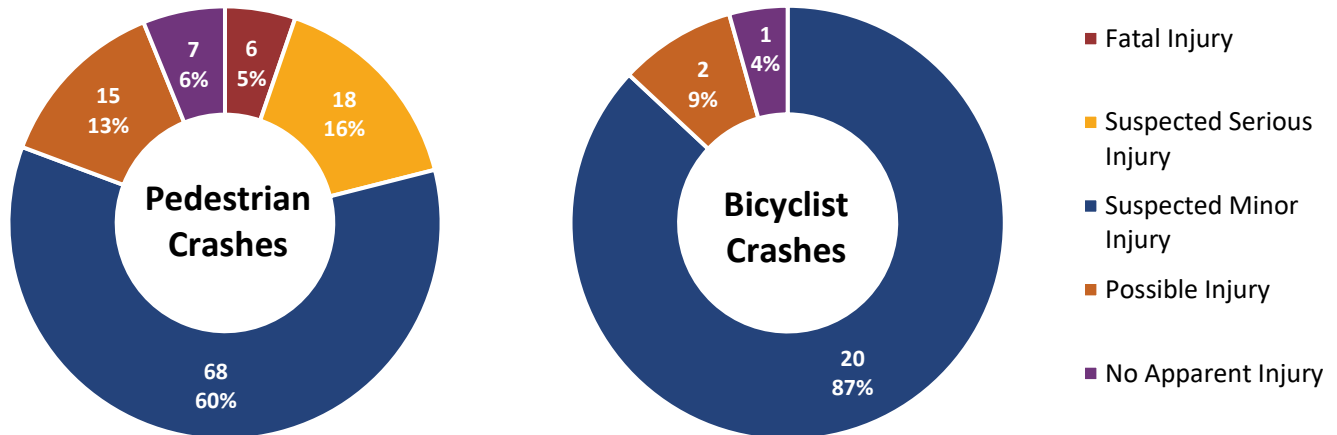
Within the deep-dive, the Consultant Team analyzed the contents of the New Britain Police Department's crash reports from 2021 to 2023 to identify trends in the unique circumstances of each recorded crash. The reports contain data describing the crash, pedestrian or cyclist involvement, road conditions, location, and full police report narratives that attempt to describe what happened in each incident.

Crash reports do not provide the full picture of pedestrian and bicyclist safety; while it is not consistent across the nation, there is significant underreporting of pedestrian and bicyclist crashes. Studies show that anywhere between a third²² and half²³ of pedestrian/bicyclist-related crashes that result in injury may not have an associated police report. This number is likely even higher when accounting for crashes resulting in at most minor injuries.

3.1 Total Crashes and Severity

As summarized in Sections 2.3.10 and 2.3.11, New Britain experienced **114 crashes** involving a pedestrian and **23 crashes** involving a bicyclist. Crashes involving pedestrians were far more common, with more than 4 pedestrian crashes for every cyclist crash in New Britain. Nationally, walking trips outnumber cycling trips around 7 to 1²⁴, so it is likely that a higher percentage of cycling trips result in a crash than pedestrian trips in New Britain. However, pedestrian crashes are more severe, on average. None of the reported cyclist crashes resulted in suspected severe injuries or fatalities while 22 percent of reported pedestrian crashes resulted in a suspected severe injury or fatality. Severity among pedestrian and bicyclist crashes is noted in Figure 21.

FIGURE 21 PEDESTRIAN & BICYCLIST CRASH SEVERITY (2021-2023)



Source: Connecticut Crash Data Repository, University of Connecticut.

²² [Comparative Analysis of Pedestrian Injuries using Police, Emergency Department, and Death Certificate Data Sources in North Carolina, U.S., 2007–2012](#), Laura S. Sandt et al, Transportation Research Record.

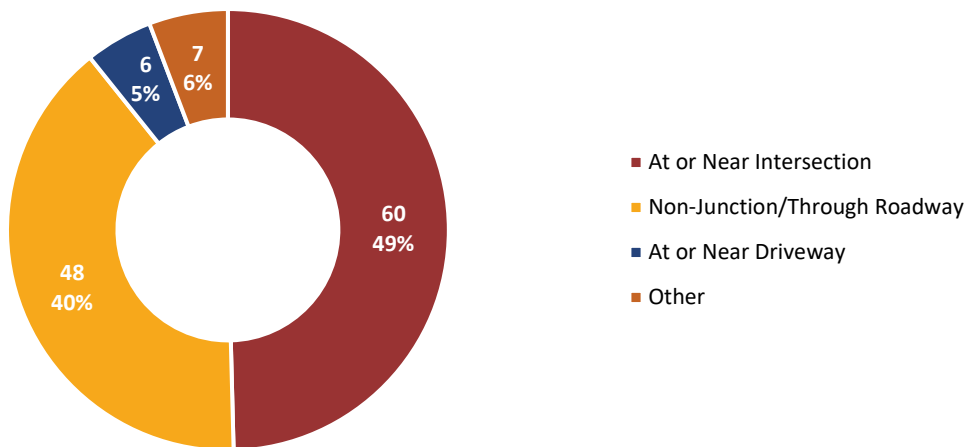
²³ [Police Reporting of Pedestrians and Bicyclists Treated in Hospital Emergency Rooms](#), Jane C. Stutts and William W. Hunter, Transportation Research Record.

²⁴ [National Rates of Biking & Walking](#), The League of American Bicyclists.

3.1.1 Pedestrian & Bicyclist Crash Locations

Figure 22 shows where on the roadway pedestrian/bicyclist crashes occur. **In general, intersections had the most (49 percent) pedestrian/bicyclist crashes compared to other sections of roadway.**

FIGURE 22 PEDESTRIAN & BICYCLIST CRASH ROADWAY LOCATION (2021-2023)



Source: Connecticut Crash Data Repository, University of Connecticut.

Notes: Data may differ from other summaries due to inconsistent data.

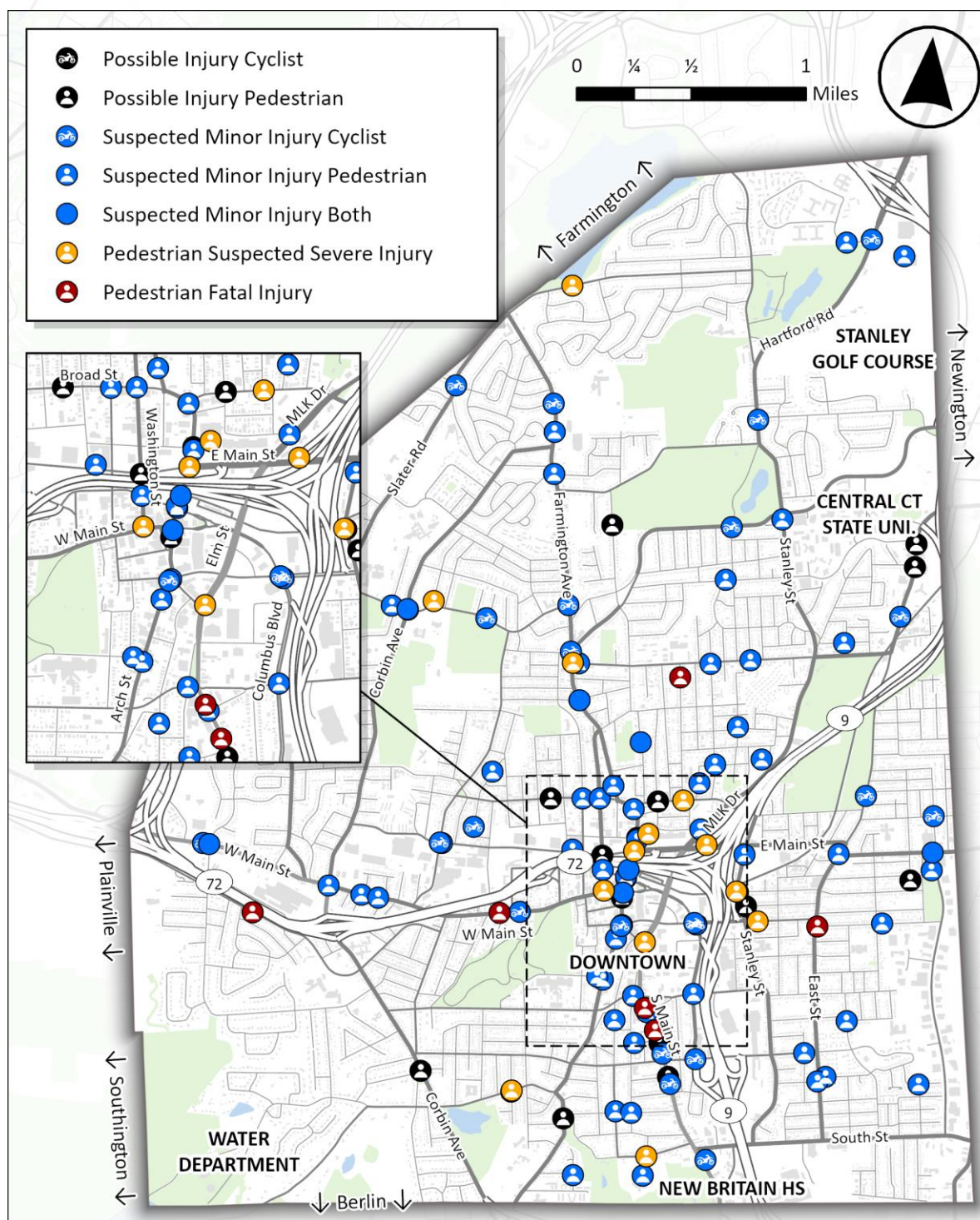
- Besides intersections, 40 percent of crashes occurred on through roadways and another 11 percent happened at other locations such as driveway approaches to roadways.
- While pedestrian/bicyclist crashes can occur at any part of the roadway, the intersection typically sees more crashes as that is where conflict points between modes are most common, such as crosswalks and vehicular turning movements that cross bicycle lanes.

Figure 23 shows a map of pedestrian and bicyclist crashes in New Britain, color-coded by severity.

- In general, Downtown New Britain sees the most pedestrian/bicyclist crashes as it's dominated by land uses that encourage active transportation, like restaurants, coffee shops, essential public services, transit connections, and commercial activity.
- The Little Poland neighborhood, north of CT-72, also contains a higher concentration of pedestrian/bicyclist crashes for similar reasons.

- Contrary to the trend for all crashes in the city, the majority of New Britain's pedestrian/bicycle crashes happen on local roads (73 percent) compared to 42 percent of all crashes (see Section 2.2.6 for more detail).

FIGURE 23 PEDESTRIAN AND BICYCLIST CRASHES (2021-2023)



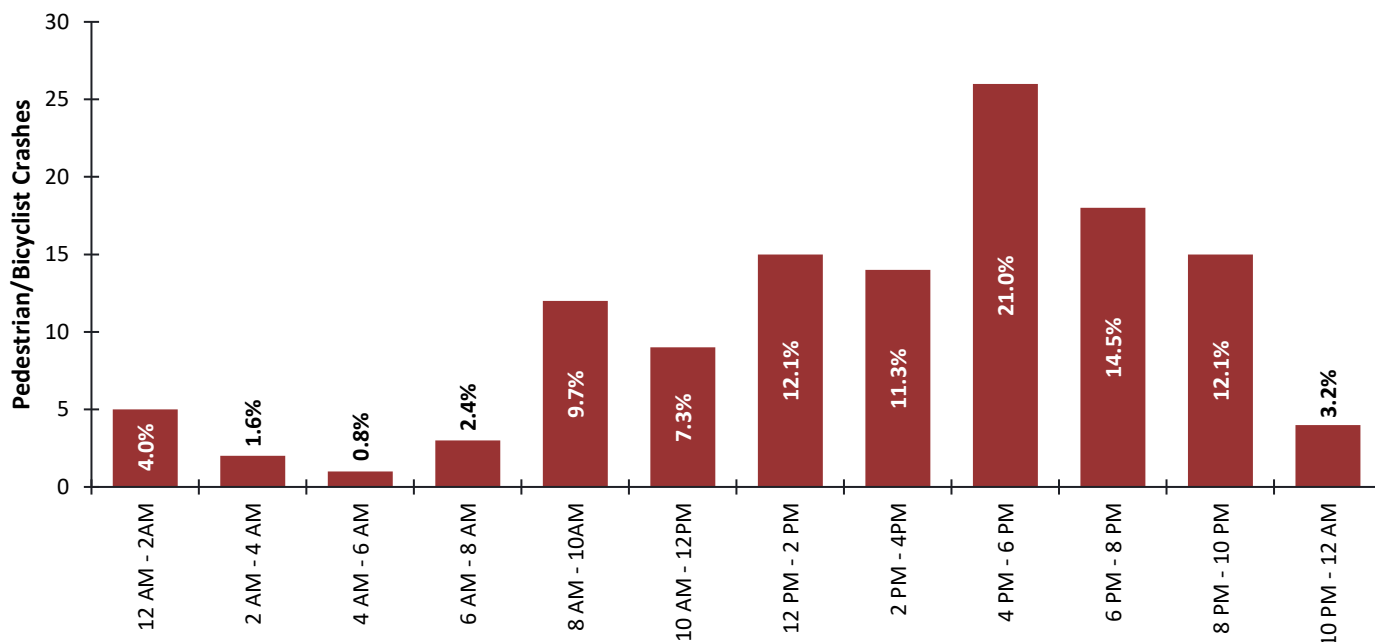
Source: Connecticut Crash Data Repository, University of Connecticut.

