

U.S. 83 Communities Roadway Safety Plan

Garden City Existing Conditions Report



Prepared by:

WILSON
& COMPANY

TRANSYSTEMS

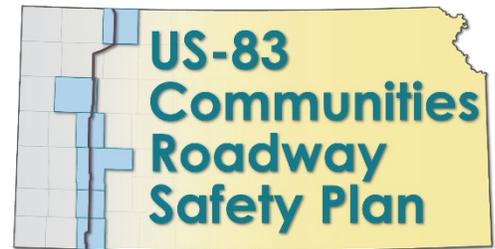
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March 2025

Thank you!

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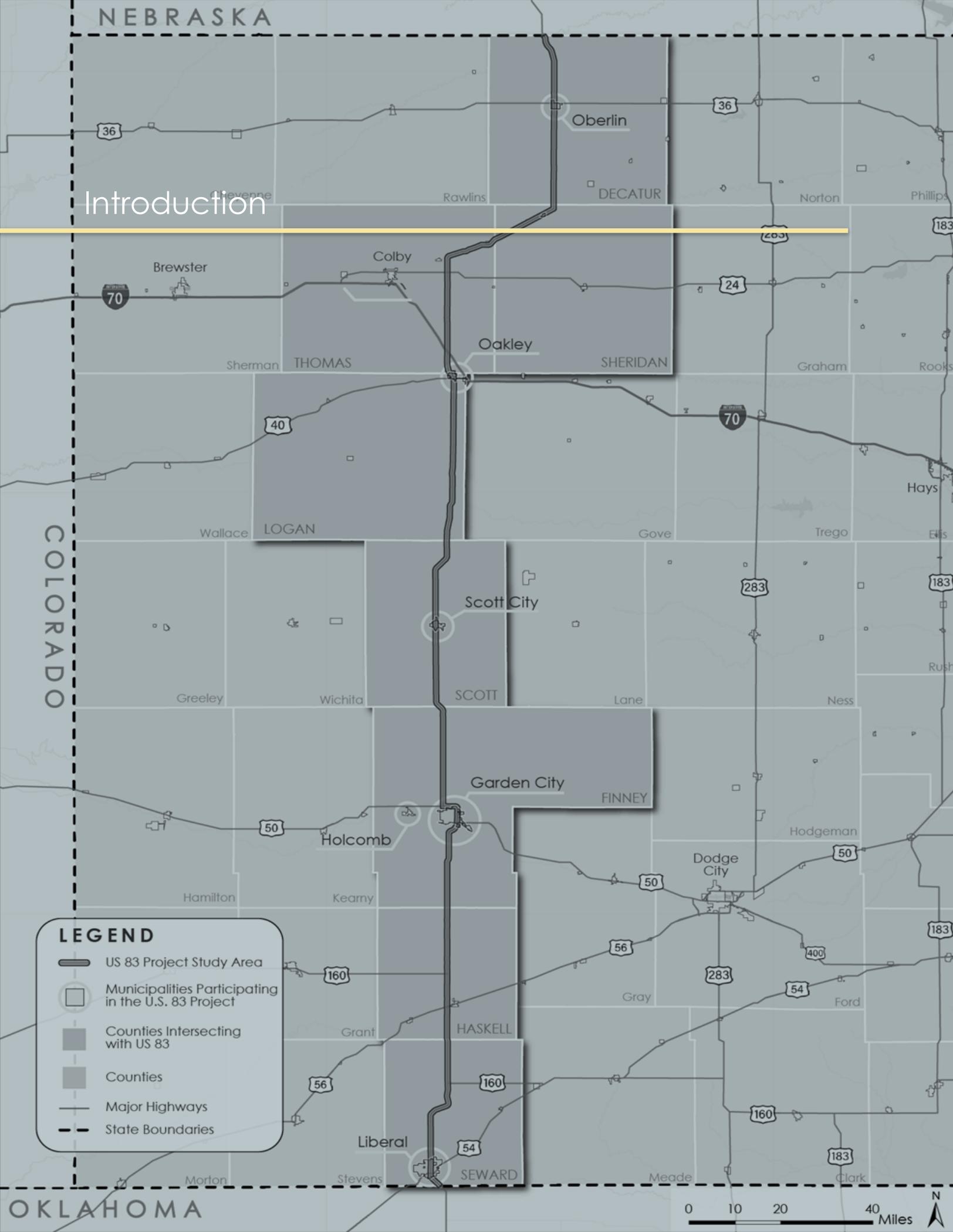
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Introduction



