City of Cincinnati

Transportation Safety Plan

October 2025

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Glossary of Terms

CRASH TYPES

FSI	Fatal and Serious Injury
EPDO	Equivalent Property Damage Only

ROADWAY CHARACTERISTICS

Arterial roads	A functional classification for a roadway primarily used for through traffic and typically carries significant traffic volumes.
Complete Streets	Streets designed to accommodate all users, including pedestrians, cyclists, and motorists, with a focus on safety, accessibility, and sustainability.
Corridor	A generally linear area that is defined by one or more modes of transportation crossing the limits of more than one city or county.
Intersection	The point where two roads cross or meet.
Local streets	A functional classification for a roadway primarily used to provide access to residences or businesses and typically carries low traffic volumes.
Minor Arterials	These roadways serve trips of moderate length to smaller geographic areas and at a slightly lower level of traffic mobility than principal arterials. They provide connectivity to the higher arterial systems. These roadways are typically multi lane facilities.
Principal Arterials	Provides a high level of traffic mobility for substantial statewide travel and/or serves major activity centers and the longest trip demands within urban areas.
Road Contour	The shape or profile of a road, including its elevation changes, curves, and grades.
Roadway Treatments	Modifications made to roadways to improve safety, efficiency, or aesthetics, such as pavement markings, signs, or landscaping.
Segment	A section of a road.
Traffic Volumes	The number of vehicles passing a specific point on a road within a given time period.
Traffic Operations	The management and control of traffic flow on roadways, including signal timing, lane management, and traffic calming measures.

DATA SOURCES

GIS Databases	Digital databases containing geographic information, such as maps, spatial data, and attributes associated with geographic features.
GIS Maps	Maps created using Geographic Information Systems (GIS) software, which can visualize and analyze spatial data.
Streetlight	A data gathering platform for urban infrastructure.
TIMS	The Ohio Department of Transportation's (ODOT) GIS Database also known as the Transportation Information Mapping System.

OTHER TERMS

Conflict point	A location where there is potential for vehicles or pedestrians to collide.
Data Cleaning	The process of identifying and correcting errors, inconsistencies, or inaccuracies in data to ensure its quality and reliability.
Data Uploading	The process of transferring data from one location to another, often from a local computer to a remote server or cloud-based storage.
Distracted Driving	Engaging in activities that divert attention from driving, such as using a cell phone, eating, or applying makeup.
Free flow speed	The speed at which a vehicle can travel without being impeded by traffic.
Posted speed limit	The maximum speed that the driver of a motor vehicle is legally permitted to travel on a given roadway as established by the Ohio Revised Code and reinforced with traffic signs..
Speeding	Driving at a speed exceeding either the posted limit or a safe speed for the conditions.
Weather Conditions	The state of the atmosphere at a given time, including temperature, precipitation, wind, and visibility.

1.0 Leadership, Commitment, and Goal Setting

The City of Cincinnati is committed to achieving the goal of safe streets and roads for all users.

The City of Cincinnati is committed to achieving the goal of safe streets and roads for all users. This is demonstrated by the goall that was approved by the Oversight Committee in their March 15, 2024 meeting, which states that the city's transportation leaders have established "a goal of working towards zero traffic fatalities and serious injuries by the year 2050." This goal also provides a directive to "identify projects, programs, strategies, policies, and ordinances that will be effective in accomplishing that goal."

The City of Cincinnati's commitment to improving the community networks stems from the 2012 Plan Cincinnati[1], where one of the goals was to "Preserve or create a pedestrian-scaled city." The Department of Transportation and Engineering (DOTE), along with 20 other City Departments, came together with neighborhoods and other organizations to develop a plan and then take ownership of the action steps. DOTE continues to take steps to increase the "walkability" of the City.

DOTE is committed to the safety of bicyclists within the city and has begun the process of updating the 2010 Bicycle Transportation Plan. The 2010 plan recommended 445 miles of on-street and off-street facilities, to be implemented in three phases over 15 years. The on-street Bicycle Network is comprised of striped bicycle lanes, shared lane markings and other on-street facilities. The off-street Bicycle Network is comprised of shared use paths (multi-use trails), sidewalks designated for bicycle use, potential rail-with-trail corridors and connector paths.[2] The plan is still in development.

DOTE has demonstrated the commitment to safety with the FY23 Vision Zero program which focuses on the most vulnerable street users—pedestrians. The funded projects include road diets, traffic calming, speed humps, speed limit reduction, dimensional crosswalks, and other pedestrian amenities in neighborhoods across the city.[3] The safety of all modes of transportation is paramount to the Safe Streets for All (SS4A) program and the plans' success.

1 Plan Cincinnati - City Planning
2 Bicycle Transportation Plan - Bikes
3 News - Vision Zero

The City-wide Transportation Safety Action Plan for Cinicnnati (TSAP4C) is a proactive plan to prioritize high volume crash locations to address preventable crashes, not only pedestrian and bicyclists. The safety of all modes of transportation is paramount to the Safe Streets and Roads for All (SS4A). program and the TSAP4C's success.

This goal has been validated with the Oversight Committee (OC) and stakeholders. The following draft objectives have been confirmed to meet the goal and achieve this Plan:

- Safer People: Encourage safe, responsible behavior by people who use our roads and create conditions that prioritize their ability to reach their destination unharmed.
- Safer Roads: Design roadway environments to mitigate human mistakes and account for injury tolerances, to encourage safer behaviors, and to facilitate safe travel by the most vulnerable users.
- Safer Speeds: Promote safer speeds in all roadway environments through a combination of thoughtful, context-appropriate roadway design, targeted education and outreach campaigns, and enforcement.
- Post-Crash Care: Enhance the survivability of crashes through expedient access to emergency medical care, while creating a safe working environment for vital first responders and preventing secondary crashes through robust traffic incident management practices.

The Framework Memo (October 2024) outlined the project goals and objectives to meet the needs and equity considerations of the 52 neighborhoods and constituents within the City of Cincinnati. These goals and objectives were developed through review of previous transportation plans as they relate to safety. They were reviewed and validated with the Oversight Committee to ensure those that are relevant are included in the final plan. The goals and objectives will directly guide the project identification and prioritization criteria to be developed later in the planning process. These may evolve throughout the planning process with the inclusion of data analyses and public engagement.

2.0 Planning Structure

The TSAP4C includes an analysis of existing conditions, historical trends, systemic needs, and specific needs. It presents projects and strategies to address the identified needs. The planning process to develop the final plan includes identifying of historical and systematic crash issues, identifying solutions to increase safety, and developing a realistic implementable action plan. The process collects and analyzes safety information and data to identify high crash spots, engages stakeholders to inform the analysis and outlines a vision for improving safety. Recommendations are developed with the public in mind, to be easily understood improvements and impacts.

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This memo also includes a discussion of the strategic opportunities and potential challenges and risks, delivery schedule with key meetings, milestones, and deliverables. A preliminary list of stakeholder and community leader organizations has also been developed for those target organizations that will be involved in the planning process and be involved in the public engagement process.

Oversight Committee

DOTE identified the members of the Oversight Committee (OC) for the TSAP4C development process. The OC was responsible for engaging with the DOTE and Consulting Team at key decision points including: the goal setting/kickoff meeting, after the draft analyses was completed, and after draft recommendations were formulated, and will be engaged after the draft report was produced. The OC is represented by individuals who are committed to providing insightful feedback throughout the process.

Oversight Committee members include:

- City of Cincinnati
  - Department of Transportation and Engineering
    - Planning
    - Traffic and Transportation
    - Operations
  - Cincinnati Public Schools
  - Cincinnati Police Department
- Ohio-Kentucky-Indiana Regional Council of Governments (OKI)
- Hamilton County Safe Communities

The Oversight Committee met several times in 2024 to discuss the development of the plan. These meetings were in-person, but with a virtual option available if necessary. A summary of these meetings to date are as follows.

03-15-2024 — Overview of the process, overview of crash trends and statistics for Cincinnati, process for identifying and ranking corridors and intersections, discussion of reactive and systemic analysis methods

07-11-2024 — Presentation of the overview of crash trends and statistics for Cincinnati and the top reactive corridors and intersections

09-26-2024 — Review of top reactive corridors, received feedback on additional corridors, presented the systemic safety needs/risks that were identified, discussed these needs/risks and potential countermeasures including potential countermeasures,

11-08-2024 — Received feedback on many locations and countermeasures/improvements

A public engagement meeting was held June 26, 2025.

These meetings were very useful for vetting the high-priority corridors and discussing the improvements that could be considered. The group discussed the highest-ranking corridors in detail.

The Planning Process

The process to develop the TSAP4C included a detailed look at the data, gathering information the Plan through public engagement, and developing and implementing strategies to make Cincinnati's transportation system safer. Specifically, it included the following (also shown in Figure 1):

- **Data analysis** including data collection, data processing, PowerBI dashboard and visualizations, and determination of priority focus areas.
- **Public Engagement** which included online outreach, a public meeting, stakeholder engagement, and outreach to the City's Community Councils.
- **Safety Strategies and Project Recommendations** which included developing countermeasures for identified historical and systematic issues and prioritization.
- **Implementation Strategies** which included project phasing and programming of projects.

Figure 1: The Planning Process

Data Analysis

Data Collection

Data collection started with the review of existing data and supplemented with public engagement through surveys, and public meetings. Details of crashes were developed through a range of data-gathering opportunities, including review of existing data and GIS databases and public outreach (e.g., surveys, online mapping tools that allow comments, public meetings), resulting in a summary of key findings from this review. Safety data collection came from data sources including:

- All traffic data, including modeling files from OKI
- ODOT Crash Data (GCAT/TIMS)
- OKI (2022) Excess Crash Data
- City Police Data
- Bridge Safety Information
- School Zones
- Rail lines and crossings
- OKI Freight Plan
- Physical Roadway information such as lanes, widths, speed limits, traffic signals and other traffic control devices, etc.
- Traffic Signal network

A data collection meeting with DOTE, other City's departments, and OKI was held to obtain infrastructure and crash data from the data sources listed above.

Data Processing

The above data sources required processing prior to analysis. The steps undertaken included:

- **Data Cleaning**—Examine the data at a high-level to identify any major issues or concerns, address them to the extent possible, and validate/verify the data's integrity.
- **Data Uploading**—Assimilating the various data formats so that they can be uploaded into data analysis tool program(s) for analysis.
- **Create Data Analysis Tools**—Creating a central analysis framework within PowerBI for customization to allow for analysis between the sets of safety parameters contained within the data.
- **Develop Dashboards, Visualizations, and GIS Maps**—PowerBI was customized to allow for the preparation of dashboard and visualizations of the data. ESRI ArcMap Pro and Adobe Illustrator software were used for final map creation from the PowerBI data.
- **Historic/Reactive and Systemic/Proactive Analysis**—A data driven historical analysis that identified locations with high crash severities and serious fatal crashes was conducted. This provided both a system level crash analysis and a detailed crash analysis that examines specific intersections, segments, and corridors including school zones and Metro Bus routes. This analysis identified the characteristics of locations associated with high crash severities, identified risk factors and ultimately systemic emphasis areas for each study area. The analysis identified correlations between elevated crash risk and specific systemic factors for intersections and segments. This analysis was used as the basis for prioritization of the recommended locations and the selection of countermeasures
- **Equity Analysis**—A specific equity focused analysis to reaffirm equity considerations specifically for the underserved and zero vehicle communities. This included the identification of historically disadvantaged communities and populations, safety analysis focused on equity and those communities, and consideration to neighborhood representative recommendations.

Determination of Priority Focus Areas

This effort began to build on the big picture analysis above and drill down to those areas that are of high priority based on the data, stakeholder input, and how they match up with the goals and objectives. A safety analysis review meeting was held with the City and Oversight Committee when draft priorities were completed. The steps include:

- **Prioritize Historic Crash Analysis Focus Areas**—Based on the analysis, corridors, segments and intersections for the City were prioritized. Each was scaled to the needs and context of that study area. The metrics were used to yield prioritized lists and maps of corridors and intersections.
- **Create High Injury Network**—This network was defined based on the data analysis and be specific to those locations where high injury crashes occur.
- **Prioritize Systemic Safety Analysis Emphasis Areas**—A prioritization of risk factors and systemic emphasis areas was conducted and based on the potential for cost effective safety improvements that will maximize the prevention of severe crashes.
- **Incorporate Input from Neighborhoods**—This included coordination with each neighborhood to incorporate the preferences noted during the public engagement efforts into the prioritization results.
- **Produce Focus Area / Safety Needs Memo**—An existing conditions Focus Area/Safety Needs Memo[1] was produced to document the existing conditions and results for historic crash analysis focus areas and systemic safety analysis emphasis areas.

1 Memo can be provided again if requested. Maps and figures that follow were selected from the memo for this report

3.0 Safety Analysis

Data Collection and Analysis

Crash data was collected for the City of Cincinnati municipal boundary for the years 2019 through 2023. Crashes on interstates were excluded from this data analysis as the city has no authority to make changes or improvements on interstates. Other limited access freeways are still included in this analysis.

One distinction in the data to note is some of the numbers reflect crashes—fatal and serious injury crashes, or FSI Crashes, which is different than fatalities and serious injuries which reflect the number of people affected.

This data was examined to identify patterns and trends related to crash causation—particularly as it related to fatal and serious injury crashes. During this time period there were (Figure 2 and Figure 3):

- 63,339 total crashes (125,910 people involved),
- 139 fatal crashes (146 fatalities),
- 846 serious injury crashes (1,046 serious injuries)

Year-to-year the number of total crashes dipped in 2020, reverted the following year, but has declined since. However, fatalities increased sharply from 2019 to 2021 and have decreased only slightly in the years since. Serious Injuries held fairly constant until 2023 when they dropped roughly 30%.

Of the 985 FSI crashes during this study period:

- 224 involved people walking (22.7%)
- 23 involved people riding bicycles (2.3%)
- 123 involved people riding motorcycles or All Terrain Vehicles (12.4%)

Together, these add up to 37.4% of FSI crashes. It is not anticipated that people walking, riding bicycles, and those on motorcycles are completing that same percentage of trips or miles through the city, therefore, these road users (who do not benefit from occupant protection of a vehicle) are inherently more vulnerable as they are overrepresented in these most severe outcomes.

Figure 2: Total Crashes

Figure 3: Fatal and Serious Injury Crashes

Contributing Characteristics to Fatal and Serious Injury (FSI) Crashes

HDR evaluated data and looked for trends based on when, where, how, and to whom crashes are occurring to help guide strategies to prevent future crashes. The findings include:

1. Males were twice as likely as females to be seriously injured or killed in traffic crashes (Figure 4)
2. People in their 20s were the age group most often killed or seriously injured (Figure 5)

Figure 4: Crashes by Gender

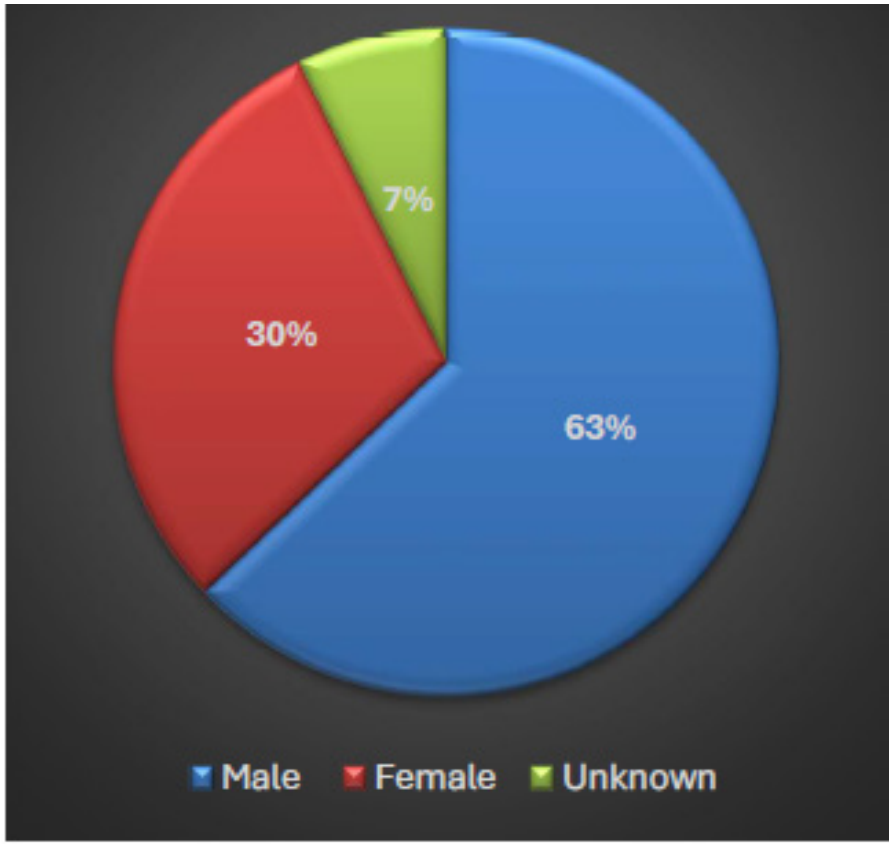
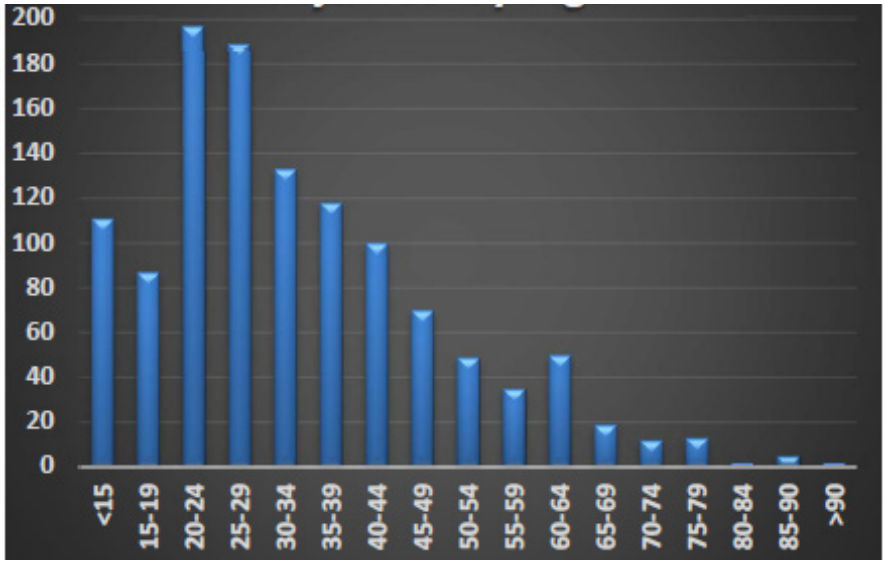
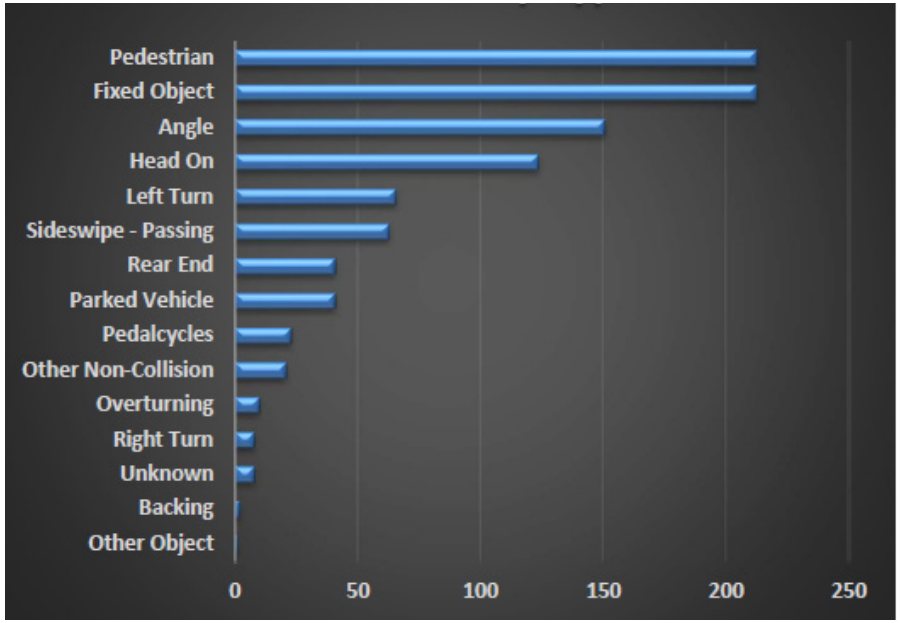


Figure 5: Crashes by Age Group



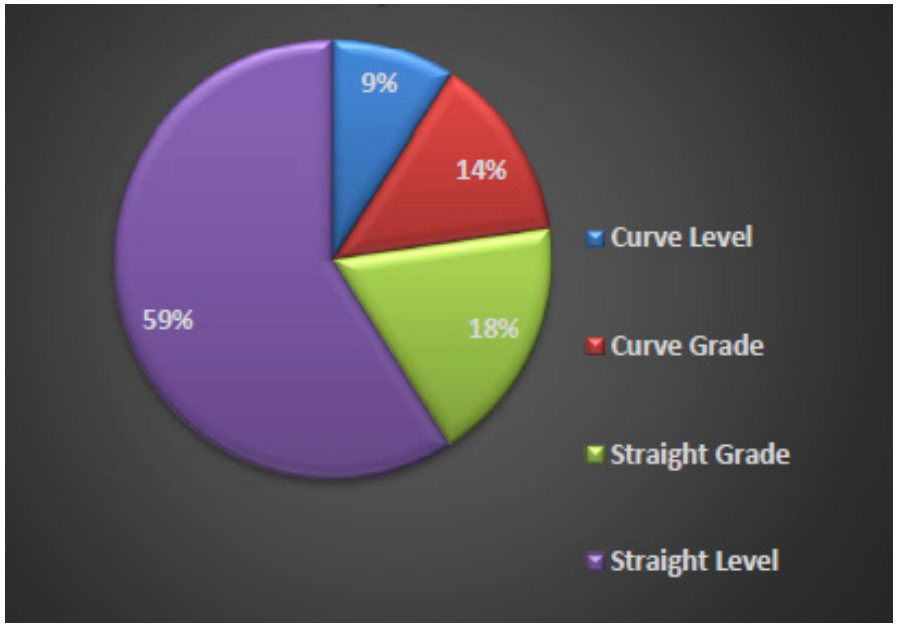
3. Pedestrian crashes, Fixed Object crashes, Angle crashes, and Head On crashes were the most frequent FSI crashes. (Figure 6)

Figure 6: FSI Crashes by Type



4. Most of the FSI crashes occurred on straight, level roads. Cincinnati does have some hilly and curvy terrain, and this data does reflect this. (Figure 7)

Figure 7: FSI Crashes by Road Contour



5. Most of the of the crashes occur on dry roads when there is no precipitation. (Figure 8 and Figure 9)

Figure 8: FSI Crashes by Road Conditions

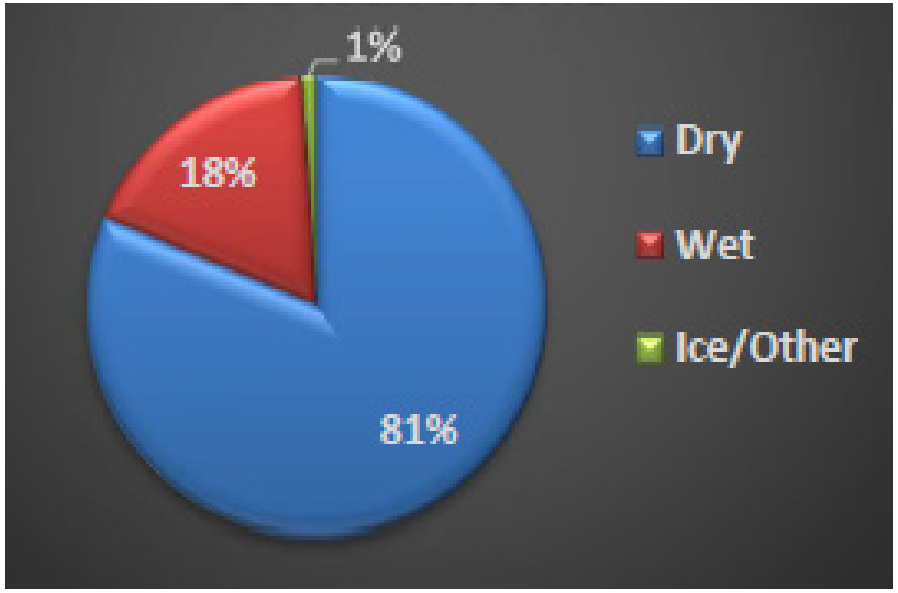
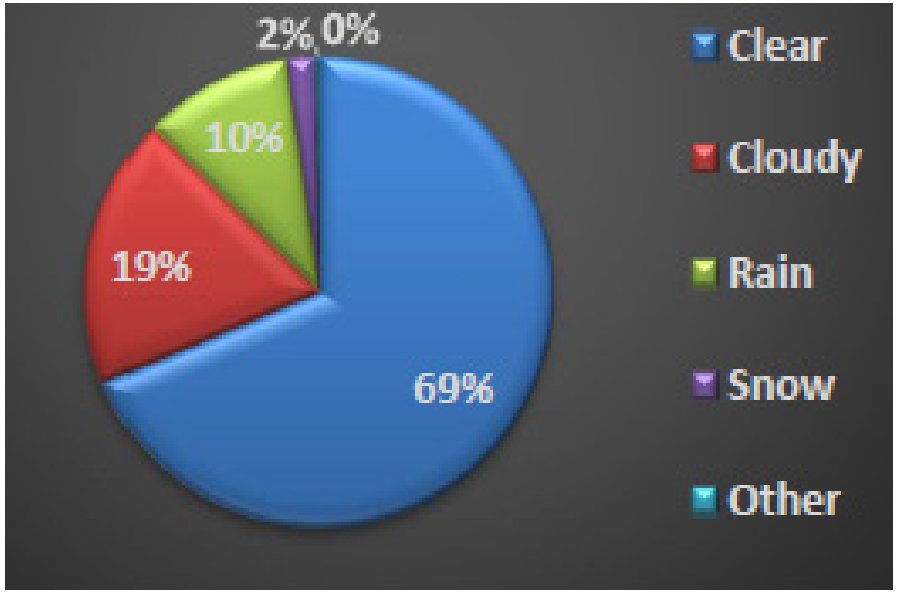
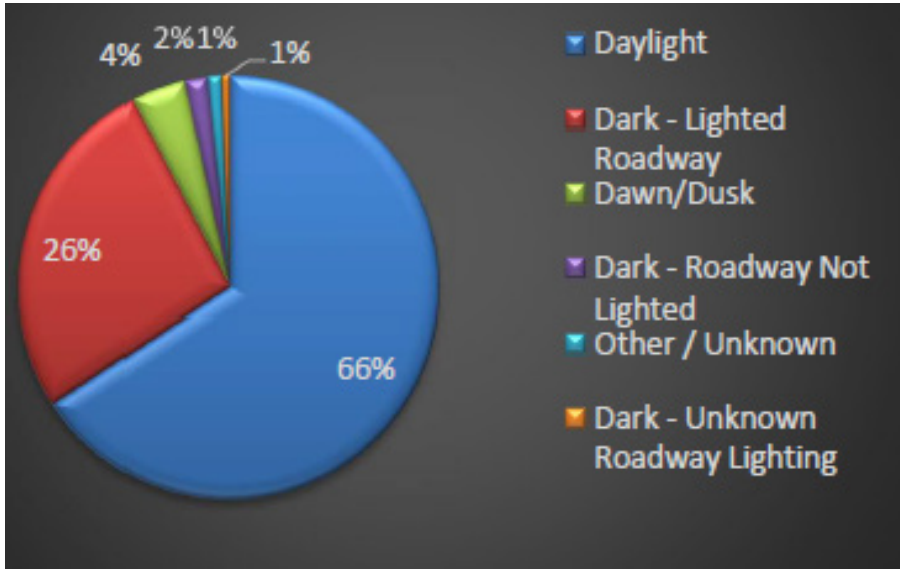


Figure 9: FSI Crashes by Weather Conditions



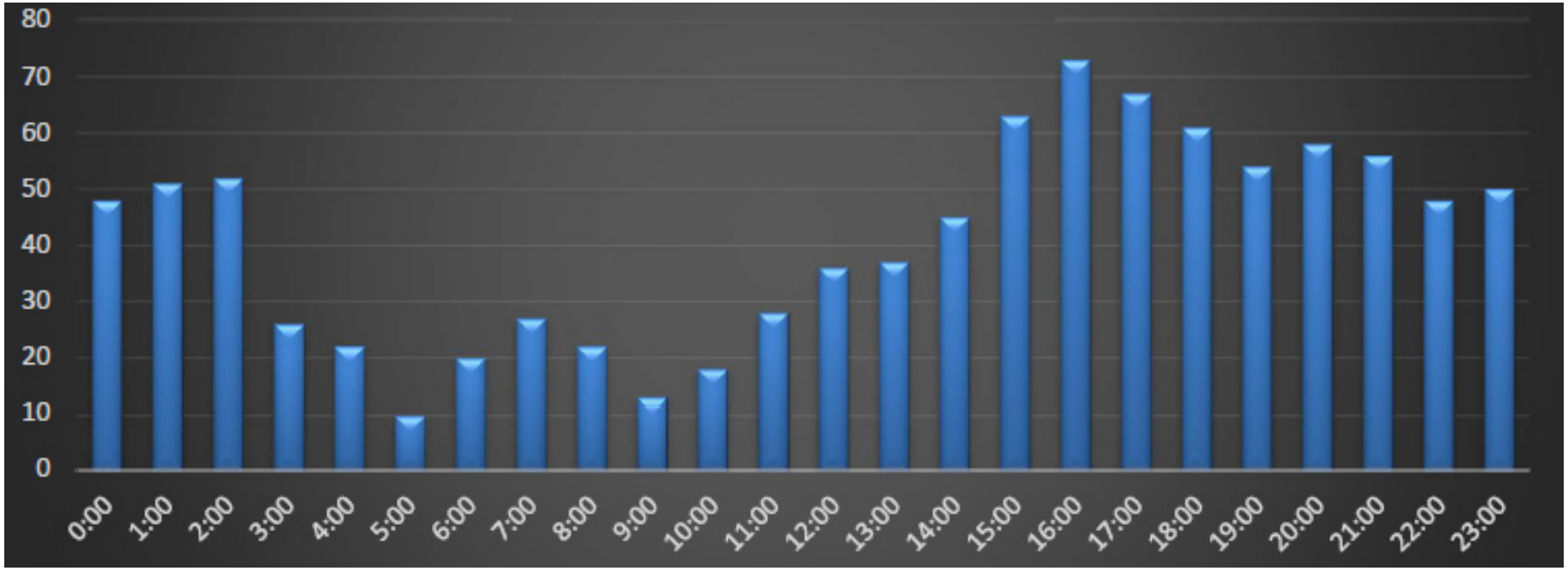
6. Two-thirds of crashes occurred during daylight; another quarter of crashes were in dark conditions with lighting present. (Figure 10)

Figure 10: FSI Crashes by Light Conditions



7. FSI crashes occur most often in the late afternoon (3:00 — 6:00 pm) coinciding with a typical PM peak hour traffic but remain more elevated in the overnight hours. (Figure 11)