Notes: Data may differ from other summaries due to inconsistent crash geolocation data.

3.1.2 Pedestrian & Bicyclist Crash Time

Figure 24 shows pedestrian/bicyclist crashes by time of day, grouped into two-hour buckets for better data readability. Crashes varied according to time of day, roughly in line with all crashes (seen in Figure 7). The highest hours for pedestrian/bicyclist crashes are when the typical work hours end around 4pm – 6pm (21 percent of total pedestrian/bicyclists on average). Crashes in the early hours of the morning are not typical.

FIGURE 24 PEDESTRIAN & BICYCLIST CRASHES BY TIME OF DAY (2021-2023)



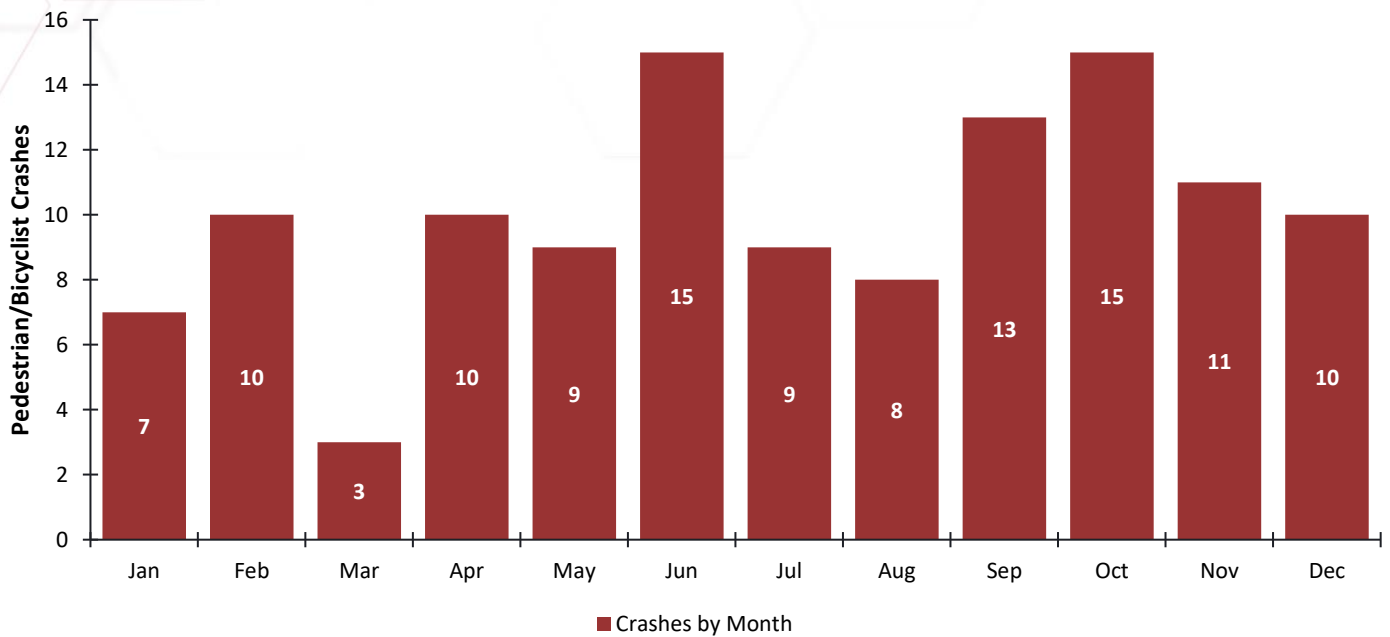
Source: Connecticut Crash Data Repository, University of Connecticut.

Notes: Totals may differ from other summaries due to inconsistent crash time data.

It is worth noting that there is a slightly higher percentage of crashes in the evening hours between 6 – 10pm; almost 27 percent of pedestrian/bicyclist crashes happened during these hours compared to 21 percent of all crashes. This can potentially be explained by the lack of ambient lighting conditions. Because bicycle light usage is inconsistent and pedestrians often do not have any lights at all, dark hours may be more deadly for these vulnerable road users.

- Of the pedestrian/bicyclist crashes that occurred at night, about 28 percent of them happened in areas without any artificial lighting. This compares to 10 percent of all crashes that happened in dark areas, which underscores the importance of streetlighting and other artificial lights in keeping vulnerable road users safe during the night.
- Pedestrian and bicyclist crashes can also be seen to vary seasonally with peaks in June (15 crashes) and the fall months of September and October (13 and 15 crashes respectively), as seen in **Error! Reference source not found.**
- In the timeframe studied, March is the month with the fewest crashes (3). All other months had between 7 and 11.

FIGURE 25 PEDESTRIAN & BICYCLIST CRASHES BY MONTH (2021-2023)



Source: Connecticut Crash Data Repository, University of Connecticut.

Notes: Totals may differ from other summaries due to inconsistent crash time data.

3.2 Vision Zero Task Force Downtown Behavioral Audit

An additional portion of the deep-dive saw the City’s Vision Zero Task Force participate in an activity where they performed a behavioral audit of the downtown area and noted the behavior of both vulnerable road users and drivers around lunch time in the middle of September. The Task Force split into three teams, each of which observed one of three main intersections (Main Street/West Main, Main Street/Columbus Boulevard, and Main Street/East Main).

- All three groups independently observed that pedestrian and cyclist compliance with travel laws was lacking.
- All three groups witnessed non-motorists violating traffic laws, including an instance where a crossing guard walked out in front a bus in the middle of a street and was nearly hit.
- All three groups independently observed a surprisingly high *vehicular* rate of compliance with travel laws.
- Based on field observations, the groups commented on the timing of pedestrian signals at the intersections and questioned whether the long cycle times were a factor in the lack of compliance by bicyclists and pedestrians.

While this audit was performed only for a short timeframe, the Task Force’s observations were consistent with previous observations by City Staff regarding the compliance with traffic laws by vulnerable road users and the need to address this to avoid fatalities and serious injuries among bicyclists and pedestrians in the future.

3.3 Video Analysis of Downtown VRU Behavior

To supplement the activity described in the previous section, the Project Team reviewed one hour of traffic camera footage recorded from several angles at three intersections in Downtown New Britain:

- Main Street at Columbus Boulevard;
- Main Street at East Main Street and Myrtle Street; and
- Main Street at West Main Street and Bank Street.

The footage was recorded between 4:00 PM and 5:00 PM on April 22, 2025, which was a clear day with seasonable weather and no visibility issues during the period of observation. For the purposes of this analysis, the Project Team established the following typology of movement types for pedestrians, cyclists, and other types of vulnerable road users (VRUs) observed using these three intersections:

- **Concurrent:** Instances of VRUs crossing a street in a crosswalk when vehicular traffic on the street they are crossing has a red light, and vehicular traffic on the perpendicular street has a green light, and the pedestrians are receiving a don't walk signal (note—New Britain current uses exclusive pedestrian phasing at each of the studied locations)
- **Timing:** Instances of pedestrians crossing a street when receiving a don't walk signal, where any feature of concurrent crossing is not present
- **Crossing:** instances of pedestrians crossing the street outside a crosswalk
- **Street:** instances of pedestrians walking in the road, outside of crosswalks, within the motor vehicle right of way
- **Other:** instances of pedestrians operating in any other manner not defined above

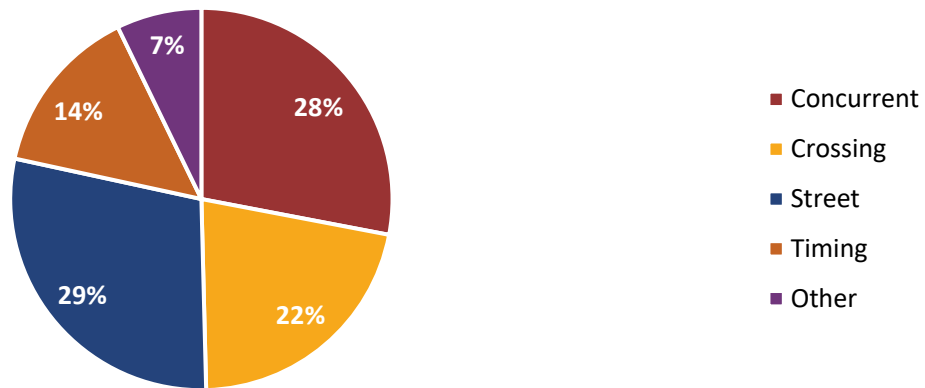
The most critical observation of this study was that pedestrians utilizing crosswalks were four times as likely (27%) to use concurrent crossings as they were to adhere to exclusive pedestrian phasing (7%).

- **Street Crossings** were common at all three intersections, with **29%** of all users crossing outside designated crosswalks, diagonally across intersections, or in the mid-block.
- **Main St at Columbus Blvd** had the most **Concurrent (40%)** and **Crossing (37%) Movements**, suggesting a high percentage of VRUs do not make use of existing pedestrian signals.
- **Main St at E Main St and Myrtle St** was dominated by **Street Crossings (51%)**, significantly above the overall average (29%), indicating that pedestrians are less likely to use the crosswalk or other pedestrian infrastructure at this intersection specifically.

*The accompanying technical memoranda focused on **Policy and Process Changes** as well as **Strategy and Project Selection** provide more detail on potential actions in response to these findings.*

3.3.1 Key Findings by Mode

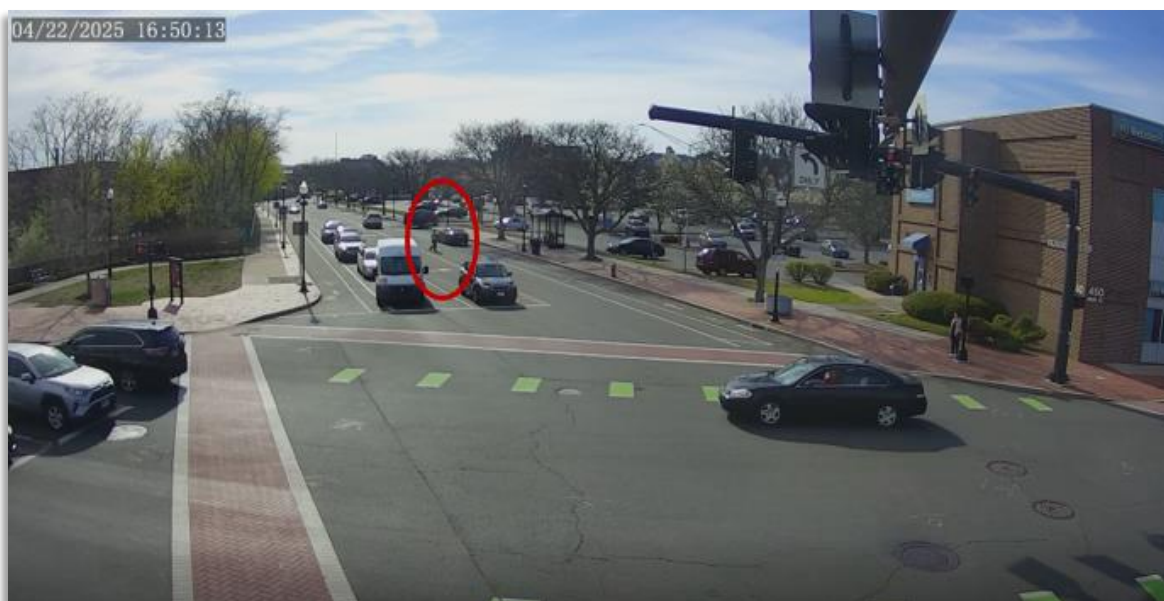
FIGURE 26 PERCENTAGE OF TOTAL CROSSING MOVEMENTS BY TYPE



Pedestrian Travel

- **Street Crossing:** 34% of pedestrians crossed outside designated crosswalks, diagonally, or in the mid-block.
- **Concurrent Movement:** 27% of pedestrians crossed concurrently with traffic, which may indicate reliance on vehicle queues rather than pedestrian signals.
- **Traffic Signals:** Just 7% of pedestrians were observed waiting for and crossing with the pedestrian signal.