COLORADO

LEGEND

- US 83 Project Study Area
- Municipalities Participating in the U.S. 83 Project
- Counties Intersecting with US 83
- Counties
- Major Highways
- State Boundaries



OKLAHOMA

Introduction

The Safe Streets and Roads for All (SS4A) program provides funding to regional, local, and tribal entities to address local roadway safety issues. Communities receive federal funds to develop Safety Action Plans (SAP) that identify strategies and local priorities for roadway improvements with the goal of eliminating fatalities and serious injuries caused by vehicle crashes. Once an SAP is completed, participating communities are then eligible to receive funds for the construction of those roadway safety improvements identified in the plan. The goal of this initiative is to create tangible roadway safety improvements that benefit all roadway users.

Background

Garden City, located in Finney County, is the largest city in western Kansas. Several U.S. and Kansas State highways pass through Garden City, including U.S. 83, U.S. 400, and K-156, making transportation safety an important topic in the community. The Garden City Safety Action Plan will serve as a guide and reference to address roadway safety and mobility with measures and data-driven solutions to reduce and eliminate all serious and fatal crashes on all roads in Garden City using a Safety System Approach and Vision Zero concept.

This Garden City Safety Action Plan is part of the larger U.S. 83 Communities Roadway Safety Plan. The SAP encompasses a coalition of cities and counties along U.S. 83 in Kansas including Seward, Haskell, Finney, Scott, Logan, and Decatur Counties, along with the Cities of Liberal, Garden City, Holcomb, Scott City, Oakley, and Oberlin.