Figure 11: FSI Crashes by Hour



8. Weekends, particularly Fridays and the months of May to July also trended highest for fatal and serious injury crashes. Early in the week (Monday—Wednesday) and Early in the year (January—April) trended lowest. (Figure 12 and Figure 13)

Figure 12: FSI Crashes by Day of the Week

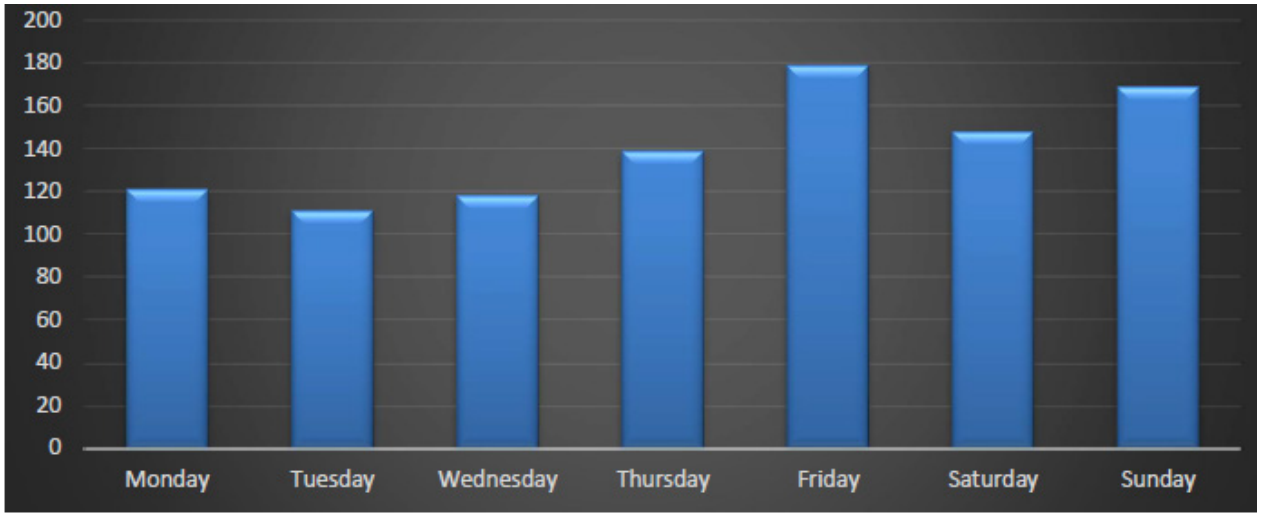
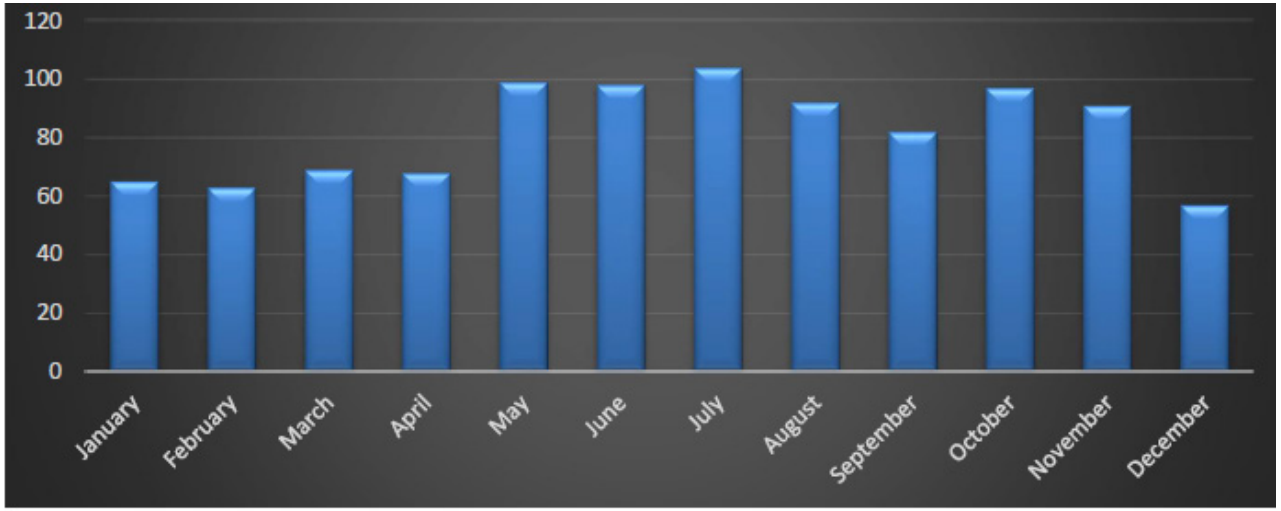


Figure 13: FSI Crashes by Month



Determination of High Injury Network Corridors

Using a data driven process, locations (intersection and roadway segments) with the most number and most severe crashes were identified through a weighted method called Equivalent Property Damage Only (EPDO). The data from the most recent 5 years recorded (2019—2023) is used and analyzed based upon:

- Crash Frequency (the number of all types of crashes)
- Crash Severity (the number of injury crashes)

The team then calculated the EPDO Score for each corridor:

# of Property Damage Crashes × 1
+
# of Possible Injury Crashes × 4.44
+
# of Minor Injury Crashes × 6.55
+
# of Fatal & Severe Injury Crashes × 37.93
=
Total Score

The EPDO scores do not account for corridors of varying lengths and traffic volumes. This challenged the team to rank the corridors with some consistency and sound logic. The rankings of corridors by crashes per mile and crashes per lane mile were considered. These rankings were effective, and are shown in Table 1 for comparison. The team along with the OC decided upon the ranking by crash rate, which includes the traffic volume along with the length of the corridor. The crash rate is highlighted in Table 1. The difference in the rankings is negligible and the top corridors do not change regardless of which method is used.

Top EPDO corridors represent 60.9 miles of 109 miles within the City, 55.9% of the City's roads 15,027 crashes, 63,339 total, 23.7% 379 fatal and serious injuries, 985 total 38.5% 6,637 at intersection

The corridors (with the most EPDO crashes) are along these commonly known roads within the City: Central Parkway, Colerain Avenue, Columbia Parkway, Daly Road, Eastern Avenue, Elberon Avenue, Este Avenue, Glenway Avenue, Grand Avenue, Hamilton Avenue, Harrison Avenue, Martin Luther King Drive, McMillen Street, North Bend Road, Paddock Road, Paddock Road—Vine Street, Queen City Avenue, Reading Road, River Road (West US 50), Riverside Drive, Spring Grove Avenue, Victory Parkway, West Fork Road, West 8th Street, West Mitchell Avenue—East Mitchell Avenue, Westwood Northern Boulevard, Winneste Avenue, and Winton Road.

The top corridors are shown in Figure 14.

Determination of Top Intersections

The team assessed the traffic data to determine the intersections with the highest crash ratings. This calculation is straightforward as all intersections have the same number of conflict points so the crash per volume of traffic is the determining factor. The top intersections are listed in Table 2.

The top 25 intersections are:

Eggleston Avenue at Broadway Street, Glenway Avenue at Grand Avenue; Broadway Street at 3rd Street; Mitchell Avenue at Kessler Avenue; Martin Luther King Dr at Eden Avenue; Martin Luther King at Highland Avenue; Harrison Avenue at Werk/Powell Road; Werk Road at Boudinot Avenue; Westwood Northern Boulevard at Baltimore Avenue; Martin Luther King Dr at Harvey Avenue; Reading Road at Mercy Health Place; Mitchell Avenue at Kenard Avenue; Martin Luther King Drive at Reading Road; Westwood Avenue at Grand Avenue; Harrison Avenue at Westwood Avenue; Martin Luther King Drive at Burnet Avenue; Harrison Avenue at McHenry Avenue; Reading Road at Tennessee Avenue; Colerain Avenue at North Bend Road; Queen City Avenue at Harrison Avenue; Virginia/Fork at Colerain Avenue; North Bend Road at Hamilton Avenue; Seymour Avenue at Paddock Road; Paddock Road at Summit Road; Dorchester Avenue at Reading Road.

The top intersections are listed in Table 2 and shown in Figure 15.

Table 1: Top EPDO Corridors

Rank by Crash Rate	Corridor ID on Map	Corridor Name	Start (West or South)	End(East or North)	Length in Miles	AADT	Total Crashes (2019—2023)	Crashes Per mile	Crashes per Lane Mile	Crash Rate (Total Crashes/ AADT*Length)	Crash rate per million vehicle miles	Fatal or Serious Injury
	A	Central Parkway	Liberty Street West	Martin Luther King Drive West	2.20	11,772	461	209.19	52.3	0.018	48.684	21
	B	Colerain Avenue	West Fork Road	West North Bend Road	2.23	25,437	652	291.77	72.95	0.012	31.425	29
	C	Columbia Parkway	I—471	Delta Avenue	4.02	22,253	320	79.53	19.89	0.004	9.790	9
	D	Daly Road	North Bend Road	Galbraith Road	1.02	10,943	145	142.56	35.64	0.014	35.690	3
	E	West Mitchell Avenue—East Mitchell Avenue	Spring Grove Avenue	Clinton Springs Avenue	1.94	16,313	922	474.41	118.61	0.030	79.675	14
	F	Eastern Avenue	Airport Road	Beechmont Avenue	0.59	3,725	19	32.43	8.11	0.009	23.846	3
	G	Elberon Avenue	Mount Echo Park Drive	Price Avenue	0.63	12,111	188	299.14	74.79	0.025	67.670	5
	H	Este Avenue	West Mitchell Avenue	West Seymour Avenue	2.25	12,903	224	99.69	24.93	0.008	21.166	8
	I	Glenway	Prosperity Place	Wing Street	2.90	13,898	1537	133	132.5	0.038	103.790	32
	J	Grand Avenue	Glenway Avenue	Westwood Avenue	0.97	3,247	143	147.25	73.63	0.046	124.241	3
	K	Hamilton Avenue	Rockford Pl	Hillcrest Road	0.79	16,907	77	97.35	24.34	0.006	15.774	3
	L	Harrison Avenue	Montana Avenue	I—75	4.17	16,874	1488	356.49	89.13	0.022	57.881	41
	M	Martin Luther King Drive	I—75	Gilbert Avenue	2.76	20,512	1469	532.12	133.03	0.026	71.073	16
	N	McMillan Street	Rohs Avenue	Concord Avenue	1.50	6,103	891	594	148.50	0.097	266.65	13
	O	North Bend Road	Kirby Road	Daly Road	2.40	19,364	721	300	75	0.016	42.59	21
	P	Paddock Road	Tennessee Avenue	Carolina Avenue	0.50	17,132	150	302.44	75.61	0.018	48.364	2
	Q	Paddock Road—Vine Street	Seymour Avenue	De Camp Avenue	1.02	20,714	367	359.84	89.96	0.018	47.594	5
	R	Queen City Avenue	Ferguson Road	Sunset Avenue	1.46	13,505	435	298.01	149.01	0.023	60.455	12
	S	Reading Road	McMillian Street	Summit Road	6.00	18,604	2363	394	98.5	0.021	57.99	49
	T	River Road	Twain Drive	I-75	10.60	22,868	679	64.07	32.04	0.003	7.675	25
	U	Riverside Drive	Kemper Lane	Pipe Alley	0.26	8,893	18	70.12	17.53	0.008	21.602	2
	V	Spring Grove Avenue	Winton Road	King's Run Drive	0.90	13,950	339	377	94.25	0.027	73.97	6
	W	Victory Parkway	Dana Avenue	Asmann Avenue	0.82	12,156	103	126.36	31.59	0.011	28.478	3
	X	West 8th Street	Depot Street	Dalton Avenue	0.84	11,230	37	44.31	11.08	0.004	10.808	3
	Y	West Fork Road	Shepherd Creek Road	Montana Avenue	1.91	5,434	76	39.89	19.95	0.008	20.108	4
	Z	Westwood Northern Boulevard	Boudinot Avenue	Beekman Street	3.56	16,566	772	216.69	54.18	0.014	35.836	25
	AA	Winneste Avenue	Kings Run Drive	Dutch Colony	0.92	6,234	183	199.44	49.86	0.032	87.647	7
	BB	Winton Road	Gray Road	Oakfield Avenue	1.75	16,702	248	141.63	35.41	0.009	23.232	15

Figure 14: High Injury Corridors

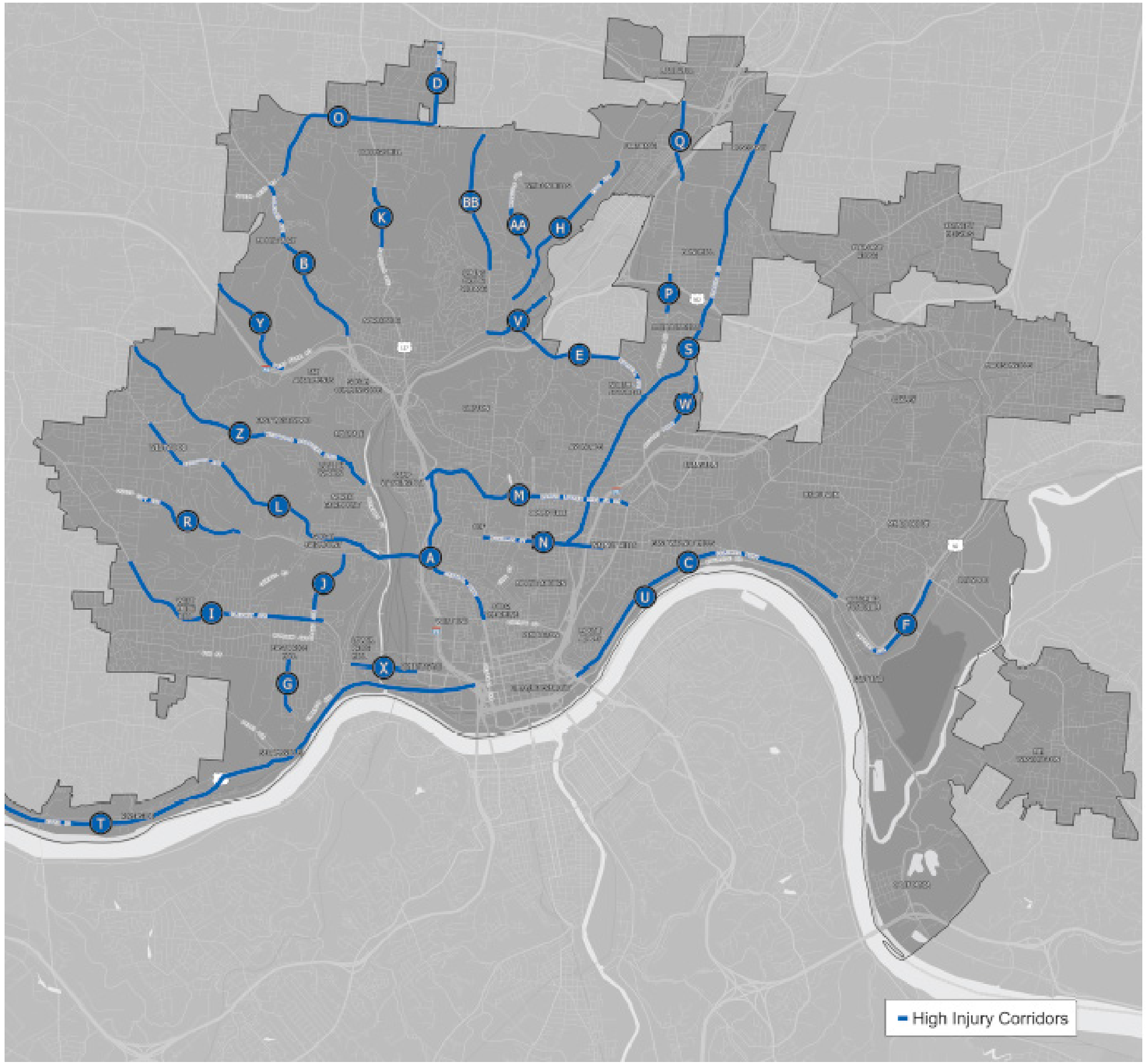
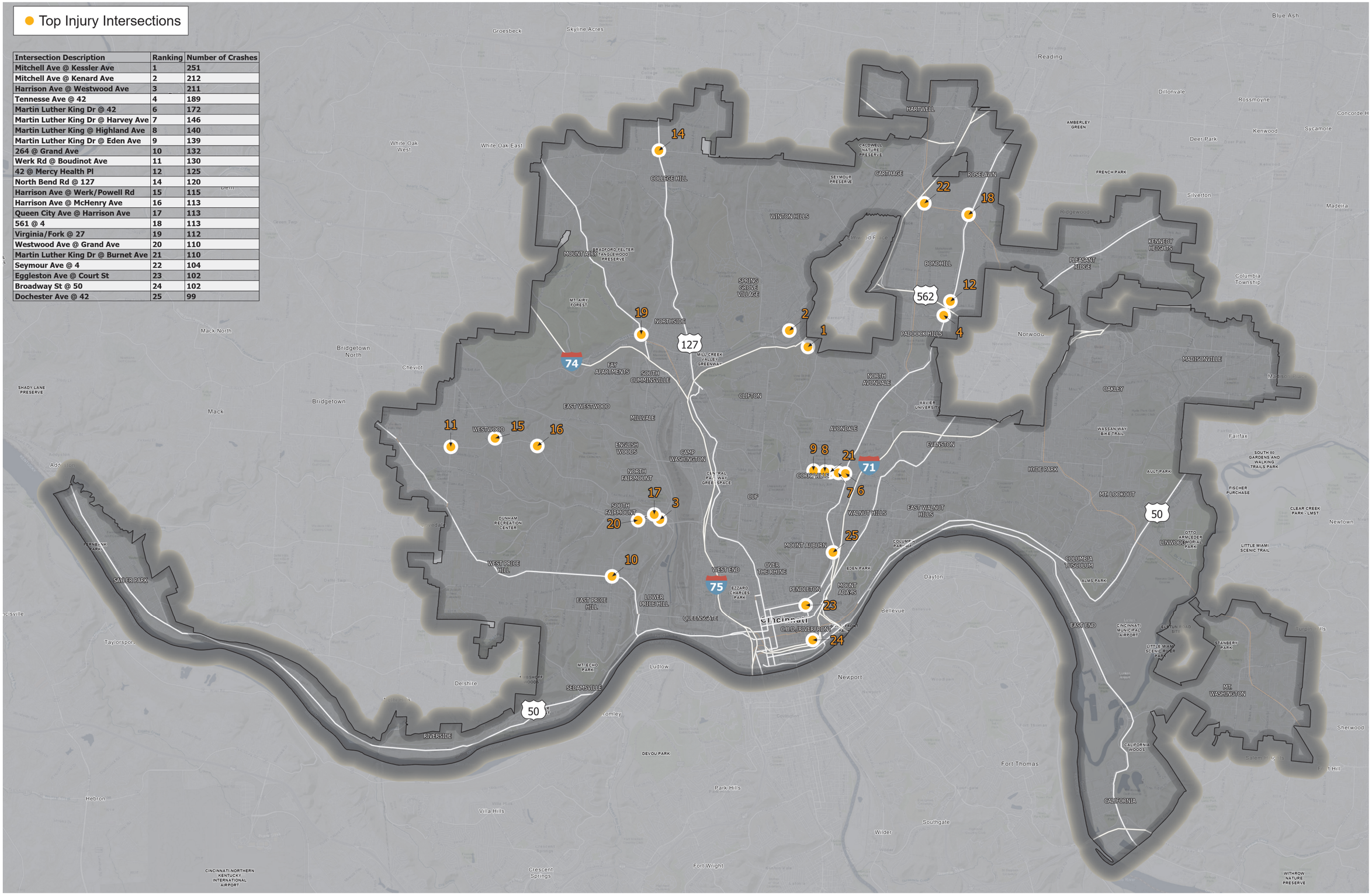


Table 2: Top Intersections

Rank by Crash Rate	Intersection Name	# of Lanes	AADT	Total Crashes (2019—2023)	Crash Rate (Total Crashes/ AADT)	Fatal or Serious Injury	Posted Speed Limit
1	Eggleston Avenue @ Broadway Street	4-4	7,189	102	0.0142	2	30
2	Glenway Avenue @ Grand Avenue	2-4	11,491	132	0.0115	0	35
3	Broadway Street @ 3rd Street	4-5	11,543	102	0.0088	1	25
4	Mitchell Avenue @ Kessler Avenue	2-6	31,302	251	0.0080	5	35
5	Martin Luther King Drive @ Eden Avenue	6-7	18,031	139	0.0077	2	30
6	Martin Luther King @ Highland Avenue	4-7	19,169	140	0.0073	1	30
7	Harrison Avenue @ Werk/Powell Road	3-4	16,278	115	0.0071	2	35
8	Werk Road @ Boudinot Avenue	3-5	21,227	130	0.0061	0	35
9	Westwood Northern Blvd @ Baltimore Avenue	3-5	31,024	189	0.0061	4	35
10	Martin Luther King Drive @ Harvey Avenue	4-7	24,035	146	0.0061	3	30
11	Reading Road @ Mercy Health Place	3-5	22,391	125	0.0056	3	35
12	Mitchell Avenue @ Kenard Avenue	3-7	40,558	212	0.0052	1	35
13	Martin Luther King Drive @ Reading Road	5-7	35,548	172	0.0048	1	30
14	Westwood Avenue @ Grand Avenue	3-3	23,824	110	0.0046	2	25
15	Harrison Avenue @ Westwood Avenue	7-7	47,320	211	0.0045	2	25
16	Martin Luther King Drive @ Burnet Avenue	5-7	25,137	110	0.0044	2	30
17	Harrison Avenue @ McHenry Avenue	3-5	26,566	113	0.0043	1	35
18	Reading Road @ Tennessee Avenue	5-5	31,024	123	0.0040	1	35
19	Colerain Avenue @ North Bend Road	5-5	47,843	185	0.0039	2	35
20	Queen City Avenue @ Harrison Avenue	3-7	29,758	113	0.0038	2	25
21	Virginia/Fork @ Colerain Avenue	4-6	32,815	112	0.0034	5	35
22	North Bend Road @ Hamlton Avenue	4-4	35,708	120	0.0034	2	25
23	Seymour Avenue @ Paddock Road	5-5	32,341	104	0.0032	3	35
24	Paddock Road @ Summit Road	3-7	35,734	113	0.0032	0	35
25	Dochester Avenue @ Reading Road	6-7	47,551	99	0.0021	2	30

Figure 15: Top Intersections

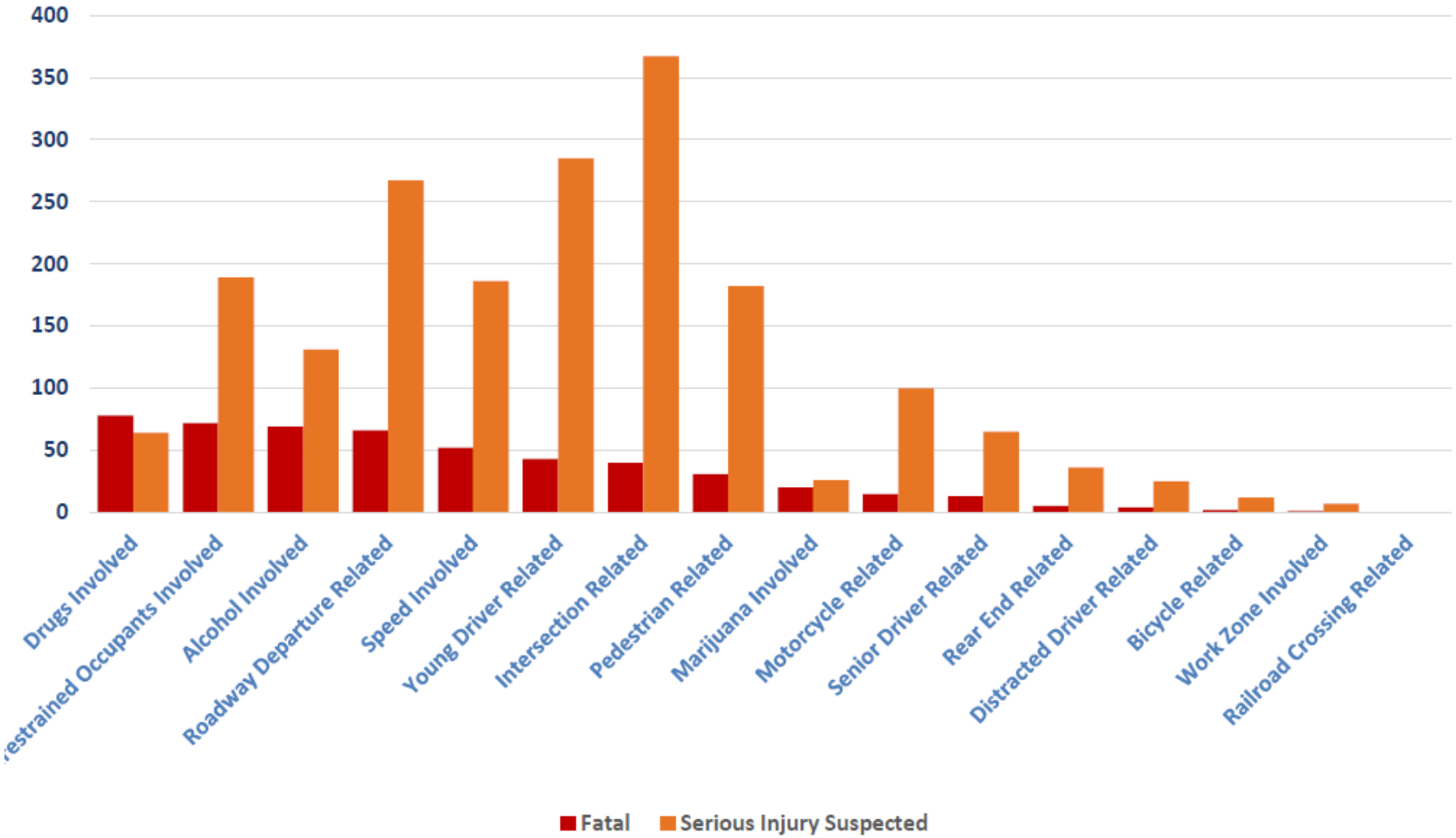


Intersection Description	Ranking	Number of Crashes
Mitchell Ave @ Kessler Ave	1	251
Mitchell Ave @ Kenard Ave	2	212
Harrison Ave @ Westwood Ave	3	211
Tennesse Ave @ 42	4	189
Martin Luther King Dr @ 42	6	172
Martin Luther King Dr @ Harvey Ave	7	146
Martin Luther King @ Highland Ave	8	140
Martin Luther King Dr @ Eden Ave	9	139
264 @ Grand Ave	10	132
Werk Rd @ Boudinot Ave	11	130
42 @ Mercy Health Pl	12	125
North Bend Rd @ 127	14	120
Harrison Ave @ Werk/Powell Rd	15	115
Harrison Ave @ McHenry Ave	16	113
Queen City Ave @ Harrison Ave	17	113
561 @ 4	18	113
Virginia/Fork @ 27	19	112
Westwood Ave @ Grand Ave	20	110
Martin Luther King Dr @ Burnet Ave	21	110
Seymour Ave @ 4	22	104
Eggleston Ave @ Court St	23	102
Broadway St @ 50	24	102
Dochester Ave @ 42	25	99

Focus Areas

Cincinnati's data was compared to Ohio's Strategic Highway Safety Plan (SHSP) Emphasis Areas. These are factors that can contribute to a crash occurring. Several of these factors can be combined in any one crash. For instance, a driver could have been Distracted, then ran off the road (Roadway Departure) and one of the occupants was not wearing a seatbelt (Unrestrained). For Fatal and Serious Injury Crashes in Cincinnati, the Emphasis Areas with the highest numbers of crashes were Intersection Related, Younger Driver Related, and Roadway Departure Related (Figure 16).

Figure 16: Crashes by Emphasis Area



All crashes (not just FSI) were compared to the statewide averages for each of the State's Focus Areas. Intersection and Rear End crashes trended higher in Cincinnati than the state average:.

Table 3: All Crashes Compared to Statewide Average

State Focus Ares	Statewide Average	Citywide, All Roads
Roadway Departure	**37.6%**	**23.7%**
Young Driver Involvement (15-25)	**36.9%**	**32.2%**
Intersection	**36.7%**	**41.4%**
Speed Related Involvement	**24.0%**	**5.5%**
Restraints Not Used Driver/Occupants	**18.9%**	**4.7%**
Older Driver Involvement	**18.4%**	**10.7%**
Alcohol Related Involvement	**16.5%**	**2.8%**
Rear End	**12.4%**	**19.1%**
Motorcycle Driver/Passenger	**10.9%**	**0.5%**
Drug Related Involvement	**8.1%**	**0.8%**
Pedestrian Involvement	**6.6%**	**0.6%**
Distracted Drivers	**6.4%**	**2.1%**
Railroad Crossing	**0.3%**	**0.0%**
Bicycle Involvement	**2.0%**	**0.1%**
Work Zone Involvement	**3.0%**	**0.8%**
Marijuana Involvement	**3.0%**	**0.2%**
Blue=Below Statewide Average Orange=Above Statewide Average		

4.0 Engagement and Collaboration

On Wednesday, June 25, 2025, the city conducted two in-person public open house meetings for the SS4A project. In conjunction with the in-person meetings, the website, www.SS4ACincinnati.com was launched to provide online/virtual visitors with the opportunity to review program information, offer feedback, and submit questions to the project team. Comments were accepted in-person at the public meetings, and via the website through Friday, July 25, 2025.

Program Goals

- Prepare and deliver a data-driven, community-centered, actionable plan to the City of Cincinnati that reinforces its transportation goals and is supportive of funding requirements for future project implementation.
- Conduct a public engagement program that informs stakeholders and the public about the planning project and provides opportunities for feedback and dialogue.

Communications Objectives

Communications activities for the SS4A program were designed to educate and engage target audiences, while enlisting communities as active participants in the prioritization process.

- Educate the public about the SS4A process and related prioritization needs.
- Solicit and collect feedback from a diverse set of community stakeholders that will inform development of future safety and transportation strategies for the City of Cincinnati.
- Provide multiple information channels that offer the public the opportunity to learn more about the planning process, including a mechanism for providing feedback and asking questions.

Outreach Key Messages

The City of Cincinnati is committed to building and supporting a safe transportation network.

- The city is continually reviewing and analyzing strategies to improve its transportation system in order to better serve those who use it.
- The city is conducting a study funded by a federal grant program known as Safe Streets and Roads for All (SS4A). The SS4A program gives local communities money to develop action plans and build safety-related projects that address mobility and access for every user, including vehicles, public transit, pedestrians, and bicyclists.
- To receive construction funds for project implementation, grant recipients must first develop a Transportation Safety Action Plan—known as TSAP4C.

Together with local partners, community leaders, and neighborhood residents, the city is identifying and prioritizing safety-related projects that can be implemented to further support the city's transportation goals and improvement strategies.

- The city is analyzing current and historic crash data involving vehicles, pedestrians, and bicycles in every neighborhood.
- In addition, the city is seeking input from community councils, stakeholders, and the public to ensure the plan it develop reflects the needs and priorities of local residents.

You have an opportunity to help shape the transportation projects that can make your community safer.