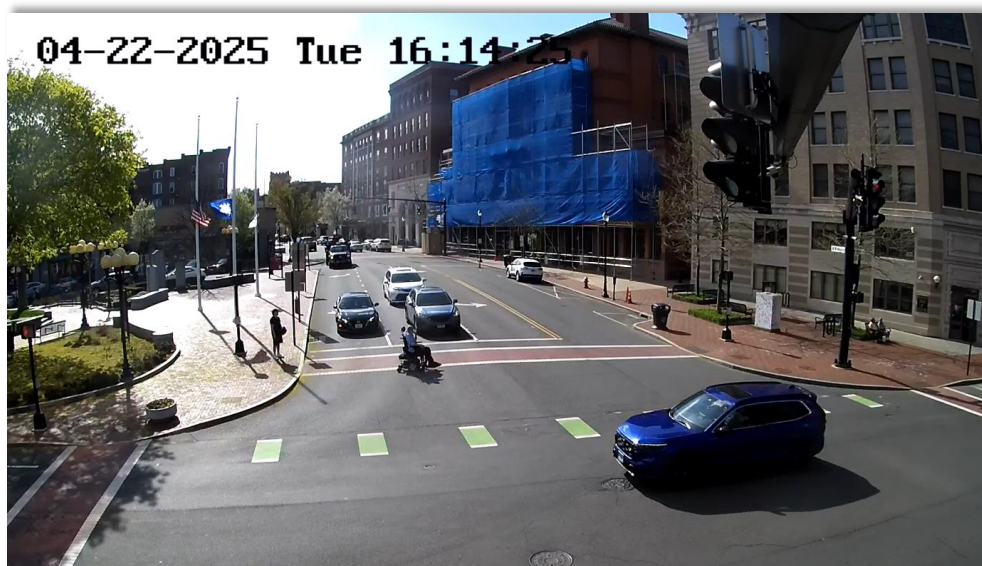
FIGURE 27 A PEDESTRIAN CROSSES THE STREET DIAGONALLY TO REACH A BUS STOP



Wheelchair Travel

- **Concurrent Movement:** 67% of electric wheelchair users were observed travel concurrently with parallel traffic.
- **Crossing Movement:** 33% of electric wheelchair users were observed traveling outside of designated crosswalks.

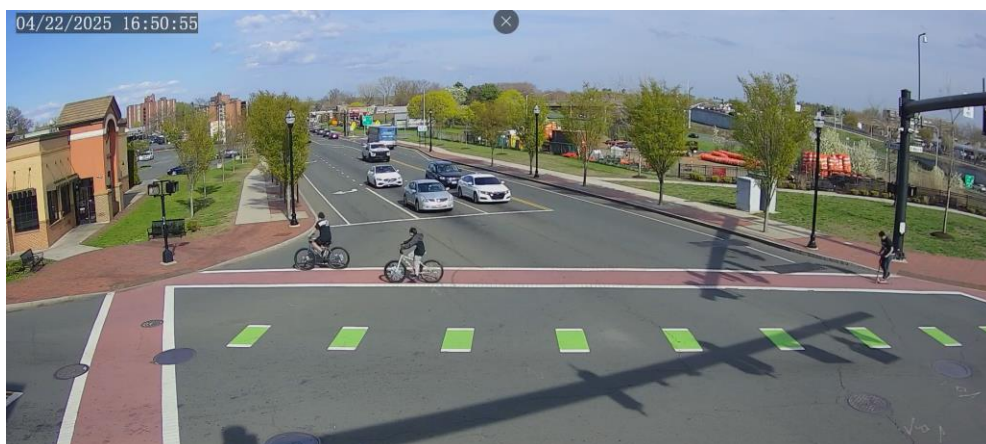
FIGURE 28 AN ELECTRIC WHEELCHAIR USER CROSSES USING CONCURRENT TIMING



Bicycle Travel

- **Concurrent Movement:** 20% of bicyclists were observed crossing concurrently.
- **Crossing Movement:** 67% of bicyclists were observed crossing the street outside a crosswalk or marked bike crossing, such as crossing diagonally across intersections.
- **Traffic Signals:** 13% of bicyclists were observed waiting for and crossing with the pedestrian signals.

FIGURE 29 CYCLISTS ARE OBSERVED USING A CROSSWALK RATHER THAN THE MARKED BIKE CROSSING



Travel by Electric Scooter or Skateboard

- **Crossing Movement:** 33% of electric scooter riders were observed crossing outside of crosswalks or bike lanes.
- **Traffic Signals:** Just 17% of scooter/skateboard users were observed waiting for and crossing with the pedestrian signals (83% did not)
- **Concurrent Movement:** 33% of scooter/skateboard users were observed crossing concurrently.
- **Timing Movement:** 17% of scooter/skateboard users were observed crossing when traffic was ongoing.

FIGURE 30 A SKATEBOARDER IS OBSERVED RIDING INTO ONCOMING TRAFFIC AFTER CROSSING DIAGONALLY



3.3.2 Conclusions

The findings from this study suggest that pedestrians and other VRUs are more likely to use the visual cue of vehicle movement to determine when it is safe to cross the street, rather than relying on the traffic signal equipment installed at each intersection. Because all three intersections have already installed proven countermeasures, this suggests an appropriate next step would be to **consider transitioning to concurrent pedestrian phasing Downtown, in an effort to align traffic signal functionality to existing user movement tendencies.**

3.4 Review of Police Crash Report Narratives

Pedestrians and cyclists move more unpredictably than cars and trucks do. All can share the road, but cyclists and pedestrians are often on the sidewalk, in crosswalks, in bicycle lanes, and in parking lots changing directions much more quickly than vehicles. Pedestrians and cyclists also have much smaller visual profiles than vehicles and may not follow rules of the road as strictly. Altogether, this means that much more information is available when reviewing a narrative describing what actually happened in crash events as opposed to studying descriptive, aggregated data about bicycle and pedestrian crash events. Unfortunately, this issue makes it difficult to generalize what has gone wrong in cases of bicycle

and pedestrian crashes. Specifically, the 2023 narrative crash reports for bicycles and pedestrians were reviewed to come to this conclusion. **The crash narrative gives an account of the crash and supporting circumstances in the police officer's own words, and often suggests who may be at fault for the crash.**

- From the reports, pedestrians and bicyclists were found at fault by the reporting officer more often than drivers.
- Of the crashes in 2023, 60 percent of the reports identified non-vehicle parties at fault due to failure to follow applicable laws such as proper crosswalk, sidewalk, and pedestrian crossing signal usage.
- Another 20 percent of reports identified vehicle drivers as being at fault, generally by being inattentive or for failure to yield/maintain distance.
- The remaining 20 percent of reports did not indicate whether any party was at fault. In 2023, both fatal crash reports indicated the pedestrian was at fault, as well as four of the five crashes that resulted in a serious injury.
- Of the 15 pedestrian crashes that occur at intersections, in eight the pedestrian was noted by the reporting officer as being "in the crosswalk". The other seven indicate the pedestrian is near the crosswalk but not in it, crossing diagonally, or waiting on the sidewalk.
- Of the 8 incidents where the pedestrian was in the crosswalk, there were five where the pedestrian was attempting to cross during a "Do Not Walk" signal phase.

3.5 Other Pedestrian & Bicyclist Observations

Driver behavior can play a significant role in a pedestrian or bicyclist crash. Aggressive drivers, drivers under the influence, or distracted drivers may not see a pedestrian or bicyclist crossing the street, or they may lose control of their vehicle and hit a pedestrian or bicyclist on the sidewalk or in the bicycle lane. These driver-related issues are compounded by the little protection pedestrians and bicyclists have when collisions occur. The consequences for bicyclists and pedestrians are often more severe than the consequences for drivers in these collisions.

- Bicyclist and pedestrian crashes involved an aggressive driver approximately 17 percent of the time, slightly lower than the 21 percent of all crashes in the city.
- Aggressive driving is more often a factor in bicycle crashes (22 percent) than in pedestrian crashes (15 percent). This may reflect the frustration of drivers traveling more slowly than normal when following behind a bicyclist.
- There were not many (fewer than 10) instances of drivers being under the influence or distracted while being involved in a pedestrian bicyclist crashes over the three years studied.
- Less than 3 percent of all pedestrian/bicyclist crashes involved a driver under the influence, and about 3 percent involved a distracted driver. These rates are a little less than the rates for all crashes for driving under the influence (5 percent) and distracted driving (5 percent).

4

AUTOMATED TRAFFIC ENFORCEMENT SAFETY DEVICES

Automated Traffic Enforcement Safety Devices (ATESD) are cameras used to enforce traffic laws such as speeding and running red lights with the purpose to improve public safety, change driver behavior, and reduce crashes. Connecticut Public Act 23-116, which implements the recommendations of the State of Connecticut’s Vision Zero Council, was passed in June 2023. Part of this Act was authorizing municipalities to use ATESDs at locations within school zones, pedestrian safety zones, and other locations in municipalities pursuant to (1) an ordinance adopted by the municipality in accordance with the Act’s requirements and (2) a plan approved every three years by CTDOT. The Act defines an ATESD and a device designed to detect and collect evidence of alleged violations of the ordinance by recording images that capture the license plate, date, time and location of a vehicle that (1) Exceeds the posted speed limit by 10 or more miles per hour; or (2) Runs a red light. On January 2, 2024, CTDOT published the [Guidance for Municipalities Developing an Automated Traffic Enforcement Safety Device \(ATESD\) Plan](#) (“Guidelines”), which describe the development and submission requirements for ATESD planning, as well as the criteria that CTDOT’s Office of the State Traffic Administration (OSTA) will use to evaluate plans submitted for approval. A number of items are required for OSTA approval including the following:

- Ordinance adopted by the City authorizing the use of ATESDs
- Public hearing
- Common Council approval of an ATESD Plan
- A Comprehensive Safety Action Plan, Regional Transportation Action Plan and/or municipal Vision Zero Action Plan

This chapter will discuss the factors considered for the analysis and identify potential locations for placing ATESD within school zones in New Britain.

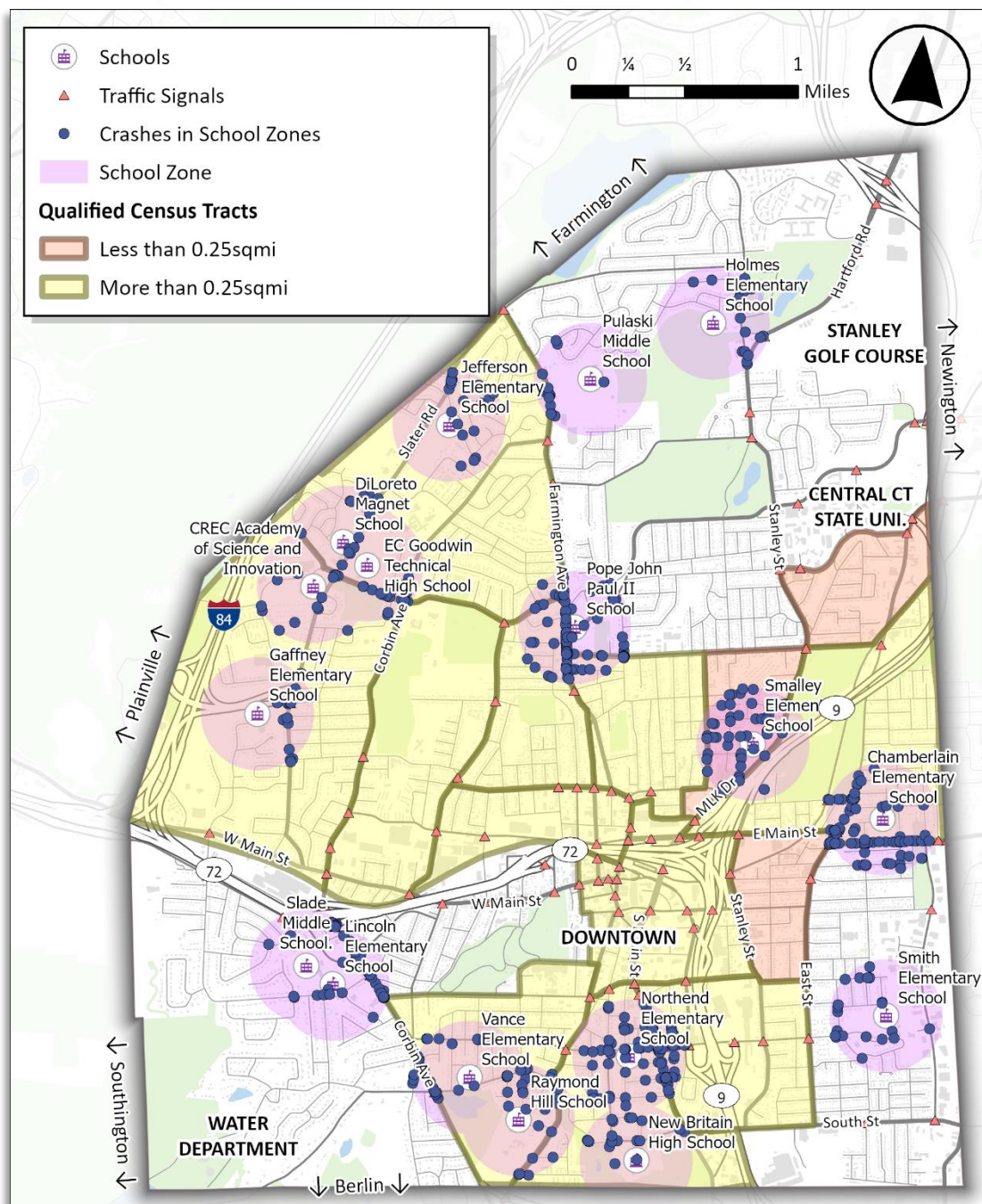
4.1 Analysis in School Zones

Several factors were identified in the Guidelines to identify the potential locations for placing ATESD around schools:

- History of traffic crashes for the past three years (2021-2023), examining factors such as speeding, crashes involving drivers and vulnerable road users 18 and under, fatal and serious injury crashes, and non-motorized crashes.
- Average Daily Traffic on the major roadway near the school from CTDOT [Traffic Monitoring Station Viewer](#)
- Poverty Rate from US Census ACS 5-year estimates 2018-2022
- Percent of occupied housing units with vehicles from US Census ACS 5-year estimates 2018-2022

The Guidelines state that the school zones should be approved by the appropriate statutory authority – either the OSTA or the local traffic authority. To date, there are no approved school zones in New Britain²⁵, thus, for the purpose of this analysis, a radius of a quarter mile around the schools was taken to demarcate school zones as shown in Figure 31.

FIGURE 31 TOTAL CRASHES IN SCHOOL ZONES (2021-2023)



Source: Connecticut Crash Data Repository, University of Connecticut.

²⁵ As of April 2025, the City is developing school zones that should be approved at a later time in 2025.

The ATESD distribution throughout the municipality needs to be equitable in accordance with state guidelines. Thus, Section 1.4 of the Guidelines provides limitations on the placement of ATESD in or adjacent to Qualified Census Tract (QCT). A QCT is an area where either:

- 50 percent or more of the households have an income less than 60 percent of the Area Median Gross Income in a given year; or
- The entire census tract reports a poverty rate of at least 20 percent.

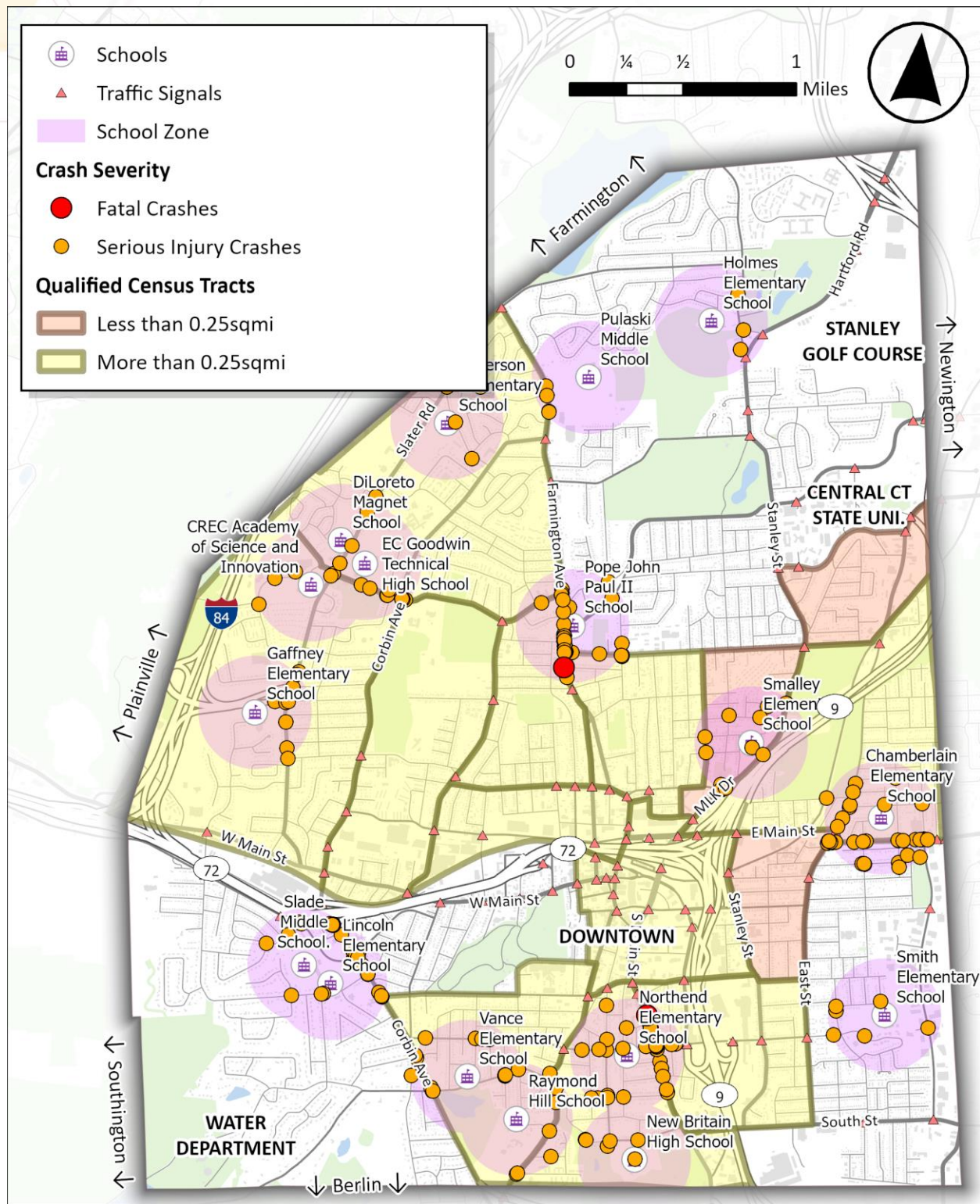
The Guidelines states that no more than two ATESD locations can be provided within a Qualified Census Tract (QCT) and no more than one within a QCT that is 0.25 sq. mi. or less in size. Moreover, if a proposed ATESD location is on a road that is a border of one or more QCTs and a census tract that is not designated as a QCT, the municipality must choose to associate the location with one of the QCTs.

New Britain has 14 QCTs out of 21, of which three are less than 0.25 sq. mi. in size. Figure 31 shows the total crashes in school zones.

- **There were 765 crashes reported in 17 school zones in New Britain from 2021-2023 (excluding the crashes on Route 84, 72, and 9).**
- Figure 32 and Figure 33 show the fatal and serious injury crashes and speeding crashes, respectively.
 - There were two fatal crashes – one near Pope John Paul II School and another near Northend Elementary School.
 - The highest density of serious injury crashes were seen near Pope John Paul II School, Chamberlain Elementary School, and Northend Elementary School.
 - The majority of the speeding crashes were seen near Pope John Paul II school.
 - While not shown in the crash data, stakeholders and speed data from the City identified Farmington Ave, including the area adjacent to Pulaski Middle School, as a hotspot for speeding activity.

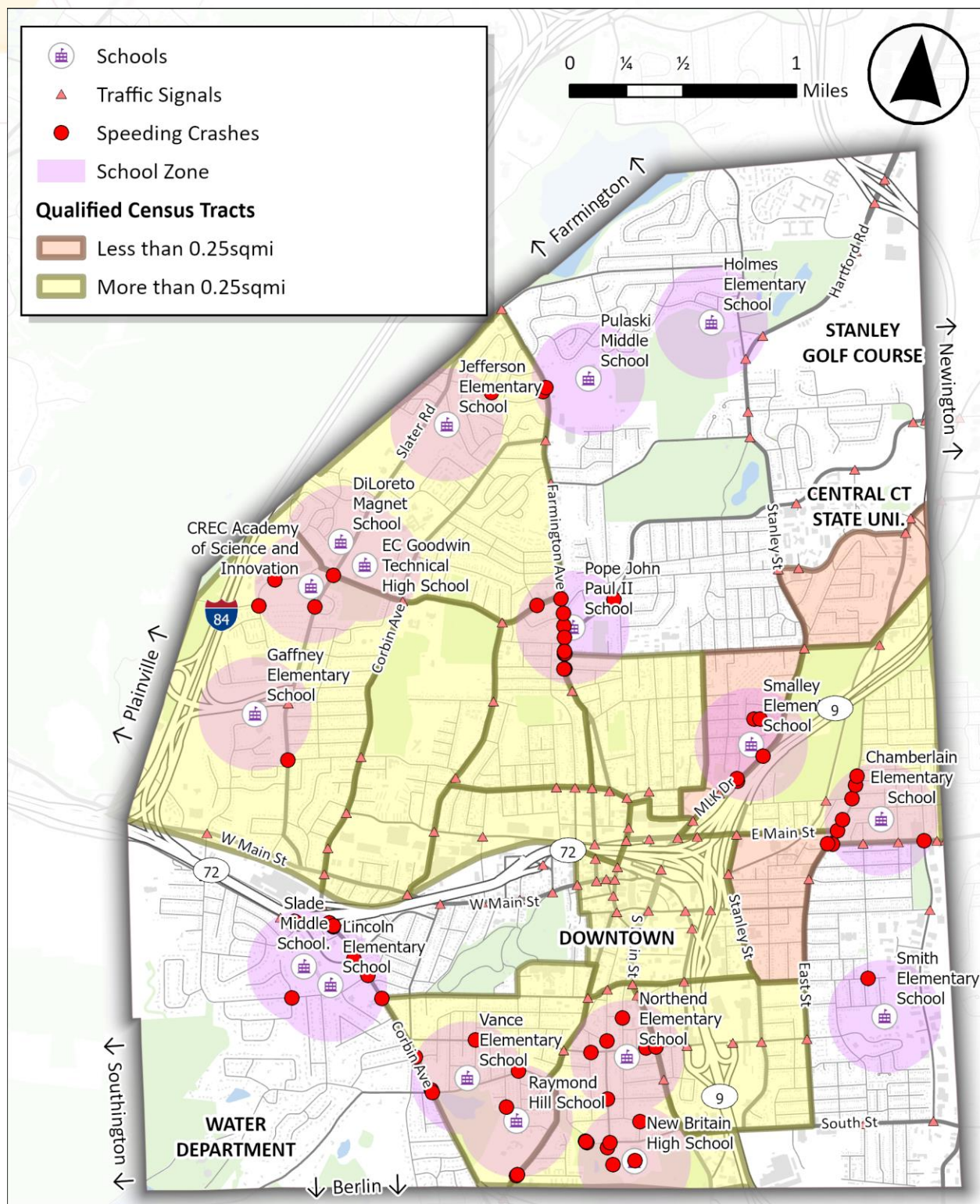
Crashes involving non-motorized vehicles and crashes involving people 18 years old or younger were also identified and summarized for each school zone, but those maps are not shown here.

FIGURE 32 FATAL AND SERIOUS INJURY CRASHES IN SCHOOL ZONES (2021-2023)



Source: Connecticut Crash Data Repository, University of Connecticut.

FIGURE 33 **SPEEDING CRASHES IN SCHOOL ZONES (2021-2023)**



Source: Connecticut Crash Data Repository, University of Connecticut.

Table 6 shows a list of school zones with all the factors used to identify the top potential locations for placing ATESD. The table also shows whether the location is on the High Crash Network (discussed in Section 5).