- Public involvement is a critical component of the plan development process.
- Public input and feedback will help to shape future plans and ultimately the prioritization of projects that will be implemented to build a safer transportation network and more accessible city.
- SS4ACincinnati.com is your resource for information related to the SS4A program. On our website, you can:
  - Learn more about the SS4A program
  - Ask the project team questions
  - Review data from the project team on local transportation 'hot spots'
  - Provide feedback on problem areas and opportunities for improvements that are not already identified

Target Audiences

- All 52 city neighborhoods
- Community Councils
- Key stakeholders and engagement partners, such as Cincinnati Public Schools (Local School Decision Making Committees), Hamilton County, OKI, SORTA, area hospitals, bike and pedestrian groups, and other community-based organizations with whom neighborhood residents have established relationships and trust
- General public

Communications Strategies

- Clearly and consistently articulate safety-related goals, along with basic program information through multiple communications channels.
- Integrate traditional public involvement activities with additional outreach tactics that support meaningful engagement to diverse audiences who receive information through varied channels at different times.
- Use earned media and various communications vehicles, e.g., digital platforms, such as website, social media, etc., to disseminate project-related information to local communities, and the public.

Outreach Summary

In-Person Engagement

On Wednesday, June 25, 2025, the City of Cincinnati hosted two in-person open house meetings at the Walnut Hills Branch Library, a centrally located venue in the City of Cincinnati. Two meeting times were offered (11 a.m. — 1 p.m., and 5 p.m. — 7 p.m.). Both meetings were held in an open-house style format; no formal presentation was given.

The public meetings were well attended with 79 people attending the two meetings (44 people attended the 11 a.m. meeting; 35 people attended the 5 p.m. meeting).

Attendees were given an opportunity to review meeting exhibits[1], speak with project representatives, ask questions, and submit feedback. Comment forms[2] were provided to facilitate public feedback.

Attendees were asked to review an analysis of traffic crashes on non-interstate roads in the city from 2019 through 2023, as well as the top corridors where serious and fatal traffic incidents occurred during that time frame. They were then asked to list which three corridors they thought should be prioritized first as the city pursues funding for construction. Thirty-two comment forms were turned in at the meetings.

Virtual Engagement

For those who were unable to attend either of the in-person meeting opportunities, program information and meeting exhibits were provided online at www.SS4ACincinnati.com. Site visitors were asked to provide the same input as in-person meeting attendees, i.e., which three corridors they thought should be prioritized by the city for future improvement. Seventy-five respondents provided feedback via the website. Online comments were accepted through Friday, July 25, 2025.

1 Exhibits are available upon request
2 Completed comment forms will be provided later

Key Findings

Participants at both the in-person meetings and online platform were provided with the opportunity to give input and feedback on the traffic data presented by the project team. A summary of the top three corridors collected from each format is provided below:

Table 4: Public Responses to Top Corridor

Top 3 In-person responses	Top 3 On-line responses	Combined Top 3 responses
M — Martin Luther King Drive (18 responses)	U — Riverside Drive (18 responses)	M — Martin Luther King Drive (29 responses)
N — McMillan Street (12 responses)	S — Reading Road (14 responses)	N — McMillan Street (21 responses)
A — Central Parkway (8 responses)	C — Columbia Parkway (13 responses)	S — Reading Road (20 responses)

Other Key Findings

In addition, respondents were asked to offer feedback on other corridors that may not have been presented in the information they reviewed, and they believe should be considered by the city for potential safety improvements. Responses included concerns regarding areas such as Beechmont Avenue, Beekman Street, Clifton Avenue, Liberty Street, Madison Road, and Ridge Road, and others.

Outreach Activities

A news release was distributed by the City of Cincinnati notifying the public and local media outlets of the Safe Streets and Roads for All Public Meeting opportunities.

Community Council partners were an integral component of the notification process. An email was sent to the Community Council database maintained by the city in advance of the public meeting making them aware of the in-person meeting and virtual engagement opportunities. Reminder emails were sent prior to the meeting.

Following the meeting, two additional emails were sent to Community Council leadership encouraging them to participate in the online feedback opportunity, and to share the website link with their membership, as well as their neighborhood and business group contacts.

The city also posted social media notifications and participation reminders on their digital platforms to encourage broad participation from neighborhood residents throughout the city.

Figure 17: June 25 Meeting Snapshots

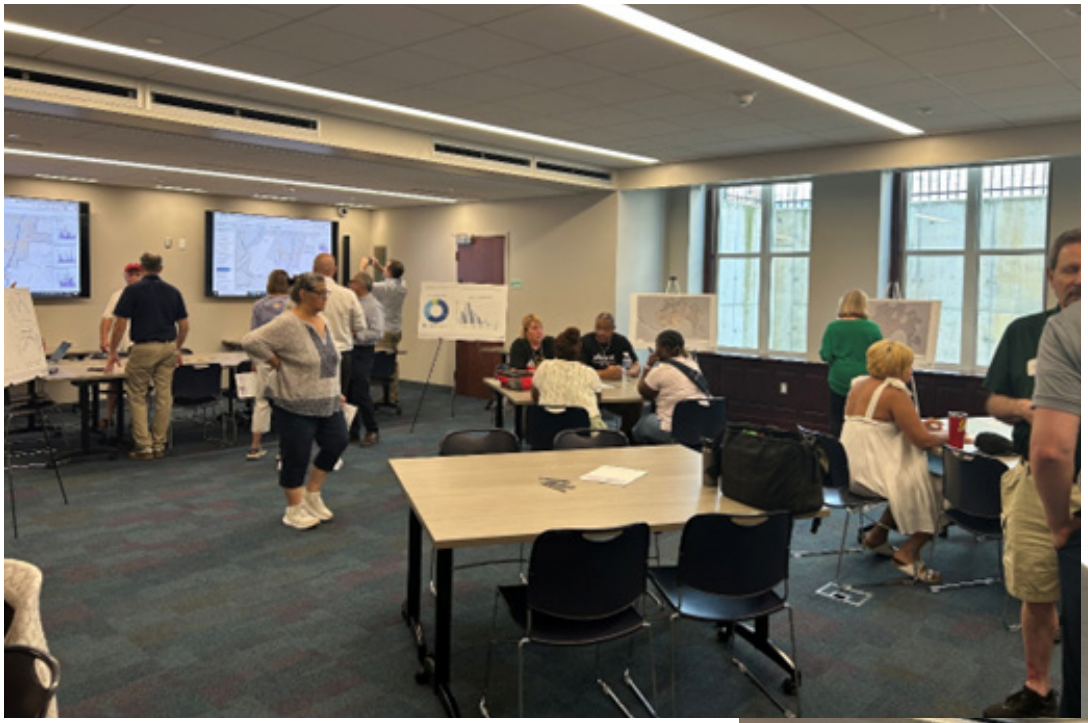


Figure 18: SS4ACincinnati.com Snapshots

5.0 Community Considerations

Providing a transportation system for all in Cincinnati goes hand in hand with safety as a desired outcome of the TSAP4C. This plan was developed with community considerations in mind, including mapping to identify underserved communities, and DOTE is committed to ensuring that the recommendations and projects that build off of this plan will feature inclusive and representative public engagement and stakeholder input.

Disadvantaged Populations & Disadvantaged Neighborhoods

A means of identifying areas of community concern is to directly identify the location and distribution of disadvantaged populations within the County.

This data is mapped in Figures on the following pages, with above-average Disadvantaged Census tracts shown in blue, and analyzed by the populations that follow.

- **Minority Population**

  The minority population was defined as all those individuals identifying as non-white, including those responding “Other” or selecting two or more categories in any combination, including “White”.

  The percentage of minority population within each Census Block Group as a percentage of this citywide average is mapped in Figure 19.

- **Population Experiencing Poverty**

  Income is a significant factor impacting societal and health outcomes for individuals. Low-income block groups were determined based on the percentage of individuals with incomes below the poverty level.

  The percentage of the population experiencing poverty within each Census Block Group as a percentage of this citywide average is mapped in Figure 20.

- **Population without Car Access**

  Carless households are more likely to have difficulty accessing jobs, social opportunities, healthcare, and other social services and are also defined on a household-by-household basis. Any household with access to zero cars met this threshold, including both owner- and renter-occupied households.

  The percentage of households impacted by disability within each Census Block Group as a percentage of this citywide average is mapped in Figure 21.

Figure 19: Minority Populations

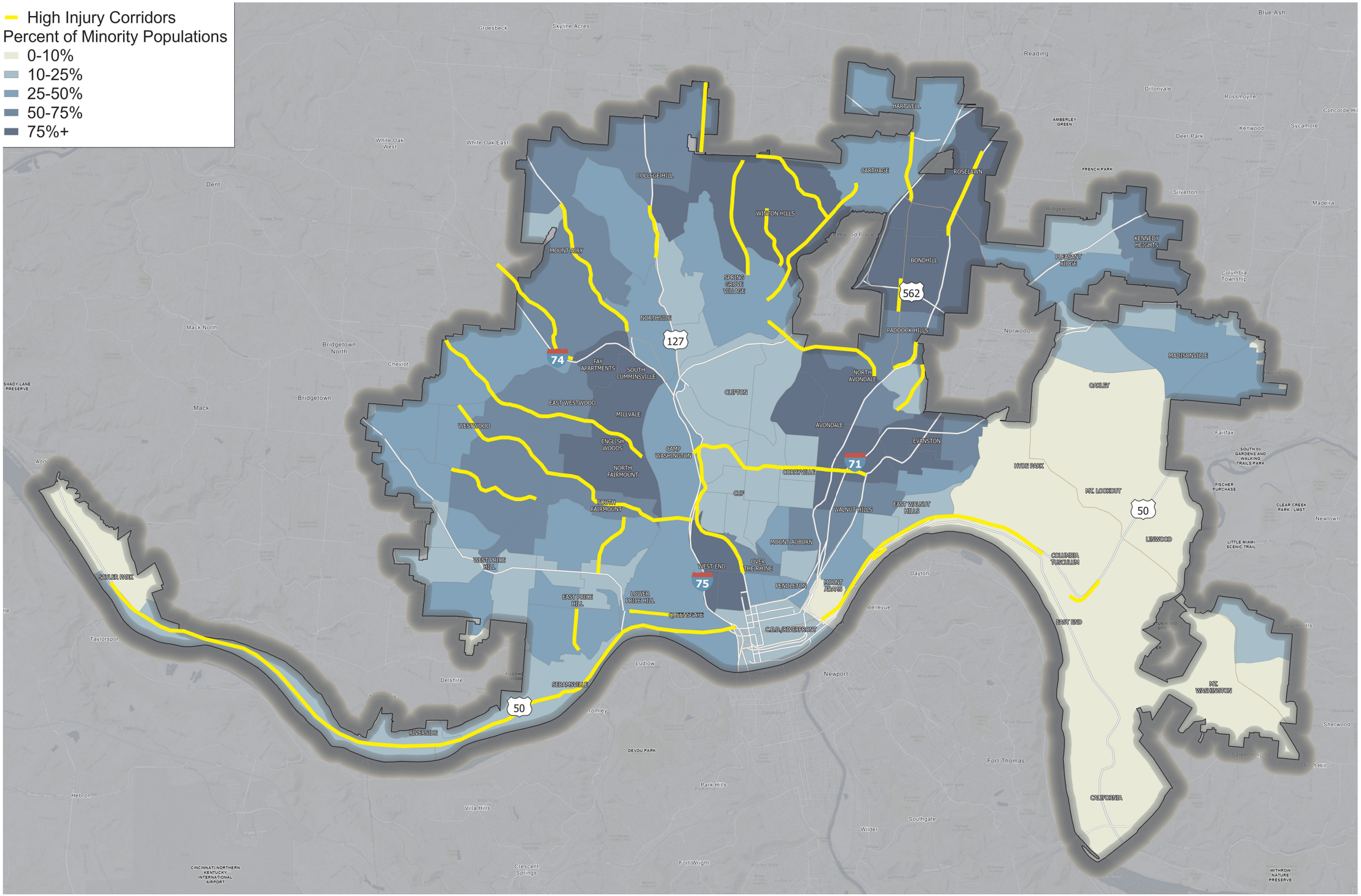


Figure 20: Population Living below Poverty

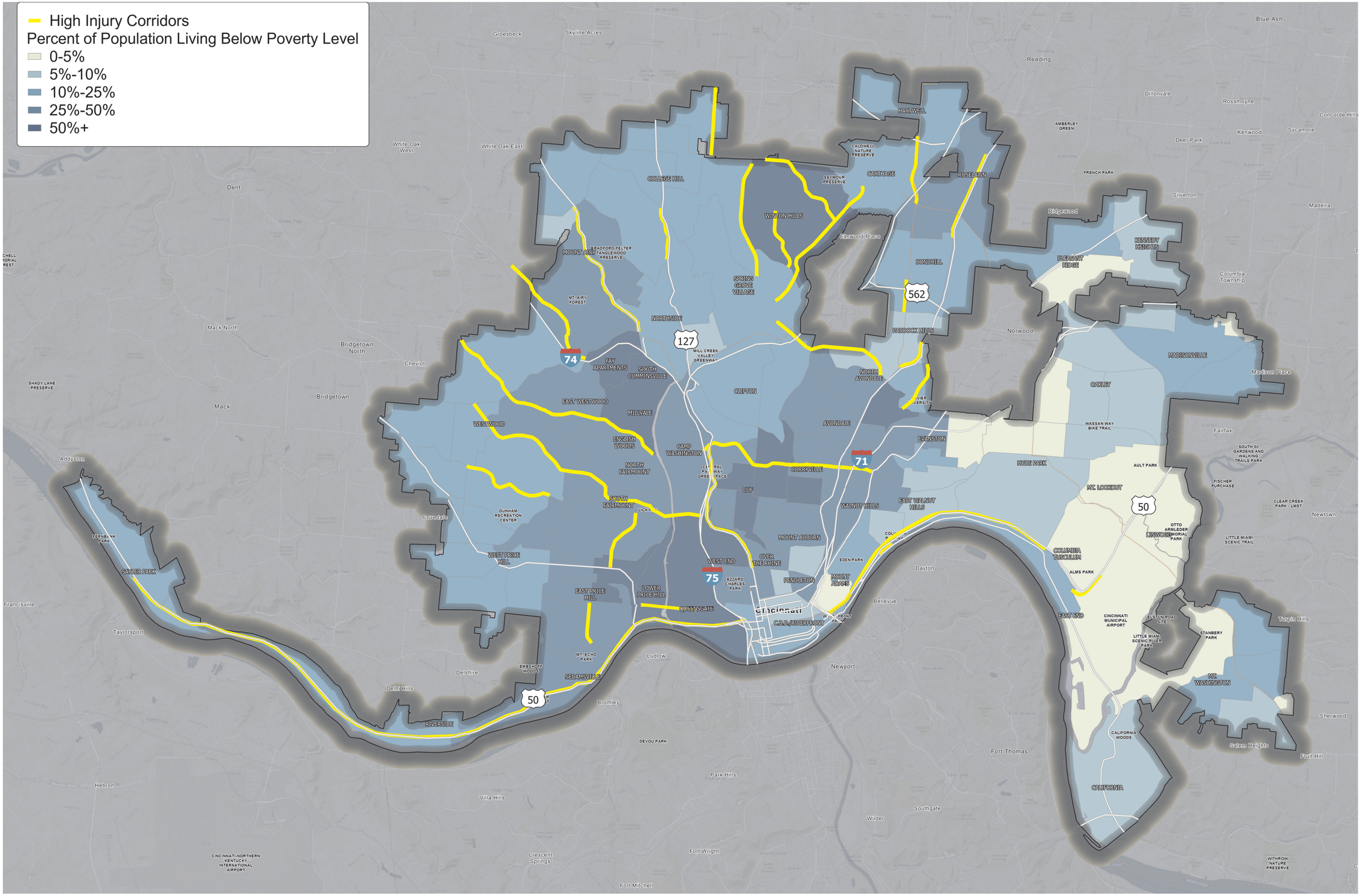
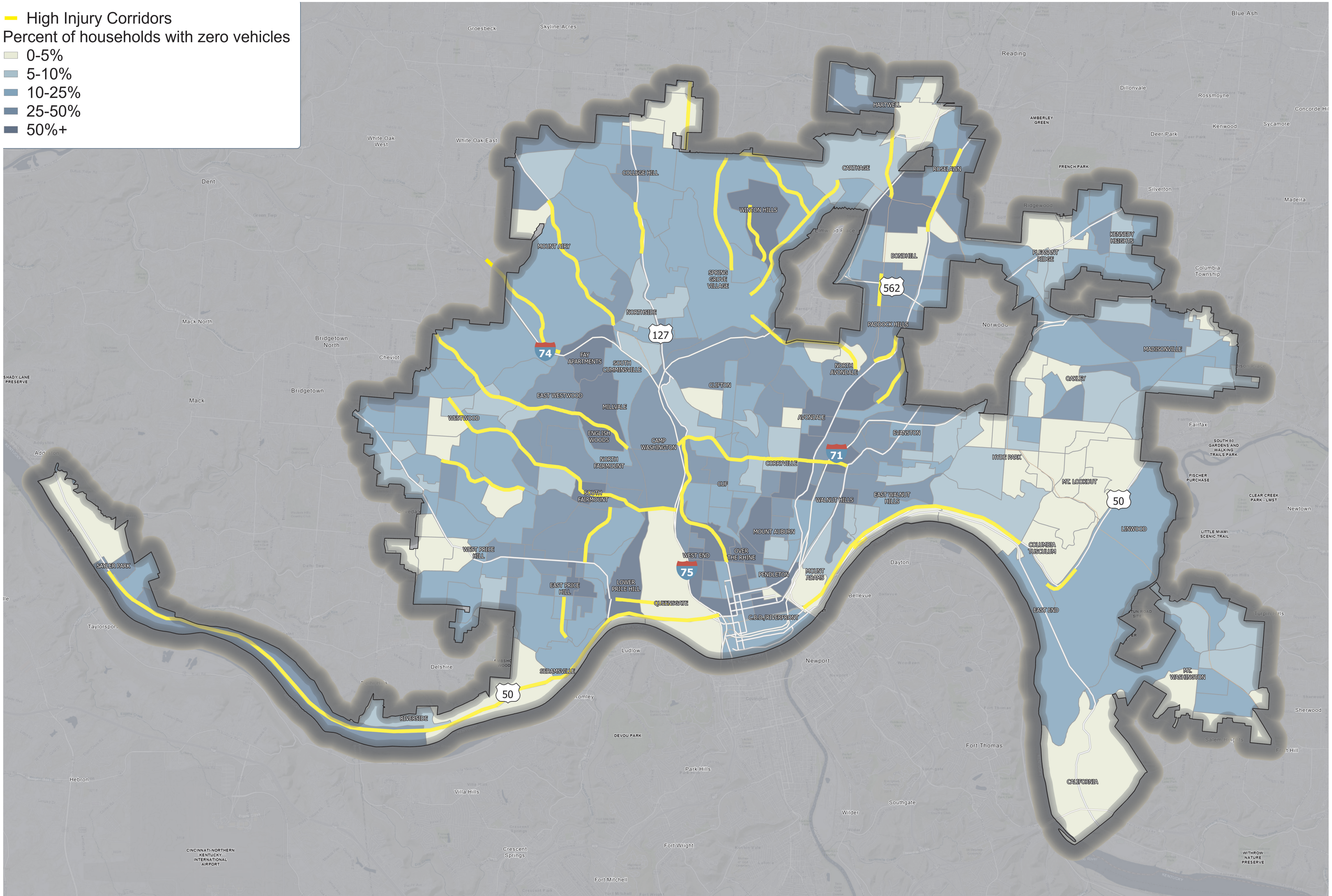


Figure 21: Zero Car Households



6.0 Policy and Process Changes

As outlined in Chapter 1, the City has made safety a top priority by implementing policies, programs, and projects that seek to create a safe transportation system for all users across the City. This emphasis shows up in many of the City's plans, design guidelines, and codes or standards. However, the City desires to continue to improve these documents and to bring safety into those that do not yet address it. This section includes a review of several important City documents as well as some regional planning documents to examine how safety is addressed in each. Recommendations are made for better integrating safety into several of the documents and should include the adoption of new or revised policies, guidelines or standards.

City of Cincinnati

- Vision Zero

  Under its Vision Zero program to improve pedestrian safety and access, in 2023 the city of Cincinnati outlined 200 projects across the city to implement safety upgrades such as lighted crosswalks, improved signage, sidewalk bump-outs and school zone flashers. About 80 of the projects are near school buildings. Projects were distributed equally in each of the City's Community Council boundaries. **This plan should be used to prioritize project improvements to be implemented with the City's Vision Zero program across the entire City.**

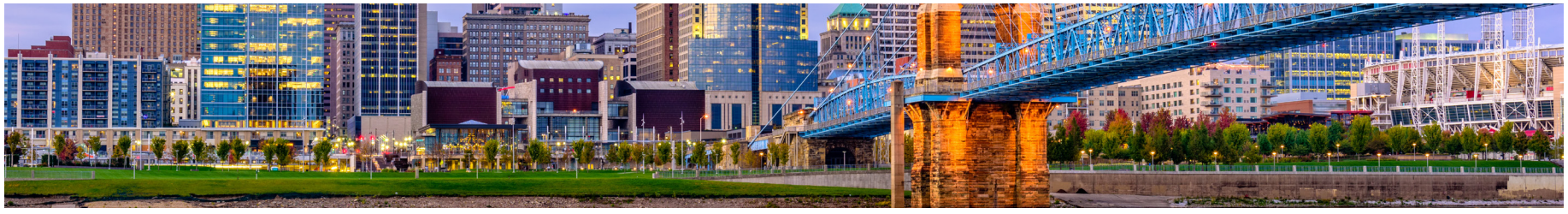
- City Complete Streets Policy

  The City of Cincinnati adopted a complete street policy in 2022. Complete Streets are planned, designed, operated, and maintained so that people of all ages and physical and economic abilities can safely and comfortably move around the city street network using all modes of travel. Complete Street features vary based on community context, but may include a wide range of elements such as bicycle facilities, sidewalks, traffic calming, safety improvements, streetscape treatments, and more.

  In 2023, the City released its first annual "Complete Streets" report. The report outlines the number and type of Complete Street improvements constructed by the Department of Transportation & Engineering (DOTE) during 2023. The City should Integrate safety into consideration for Complete Streets when assessing projects for design and construction. **The City should use this policy to incorporate complete street elements into the improvements to help with the safety of pedestrians and bicyclists**.

- City Subdivision regulations

  The City's subdivision regulations should be revised to include transportation safety as it relates to the roadway connections, design, and traffic calming measures.



- Performance monitoring and project coordination

  Following this plan, the City will have a GIS tool in place that can be used to monitor crash data. T**he data should be updated annually within the GIS tool.** This can be used to monitor crash data was well as the implementation of the projects from this plan. The tool can also be integrated with files for other roadway improvements to coordinate the implementation of safety improvements at the same time as repairs and upgrades.

- Safety Advisory Working Group

  The city should develop a **Safety Advisory Working Group** which would consist of City DOTE, City Health Department, Cincinnati Public Schools, Hamilton County, OKI, ODOT, First Responders, and Hamilton County Safe Communities, and METRO.

- Community Councils Neighborhood Traffic Management Program

  Community Councils should adopt the TSAP4C and incorporate it into support and approval of decisions that occurs at the community level.

  It is also recommended that the City staff work with the Community Councils to develop a **Neighborhood Traffic Management Program (NTMP)** for the community council neighborhoods. The NTMP would provide a framework for neighborhood residents and City staff to collaborate on potential roadway mitigation measures to improve the livability within their area. This document establishes the process, requirements, and options available for potential treatments to provide residents with an understanding and method of changing the landscape as appropriate. The overall focus of many of the mitigation measures is targeted at reducing travel speeds and improving safety.

Ohio-Kentucky-Indiana Regional Council of Governments (OKI)

The City should c**oordinate the TSAP4C recommendations list with OKI** to work with them to prioritize for Metropolitan Transportation Plan (MTP) and Transportation Improvement Program for inclusion and funding. The MTP states that the MPO has made transportation safety a top priority. The MTP outlines a series of projects and strategies for transportation improvements, of which safety is a key priority and is mentioned throughout, reinforcing the goals mentioned in the previous sections.

Ohio Department of Transportation (ODOT)

ODOT has a competitive and non-competitive Safety Program to apply for funding for safety related improvements. The City should **share their safety list and plan to continue discussion with ODOT** to prioritize projects for safety funds.

7.0 Strategy and Project Selections

Priorities based on crashes were identified in Chapter 3.0.

Develop Specific Treatments

The safe systems approach to roadway safety examines five critical areas of safety to develop countermeasures and improvements to improve safety performance. These areas are shown in Figure 22 and include safe vehicles, safe speeds, safe roads, post-crash care, and safe road users. Engineering countermeasures often address several of these categories, but do not always intersect with all; therefore, additional countermeasures will be examined as part of this action plan to address the safety issues more holistically in the City.

Engineering countermeasures can be classified as Reactive or Systemic.

- **Systemic** countermeasures seek to address "global/systemwide" problems throughout the study area. They can also address safety problems at many locations or within a sub-area of the overall.
- **Reactive** countermeasures are those that focus on improving "hot-spots" or intersections/segments which have been shown to have a safety problem.

Both reactive and systemic strategies rely heavily on the implementation of documented, proven countermeasures that can address safety concerns. These countermeasures are based upon research, before-after, and case study data which show positive safety benefits geared for specific design or operational issues. The countermeasures described or shown detail the concept, which may vary in actual application and can often be customized to best fit the context for a segment or intersection.

Systemic Improvements

Systemic improvements are improvements implemented across an area to mitigate high-risk roadway features. They are not site-specific but seek to lower crash frequency and severity across a region or sub-area. These improvements should be considered at any location where safety improvements are being implemented as well as incorporated within any new infrastructure project.

Figure 22: Safe Streets for All Principles

The crash data was analyzed to determine risk factors that seemed to contribute to crash clusters, frequency, and severity throughout the study area network. The data was matched against roadway and intersection data features to examine these factors more. The analysis resulted in four major groupings of risk factors to be explored systemically.

1. Roadway Departure
2. Young Driver
3. Intersection
4. Pedestrian

Roadway Departure

Crash analysis indicated that there were 260 severe roadway departure crashes. (30% of the total severe crashes). Further detailed crash analysis and spatial analysis examined these types of crashes to determine potential risk factors influencing the crash history. The following risk factors indicate geometric conditions indicating risks associated with roadway departure crashes:

- 5-6 lane highways
- Roadways with posted speed limit of 35mph

These types of facilities are present within the City. Systemically, as highway projects and additional funding is available, these risk factors should be eliminated to reduce the potential for future crashes and hotspots to occur. Potential countermeasures which may help negate the risk factors include: shoulder widening, roadway safety edge, rumble strips (edge and center), speed management (traffic calming, speed feedback, enforcement), improved signing/striping/advanced warning.

Young Driver

Generally, age is a primary contributing factor to roadway safety as it can significantly increase the chances of a crash. Correlating age related trends with crashes, as opposed to isolated incidents of crash data, can sometimes be difficult as the datasets are not typically cohesive. Crash analysis indicated that there were 280 young driver (20-30 yr old) crashes. (33% of the total severe crashes).

Potential engineering countermeasures to influence speed are primarily related to traffic calming measures and driver awareness features. Engineering countermeasures can have some impact on age-related crashes particularly around secondary and higher education schools, but non-engineering countermeasures such as education or enforcement can often move the needle more effectively. A safety education campaign specifically focused on younger drivers to better inform drivers and/or remind drivers of the amplified risk of crashes may serve as a more effective method than engineering countermeasures alone. Age related crash campaigns focus on the unique risks and behaviors associated with different age groups to prevent injuries and fatalities.

Here are some key campaigns and initiatives:

- Teen Crash Dashboard: This dashboard provides an overview of fatal traffic crashes involving teen drivers, analyzing factors like road conditions, driver age, safety equipment use, and driver education.
- Comprehensive Road Safety Activities: This guide offers tailored initiatives for children, teens, adults, seniors, and the general public to promote road safety. It emphasizes the importance of a collective approach to road safety and includes activities for each age group.

Promoting road safety among teens is crucial to reduce accidents and fatalities. Here are some road safety activities and initiatives specifically designed for younger drivers:

1. Defensive Driving Course
2. Virtual Reality (VR) Simulations
3. Discussion Sessions
4. Mock Checkpoints
5. Peer-to-Peer Education Programs

Intersection

As discussed in the Data Analysis section (Chapter 3) and previously in this chapter, intersections present a more significant contributor to crashes than roadway segments. Approximately half of the FSI pedestrian crashes were at intersections. Intersections occupy significantly less area while resulting in more crashes (especially multi-unit crashes) and typically result in crashes of higher severity, due to the presence of the majority of conflict points within a roadway system and the presence of pedestrians and bicyclists. Due to the nature of intersections, they also often introduce the more significant traffic operational impacts to the roadway system as they impact traffic movement.

From a systemic perspective intersections were studied to determine potential risk factors which may have a negative impact on safety performance without the inverse positive performance on operations (or necessity of).

The historic crash analysis provided indications of potential risk intersection risk factors which may be contributing to crashes. This included a main categories of intersections as well as additional considerations:

- Intersections with geometrical issues including:
  - Intersection size — stop bar locations as correlated with cross street movements/turning movements
  - Corner radii
  - Crosswalk alignments
  - Left-Turn Treatments

Potential countermeasures which may help negate the risk factors include: rumble strips (edge and center), speed management (traffic calming, speed feedback, enforcement), improved signing/striping/advanced warning, traffic signal backplates, addition of turn lanes, intersection lighting, sight distance improvements, improved crosswalks and corner radii with curb and curb ramps.

Pedestrian

Crashes involving walking, bicycles, and motorcycles represent 37.4% of all severe crashes in Cincinnati within the 2019-2023 study period. Due to the high severity ratio and frequency of pedestrian crashes, the data was examined to determine potential risk factors correlating with pedestrian crashes to address with the aforementioned reactive corridor and intersection projects as well as identify potential areas exhibiting similar features. Several of the segments shown in the top list of pedestrian and bicycle crashes overlap with the list of prioritized corridors documented and detailed previously in chapter 3.0. Additional areas which exhibit these features and have a history of pedestrian crashes are primarily related to the University of Cincinnati campus and the downtown core.

Systemic pedestrian improvements should include improving pedestrian access and crossings which can include any or all of the following: sidewalk connectivity, increased lighting, crosswalk striping and signage improvements, leading pedestrian intervals, rapid flashing beacons, additional crossing locations, reducing crossing distance with bumpouts, and pedestrian crossing refuge. These improvements will yield positive safety benefits to pedestrian, improve driver awareness, and potentially compliance from all users to utilize the facilities as designed.

Any bicycle and pedestrian improvement should be supplemented with coordinated programs and policies that instruct and encourage bicyclists and pedestrians in the full and proper use of the non-motorized transportation network.

Bicyclists, pedestrians, and motorists must be educated on the “rules of the road” to improve everyone’s safety while operating on and adjacent to the bicycle and pedestrian facilities. Education programs can be initiated from a variety of sources. The City can host workshops and bike rodeos, law enforcement officers can launch school-based education programs, and local advocacy groups can distribute educational materials.