TABLE 6

SUMMARY OF CRASHES IN SCHOOL ZONES

School	Total Crashes	Speeding Crashes	Fatal & Serious Injury Crashes	Crashes Involving People 18 and Under	Non-Motorized Crashes	Poverty Rate	Occupied Housing Units with Vehicles	QCT	AADT (2021)	High Crash Network
Chamberlain Elementary School	112	7	39	21	5	25.8	73	Yes	7,600	Yes
New Britain High School	21	8	6	9	2	23	69	Yes	1,100	
Northend Elementary School	132	6	42	35	9	23	69	Yes	7,800	Yes
Pulaski Middle School	15	2	4	2	1	6.5	89		9,300	Yes
Slade Middle School	64	7	28	16	0	5	98		14,300	Yes
Smalley Elementary School	62	5	14	13	4	27	75	Yes	8,000	
Pope John Paul II School	101	11	31	24	6	6.5	89	Yes	8,500	Yes
CREC Academy of Science and Innovation	26	4	8	7	1	12.1	88	Yes	3,900	Yes
DiLoreto Magnet School	26	1	9	9	1	24.1	96	Yes	3,900	Yes
Gaffney Elementary School	22	1	9	2	0	12.1	88	Yes	4,100	
EC Goodwin Technical High School	45	1	19	12	4	24.1	96	Yes	3,900	Yes
Holmes Elementary School	16	0	3	1	0	6.5	89		6,600	
Jefferson Elementary School	22	1	5	6	1	24.1	96	Yes	3,900	
Lincoln Elementary School	60	4	24	12	0	5	98		14,300	Yes
New Britain High School	21	8	6	9	2	23	69	Yes	1,100	
Raymond Hill School	28	4	10	4	3	9.2	84	Yes	4,700	Yes
Smith Elementary School	20	1	6	3	1	12.4	90		750	
Vance Elementary School	40	6	18	7	3	9.2	84	Yes	2,300	

4.2 Potential Locations for ATESD in School Zones

By analyzing all the factors listed in the table above with a particular emphasis on the speeding crashes, the top seven recommended locations for ATESD installation in school zones are:

- | | |
|---|---|
| ● Farmington Ave near Pope John Paul II School | ● S Main St near Northend Elementary School |
| ● MLK Dr near Smalley Elementary School | ● Mill St near New Britain High School |
| ● East St near Chamberlain Elementary School | ● Farmington Ave near Pulaski Middle School ²⁶ |
| ● Corbin Ave near Slade Middle School & Lincoln Elementary School | |

Additional installations of ATESD may be appropriate, but must be ensured that the installation of ATESD follows the equity considerations related to QCTs.

4.3 Next Steps for ATESD

Using the factors listed in the Guidelines, the top seven locations for placing the ATESD were identified within the school zones. To implement ATESD at these locations and other potential locations, the city needs to take the following steps:

1. Adopt an ordinance to authorize the use of ATESDs.²⁷
2. Approval of the school zones pursuant to Connecticut General Statutes 14-212b.²⁷
3. Collect additional data such as history of traffic stops, speed data, recommendations from a Road Safety Audit, etc.
4. Develop an ATESD plan using the Guidelines providing written documentation for each location.
5. Hold a public hearing soliciting input on the draft ATESD Plan.
6. Get the plan approved by the City Council.
7. Get the plan approved by OSTA. To get approval from OSTA, the municipality needs to submit a Comprehensive Safety Action Plan along with the approved ATESD plan.

Once OSTA approves the plan, then the city can install ATESD in the locations identified in the Plan.

²⁶ While Pulaski Middle School does not have a high number of crashes in the school zone, there is ample evidence of speeding outside the school. Additionally, this location was mentioned by multiple stakeholders as an area with numerous speeding violations.

²⁷ As of April 2025, the city is currently working on passing the appropriate ordinances and legislation to complete steps one and two.

5

HIGH CRASH NETWORK

As part of the data analysis, a citywide network of high-injury locations was developed. This analysis brought together multiple data sets such as crashes, fatalities, serious injuries, and other layers to conduct a network screening, which is a method for identifying specific roadway locations with the highest potential for safety improvement and helps prioritize where to invest in safety improvements.

5.1 Connecticut Roadway Safety Management System

The primary data source for this task was the Connecticut Roadway Safety Management System (CRSMS), which is a highway safety manual (HSM) compliant web-based safety analysis tool run by Connecticut DOT and the University of Connecticut. The CRSMS segments and divides the transportation network into comparable segments and intersections and joins crash information, traffic volume information, and roadway geometry information together to create safety-specific metrics for the transportation network.

The primary safety metric outputs from this tool used in the network screening analysis were:

- **The total number of fatal and serious injury crashes**
- **The total number of crashes regardless of severity**
- **The crash rate measured in crashes per 100 million vehicle-miles traveled**, a metric that normalizes crashes by volumes on the roadway to account for the fact that there are likely to be more crashes on higher-traveled roads.

These outputs were available both for all types of crashes in the region and for vulnerable road crashes only for both segments and intersections.

The raw outputs for crashes and crash rate are shown in Appendix B. In general, the highest crash rates for the local or neighborhood roadways are much higher than the highest crash rates for the state roadways even though the total number of crashes on local roadways is generally lower. This is because the volumes on local roadways are much lower on average than state roadways, so one random crash on a local roadway will show as a high rate.

5.2 Other Relevant Data Sets

Besides the two outputs from the CRSMS, other data sets were considered in a more qualitative manner that influenced the High Crash Network. Those data sets and elements included:

- **High-priority safety locations from the [CROCOG Regional Transportation Safety Plan](#):** While these locations may have changed in the past few years since they were identified, the identification of similar corridors and intersections from the CRSMS may indicate recurring safety issues.
- **Speed data from the [Connecticut DOT Traffic Monitoring Station Viewer](#):** While not all areas where vehicles are consistently driving above the speed limit have crashes, consistently high speeds is a recurring systemic factor that can contribute to crashes, oftentimes serious crashes.
- **Potential ATESD locations:** As seen in Section 4, the ATESD analysis revealed locations where drivers may already be speeding, especially in areas around school districts.
- **Expertise and local context from the Vision Zero Task Force and Other Stakeholders:** Using their local expertise and knowledge of the city, the Task Force and other stakeholders provided input into their highest-priority safety locations.

Note that although the CRSMS tool outputted analysis for Interstates, freeways, and expressways, these locations were not considered for inclusion in the final High Crash Network.

5.3 Final High Crash Network

After taking into account all of the elements in Sections 5.1 and 5.2, the High Crash Safety Network, seen below in Figure 34 and Figure 35 was developed. The High Crash Network contains 18 intersections and 19 segments, a mix of local- and state-controlled roads, and locations in every ward of the city.

Table 7 and Table 8 list the intersections and segments, respectively, that make up the High Crash Network.

FIGURE 34 FINAL HIGH CRASH NETWORK INTERSECTIONS

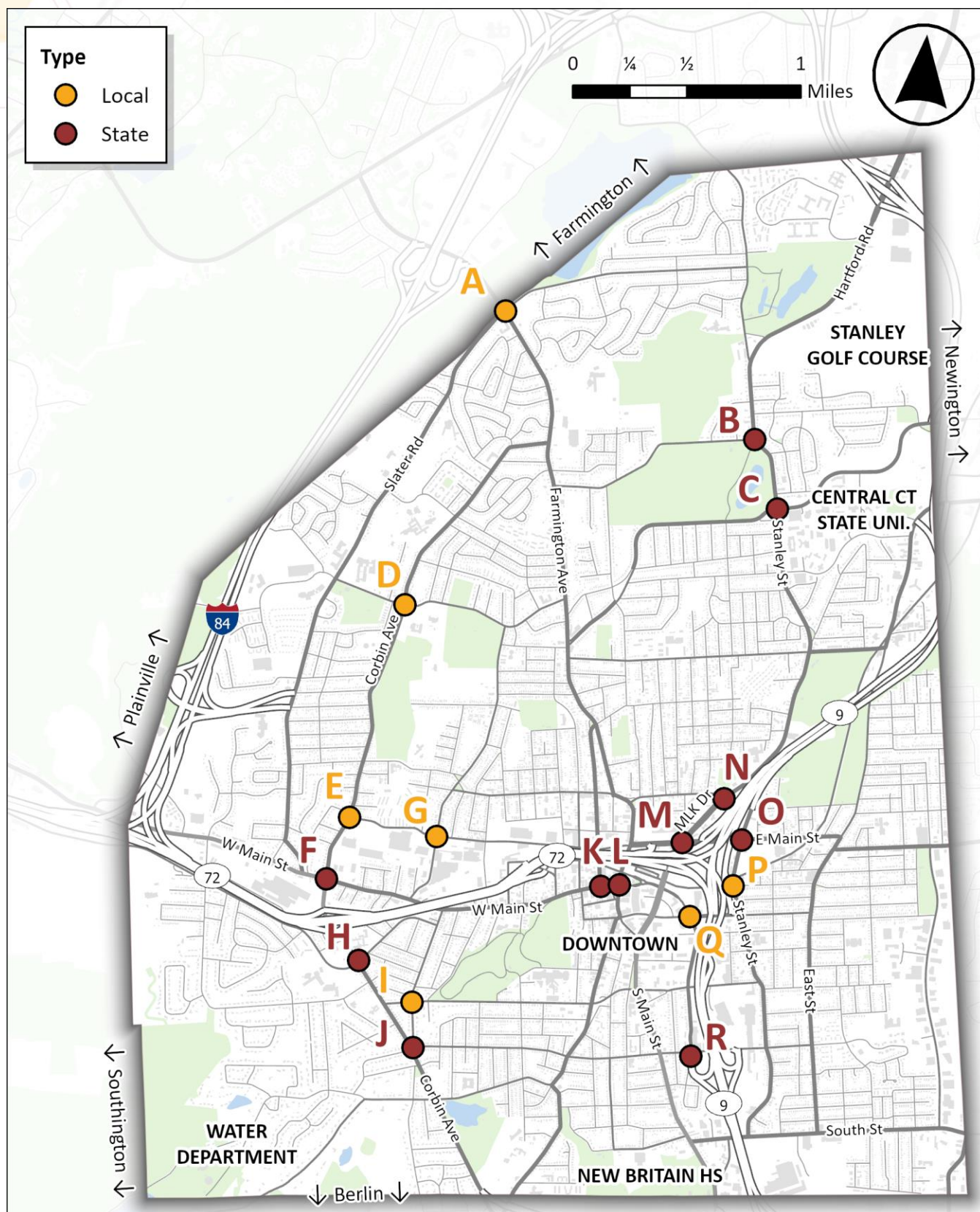


TABLE 7 **FINAL HIGH CRASH NETWORK INTERSECTIONS**

ID	Intersection	Ownership
A	Farmington Ave & Slater Rd/Alexander Rd	Local
B	Stanley St (CT-71a) & Blake Rd/Driveway to Stanley Quarter Park	State
C	Stanley St (CT-71a) & Eddy Glover Blvd	State
D	Osgood Ave & Corbin Ave	Local
E	Corbin Ave & Myrtle St	Local
F	W Main St (CT-372) & Corbin Ave	State
G	Myrtle St & Burritt St	Local
H	Corbin Ave (CT-372) & Black Rock Ave	State
I	Lincoln St & Hart St	Local
J	Corbin Ave (CT-372) & Lincoln St/Monroe St	State
K	W Main St (CT-555) & Washington St	State
L	Main St & W Main St (CT-372)	State
M	E Main St (CT-174) & MLK Dr (CT-71a)	State
N	North St/Stanley St (CT-71a) & MLK Dr (CT-71a)	State
O	E Main St (CT-174) & Stanley St	State
P	Stanley St & Dwight St	Local
Q	Chestnut St & Columbus Blvd	Local
R	CT-9 Ramp/Columbus Blvd & Ellis St	State

FIGURE 35 FINAL HIGH CRASH NETWORK SEGMENTS

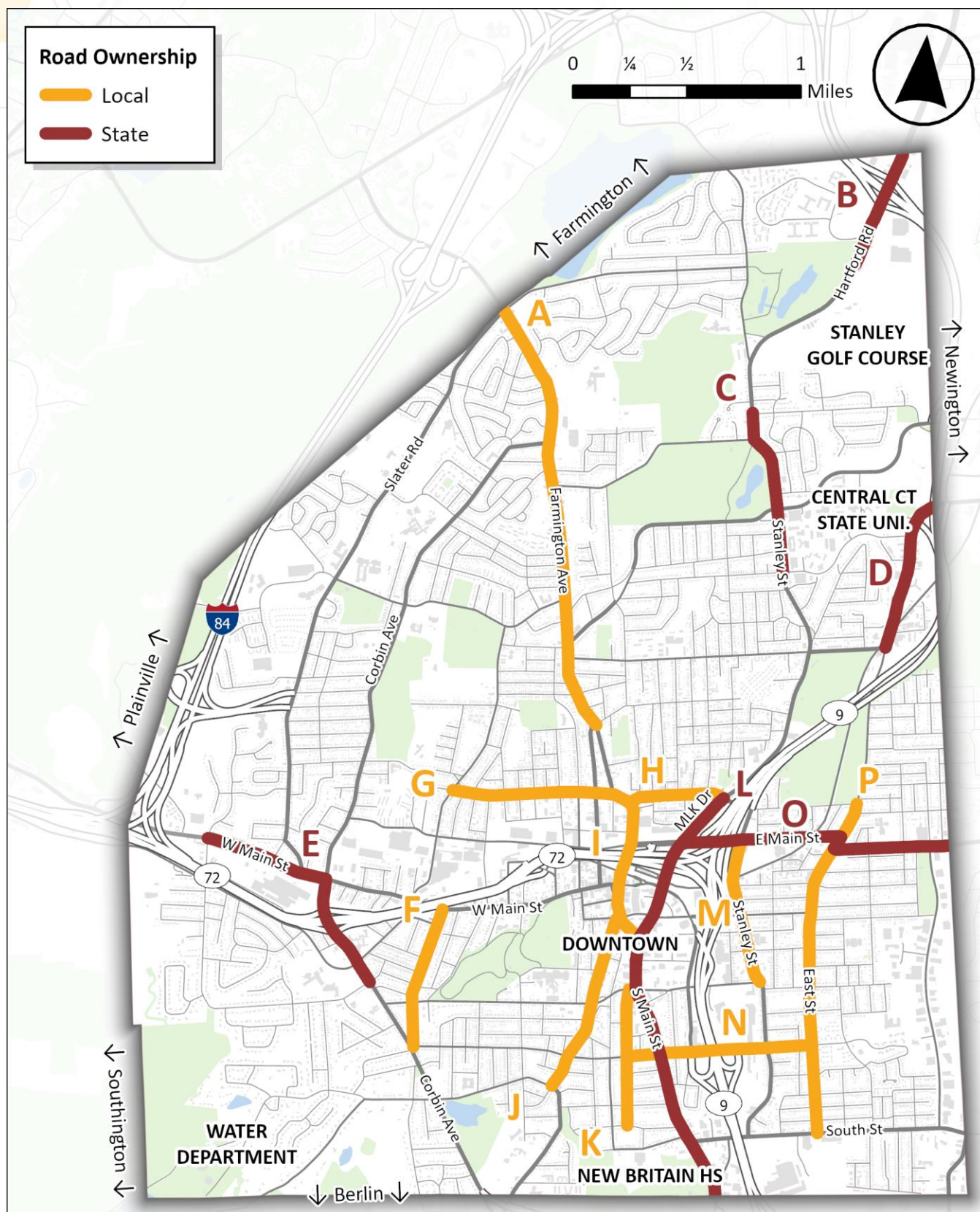


TABLE 8 FINAL HIGH CRASH NETWORK SEGMENTS

#	Segment	Ownership
A	Farmington Ave from Slater Rd/Alexander Rd to Washington St	Local
B	Hartford Rd (CT-71a) from Costco to town boundary	State
C	Stanley St (CT-71a) from Barbour Rd to Francis St	State
D	East St (CT-175) from Allen St to town boundary	State
E	W Main St & Corbin Ave (CT-372 & CT-555) from Wooster St to Steele St	State
F	Lincoln St from W Main St to Monroe St	Local
G	Broad St from Burritt St to Main St	Local
H	North St from Main St to Stanley St	Local
I	Main St from Broad St/Beaver St to Elm St/Franklin Square/S Main St	Local
J	Arch St from Main St to Shuttle Meadow Ave	Local
K	Bassett St from Whiting St to Brook St	Local
L	CT-71 from North St to town boundary	State
M	Stanley St from E Main St to Whiting St	Local
N	Ellis St from East St to Bassett St	Local
O	E Main St (CT-174) & Washington Ave from MLK Dr to town boundary	State
P	East St from Smalley St to South St	Local

6

NEXT STEPS

This review and analysis of the historical trends, pedestrian & bicyclist deep-dive, potential ATESD locations, and the High Crash Network will help inform the next steps of the New Britain Safety Action Plan. Developing effective strategies and policy recommendations should be based upon the understanding of the unique crash history within New Britain. As long-term trends have shown, there have been short-term increases in fatalities and serious injuries since the COVID-19 pandemic, but by taking a strategic approach, the region can once again address and reverse those trends.

The identification of emphasis areas will assist in identifying a targeted set of countermeasures and programs tailored to the crash types, vehicles, and road users involved in each area. Emphasis Areas will serve as a helpful framework for organizing the strategies and recommendations of the Safety Action Plan and align it with the Connecticut Strategic Highway Safety Plan and CRCOG Regional Transportation Safety Plan.

One of the strategies for the city will likely be the installation of ATESDs. This memorandum and The Plan it supports serve as first steps towards getting these locations studied by the City and ultimately approved by the state. Immediate next steps will include:

- Adopting an ordinance to authorize the use of ATESDs;
- Formalizing school zones; and
- Approving a plan, supported by public feedback, for ATESD implementation at each desired location.

Outside of these ATESD locations, the next step of this plan will be to choose **two locations** for a detailed countermeasure selection and engineering concept development. While the rest of the locations will not receive formal concept drawings within this plan, it's intended that the strategies and actions from this plan will benefit the entire transportation network of New Britain, not just the three identified locations. Additionally, the identification of these additional priority locations will provide further justification for the approval of funds and grant applications in the future.

The road to Vision Zero will stretch across years, so it is critical for the city to use the lessons learned from historical crash data to continually improve and monitor safety in the City of New Britain. The goal of **reducing fatal and serious injury crashes by 50 percent by 2035** and ultimately **reaching Vision Zero by 2045** is achievable, but not without hard work today and in the near future.

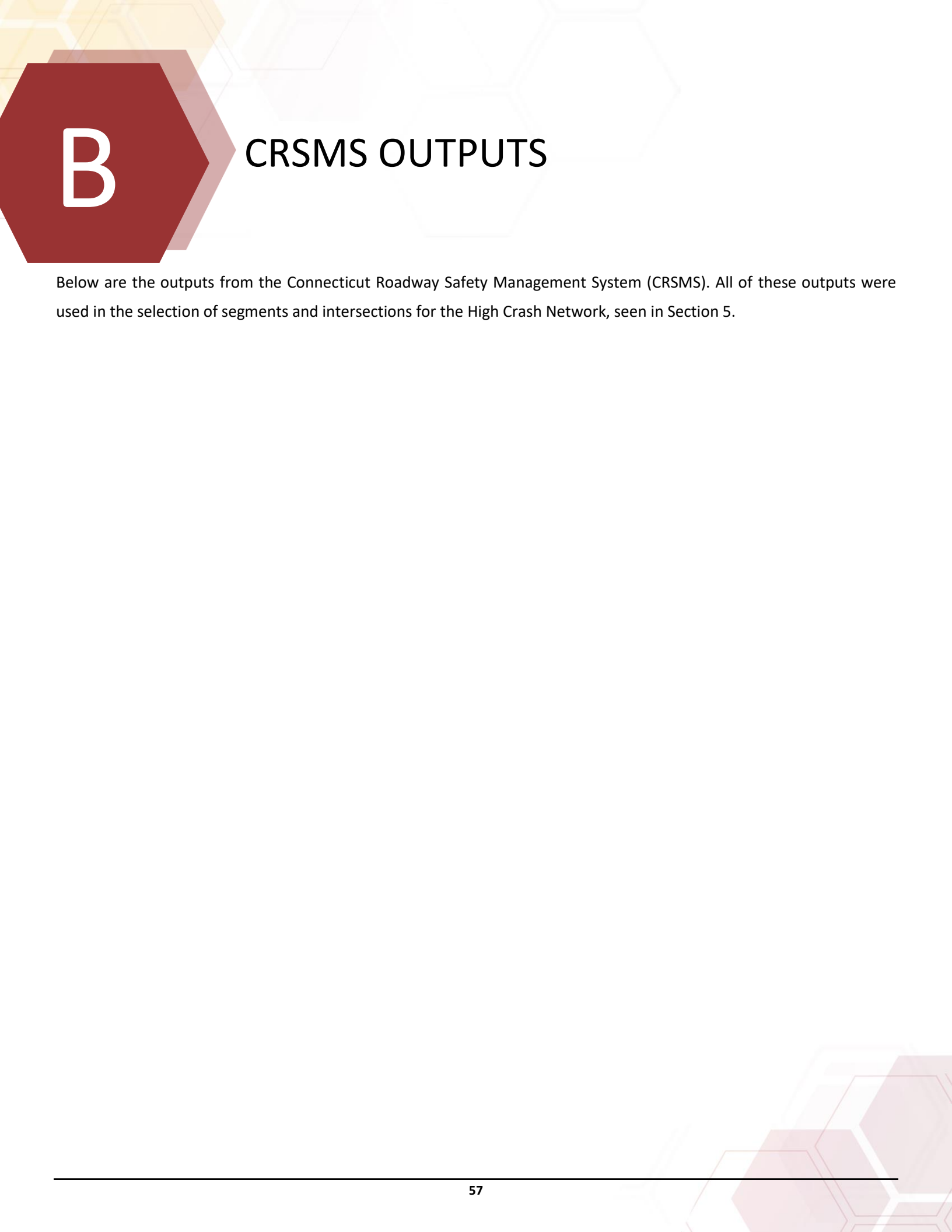
A

EMPHASIS AREA QUERIES

Below are descriptions of queries used in the Connecticut Crash Data Repository (CTCDR) to identify crashes in specific Emphasis Areas. Going forward, these queries may be useful in ensuring consistent reporting and baselining for specific New Britain emphasis areas.

TABLE 9 CTCDR EMPHASIS AREA QUERIES

Emphasis Area	Query Information
Intersections	Type of Intersection: Four-Way Intersection, T-Intersection, Y-Intersection, L-Intersection, Traffic Circle, Roundabout, Five-Point or More
Roadway Departure	First Harmful Event: Overturn/Rollover, Immersion, Full or Partial, Parked Motor Vehicle, Bridge Pier or Support, Cable Barrier, Culvert, Ditch, Embankment, Guardrail Face, Concrete Traffic Barrier, Other Traffic Barrier, Tree (standing), Utility Pole/Light Support, Fence, Mailbox, Other Post, Pole or Support, Other Fixed Object (wall, building, tunnel, etc.)
Aggressive Driving	Speeding Related: Racing, Exceeded Speed Limit, Too Fast for Conditions OR Driver Action: Followed Too Closely, Operated Motor Vehicle in Reckless or Aggressive Manner
Unrestrained Occupants	Restraint System: None Used-Motor Vehicle Occupant, Shoulder Belt Only Used, Lap Belt Only Used
Impaired Driving	Person Type: Driver AND Condition at Time of Crash: Under the Influence of Medications/Drugs/Alcohol
Distracted Driving	Driver Distracted By: Manually Operating an Electronic Communication Device (texting, typing, dialing), Talking on Hands-Free Electronic Device, Talking on Hand-Held Electronic Device, Other Activity, Electronic Device, Passenger, Other Inside the Vehicle (eating, personal hygiene, etc.), Outside the Vehicle (includes unspecified external distractions)
Older Drivers	Person Type: Driver AND Age: >= 65
Young Drivers	Person Type: Driver AND Age: <= 25
Pedestrians	Person Type: Pedestrian, Other Pedestrian (wheelchair, person in a building, skater, pedestrian conveyance)
Bicyclists	Person Type: Bicyclist, Other Cyclist
Motorcyclists	Body Type: Motorcycle, Moped