People should be encouraged to bicycle and walk. Encouragement should become easier as the network of pathways makes the region more bicycle- and pedestrian-friendly. Encouragement becomes more critical as these facilities are constructed to justify the investment. Popular encouragement programs include Safe Routes to School, Walk/Bike to School Days, Bicycle to Work Week, Bicycle Rodeos, and Bicycle Mentor Programs.

To ensure the safety of all users and the long-term sustainability of the bicycle and pedestrian system, the formal and informal “rules of the road” must be heeded by all. Effective enforcement programs ensure consistent enforcement of traffic laws affecting motorists and bicyclists. These programs include bicycle licensing/registration efforts and positive reinforcement programs implemented by local law enforcement.

Post Crash Care

Post-crash care will enhance the survivability of crashes through expedient access to emergency medical care, while creating a safe working environment for vital first responders and preventing secondary crashes through robust traffic incident management practices. Ability to save lives does not end when a crash occurs. The timely arrival of emergency responders and well-trained Emergency Medical Services (EMS) clinicians is a major factor ensuring an injured person receives the medical care they need to survive a crash.

A safe system of mobility needs to enhance the survivability of crashes through expedient access to emergency medical care, while creating a safe working environment for vital first responders and preventing secondary crashes through robust traffic incident management practices.

Good post-crash emergency response depends on strategic planning and investment, good coordination, communication, equipment and training. Effective post-crash response requires collaboration between many different government departments, emergency services, national and community health providers, fleet and equipment managers, training institutions and even individual volunteers. Good coordination, planning and communication are vital to ensure good outcomes. Coordination and understanding between emergency services is essential for effective post-crash response. This ensures every responder knows their role and what to expect from others. There should be joint planning between all services. Therefore, this plan should be shared with the different departments and agencies that are involved with post-crash care. That way, everyone shares the same strategy and goals as well as understand where the most severe and fatal crashes are occurring. This plan can help drive strategies for law enforcement and EMS agencies.

Cooperation between emergency services should drive efficiencies, reduce duplication and direct resources where most needed. The aim is to deliver an improved service to the public with better results.

The collection and use of 911 and EMS data is essential for measuring post-crash care performance. Data is critical for identifying areas for improvement and ensuring victims receive optimal care. EMS crash data can be accessed through the National EMS Information System (NEMSIS) database to assess the various aspects of the response effort, including response times, quality of care at the scene and patient outcomes. Factors that go into this are the clarity for the emergency dispatch, timely on-scene care, and transport to a Trauma Center. Ongoing monitoring and evaluation will also ensure that the right equipment is in the right place at the right time. Ultimately, it should be possible to map the casualty needs from the moment of a crash through to recovery and identify what is needed at each stage. This information should underpin both equipment and training needs, as well as which services are responsible and accountable.

Adequate training and equipment are essential for emergency responders to deliver the best outcome for the casualty and ensure their own safety. With joint training, all services work in harmony with agreed protocols and methods. The best way to ensure effective cooperation is to sign inter-agency agreements and to agree and adopt joint protocols.

As such, some training and equipment choices may have to be suitable for a range of purposes and not only road crashes There are also specific requirements for road crashes which need to be met. Traffic incident management (TIM) training is pivotal for EMS clinicians and 911 centers to prevent secondary crashes and create a safe environment at incident sites.

Reactive Improvements

The aforementioned modified EPDO methodology was applied to roadway segments and intersections which provided an initial list of locations for investigation. Spatial examination of the segments and corridors with associated EDPO values helped to generate a list of logical corridor areas for focus on safety improvements. Corridors consisted of a combination of adjoining or neighboring roadway segments and/or intersections that exhibited high EPDO values and generally exhibited similar characteristics (relatively homogeneous roadway type, context, function, etc.)

Prioritized Corridors and Intersections

Table 1 presents the list of prioritized corridors for safety improvements throughout the City. This list illustrates the location, extent, and high-level crash details on each of the corridors. A map of these corridors is shown in Figure 14 to provide spatial context. Together these corridors contain 11,086 (21.9% of total) crashes of which 260 were severe crashes (34.9% of total) demonstrating the potential for impact if safety improvements were implemented in these locations.

Table 1 and Figure 14 highlight the prioritized corridor projects within the study area, identified in Figure 14 by Corridor ID.

Toolbox of Proven Countermeasures

Both reactive and systemic strategies rely heavily on the implementation of documented, proven countermeasures that can address safety concerns. These countermeasures are based upon research, before-after, and case study data which show positive safety benefits geared for specific design or operational issues. Figure 263—26 detail the toolbox of proven pedestrian, segment, and intersection countermeasures to be utilized for Cincinnati as appropriate. The countermeasures described or shown detail the concept, which may vary in actual application and can often be customized to best fit the context for a segment or intersection.

Reactive safety strategies use the historic crash data and crash trends to identify countermeasures to directly address safety concerns. As previously discussed, prioritized lists of corridors and intersections have been identified for safety focus and future safety improvement projects.

Corridor Improvements

The prioritized corridors represent longer roadway segments and/or intersections grouped to generate cohesive safety project areas. The grouping was to incorporate adjacent or nearby segments/intersections which also exhibited crash issues and were generally homogenous concerning operations, function, context, and layout. Each of the corridors from the prioritized list was studied to generate potential countermeasures for implementation. Table 5 provides a high-level set of improvements associated with each of the prioritized corridors.

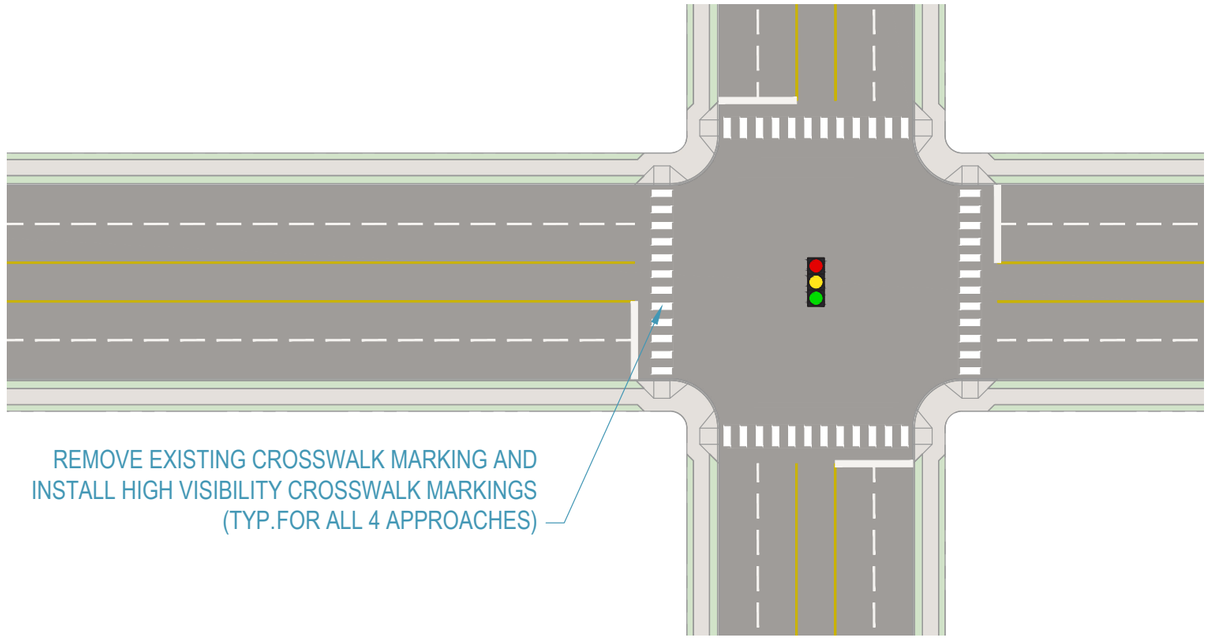
Implementation Strategies

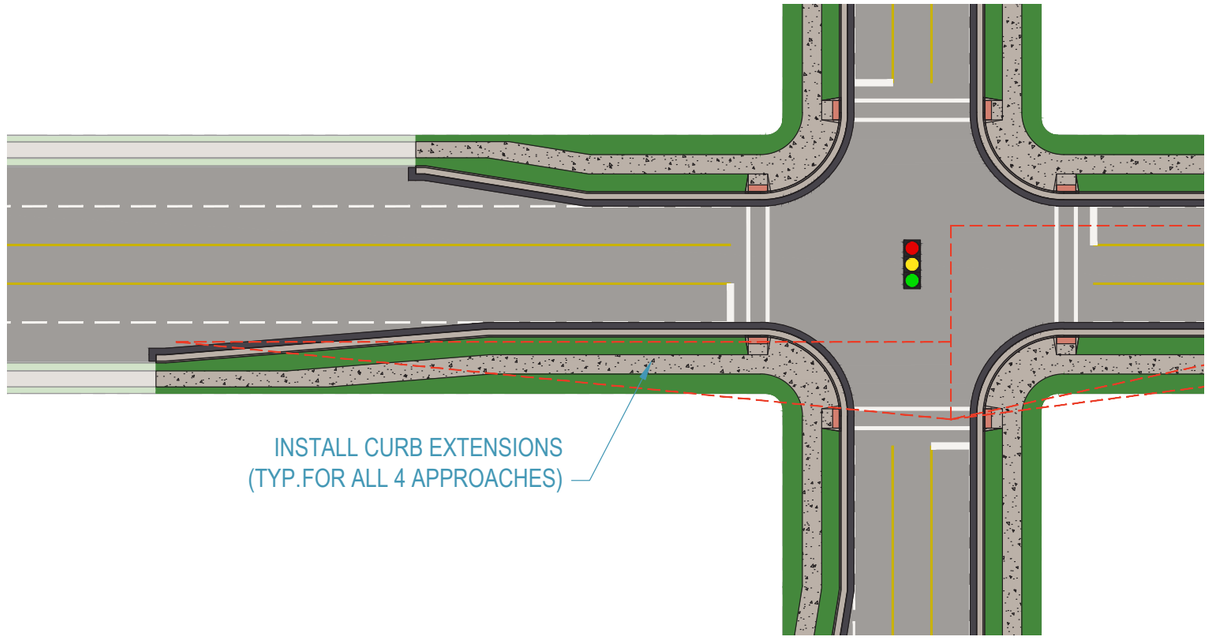
Following the data and field reviews and public involvement, the project team assigned the prioritization for each location. The list of projects was ranked according to crash rate, cost range, ability and time to implement, coordination with ongoing/planned projects and studies such as pavement repairs and bus route improvements, and public comments. Each were then separated into categories of high, medium-high, medium, and low priorities according to their overall prioritization rankings. Developing a priority category of projects gives the City a targeted list to prioritize funding and plan for improvements. This list can also be used to incorporate improvements into other roadway projects that are being developed and can facilitate project development.

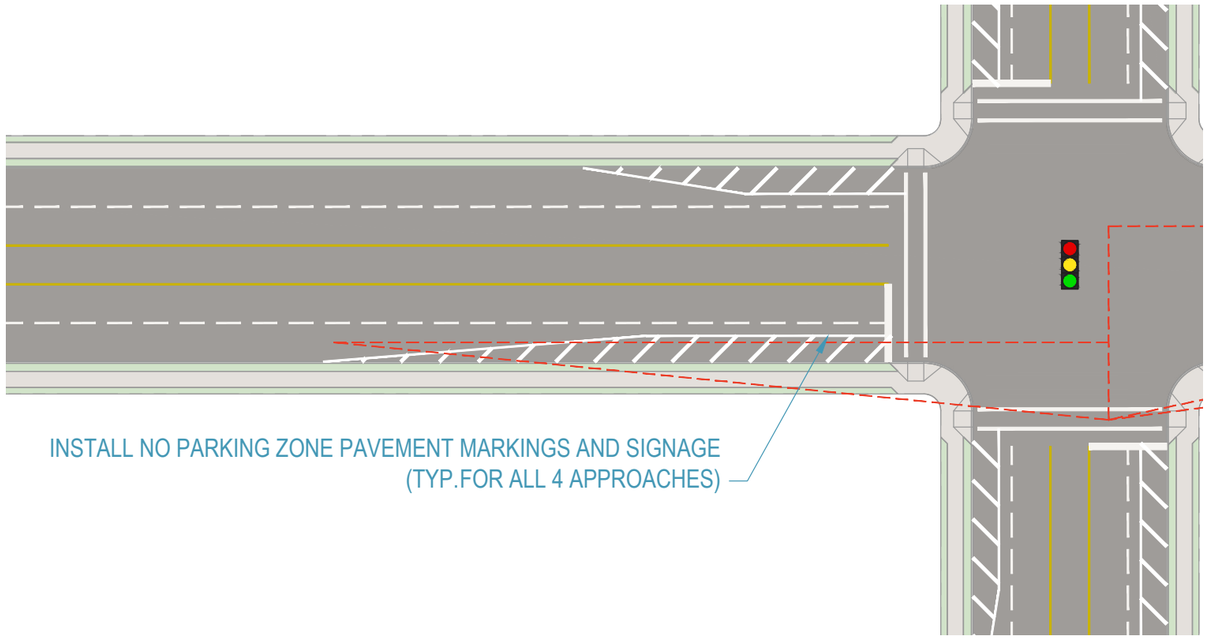
Table 6 shows the prioritized recommendations.

Details, such as the location, description of the improvement concept, and cost estimate, on the final recommended projects are shown on separate project sheets following the tables.

Figure 23: Improvements at intersections







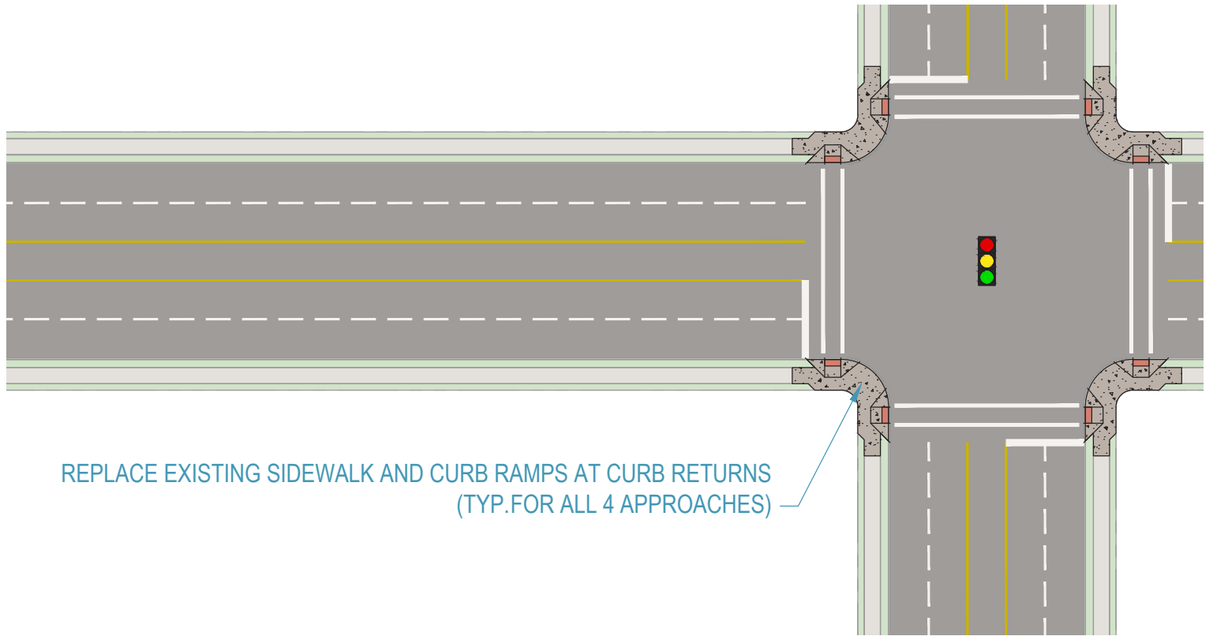
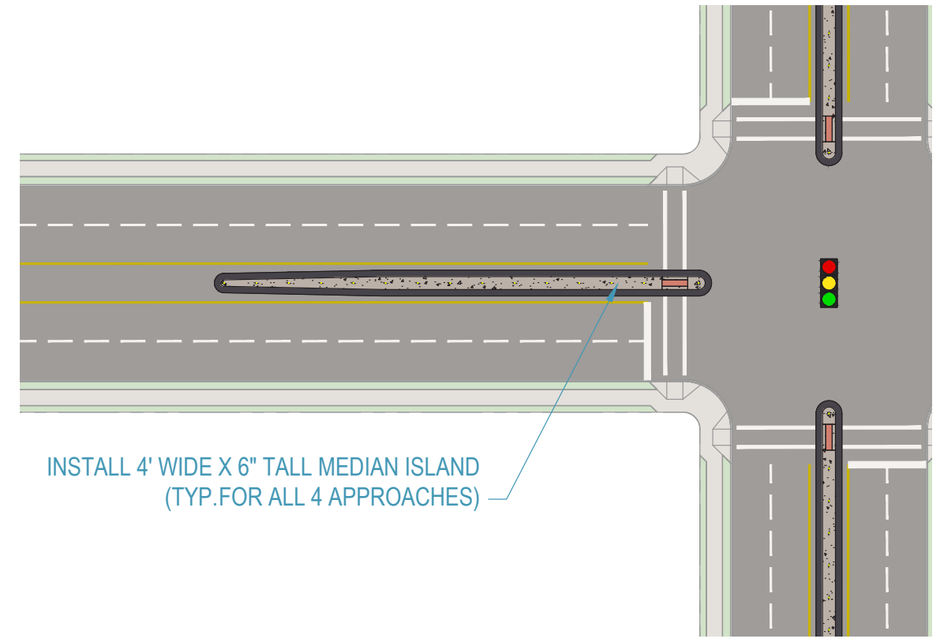
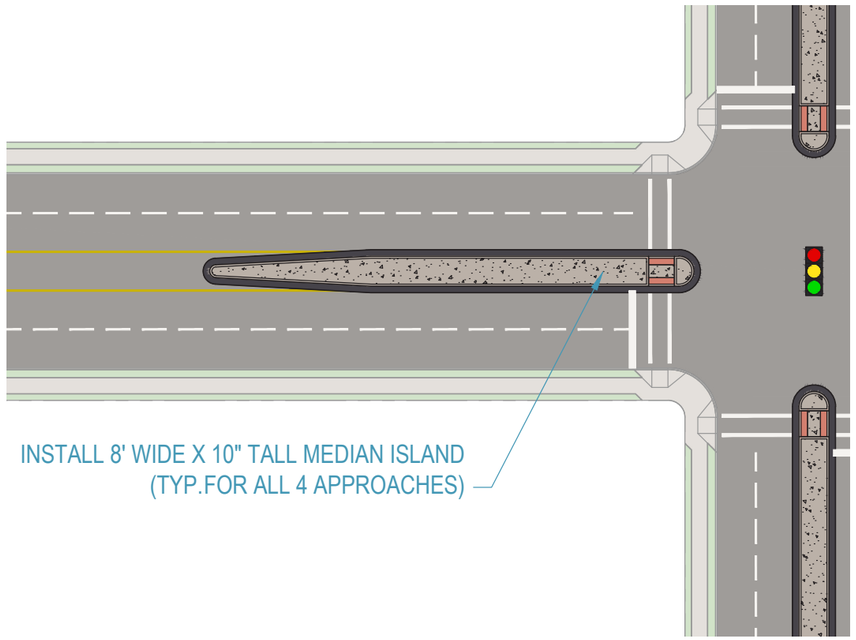
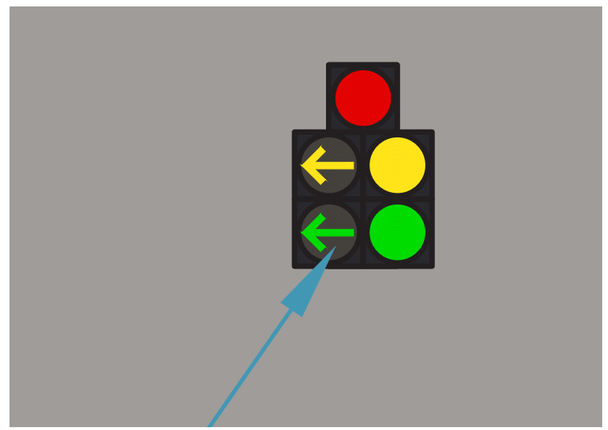


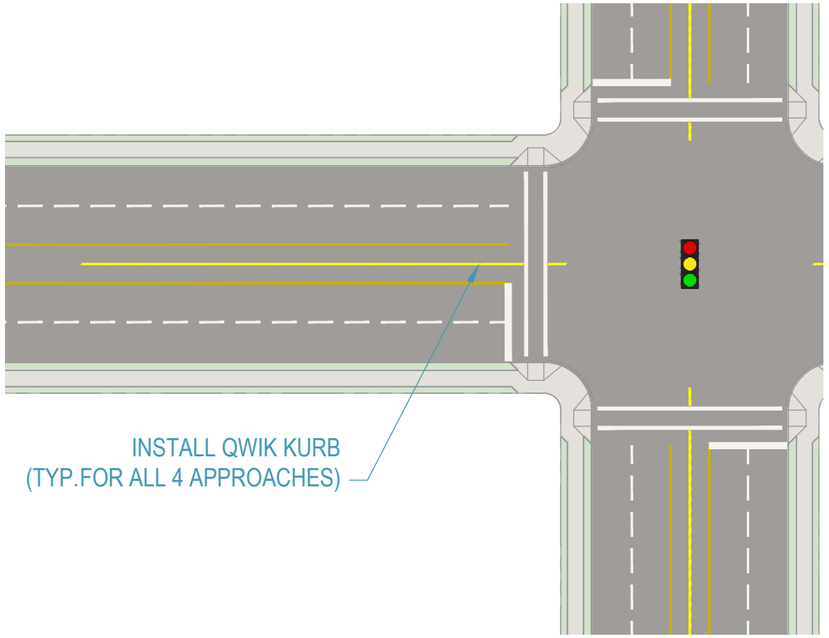
Figure 24: Improvements at intersections

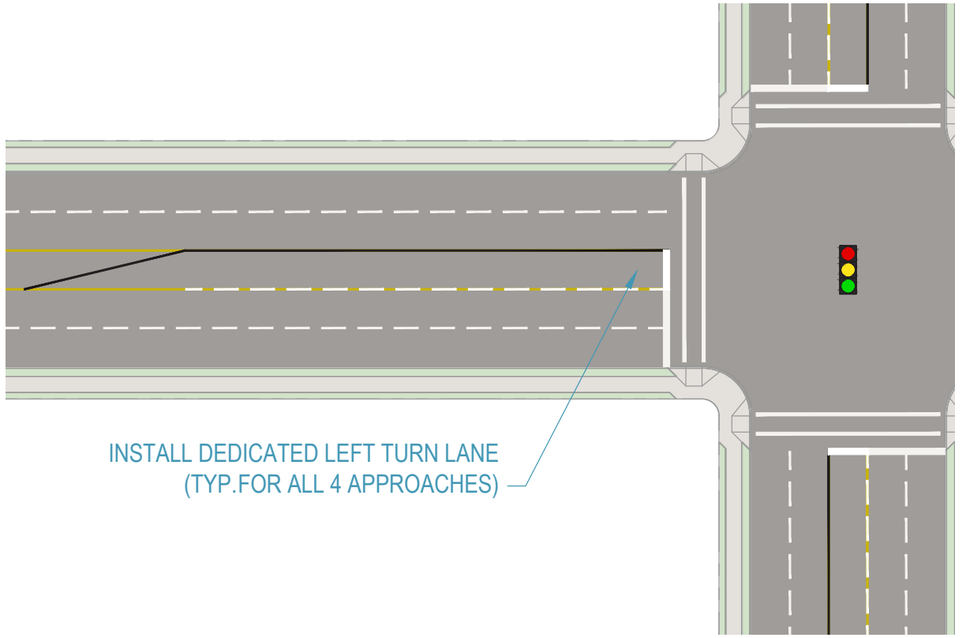


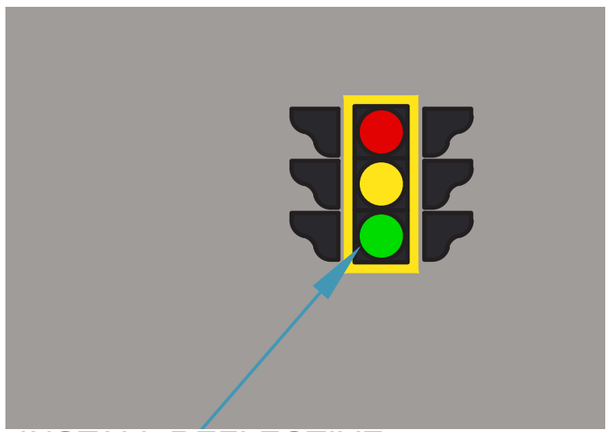




INSTALL PROTECTED LEFT TURN SIGNALS ON ALL FOUR APPROACHES

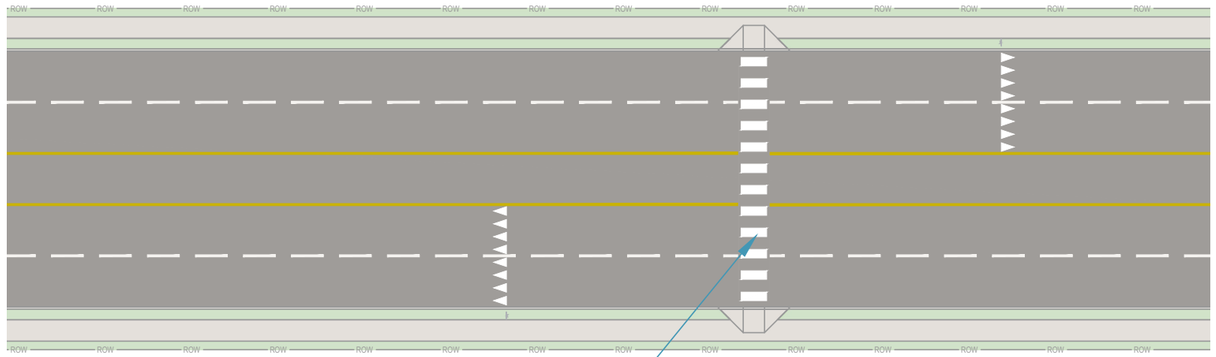


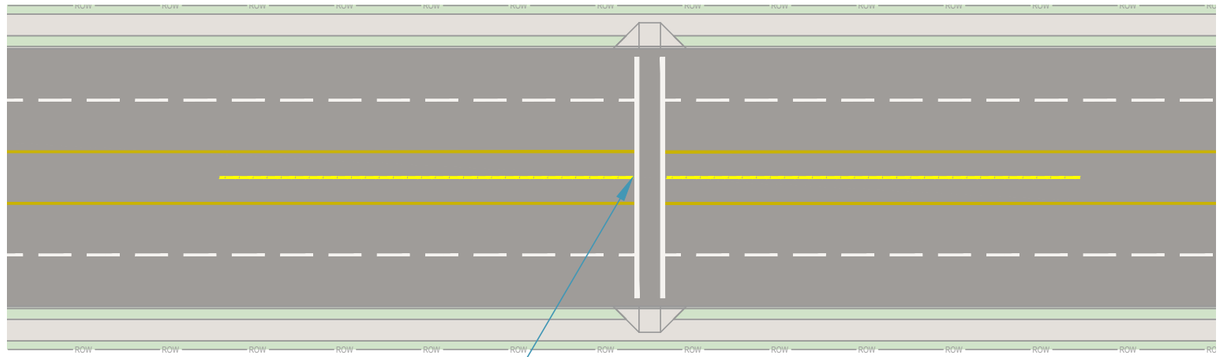


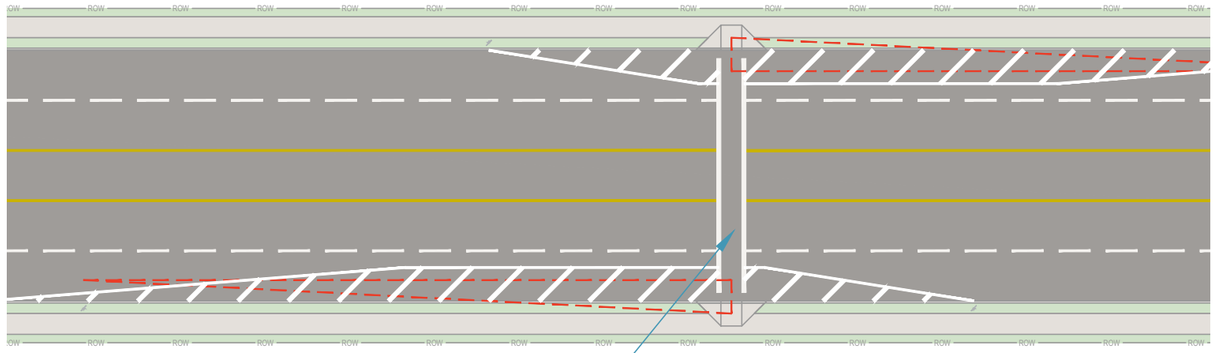


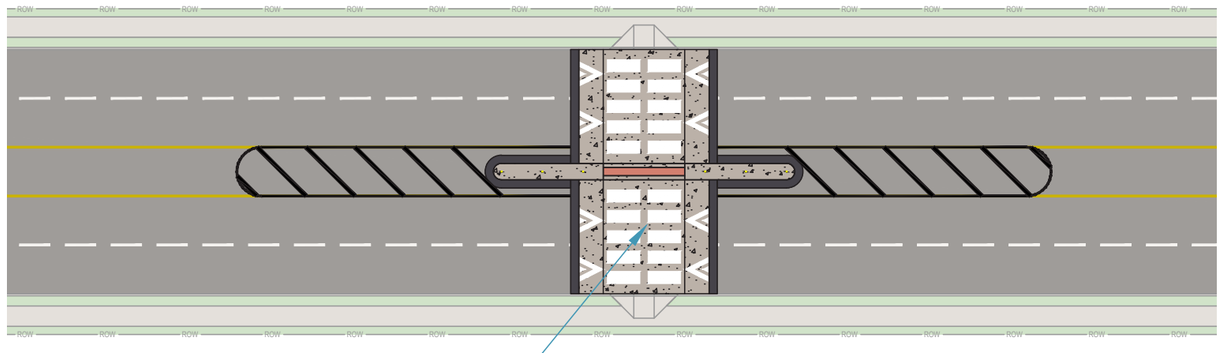
INSTALL REFLECTIVE BACKPLATES ON ALL FOUR APPROACHES

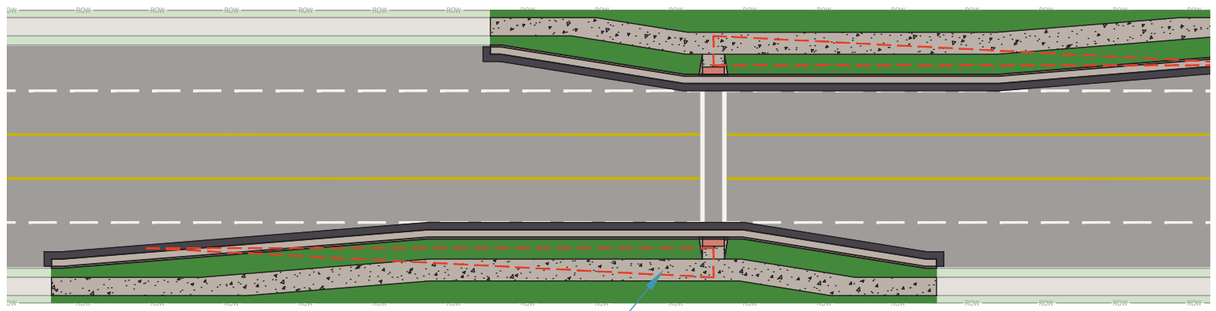
Figure 25: Improvements midblock











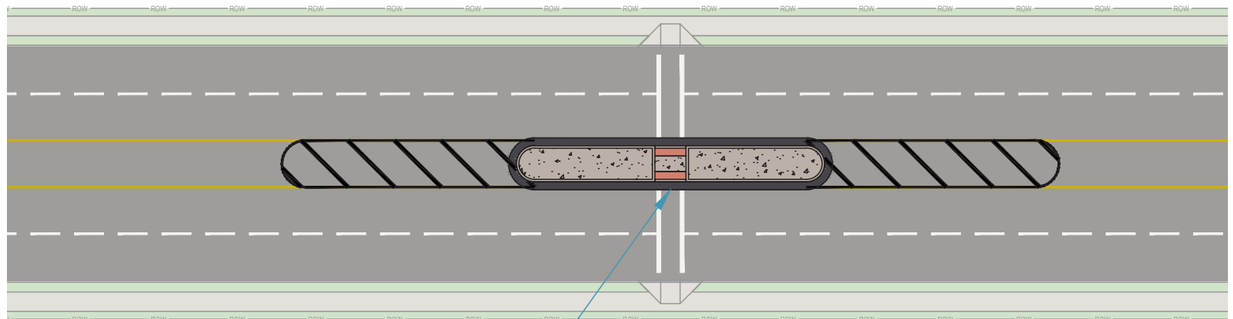
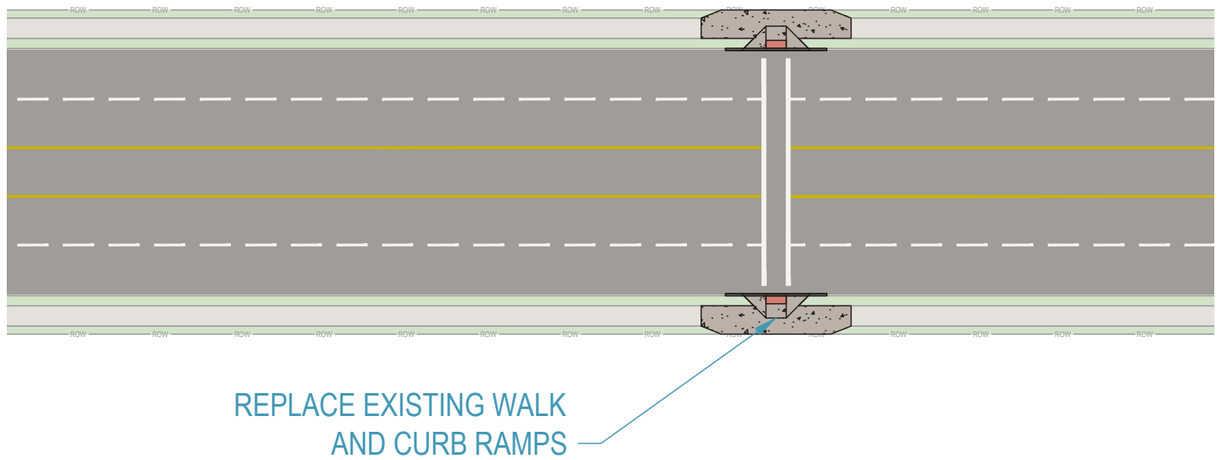


Figure 26: Improvements midblock



Summary of Action items for the Plan

Systemic Recommendations

Systemic pedestrian improvements should include improving roadway departure, intersections, and pedestrian access and crossings. Potential countermeasures which may help negate the risk factors include: shoulder widening, roadway safety edge, rumble strips (edge and center), speed management (traffic calming, speed feedback, enforcement), improved signing/striping/advanced warning, traffic signal backplates, improved crosswalks and corner radii with curb and curb ramps, leading pedestrian intervals, rapid flashing beacons, additional crossing locations, and pedestrian crossing refuge.