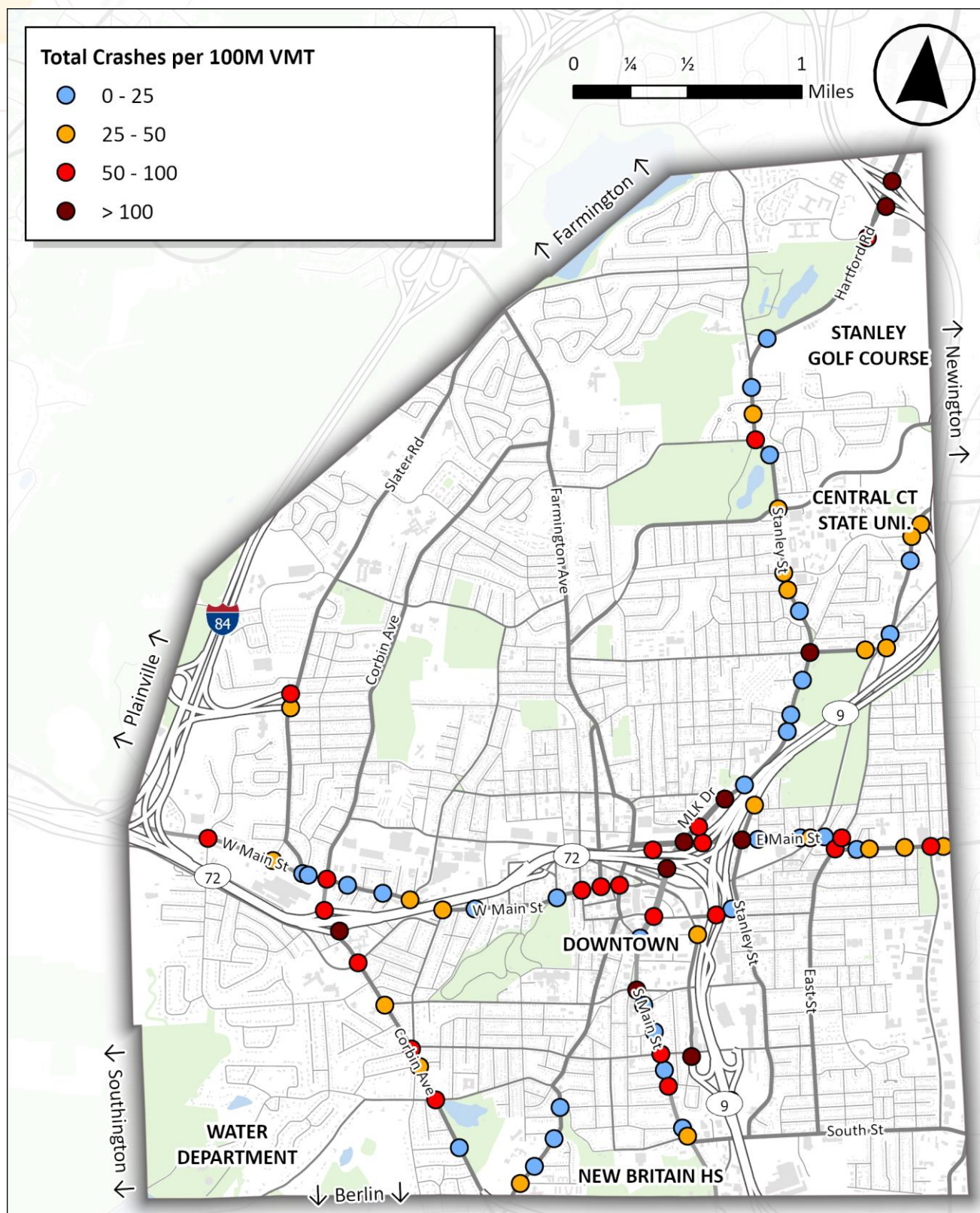


B

CRSMS OUTPUTS

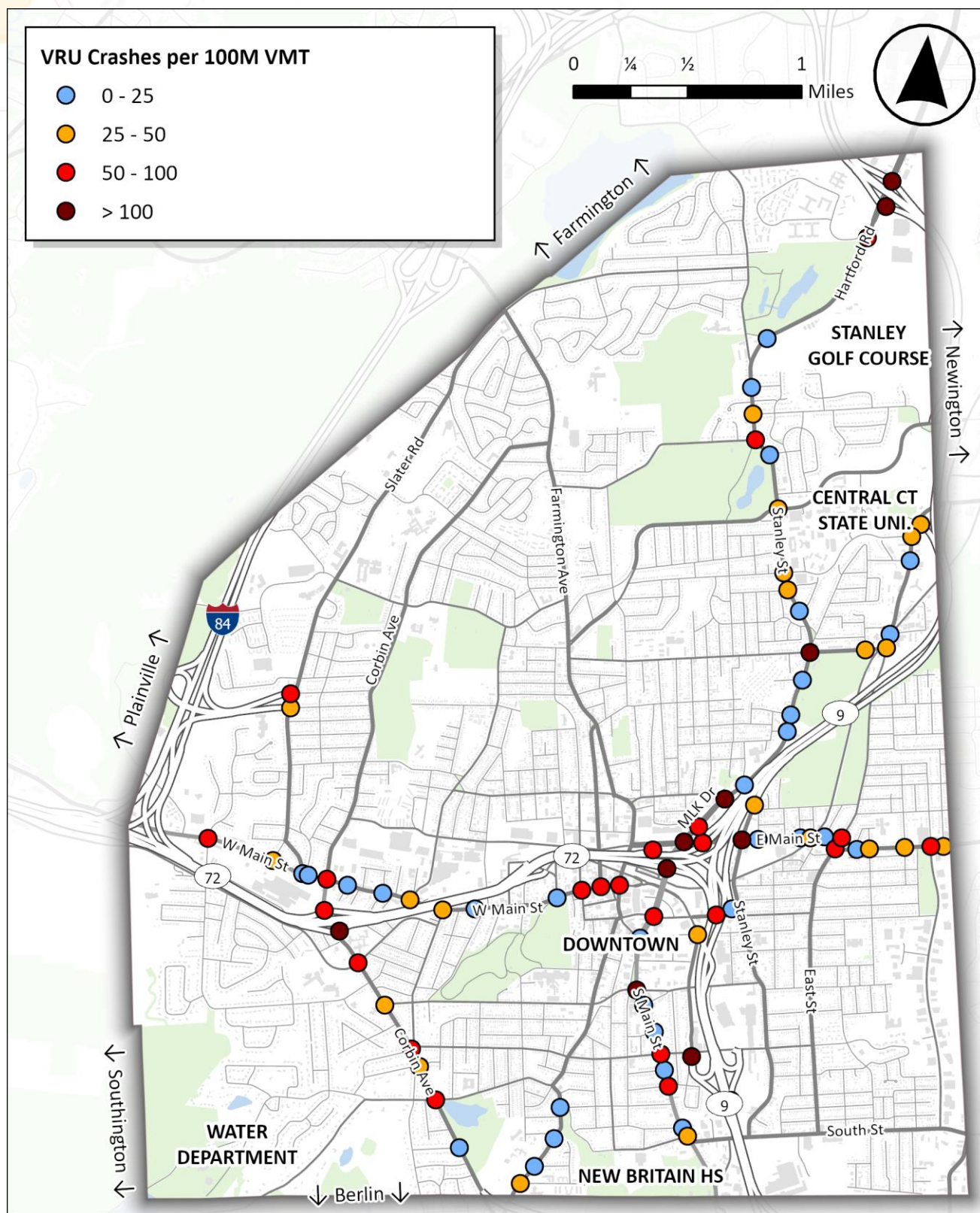
Below are the outputs from the Connecticut Roadway Safety Management System (CRSMS). All of these outputs were used in the selection of segments and intersections for the High Crash Network, seen in Section 5.

FIGURE 36 CRSMS OUTPUTS – STATE INTERSECTIONS ALL CRASHES



Source: Connecticut Roadway Safety Management System.

FIGURE 37 CRSMS OUTPUTS – STATE INTERSECTIONS VRU CRASHES



Source: Connecticut Roadway Safety Management System.

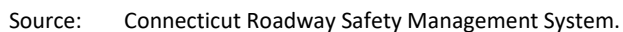
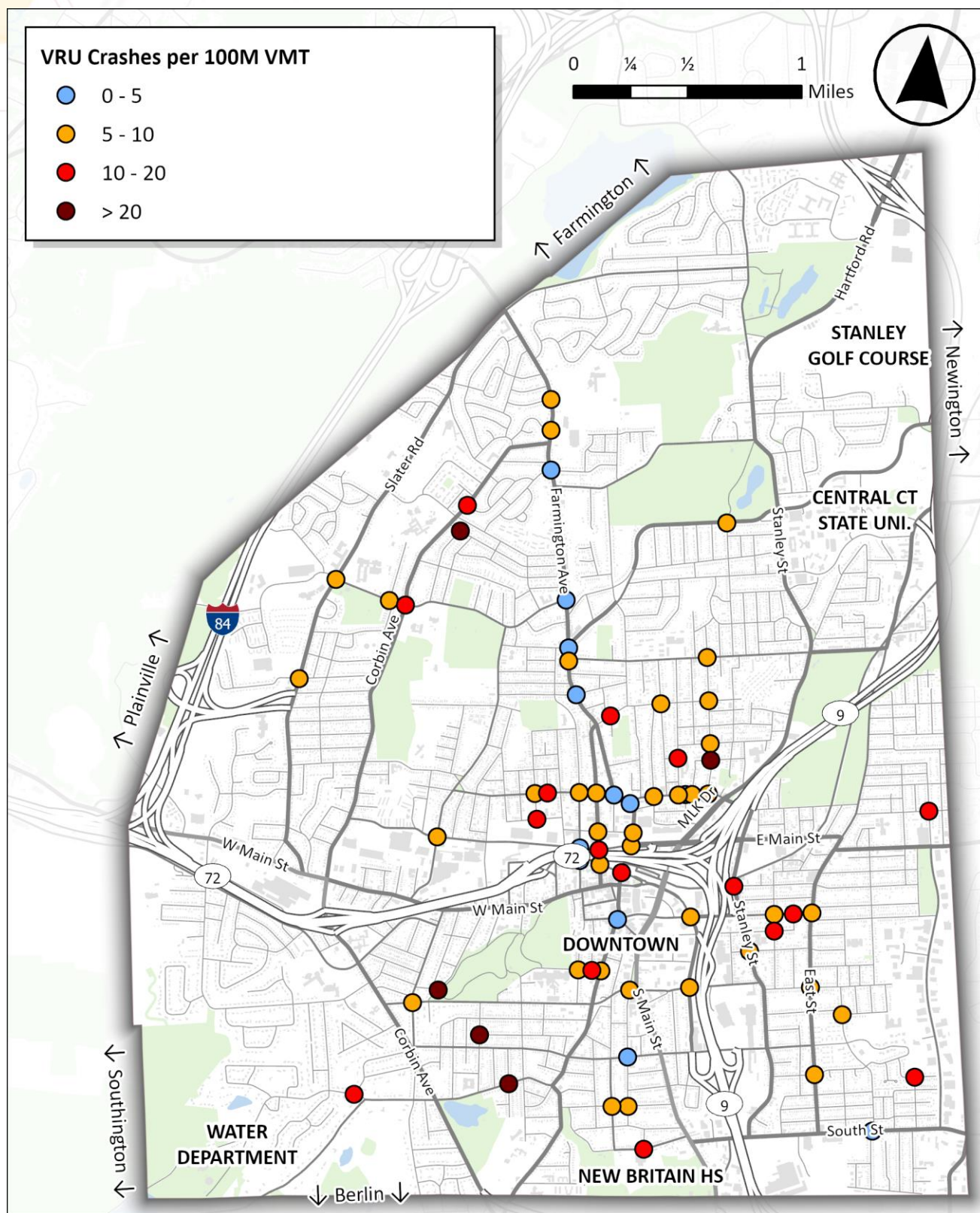
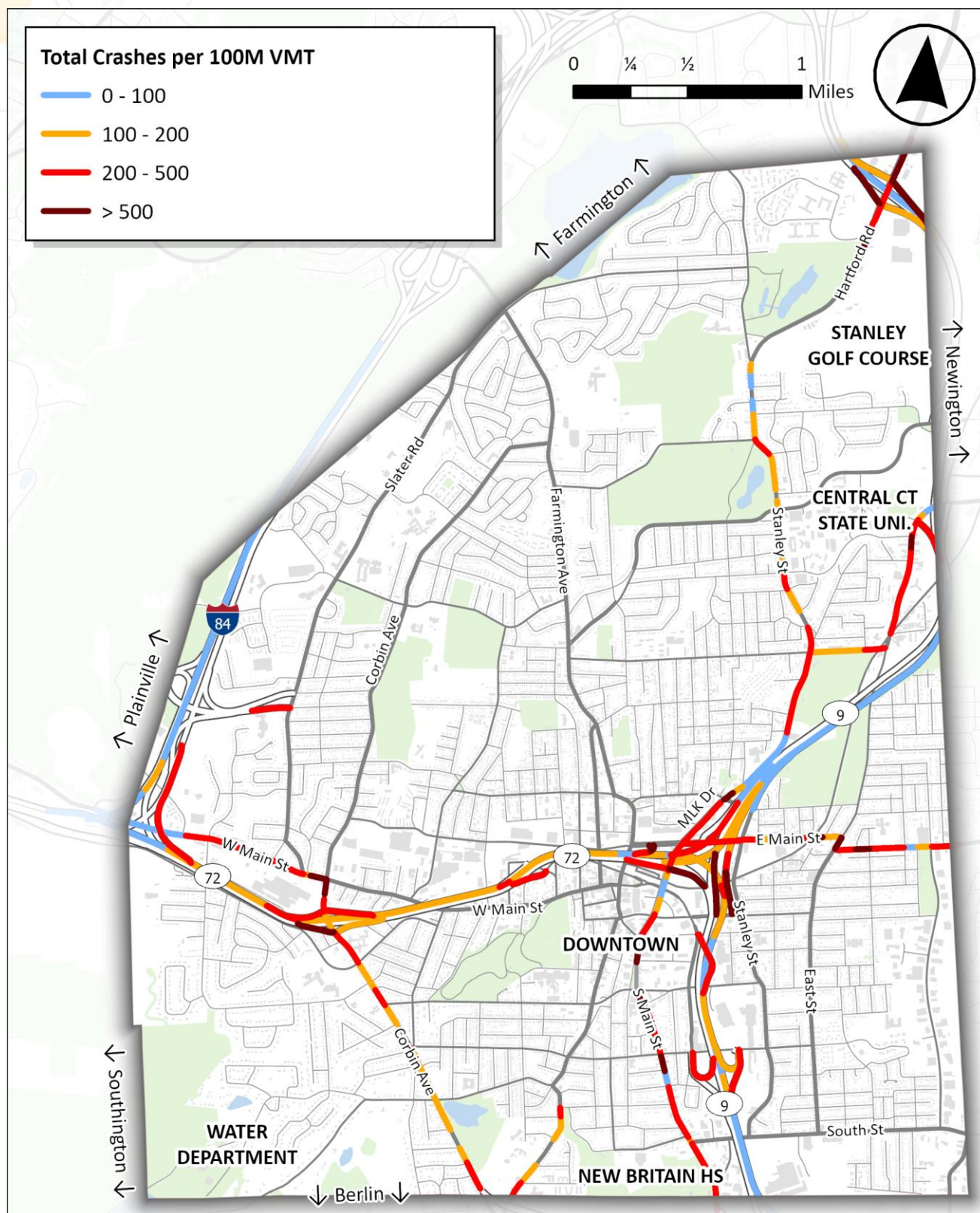