Engineering countermeasures can have some impact on age-related crashes particularly around secondary and higher education schools, but non-engineering countermeasures such as education or enforcement can often move the needle more effectively. A safety education campaign specifically focused on younger drivers to better inform drivers and/or remind drivers of the amplified risk of crashes may serve as a more effective method than engineering countermeasures alone.

Good post-crash emergency response depends on strategic planning and investment, good coordination, communication, equipment and training. There should be joint planning between all services. Cooperation between emergency services should drive efficiencies, reduce duplication and direct resources where most needed. The aim is to deliver an improved service to the public with better results. The collection and use of 911 and EMS data is essential for measuring post-crash care performance. Adequate training and equipment are essential for emergency responders to deliver the best outcome for the casualty and ensure their own safety. The best way to ensure effective cooperation is to sign inter-agency agreements and to agree and adopt joint protocols.

Reactive Recommendations

Location specific recommendations are located Table 5.

Policies

Recommendations are made for better integrating safety into several of the documents and should include the adoption of new or revised policies, guidelines or standards. This plan should be used to prioritize project improvements to be implemented with the City's Vision Zero program across the entire City. The City should use their Complete Streets policy to incorporate complete street elements into the improvements to help with the safety of pedestrians and bicyclists. The City's subdivision regulations should be revised to include transportation safety as it relates to the roadway connections, design, and traffic calming measures. The crash data should be updated annually within the GIS tool. The city should develop a Safety Advisory Working Group which would consist of City DOT&E, City Health Department, Cincinnati Public Schools, Hamilton County, OKI, ODOT, First Responders, and Hamilton County Safe Communities, and METRO. Community Councils should adopt the TSAP4C and incorporate it into support and approval of decisions that occurs at the community level. It is also recommended that the City staff work with the Community Councils to develop a Neighborhood Traffic Management Program (NTMP) for the community council neighborhoods. The City should coordinate the TSAP4C recommendations list with OKI to work with them to prioritize for Metropolitan Transportation Plan (MTP) and Transportation Improvement Program for inclusion and funding. The City should share their safety list and plan to continue discussion with ODOT to prioritize projects for safety funds.

Table 5: Corridor recommendations

			Traffic Signals and Lighting Changes			Roadway changes								Pedestrian Improvements	
Corridor ID on Map	Corridor Name	Length in Miles	Reflective Backplates	Overhead lighting	New traffic Signal or Signal Upgrade	Intersection Redesign	Curb bumpouts	Left Turn Lanes @ intersections	Median Islands or Quick Curbs	TWLTL	Right Sizing	Speed humps	Vegetation clearing or Utility Pole setbacks	Improved Crosswalks	New sidewalks and ADA compliant curbs
A	Central Parkway	2.20	5					2						4	
B	Colerain Avenue	2.23	3	1						2	1			1	2
C	Columbia Parkway	4.02	3						1						
D	Daly Road	1.02	2								1	1			
E	West Mitchell Avenue—East Mitchell Avenue	1.94	5			3				1		1		1	
F	Eastern Avenue	0.59	1									2		1	
G	Elberon Avenue	0.63	2											2	
H	Este Avenue	2.25	3							1					
I	Glenway	2.9	12					5		2	1	1			
J	Grand Avenue	0.97	3									2		1	
K	Hamilton Avenue	0.79	3									1			
L	Harrison Avenue	4.17	9			1				2			1		
M	Martin Luther King Drive	2.76	8				5	2						1	
N	McMillan Street	1.5	11					4		1		2			
O	North Bend Road	2.4	9							1		2	6	1	
P	Paddock Road	0.50	2			2	2							2	
Q	Paddock Road—Vine Street	1.02	4			1				1			1	1	
R	Queen City Avenue	1.46	5		2			2		3			1		
S	Reading Road	6	35		1		5	2		4					
T	River Road	10.60	11					2	1	3					
U	Riverside Drive	0.26		1											
V	Spring Grove Avenue	0.90	9	1	2					1					
W	Victory Parkway	0.82	3					3				1	1		
X	West 8th Street	0.84	3											1	
Y	West Fork Road	1.91	1	1								1	1	1	
Z	Westwood Northern Boulevard	3.56	6	1					1			1	4		3
AA	Winneste Avenue	0.92		1			1							1	
BB	Winton Road	1.75	3									1	2		

Table 6: Corridor ranking and implementation

ID	Location	Cost Range ($ Thousands)	Time to Implement	Priority
A	Central Parkway	50—100	1—2 years	High
B	Colerain Avenue	650—750	3—5 years	High
C	Columbia Parkway	550—700	1—2 years	High
D	Daly Road	350—400	1—2 years	High
F	Eastern Avenue	20—50	1—2 years	High
G	Elberon Avenue	20—50	1—2 years	High
H	Este Avenue	80—100	1—2 years	High
J	Grand Avenue	200—300	1—2 years	High
K	Hamilton Avenue	20—50	3—5 years	High
U	Riverside Drive	300—500	1—2 years	High
W	Victory Parkway	50—100	1—2 years	High
L	Harrison Avenue	2,300—3,000	3—5 years	Medium High
R	Queen City Avenue	1,700—2,500	3—5 years	Medium High
Z	Westwood Northern Boulevard	2,700—3,500	3—5 years	Medium High
AA	Winneste Avenue	1,100—2,000	3—5 years	Medium High
BB	Winton Road	50—100	3—5 years	Medium High
E	East Mitchell	6,000—7,000	1—2 years	Medium
I	Glenway Avenue	300—350	3—5 years	Medium
M	Martin Luther King Drive	4,000—5,000	3—5 years	Medium
N	McMillan Street	3,300—4,000	3—5 years	Medium
O	North Bend Road	500—600	1—2 years	Medium
P	Paddock Road	2,100—3,000	5+ years	Medium
Q	Paddock Road—Vine Street	5,600—6,500	3—5 years	Medium
S	Reading Road	4,000—5,000	3—5 years	Medium
T	River Road	700—800	3—5 years	Medium
X	West 8th Street	20—50	3—5 years	Medium
V	Spring Grove Avenue	2,000—3,000	3—5 years	Low
Y	West Fork Road	500—600	5+ years	Low

Central Parkway, Liberty Street to Martin Luther King Drive

STATISTICS

Distance	2.2 miles
Crashes (2019-2023)	461
Crashes Per Mile	209
Crash Rate	0.0178
Fatal or Serious Injuries	21
Population	75+% Minority >25% Below Poverty Level 25—50+% Zero Car Households

Recommended Improvements:

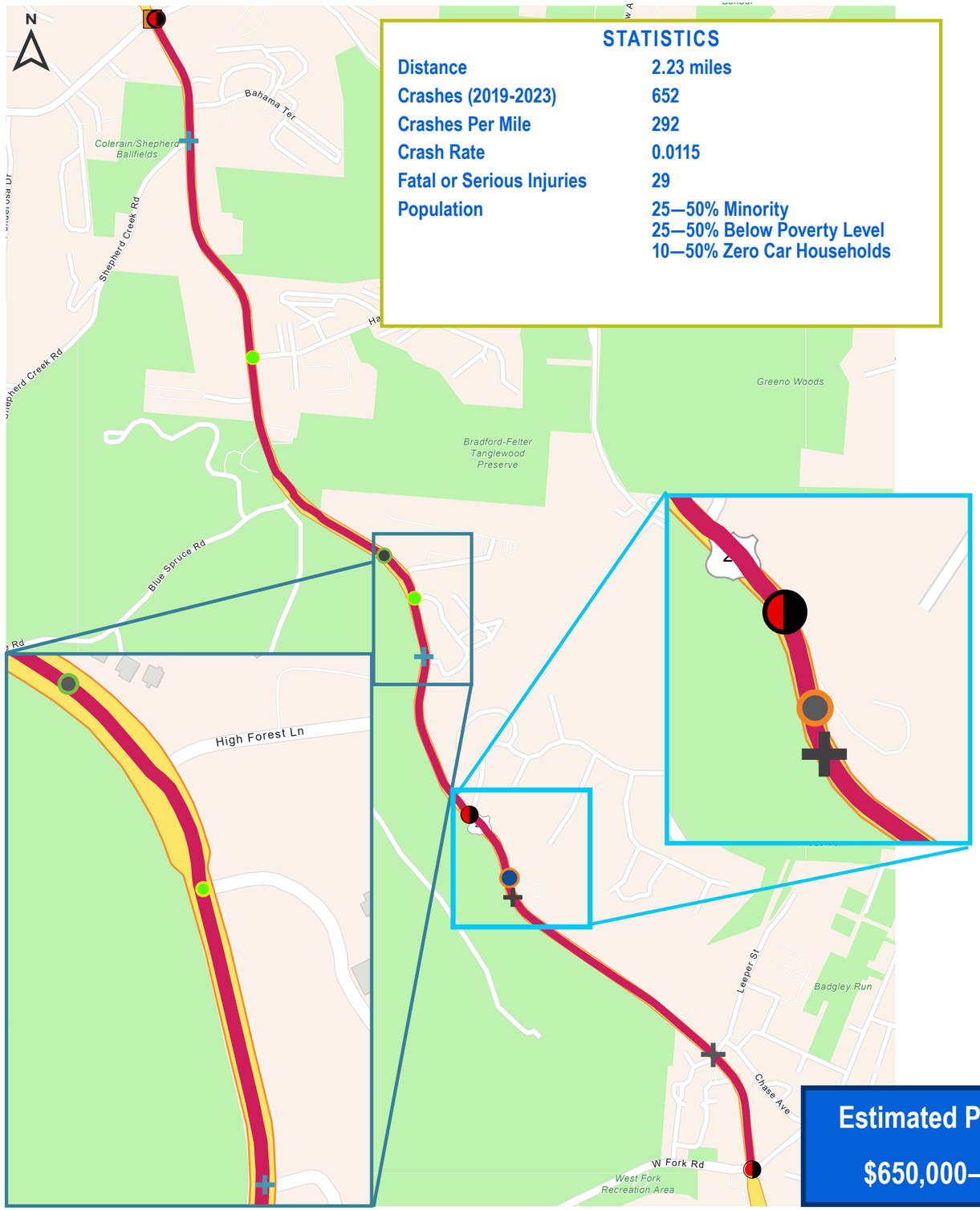
- Reflective backplates
- Left turn lanes (turn pockets)
- Pedestrian crossing improvements

This North/South connector between the Central Business District and the Hopple Street Interchange of Interstate 75 is a busy corridor that is home to a larger minority population with limited access to personal vehicals, It is traversed quite frequently by bicyclists, pedestrians using publlic transit stops along the way, and many commuters seeking to find a less busy way to the interstate. Sixty-one percent of the 461 crashes occurred at intersection.

Estimated Project Cost:

$50,000—$100,000

Colerain Avenue, West Fork Road to West North Bend Road



STATISTICS

Distance	2.23 miles
Crashes (2019-2023)	652
Crashes Per Mile	292
Crash Rate	0.0115
Fatal or Serious Injuries	29
Population	25—50% Minority 25—50% Below Poverty Level 10—50% Zero Car Households

Recommended Improvements:

- Overhead lighting
- Reflective backplates
- TWLTL
- Utility relocation/vegetation clearing
- Right Sizing
- Pedestrian crossing improvements
- Sidewalk Improvements

Colerain Avenue runs north/south between West Fork Raod and West North Bend Road and along a popular recreation area of Mount Airy Forest. The elevation gain makes it a challenging pedestrian or bicyclist area, but one that does draw enthusiast to try. This 2.2 mile 4—lane corridor sees AADT of 25,437 vehicles. Four hundred and forty-two (68%) of the 662 crashes occurred at intersections. The posted speed limit is 25—35 mph.

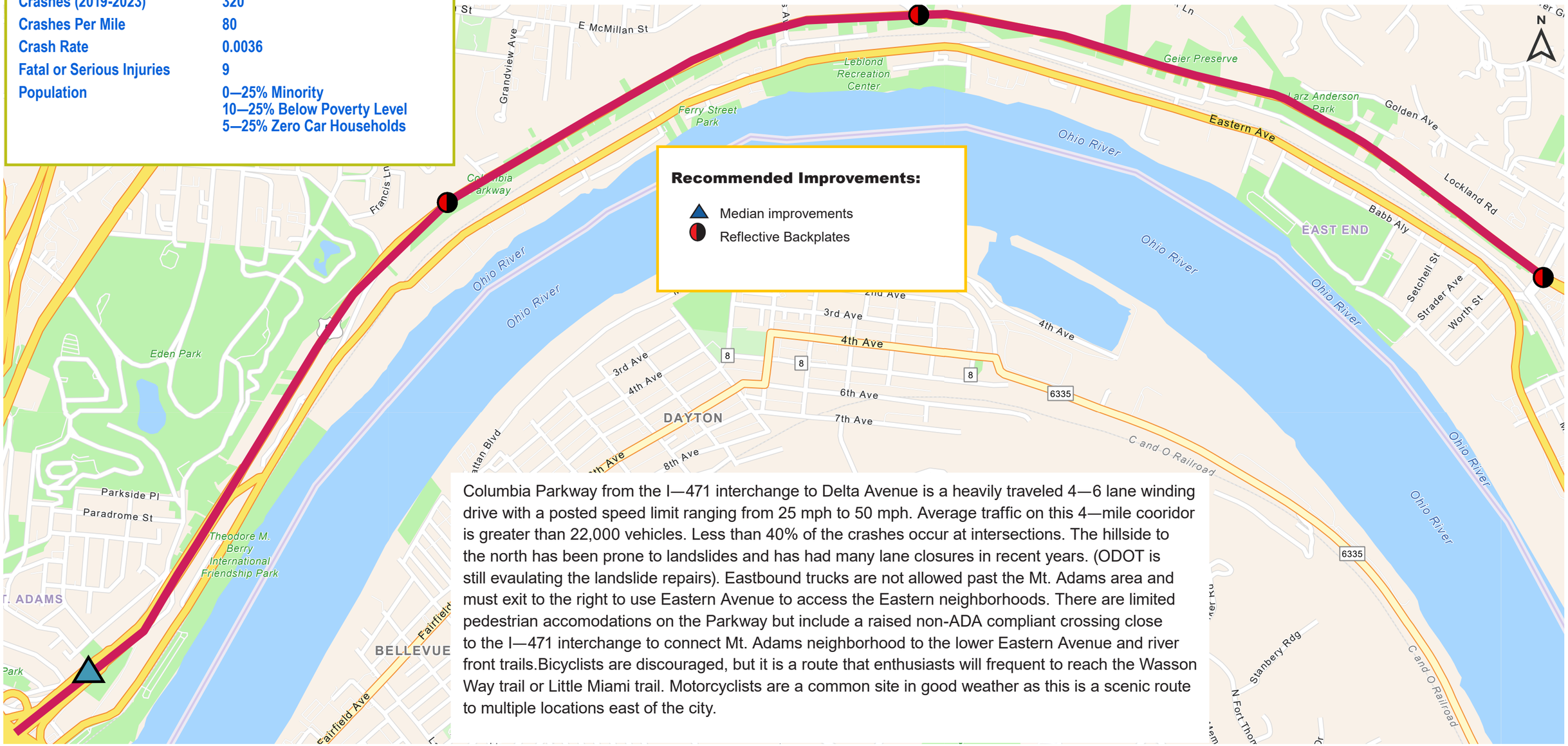
Estimated Project Cost:

$650,000—$750,000

Columbia Parkway, I–471 to Delta Avenue

STATISTICS

Distance	4.02 miles
Crashes (2019-2023)	320
Crashes Per Mile	80
Crash Rate	0.0036
Fatal or Serious Injuries	9
Population	0—25% Minority 10—25% Below Poverty Level 5—25% Zero Car Households

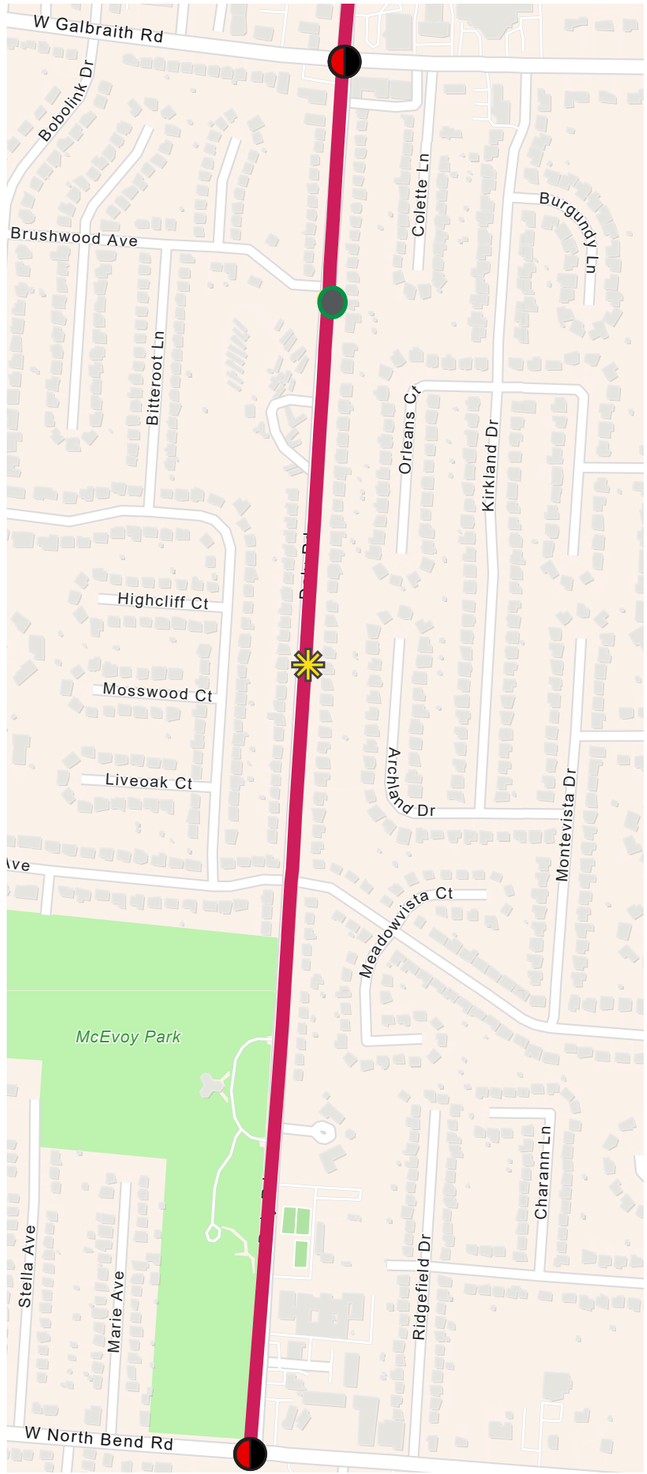


Columbia Parkway from the I—471 interchange to Delta Avenue is a heavily traveled 4—6 lane winding drive with a posted speed limit ranging from 25 mph to 50 mph. Average traffic on this 4—mile cooridor is greater than 22,000 vehicles. Less than 40% of the crashes occur at intersections. The hillside to the north has been prone to landslides and has had many lane closures in recent years. (ODOT is still evaulating the landslide repairs). Eastbound trucks are not allowed past the Mt. Adams area and must exit to the right to use Eastern Avenue to access the Eastern neighborhoods. There are limited pedestrian accomodations on the Parkway but include a raised non-ADA compliant crossing close to the I—471 interchange to connect Mt. Adams neighborhood to the lower Eastern Avenue and river front trails.Bicyclists are discouraged, but it is a route that enthusiasts will frequent to reach the Wasson Way trail or Little Miami trail. Motorcyclists are a common site in good weather as this is a scenic route to multiple locations east of the city.

Estimated Project Cost:

$550,000—$700,000

Daly Road, North Bend Road to Galbraith Road



STATISTICS

Distance	1.02 miles
Crashes (2019-2023)	145
Crashes Per Mile	143
Crash Rate	0.0130
Fatal or Serious Injuries	3
Population	25—50% Minority 10—25% Below Poverty Level 0—5% Zero Car Households

Recommended Improvements:

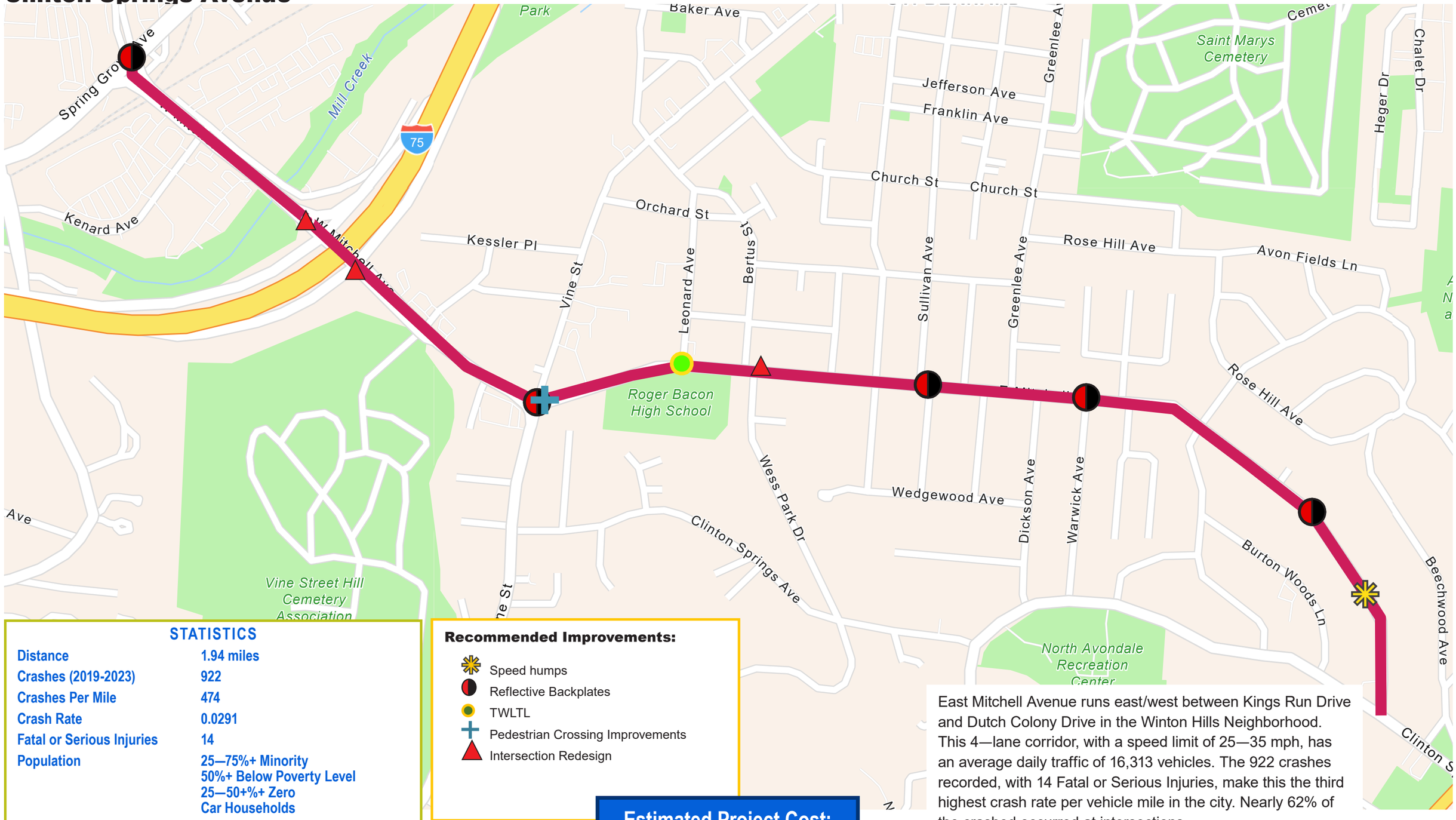
- Speed humps
- Reflective backplates
- Right Sizing

Daly Road runs south to north in the western section of the City. It is a heavily populated and high personal vehicle corridor which sees a need for speed calming to reduce the accidents.

Estimated Project Cost:

$350,000—$400,000

East Mitchell Avenue, Spring Grove Avenue to Clinton Springs Avenue



STATISTICS

Distance	1.94 miles
Crashes (2019-2023)	922
Crashes Per Mile	474
Crash Rate	0.0291
Fatal or Serious Injuries	14
Population	25—75%+ Minority 50%+ Below Poverty Level 25—50+%+ Zero Car Households

Recommended Improvements:

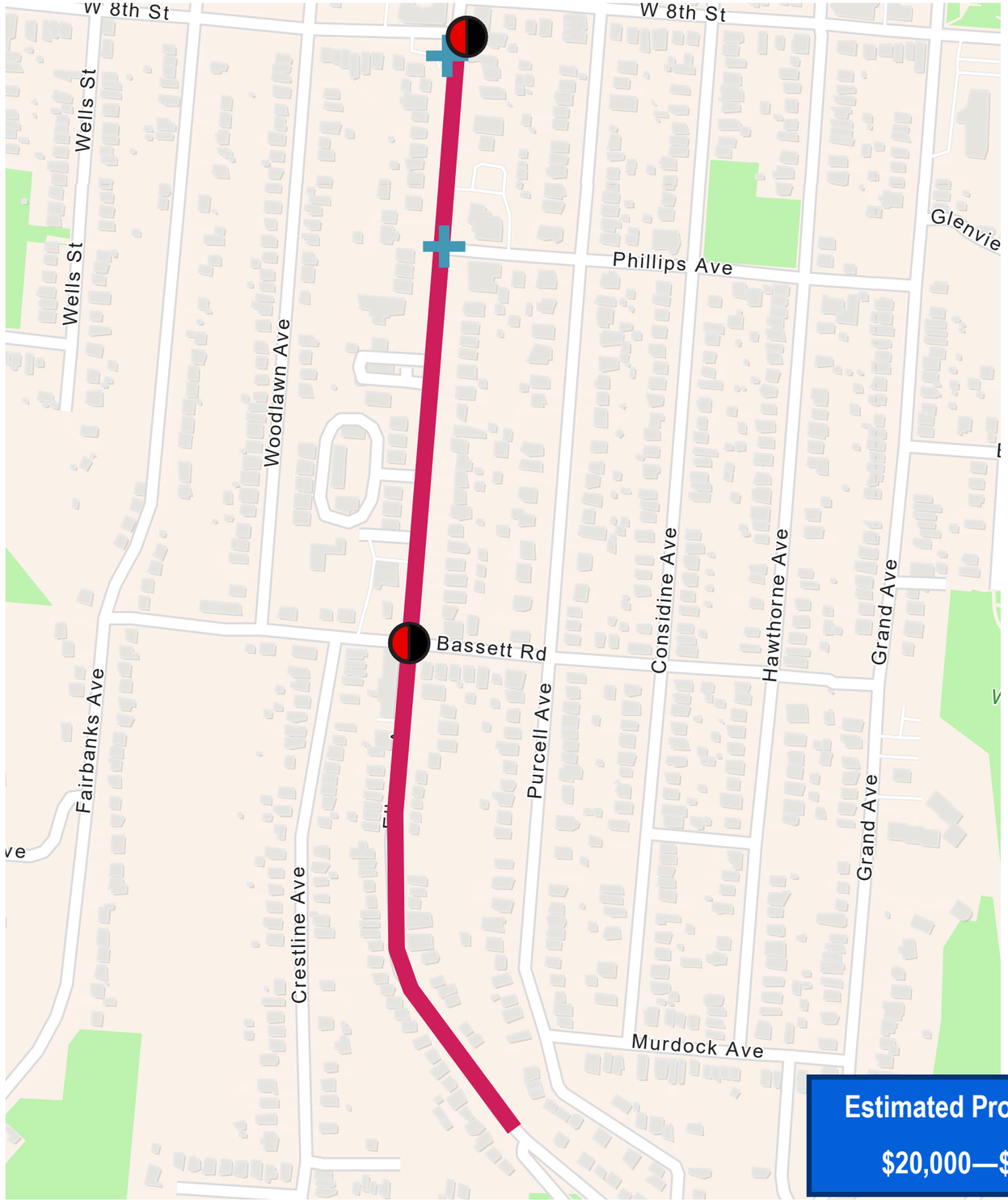
- Speed humps
- Reflective Backplates
- TWLTL
- Pedestrian Crossing Improvements
- Intersection Redesign

Estimated Project Cost:

$6,000,000—$7,000,000

East Mitchell Avenue runs east/west between Kings Run Drive and Dutch Colony Drive in the Winton Hills Neighborhood. This 4—lane corridor, with a speed limit of 25—35 mph, has an average daily traffic of 16,313 vehicles. The 922 crashes recorded, with 14 Fatal or Serious Injuries, make this the third highest crash rate per vehicle mile in the city. Nearly 62% of the crashed occurred at intersections.

Elberon Avenue, Mount Echo Park Drive to Price Avenue



STATISTICS	
Distance	0.63 miles
Crashes (2019-2023)	188
Crashes Per Mile	299
Crash Rate	0.0247
Fatal or Serious Injuries	5
Population	25—50% Minority 25—50% Below Poverty Level 10—25% Zero Car Households

Recommended Improvements:

- Reflective Backplates
- Pedestrian Crossing Improvements

Elberon Avenue runs north/south from Mount Echo Park Drive to Price Avenue. This short segment of roadway recorded 188 crashes and 5 Fatal or Serious injury accidents. The ADT of 12,111 makes the crash rate 0.0247 per vehicle mile traveled. Crashes at intersections account for 54% of the total.

Estimated Project Cost:

$20,000—$50,000

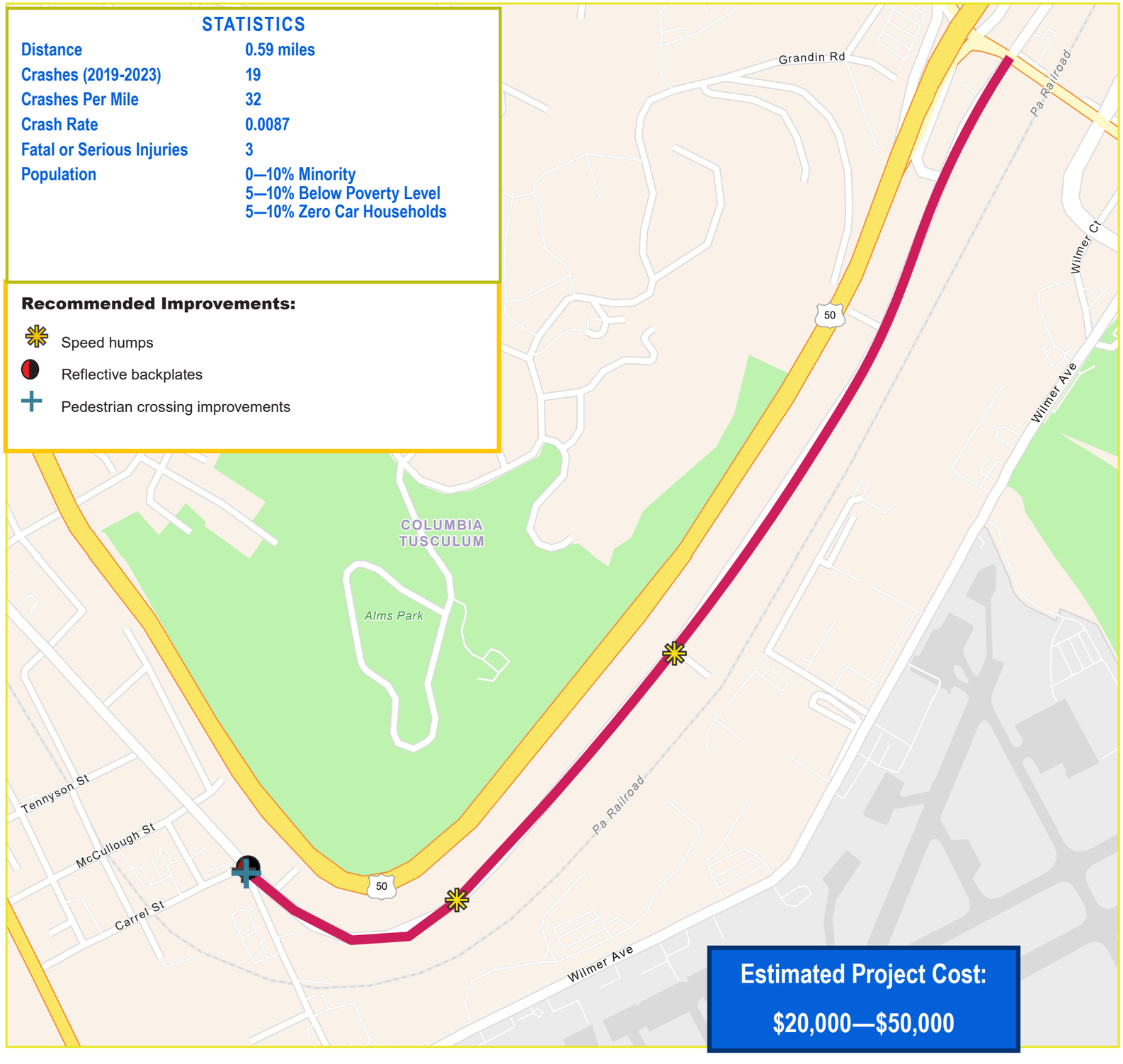
Eastern Avenue, Airport Road to Beechmont Avenue

STATISTICS

Distance	0.59 miles
Crashes (2019-2023)	19
Crashes Per Mile	32
Crash Rate	0.0087
Fatal or Serious Injuries	3
Population	0—10% Minority 5—10% Below Poverty Level 5—10% Zero Car Households

Recommended Improvements:

- Speed humps
- Reflective backplates
- Pedestrian crossing improvements



Estimated Project Cost:

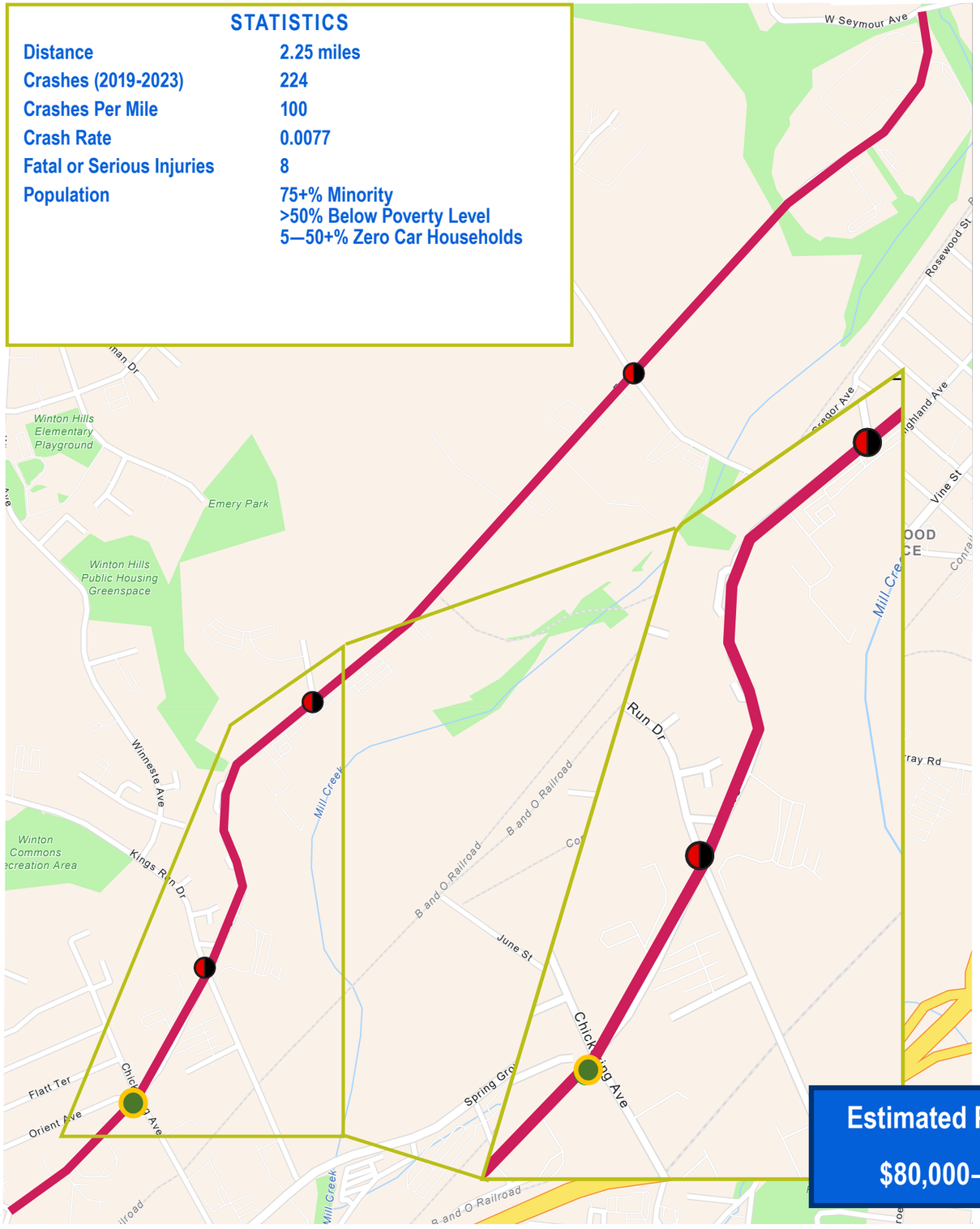
$20,000—$50,000

Eastern Avenue runs along US50 Columbial Parkway and is popular cut-through and bike/pedestrian path. Speed calming measures would assist with fewer accidents.

Este Avenue, West Mitchell Avenue to West Seymour Avenue

STATISTICS

Distance	2.25 miles
Crashes (2019-2023)	224
Crashes Per Mile	100
Crash Rate	0.0077
Fatal or Serious Injuries	8
Population	75+% Minority >50% Below Poverty Level 5—50+% Zero Car Households



Recommended Improvements:

- Reflective backplates
- TWLTL

This short segment is parallel to I-75 west of Spring Grove Avenue.

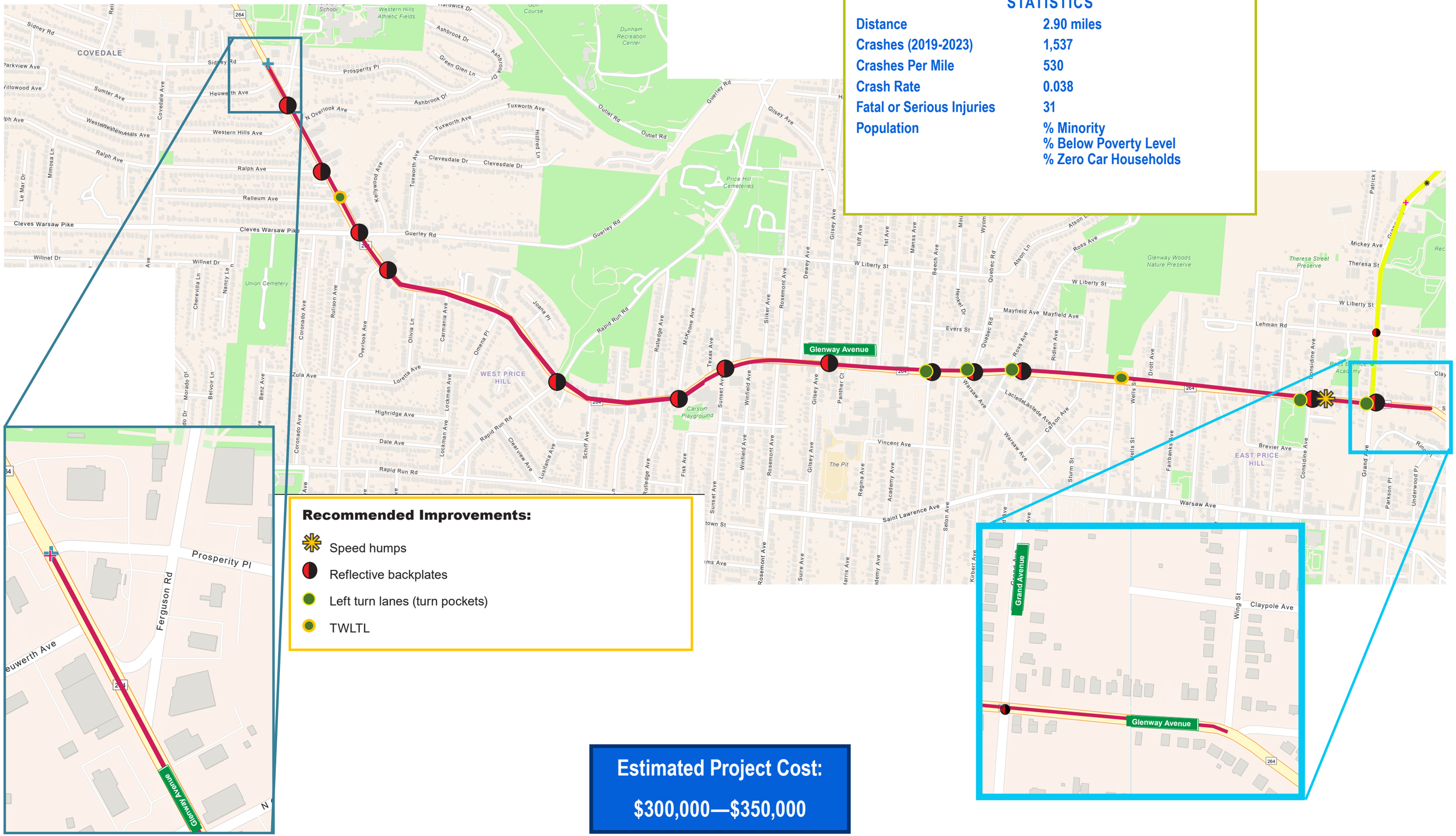
Estimated Project Cost:

$80,000—$100,000

Glenway Avenue, Prosperity Place to Wing Street

STATISTICS

Distance	2.90 miles
Crashes (2019-2023)	1,537
Crashes Per Mile	530
Crash Rate	0.038
Fatal or Serious Injuries	31
Population	% Minority % Below Poverty Level % Zero Car Households



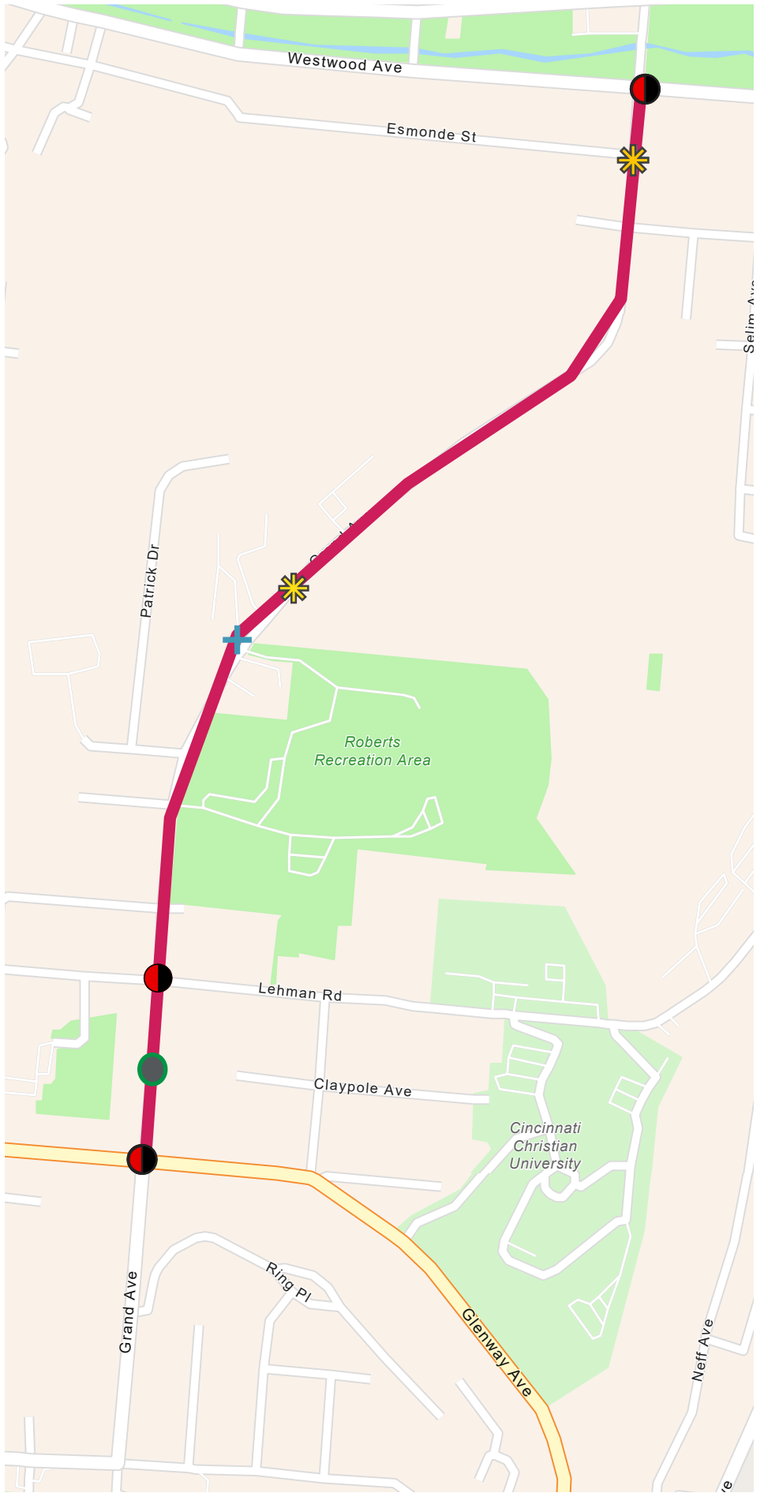
Recommended Improvements:

- Speed humps
- Reflective backplates
- Left turn lanes (turn pockets)
- TWLTL

Estimated Project Cost:

$300,000—$350,000

Grand Avenue, Glenway Avenue to Westwood Avenue



STATISTICS

Distance	0.97 miles
Crashes (2019-2023)	143
Crashes Per Mile	147.24
Crash Rate	0.0453
Fatal or Serious Injuries	3
Population	10—50% Minority 10—25% Below Poverty Level 10—50% Zero Car Households

Recommended Short Term Improvements:

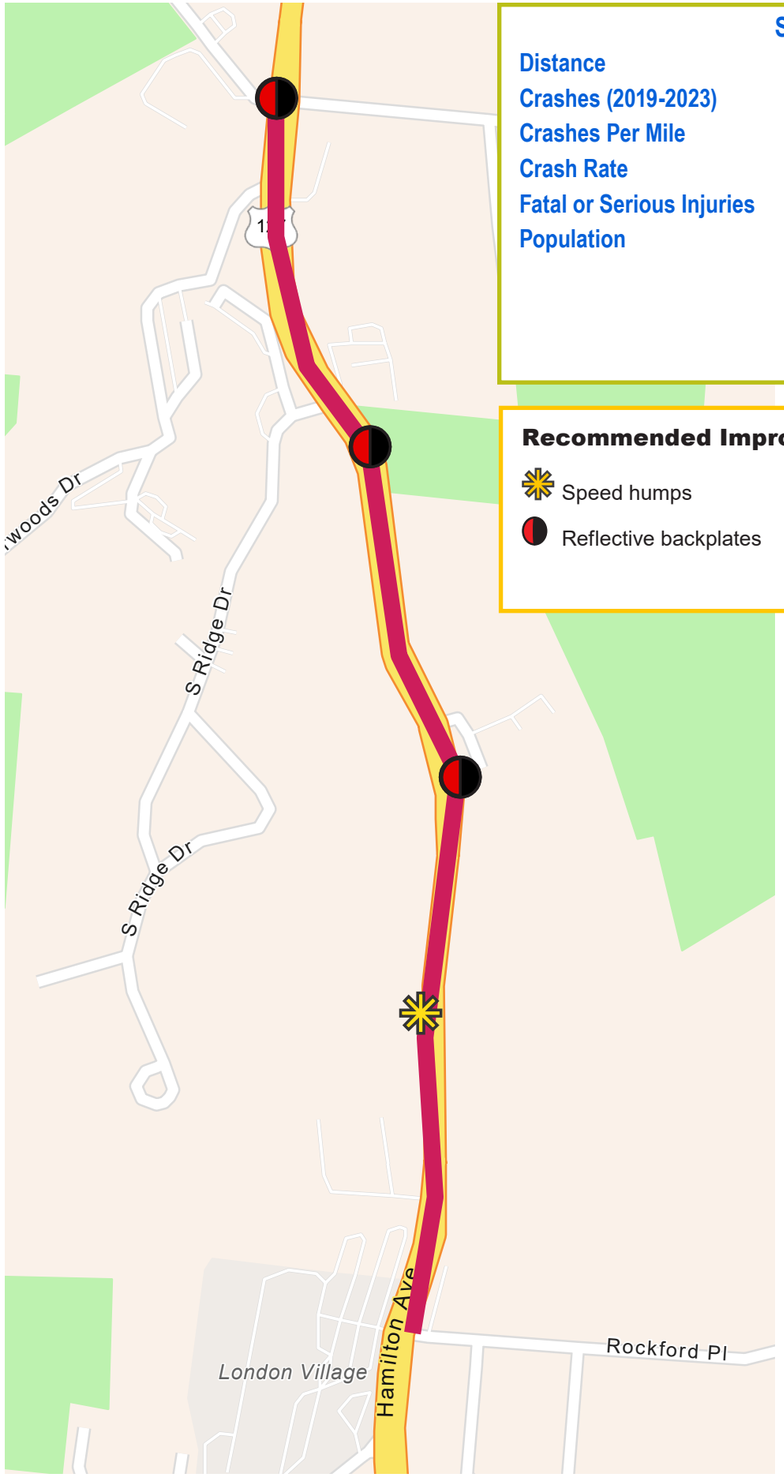
- Speed humps
- Reflective Backplates
- Right sizing
- Pedestrian Crossing Improvements

Grand Avenue runs north/south between Glenway Avenue at the East/West Price Hill Neighborhood line and Westwood Avenue in the South Fairmont Neighborhood. This 2—lane corridor, with a speed limit of 25—35 mph, has an average daily traffic of 3,247 vehicles. The 143 crashes recorded, with 3 Fatal or Serious Injuries, make this the highest crash rate per vehicle mile in the city. Sixty-eight percent of the crashes occurred at intersections.

Estimated Project Cost:

$200,000—300,000

Hamilton Avenue, Rockford Place to Hillcrest Road



STATISTICS

Distance	0.79 miles
Crashes (2019-2023)	77
Crashes Per Mile	97
Crash Rate	0.0058
Fatal or Serious Injuries	3
Population	25—50% Minority 10—25% Below Poverty Level 10—25% Zero Car Households

Recommended Improvements:

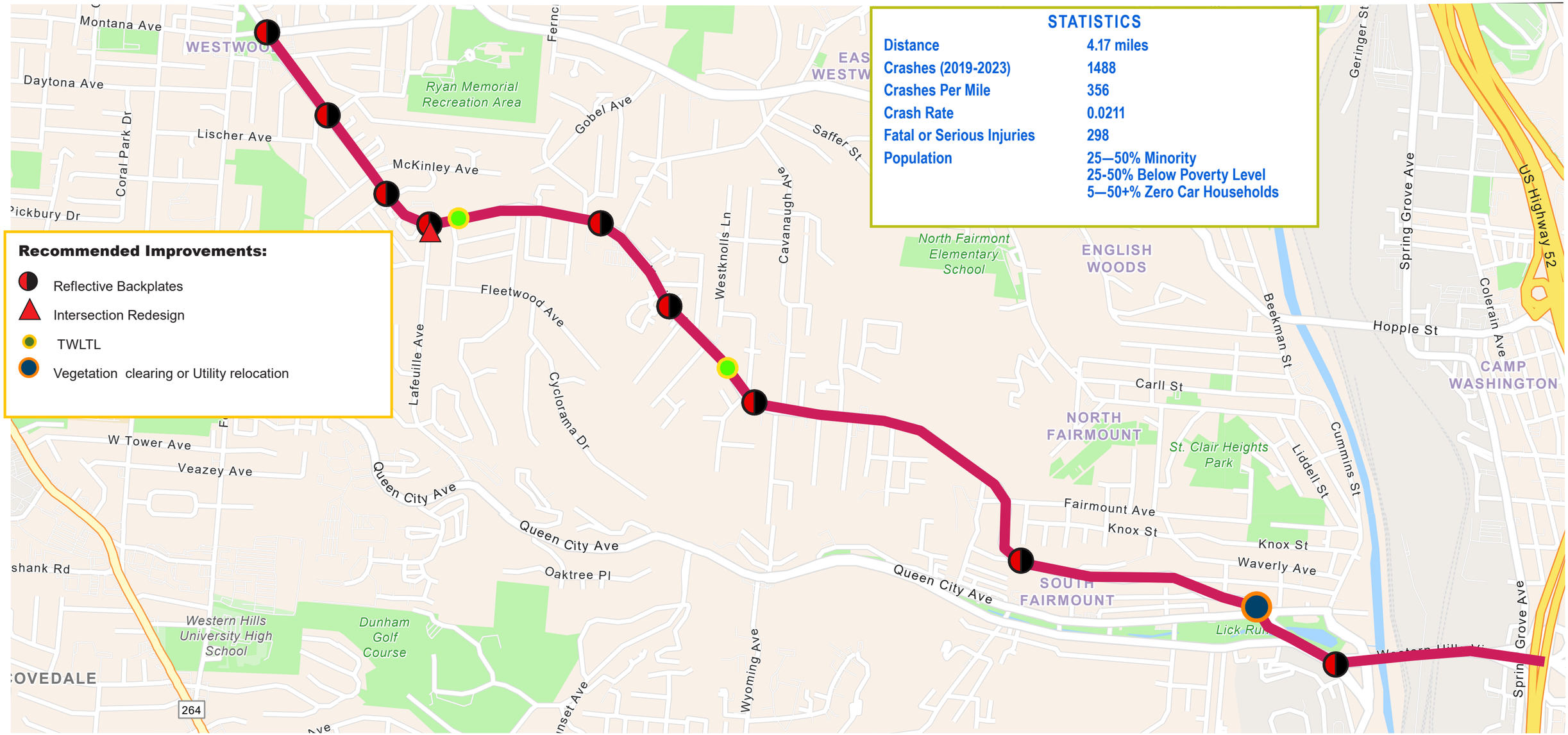
- Speed humps
- Reflective backplates

Hamilton Avenue is a north south thoroughfare which is currently in consideration for the Bus Rapid Transit System (BRT). There is a good amount of transit use on this corridor which will likely increase with the implementation of BRT.

Estimated Project Cost:

$20,000 to $50,000

Harrison Avenue, Montana Avenue to I–75



Recommended Improvements:

- Reflective Backplates
- Intersection Redesign
- TWLTL
- Vegetation clearing or Utility relocation

STATISTICS

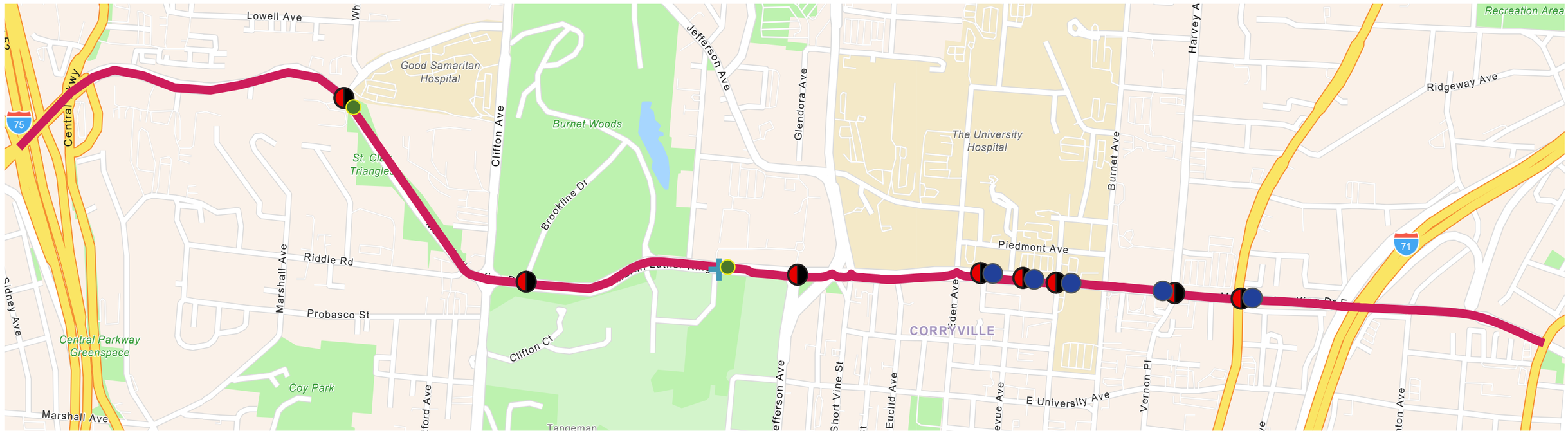
Distance	4.17 miles
Crashes (2019-2023)	1488
Crashes Per Mile	356
Crash Rate	0.0211
Fatal or Serious Injuries	298
Population	25—50% Minority 25-50% Below Poverty Level 5—50+% Zero Car Households

Harrison Avenue runs east/west from I-75 to Montana Avenue. This 4.17 mile, 4—lane corridor has an ADT of 16,874 with a crash rate of 8.8%. More than 61% of the 1,488 crashes occurred at intersections. The posted speed limit is from 25-35 mph.