FIGURE 39 CRSMS OUTPUTS – LOCAL INTERSECTIONS VRU CRASHES



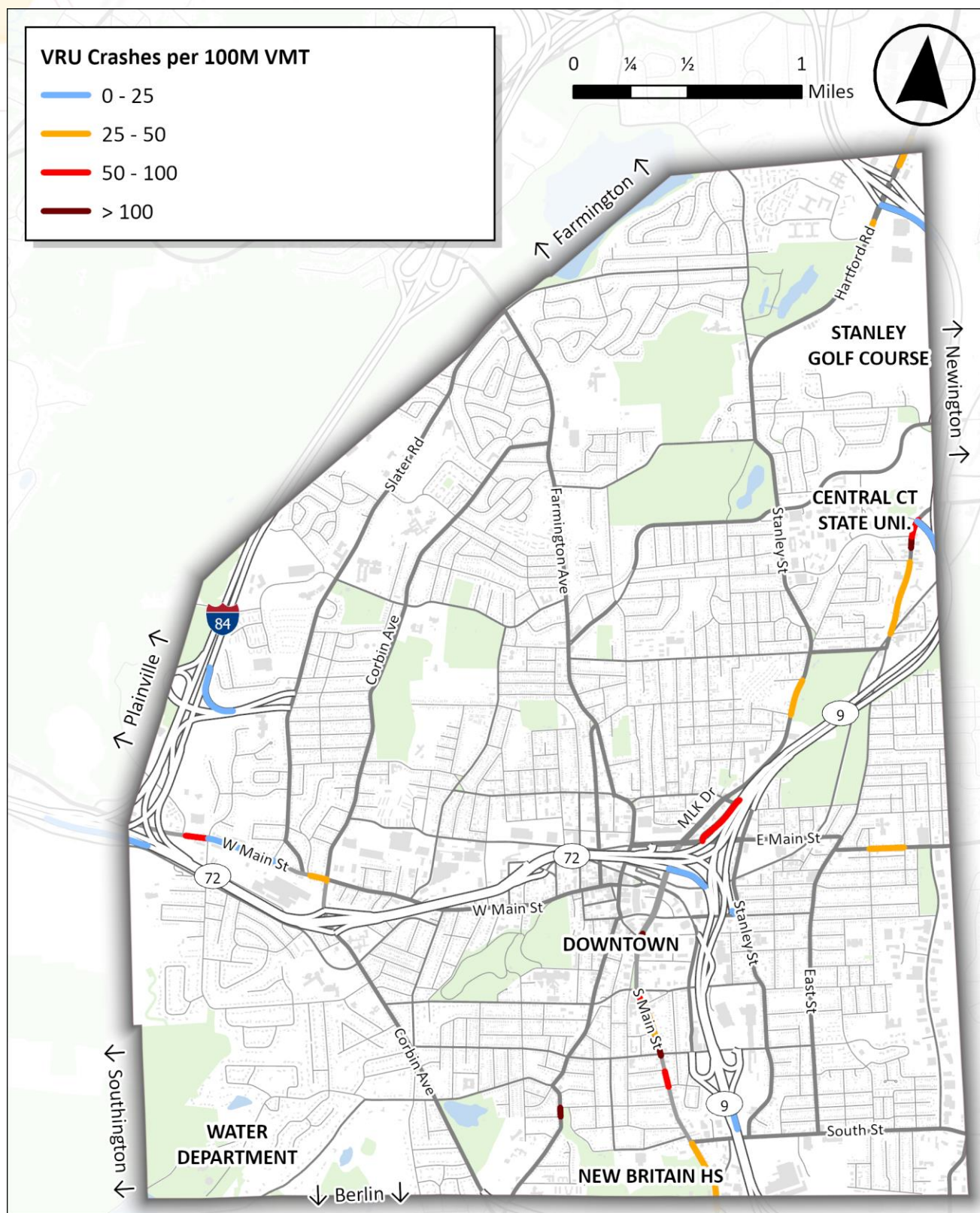
Source: Connecticut Roadway Safety Management System.

FIGURE 40 CRSMS OUTPUTS – STATE SEGMENTS ALL CRASHES



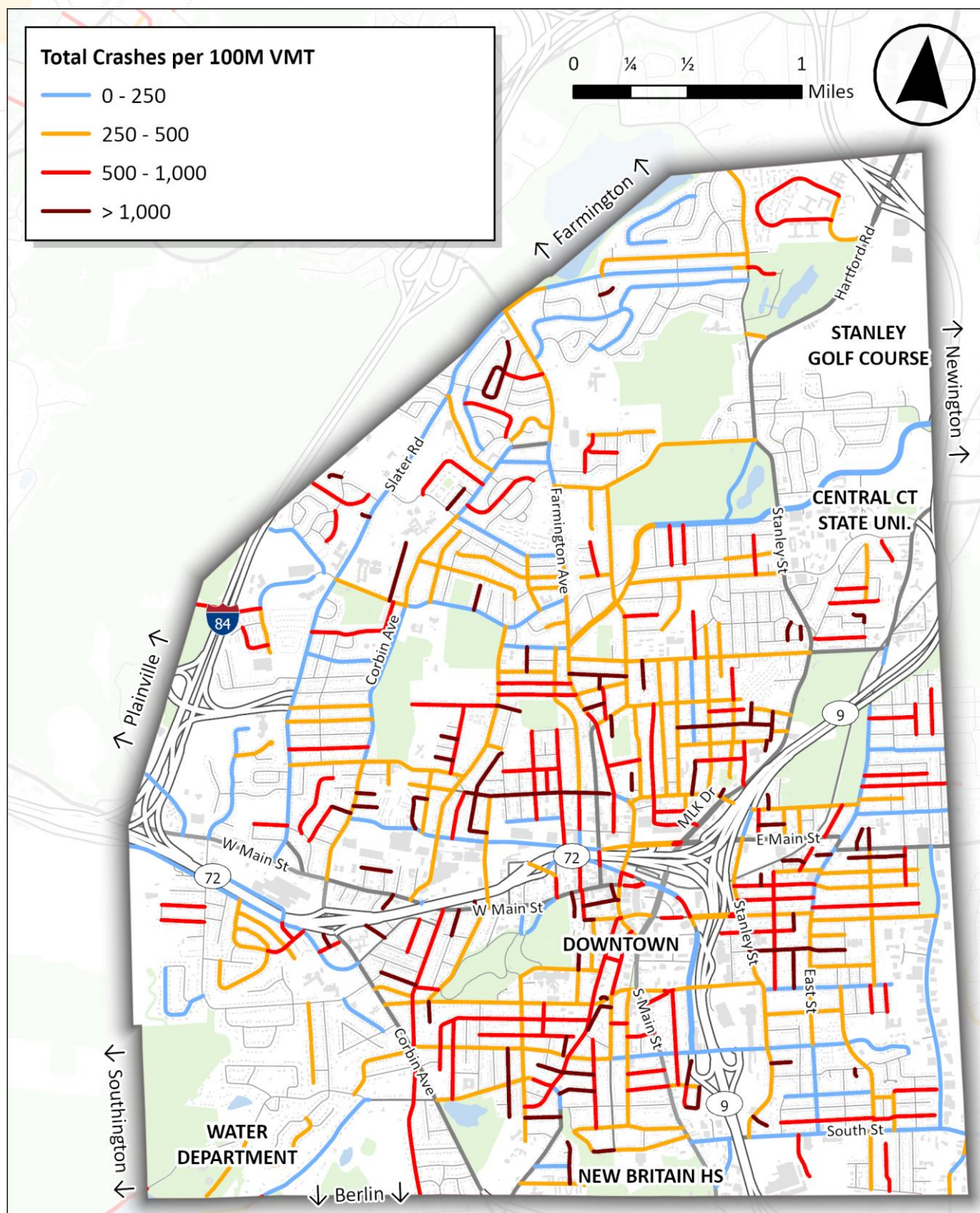
Source: Connecticut Roadway Safety Management System.

FIGURE 41 CRSMS OUTPUTS – STATE SEGMENTS VRU CRASHES



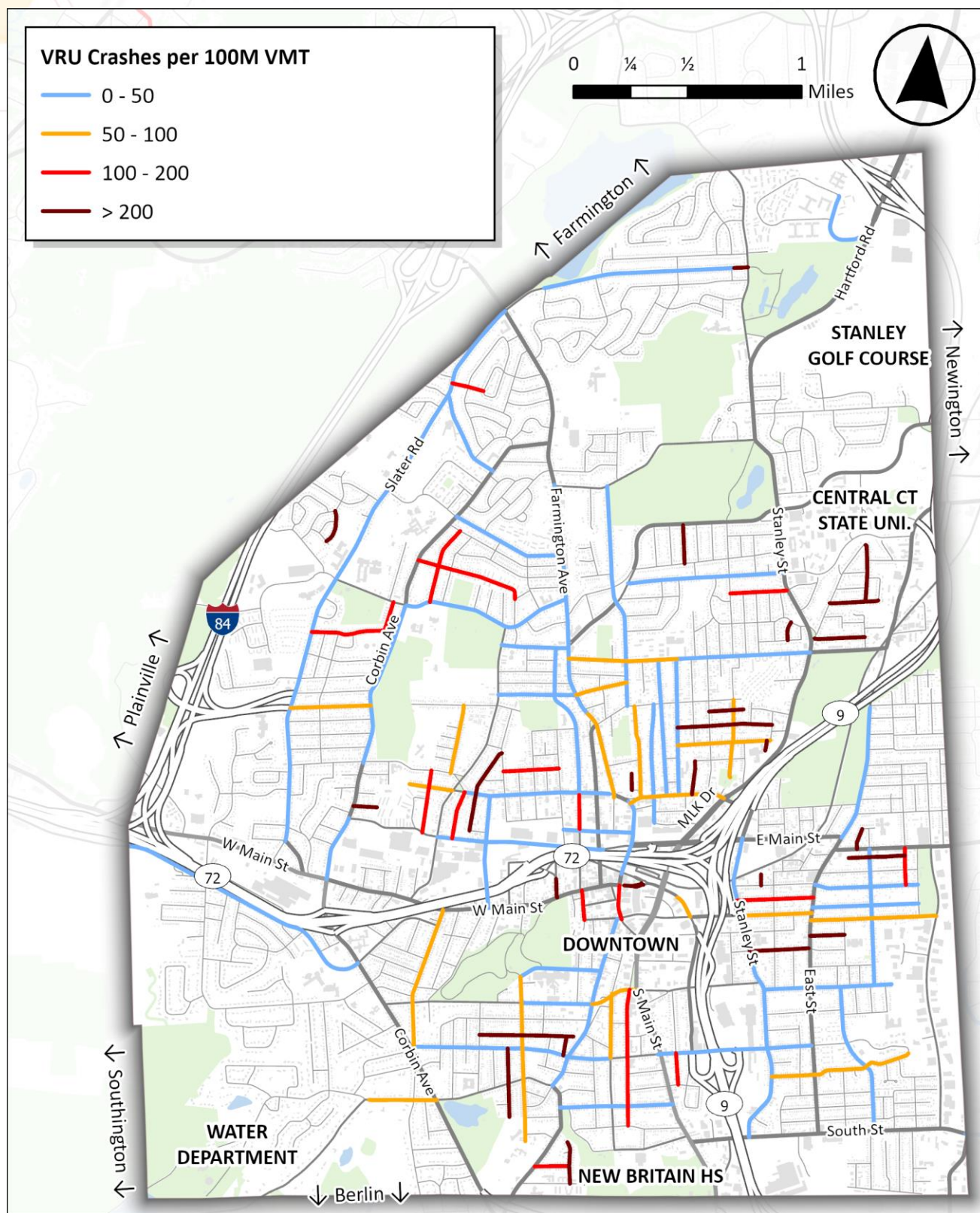
Source: Connecticut Roadway Safety Management System.

FIGURE 42 CRSMS OUTPUTS – LOCAL SEGMENTS ALL CRASHES



Source: Connecticut Roadway Safety Management System.

FIGURE 43 CRSMS OUTPUTS – LOCAL SEGMENTS VRU CRASHES



Source: Connecticut Roadway Safety Management System.