Estimated Project Cost:

$2,300,000—3,000,000

Martin Luther King Drive, I–75 to Gilbert Avenue



STATISTICS

Distance	2.76 miles
Crashes (2019-2023)	1469
Crashes Per Mile	532.12
Crash Rate	0.0259
Fatal or Serious Injuries	16
Population	10—25% Minority > 25% Below Poverty Level 5—50+% Zero Car Households

Recommended Improvements:

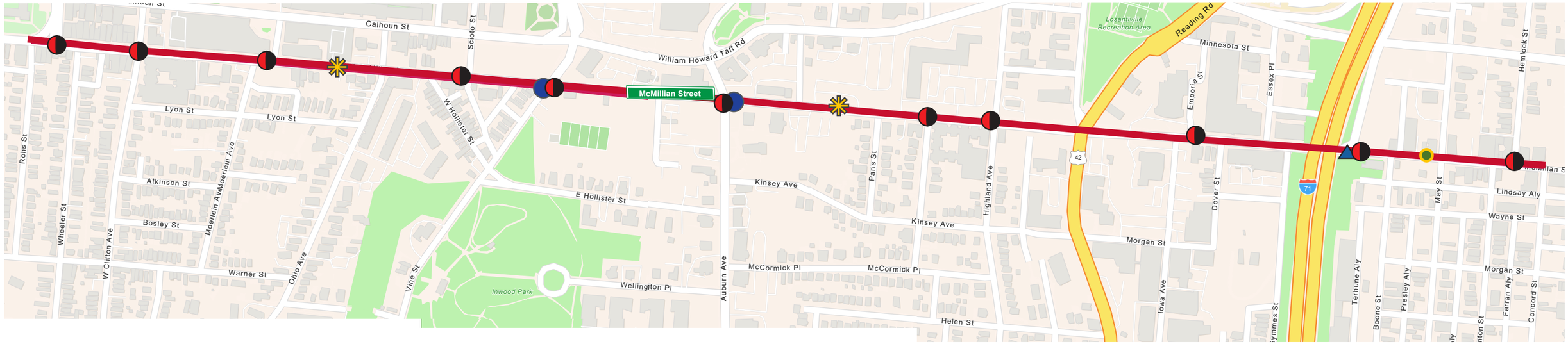
- Reflective Backplates
- Curb bumpouts
- Left Turn Lanes @ intersections
- Pedestrian Crossing Improvements

Martin Luther King Drive runs west/east from I—75 to Gilbert Avenue adjacent to Hospitals and the University of Cincinnati Main Campus. This corridor experienced 1469 crashes with average daily traffic of 20,512 vehicles. This busy corridor averages 2.59% crash rate, with 74% occurring at intersections. The posted speed limit is 25-35 mph for this area.

Estimated Project Cost:

$4,000,000—5,000,000

McMillian Street, Rohs Street to Concord Avenue



Recommended Improvements:

- Reflective Backplates
- Curb bumpouts
- Left Turn Lanes @ intersections
- Median Islands or Quick Curbs
- TWLTL
- Speedhumps

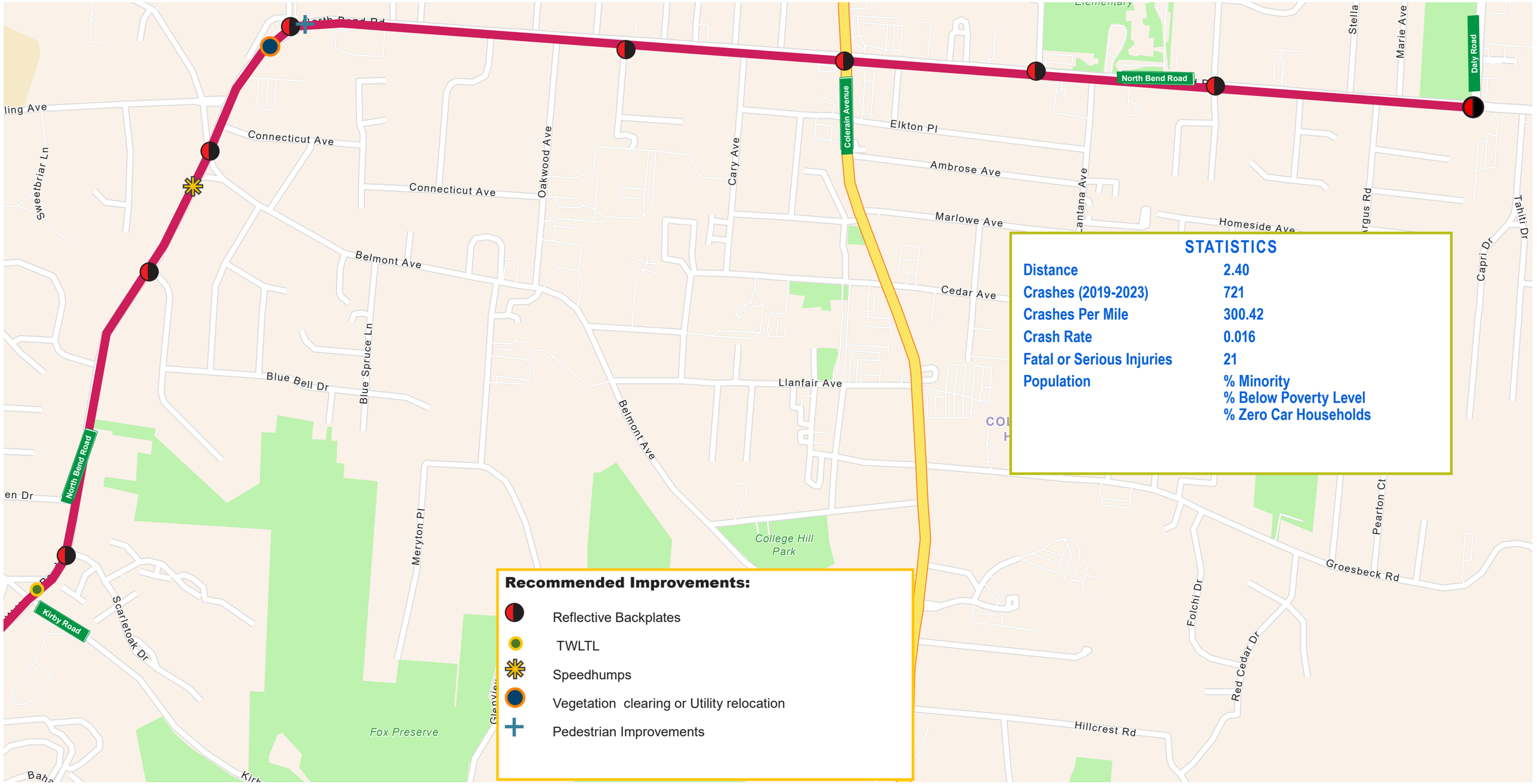
STATISTICS

Distance	1.50
Crashes (2019-2023)	891
Crashes Per Mile	594.00
Crash Rate	0.097
Fatal or Serious Injuries	13
Population	% Minority % Below Poverty Level % Zero Car Households

Estimated Project Cost:

$3,000,000—4,000,000

North Bend Road, Kirby Avenue to Daly Road



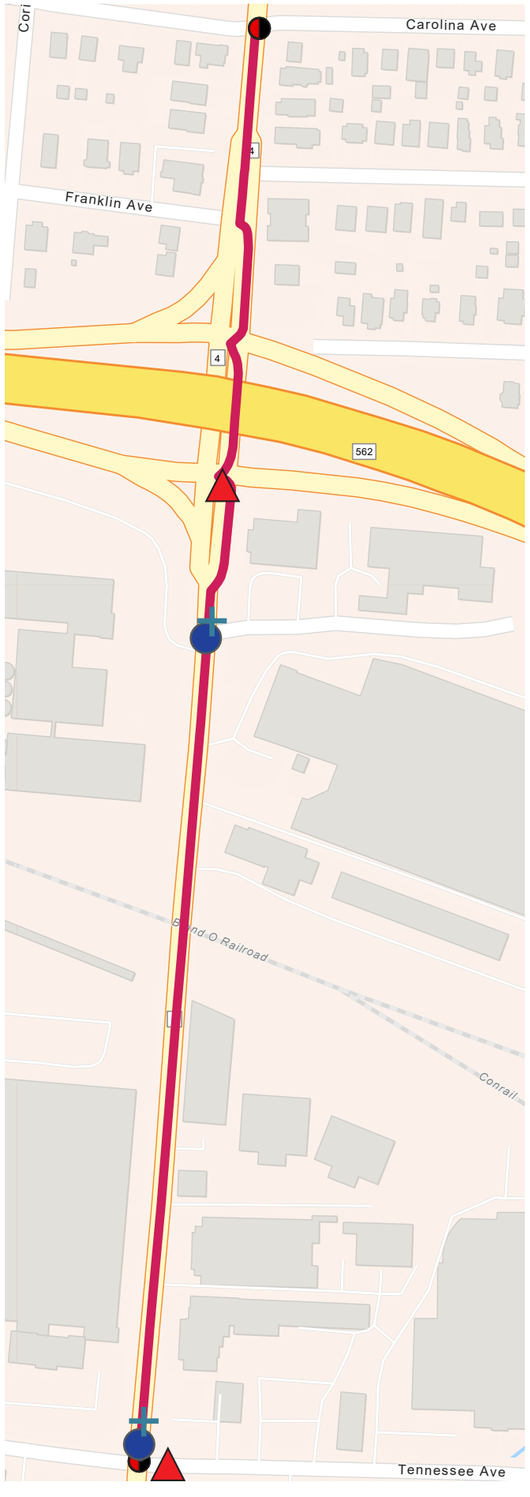
STATISTICS

Distance	2.40
Crashes (2019-2023)	721
Crashes Per Mile	300.42
Crash Rate	0.016
Fatal or Serious Injuries	21
Population	% Minority % Below Poverty Level % Zero Car Households

Estimated Project Cost:

$500,000—600,000

Paddock Road, Tennesse Avenue to Carolina Avenue



STATISTICS

Distance	0.5 miles
Crashes (2019-2023)	150
Crashes Per Mile	302
Crash Rate	0.0177
Fatal or Serious Injuries	2
Population	75+% Minority 10—25% Below Poverty Level 25—50% Zero Car Households

Recommended Improvements:

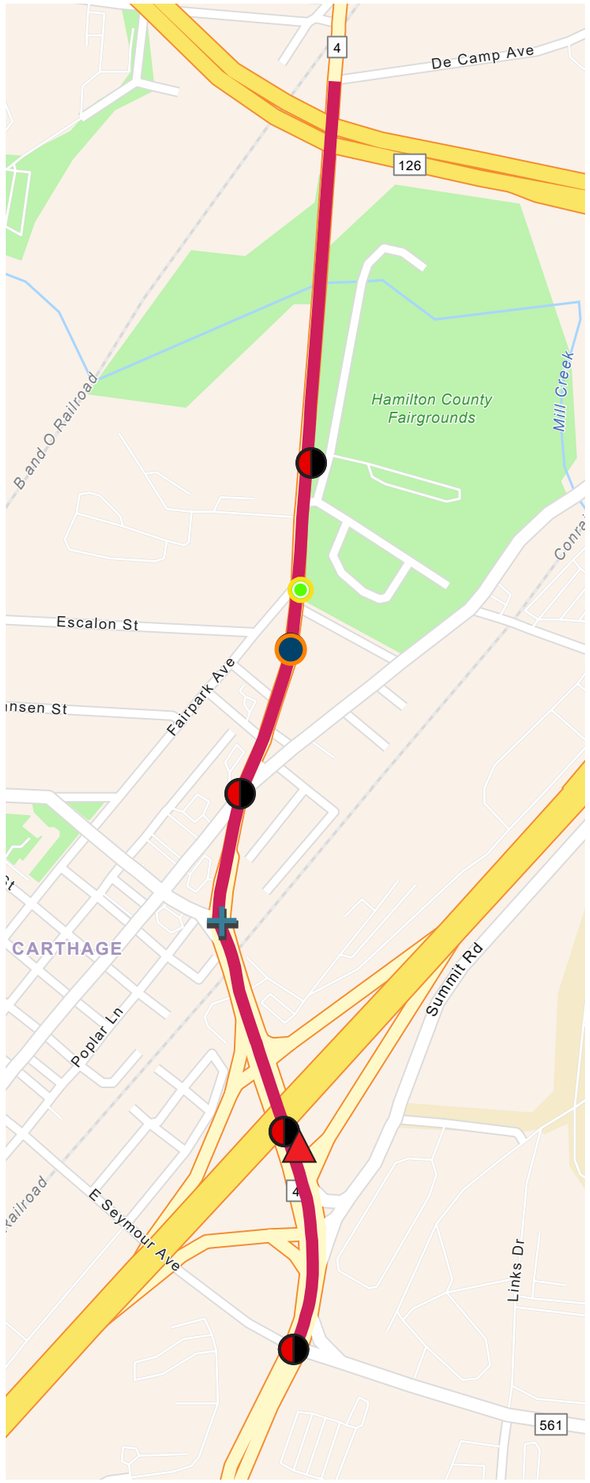
- Reflective Backplates
- Curb bumpouts
- Intersection Redesign
- Pedestrian Improvements

Paddock Road runs north/south from Tennesse Avenue to Carolina Avenue between the North Avondale and Bond Hill neighborhoods crossing under the Norwood Lateral (US562). This 1/2 mile corridor features 4 lanes and average daily traffic of 17,132 vehicles. Close to half of the 150 crashes occurred at intersections. The posted speed limit is 25-30 mph.

Estimated Project Cost:

$2,100,000—3,000,000

Paddock Road/Vine Street, Seymour Avenue to DeCamp Avenue



STATISTICS

Distance	1.02 miles
Crashes (2019-2023)	367
Crashes Per Mile	360
Crash Rate	0.0174
Fatal or Serious Injuries	5
Population	25—50% Minority 10—50% Below Poverty Level 5—10% Zero Car Households

Recommended Improvements:

- Reflective Backplates
- Pedestrian Improvements
- TWLTL
- Intersection Redesign
- Utlility relocation

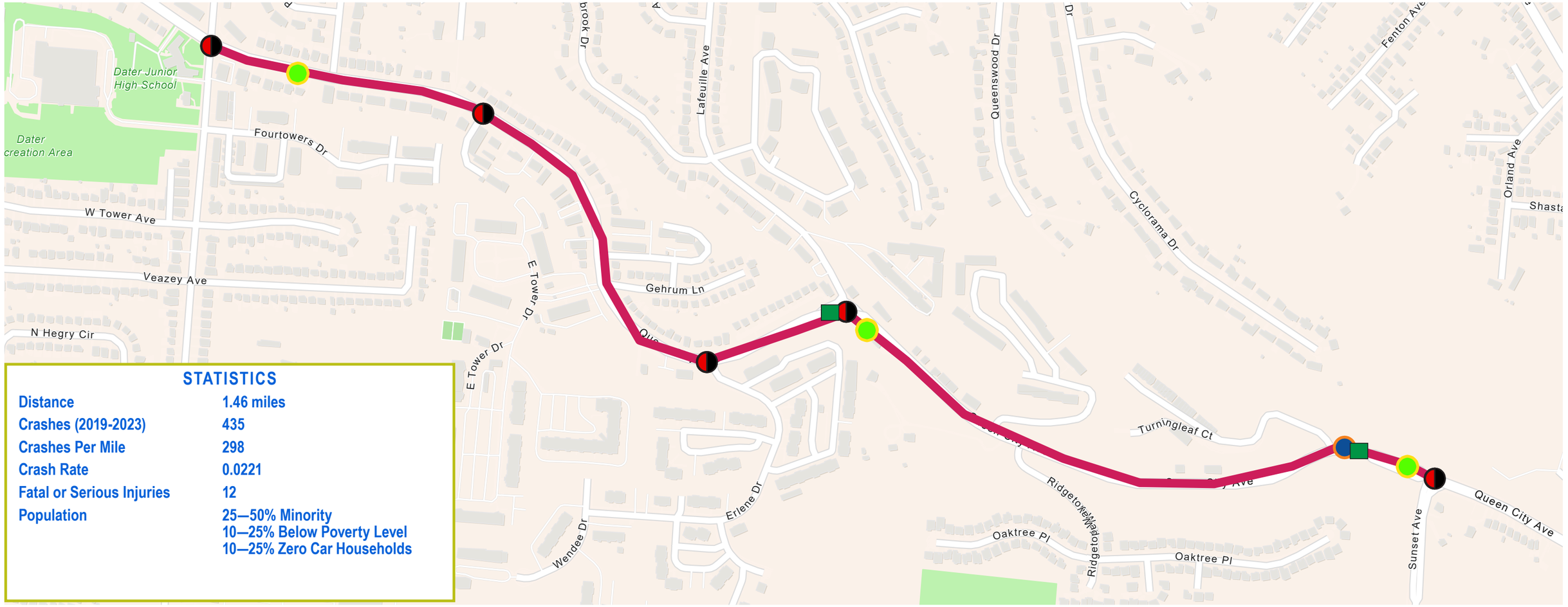
Paddock Road becomes Vine Street as it runs north/south between Seymour Avenue and DeCamp Avenue in the Carthedge neighborhood, which is home to the Hamilton County Fairgrounds.

It passes under Interstate 75 and Ronald Regan Cross County Highway (SR 126). This just more than 1 mile corridor had 80% of the 367 crashes at intersection. The 4—lane segment has average daily traffic of 20,714 vehicles and a posted speed limit of 25—35 mph.

Estimated Project Cost:

$5,600,000—$6,500,000

Queen City Avenue, Ferguson Road to Sunset Avenue



STATISTICS

Distance	1.46 miles
Crashes (2019-2023)	435
Crashes Per Mile	298
Crash Rate	0.0221
Fatal or Serious Injuries	12
Population	25—50% Minority 10—25% Below Poverty Level 10—25% Zero Car Households

Recommended Improvements:

- Reflective backplates
- Left turn lanes
- Utility relocation/vegetation clearing
- Signal Upgrade

Queen City Avenue runs east/west from Sunset Avenue to Ferguson Avenue. This 1.46 mile, 2—lane corridor has an ADT of 13,505 with a crash rate of 2.21%. More than 58% of the 435 crashes occured at intersections. The posted speed limit is from 25-35 mph.

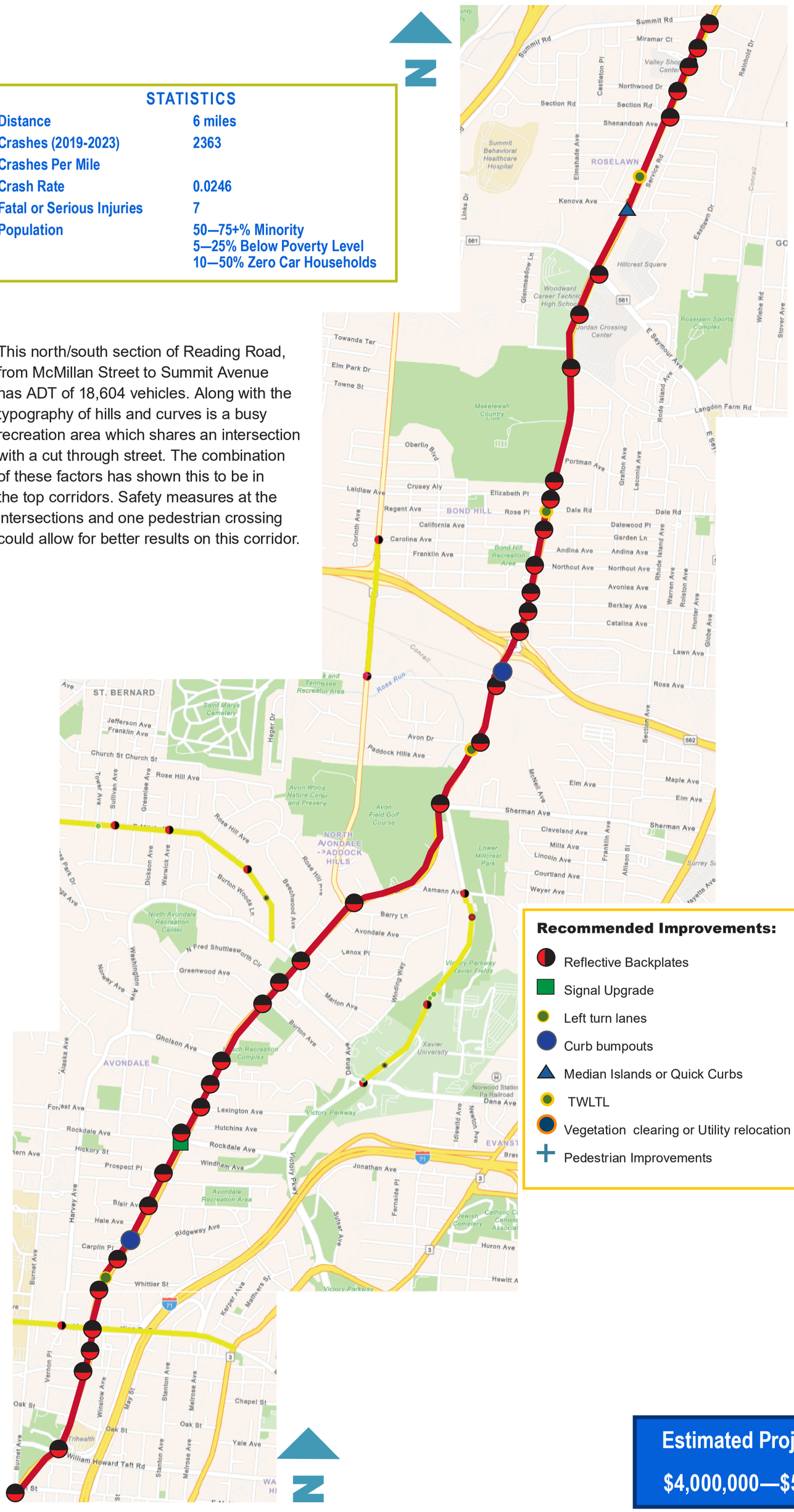
Estimated Project Cost:

$1,700,000—$2,500,000

Reading Road, McMillan Street to Summit Avenue

STATISTICS	
Distance	6 miles
Crashes (2019-2023)	2363
Crashes Per Mile	
Crash Rate	0.0246
Fatal or Serious Injuries	7
Population	50—75+% Minority 5—25% Below Poverty Level 10—50% Zero Car Households

This north/south section of Reading Road, from McMillan Street to Summit Avenue has ADT of 18,604 vehicles. Along with the typography of hills and curves is a busy recreation area which shares an intersection with a cut through street. The combination of these factors has shown this to be in the top corridors. Safety measures at the intersections and one pedestrian crossing could allow for better results on this corridor.



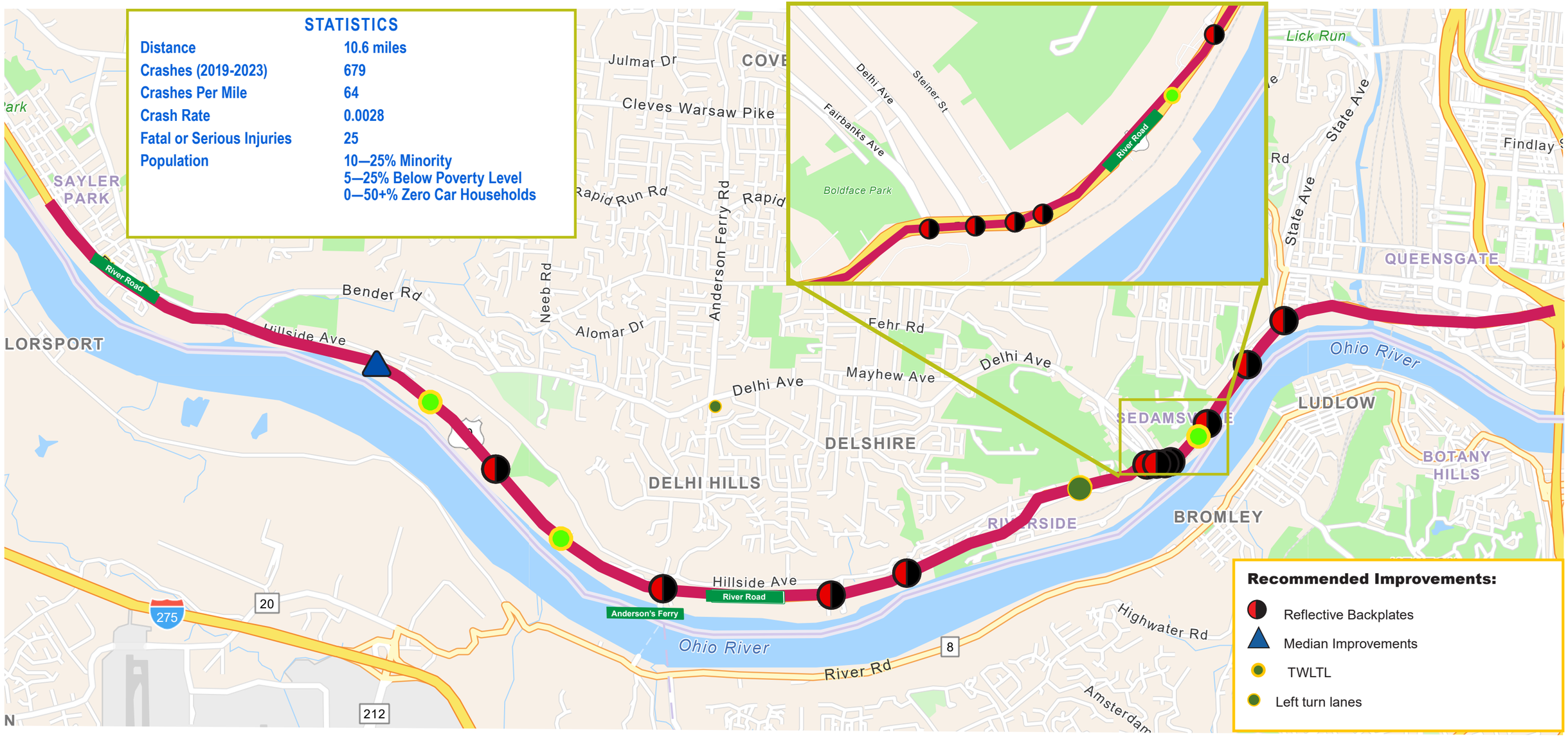
Recommended Improvements:

- Reflective Backplates
- Signal Upgrade
- Left turn lanes
- Curb bumpouts
- Median Islands or Quick Curbs
- TWLTL
- Vegetation clearing or Utility relocation
- Pedestrian Improvements

Estimated Project Cost:

$4,000,000—$5,000,000

River Road, Twain Avenue to I–75

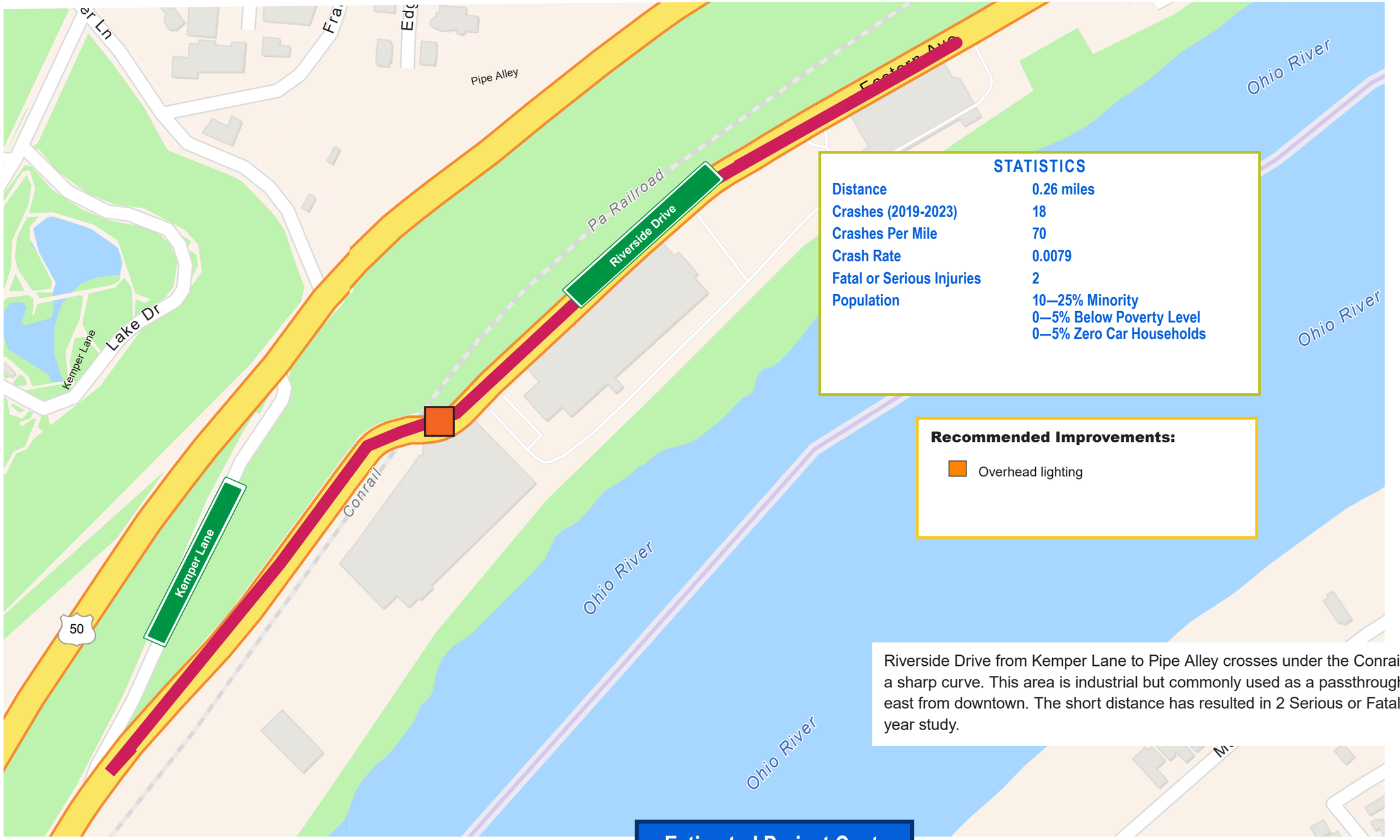


River Road from Saylor Park neighborhood to the I—75 interchange is a 10.6—mile route used by trucks, commuters, and recreational users. The Fairbanks Ave interchange to the I—75 is a heavily utilized commuter route that is common for “sun delays” at certain times of the year. Further west there are many warehouses and commercial facilities that drive the truck traffic, as well as parks, recreational areas, and a historic river ferry crossing to Kentucky. The north hillside is heavily vegetated in areas and some sight distance issues may be present. The rail line to the south of the roadway does sometimes back vehicles on the cross streets and cause traffic issues although only 31% of the crashes occurred at intersections.

Estimated Project Cost:

$700,000-$800,000

Riverside Drive, Kemper Lane to Pipe Alley



STATISTICS

Distance	0.26 miles
Crashes (2019-2023)	18
Crashes Per Mile	70
Crash Rate	0.0079
Fatal or Serious Injuries	2
Population	10—25% Minority 0—5% Below Poverty Level 0—5% Zero Car Households

Recommended Improvements:

- Overhead lighting

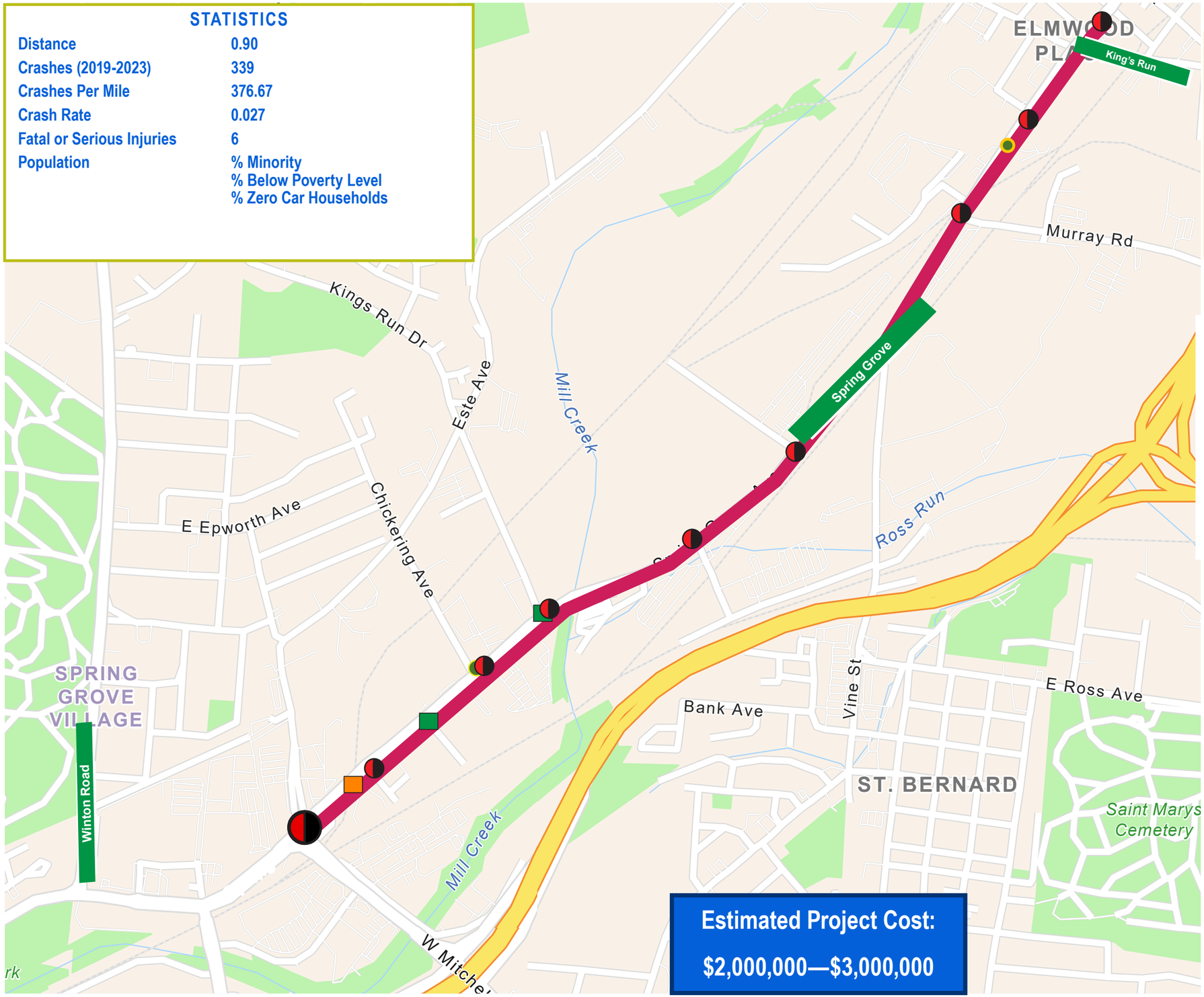
Riverside Drive from Kemper Lane to Pipe Alley crosses under the Conrail Railroad tracks in a sharp curve. This area is industrial but commonly used as a passthrough to neighborhoods east from downtown. The short distance has resulted in 2 Serious or Fatal Injuries in the 5 year study.

Estimated Project Cost:

$300,000—$500,000

Spring Grove Avenue, Winton Road to King's Run Road

STATISTICS	
Distance	0.90
Crashes (2019-2023)	339
Crashes Per Mile	376.67
Crash Rate	0.027
Fatal or Serious Injuries	6
Population	% Minority % Below Poverty Level % Zero Car Households



Recommended Improvements:

- Reflective Backplates
- Overhead lighting or utility pole changes
- New traffic Signal
- TWLTL

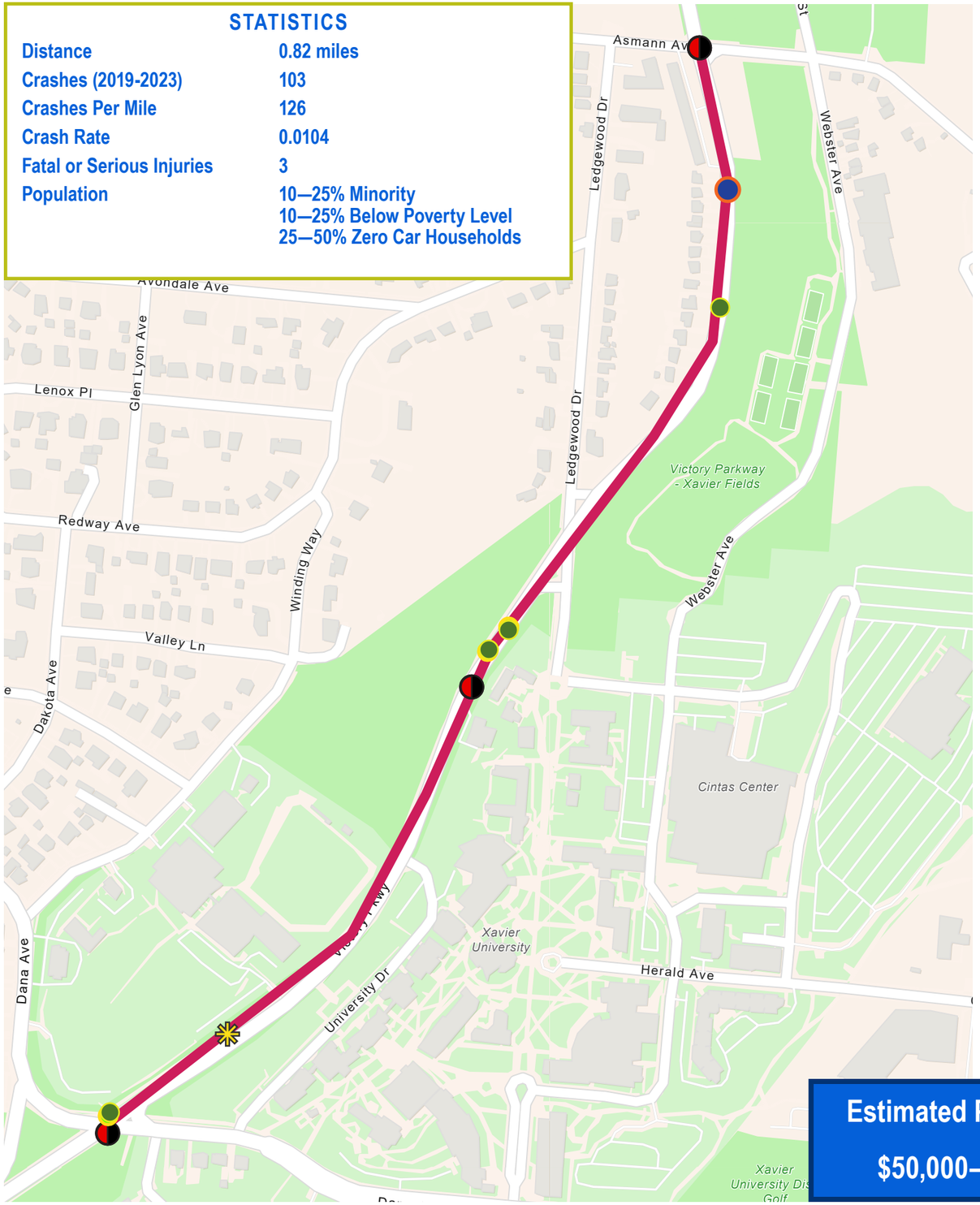
Spring Grove Avenue is a major arterial parrallel to I-75 on the West. It is used by commuters when there are backups on I-75 or construction, and can benefit from some traffic alterations.

Estimated Project Cost:

$2,000,000—$3,000,000

Victory Parkway, Dana Avenue to Asmann Avenue

STATISTICS	
Distance	0.82 miles
Crashes (2019-2023)	103
Crashes Per Mile	126
Crash Rate	0.0104
Fatal or Serious Injuries	3
Population	10—25% Minority 10—25% Below Poverty Level 25—50% Zero Car Households



Recommended Improvements:

- Reflective Backplates
- Left Turn Lanes @ intersections
- Speedhumps
- Vegetation clearing or Utility relocation

Victory Parkway is a North South Connector from Avondale to Pleasant Ridge. Lined by Xavier University and Century old Homes this Parkway has a fair amount of serious accidents.

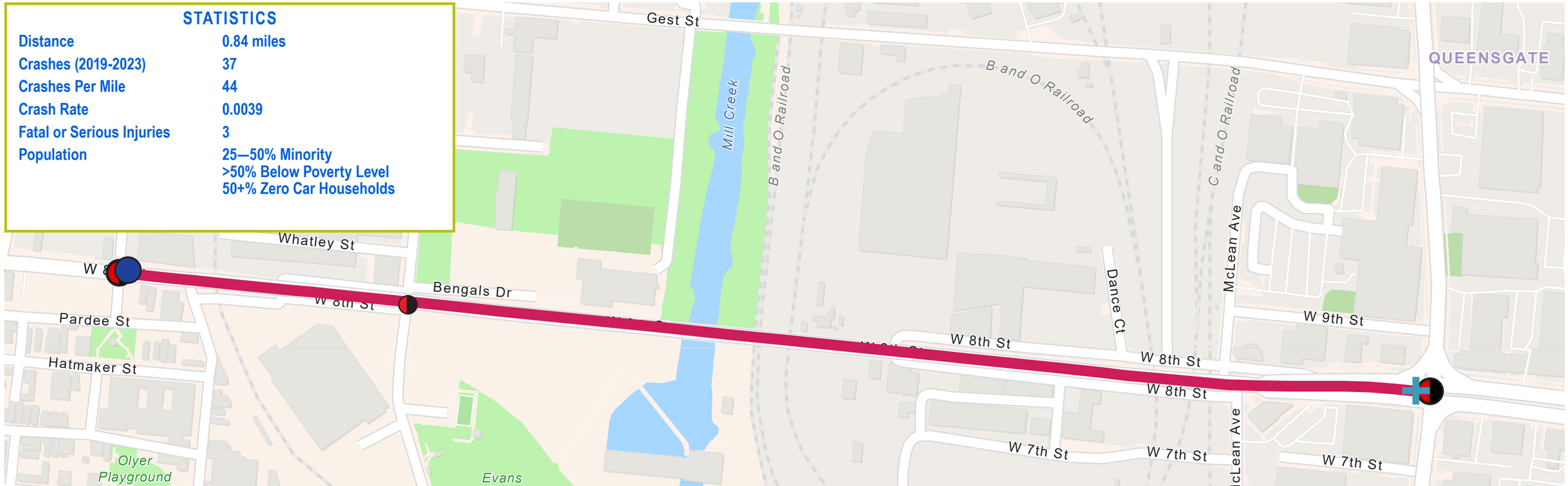
Estimated Project Cost:

$50,000—$100,000

West 8th Street, Depot Street to Dalton Avenue

STATISTICS

Distance	0.84 miles
Crashes (2019-2023)	37
Crashes Per Mile	44
Crash Rate	0.0039
Fatal or Serious Injuries	3
Population	25—50% Minority >50% Below Poverty Level 50+% Zero Car Households



This Segment of West 8th Street in the Queensgate area is mainly commerical/light industrial properties.

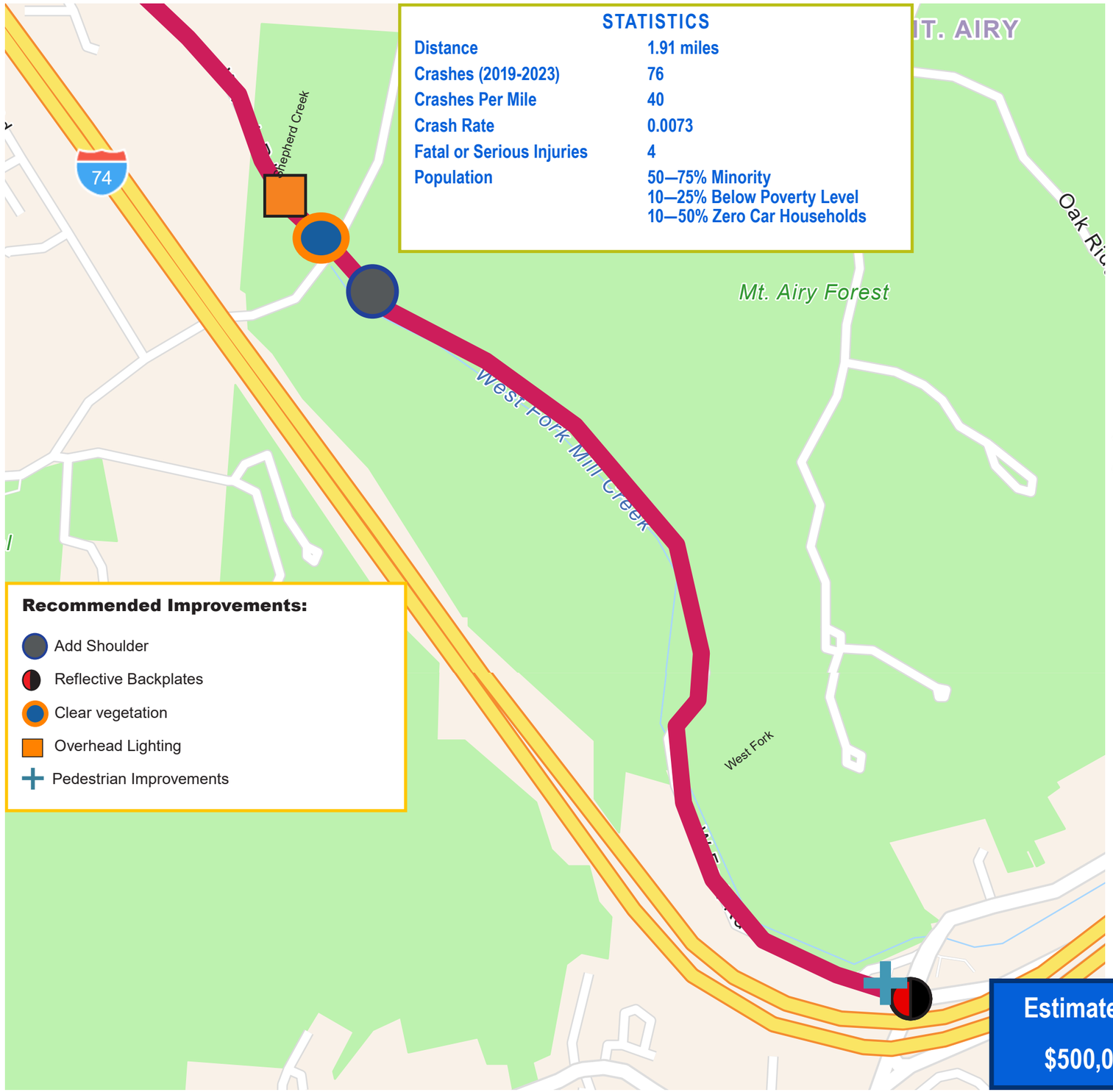
Recommended Improvements:

- Reflective Backplates
- Curb bumpouts
- Pedestrian Improvements

Estimated Project Cost:

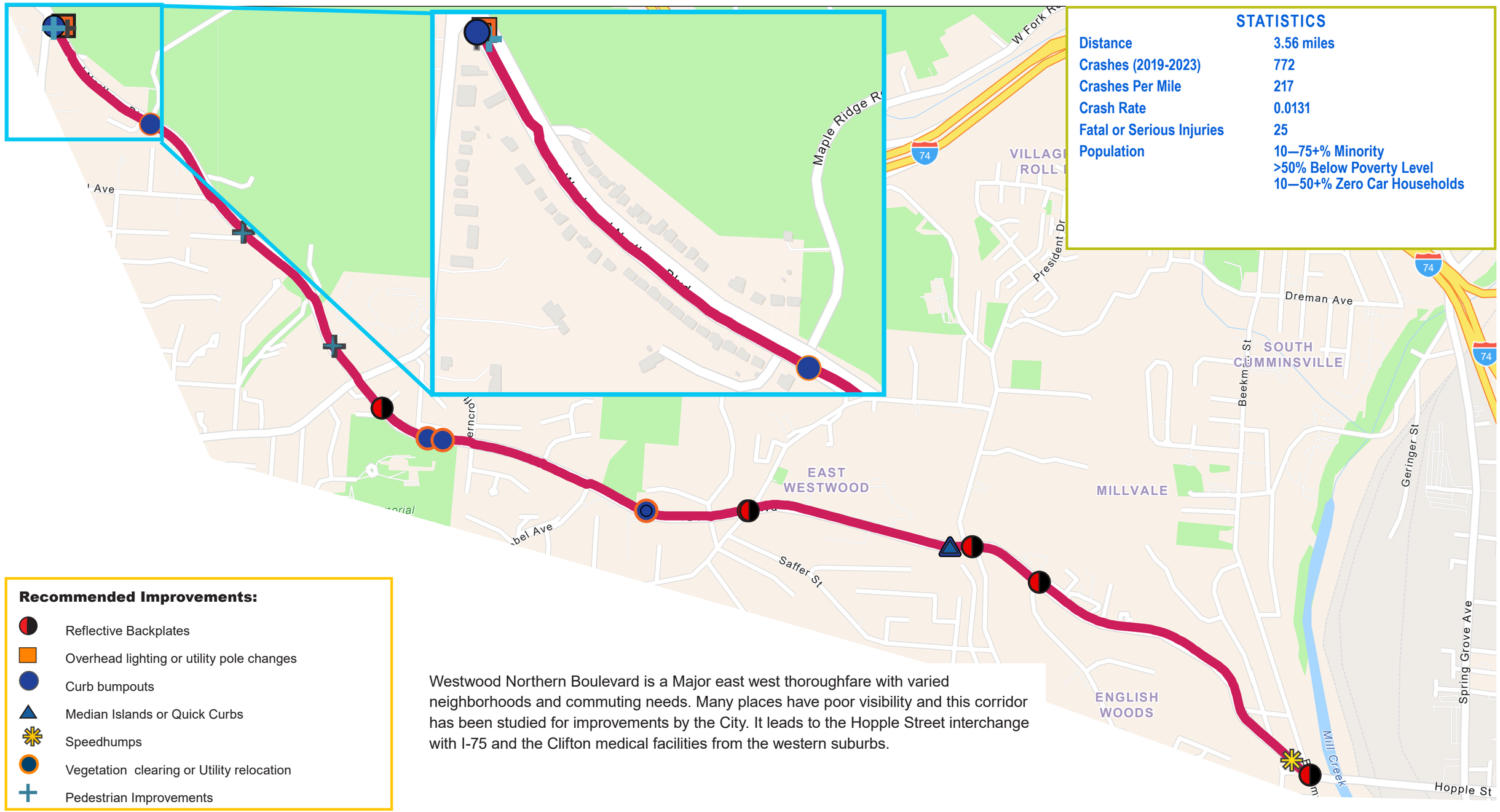
$20,000—$50,000

West Fork Road, Shepherd Creek Road to Montana Avenue



West Fork Road is a two lane west to east roadway with steep hillsides and difficult to manuver turns, with little to no shoulders.

Westwood Northern Boulevard, Boudinot Avenue to Beekman Street



STATISTICS

Distance	3.56 miles
Crashes (2019-2023)	772
Crashes Per Mile	217
Crash Rate	0.0131
Fatal or Serious Injuries	25
Population	10—75+% Minority >50% Below Poverty Level 10—50+% Zero Car Households

Recommended Improvements:

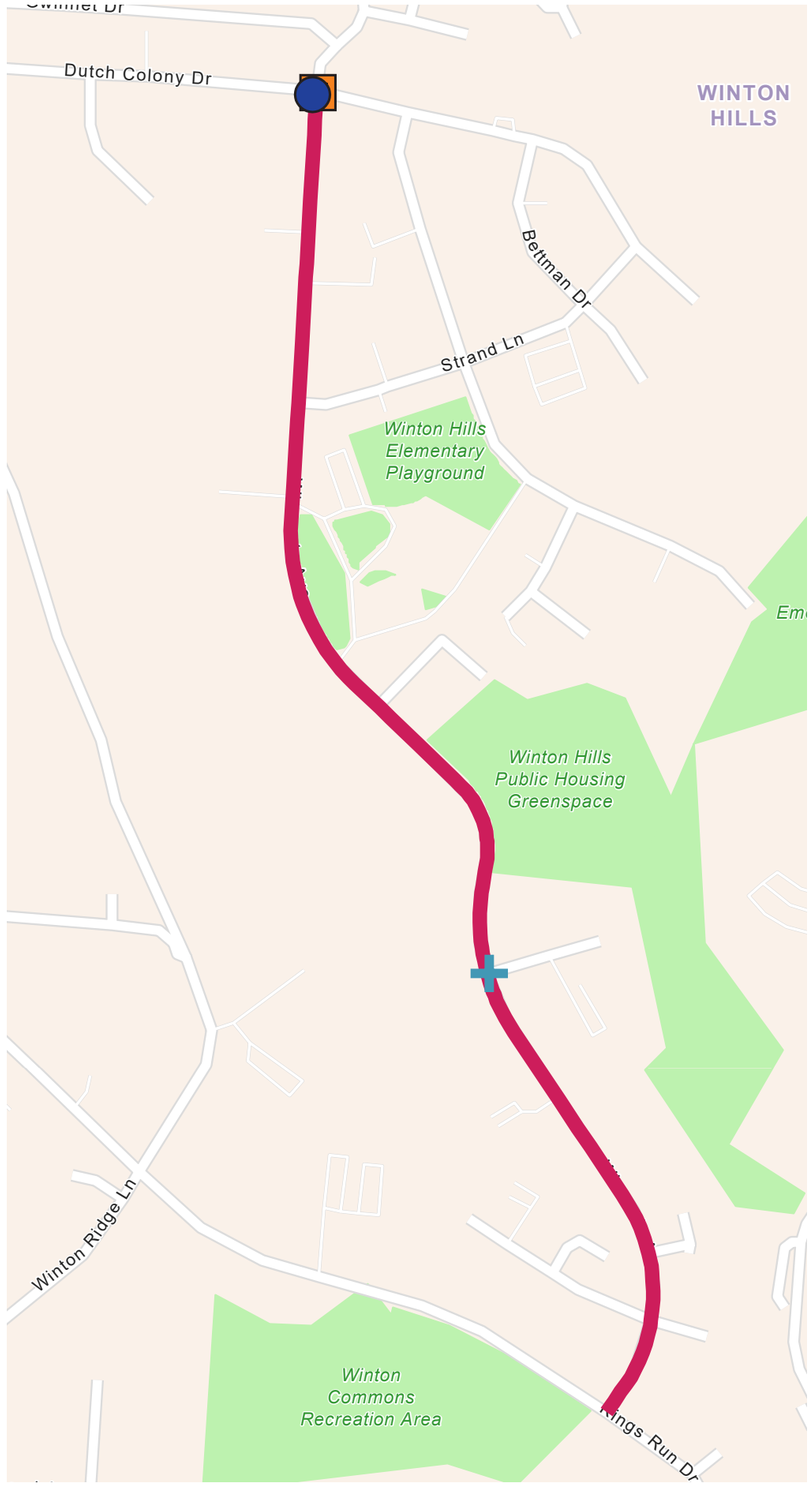
- Reflective Backplates
- Overhead lighting or utility pole changes
- Curb bumpouts
- Median Islands or Quick Curbs
- Speedhumps
- Vegetation clearing or Utility relocation
- Pedestrian Improvements

Westwood Northern Boulevard is a Major east west thoroughfare with varied neighborhoods and commuting needs. Many places have poor visibility and this corridor has been studied for improvements by the City. It leads to the Hopple Street interchange with I-75 and the Clifton medical facilities from the western suburbs.

Estimated Project Cost:

$2,700,000—$3,500,000

Winneste Avenue, Kings Run Drive to Dutch Colony Drive



STATISTICS

Distance	0.92 miles
Crashes (2019-2023)	183
Crashes Per Mile	199.43
Crash Rate	0.0320
Fatal or Serious Injuries	7
Population	75%+ Minority 50%+ Below Poverty Level 50%+ Zero Car Households

Recommended Improvements:

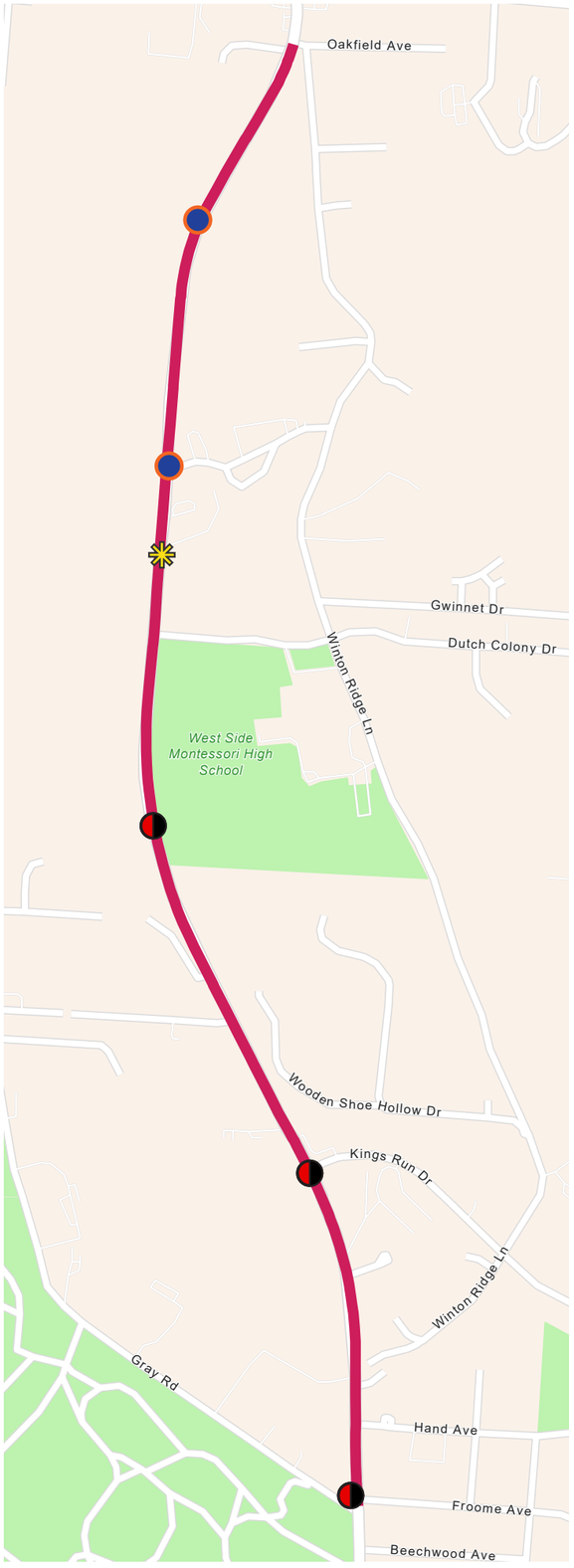
- Overhead lighting or utility pole changes
- Curb bumpouts
- Pedestrian Improvements

Winneste Avenue runs north/south between Kings Run Drive and Dutch Colony Drive in the Winton Hills Neighborhood. This 4—lane corridor, with a speed limit of 25—35 mph, has an average daily traffic of 6,234 vehicles. The 183 crashes recorded, with 7 Fatal or Serious Injuries, make this the second highest crash rate per vehicle mile in the city. Fifty-eight percent of the crashes occurred at intersections.

Estimated Project Cost:

$1,100,000—$2,000,000

Winton Road, Gray Road to Oakfield Avenue



STATISTICS	
Distance	1.75 miles
Crashes (2019-2023)	248
Crashes Per Mile	142
Crash Rate	0.0085
Fatal or Serious Injuries	15
Population	75+% Minority >50% Below Poverty Level 25—50% Zero Car Households

Recommended Improvements:

- Reflective Backplates
- Speedhumps
- Vegetation clearing

Winton Road runs North to South on the west Side of I-75, through diverse neighborhoods which could benefit from speed reductions.

Estimated Project Cost:

$50,000—$100,000

8.0 Progress and Transparency

This Safety Action Plan sets a safety baseline and recommends several courses of action to improve the safety performance of the roadway system. It is important for the success of the plan that the City measure progress in attaining the goal of moving toward zero deaths and serious injuries by 2050. It is also important that the baseline and progress be easily accessible and understandable to the public.

The proposed metrics are discussed below, along with how they will be made public. The concluding section presents needs and recommended actions to implement this portion of the safety action plan.

Safety Performance Metrics

City of Cincinnati proposes to use several overall high-level safety performance metrics to track safety improvements in the region. Those same metrics are also proposed to be used to measure progress in serving disadvantaged populations in the community. Several additional project-level performance metrics are proposed for consideration.

High-Level Safety Performance Metrics

Three high-level performance metrics were selected. They offer a way to track progress over the coming years as the action plan is implemented.

Annual Fatal and Serious Injury Crashes — Total and Rate

This is the core metric for tracking the success of the action plan in moving Cincinnati toward zero fatalities and serious injuries by 2050. The historical trend was down from 2019 to 2023, but the fatalities increased.

Annual Bicycle and Pedestrian Crashes and Intersection — Total and Rate

These are additional core metrics for tracking the success of the action plan.

Equity Focused Performance Metrics

Cincinnati proposes to apply the same high-level performance metrics listed above to portions of the City that are designated as underserved or disadvantaged and compare them to the remainder of the City. This will provide a clear comparison of the change over time in these areas. With this information, the public and decision makers will be able to asses the overall program effectiveness and trends and whether or not historically underserved populations in the City appear to be benefiting at least as much as the rest of the City from the projects and strategies that are implemented. It is important to note that there are many factors that influence traffic safety, so potential trends and correlations could be due to other factors, but this will at least provide high-level data to assess progress.

Project-Level Safety Performance Metrics

The action plan recommends focused improvements based on the historical crash analysis as well as systemic safety improvements for several key emphasis areas. The project level metrics could be used to track safety progress in addressing these identified needs. Project-level metrics could include:

- Number of projects implemented to address the top corridors and intersections
- Number of projects implemented to address the identified systemic emphasis areas
- Crash trends for the corridors or intersections where projects have been implemented focusing on:
  - Severe Crashes
  - Pedestrian and Bicycle Crashes
  - Intersection Crashes
  - Crash Trends in Disadvantaged Portions of the Community (where projects have been implemented)
- Crash trends for locations where systemic improvements have been implemented focusing on:
  - Severe Crashes
  - Emphasis Area Severe Crash Types (intersection crashes, roadway departure crashes, young driver, pedestrian crashes, etc.)
  - Crash Trends in Disadvantaged Portions of the Community (where systemic projects have been implemented)

Public Access and Transparency

This Safety Action Plan has been made publicly available by posting it on the City website at: www.cincinnati-oh.gov/dote/. And the Plan website at: https://www.ss4acincinnati.com/

Annual performance updates will be posted to the City website as well.

Needs and Recommendations

It is agreed that a transparent and easily accessible public performance tracking process has great value for moving forward with improving safety in Cincinnati. The City is committed to doing this. It is recommended that the City pursue five years of grant funding to help bolster the safety program implementation and progress tracking through the institution of a Vision Zero Coordinator position. This will help the City more effectively implement the program and make the results of the program available to the public. Once the program has been implemented and progress is being reported, it is expected that the public and elected officials will see the value of having additional staff resources dedicated to focusing on traffic safety.