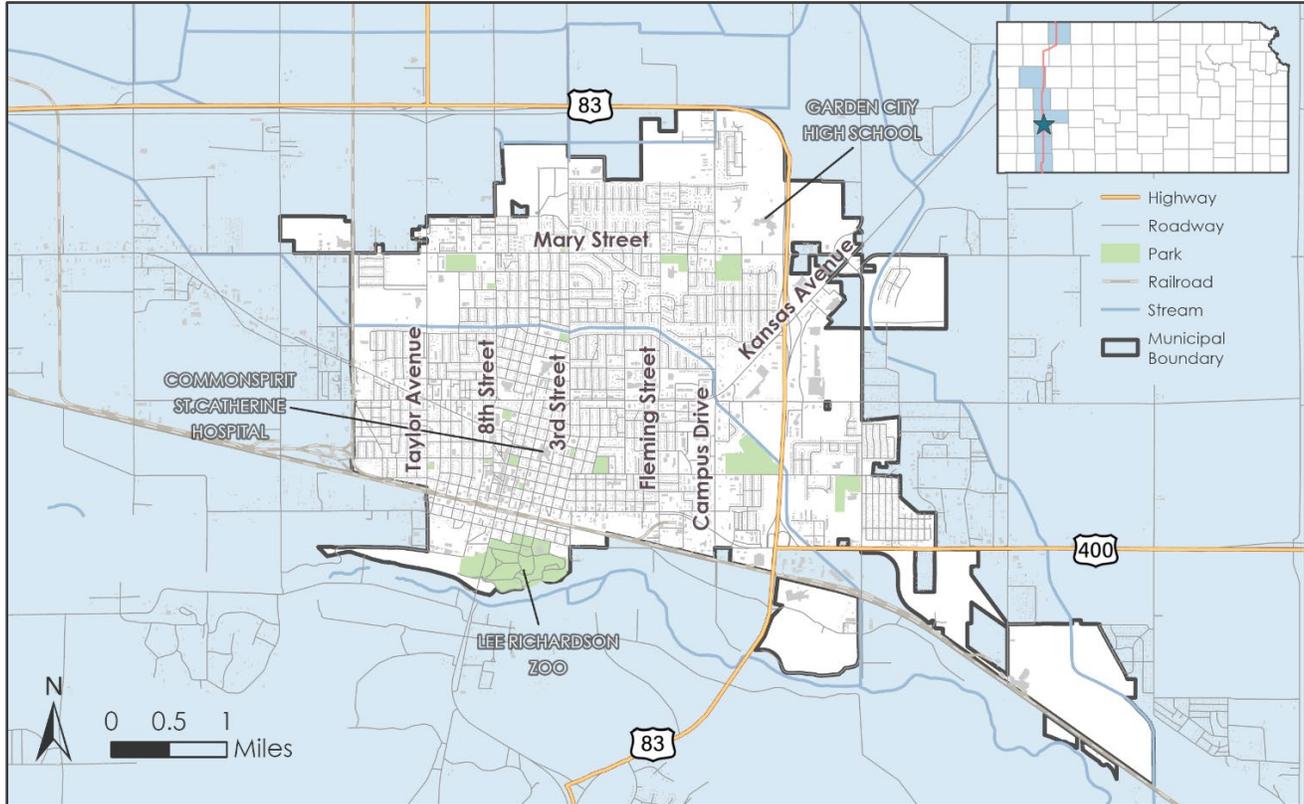


Figure 1 - Garden City Map

Safe System Approach

The Safe System Approach is a framework that addresses roadway safety through principles established by the U.S. Department of Transportation (USDOT). These principles are grounded in innovative ideas and approaches aimed at eliminating fatal and serious roadway injuries. The Safe System Approach principles include:

- Deaths and serious injuries are unacceptable;
- Humans make mistakes;
- Humans are vulnerable;
- Responsibility is shared;
- Safety is proactive;
- And redundancy is crucial



Figure 2 - Safe Systems Approach

Vision Zero Concept

Vision Zero is a multidisciplinary approach aimed at eliminating all traffic fatalities and serious injuries on transportation networks while increasing safety, health, and equitable mobility for all. Vision Zero supports the USDOT's National Roadway Safety Strategy and the Kansas Strategic Highway Safety Plan's Drive to Zero campaign.



Figure 3 - Vision Zero Approach

Planning Context

Recent Studies and Planned Improvements

The Garden City Comprehensive Plan serves as a strategic guide for community development over the next 20 years. It outlines anticipated city growth, addresses challenges in housing supply and affordability, and plans for land use in industrial and retail sectors. The plan also focuses on enhancing transportation networks and improving public health metrics throughout the community.

A key component of the plan is to develop a multimodal transportation system that accommodates pedestrians, cyclists, transit users, and vehicles. It includes upgrading regional highways, reimagining the eastern bypass route to reduce congestion, increasing capacity, and improving safety. Enhancing connections to regional and national networks is vital for Garden City's growth and economic competitiveness.

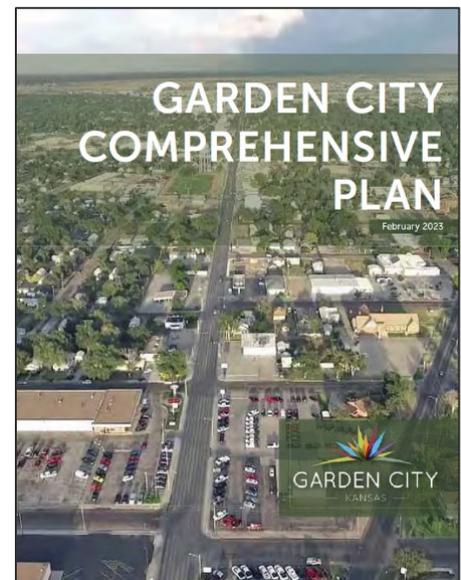


Figure 4 - Garden City Comprehensive Plan

During the planning process community feedback emphasized improving regional highways to ease congestion and better connect Garden City. The plan aligns with the SS4A program's goals, focusing on transportation safety, efficiency, connectivity, and accommodating heavy freight traffic due to the area's manufacturing and farming sectors.

Zoning Analysis

Garden City is comprised of approximately 10.93 square miles of incorporated land, bordered by unincorporated areas primarily used for agriculture. This setup highlights the rural nature of Garden City and the surrounding region, which supports various agricultural, energy, livestock, and manufacturing activities.

Garden City has a diverse mix of zoning districts with multiple types of residential, industrial, and commercial districts. Residential zones range from low density (3-6 dwelling units per acre) to mixed use (12-40 dwelling units per acre). Future land use goals include maintaining a healthy balance between residential, commercial, office/business, industrial, and park/open space zoning and incorporating appropriate levels of density to support increased housing options.

City of Garden City Zoning

- A
- AO
- AS
- C-1
- C-2
- C-3
- C-O
- I-1
- I-2
- I-3
- MHP
- MHS
- P-F
- R-1
- R-2
- R-3
- R-C
- ZL

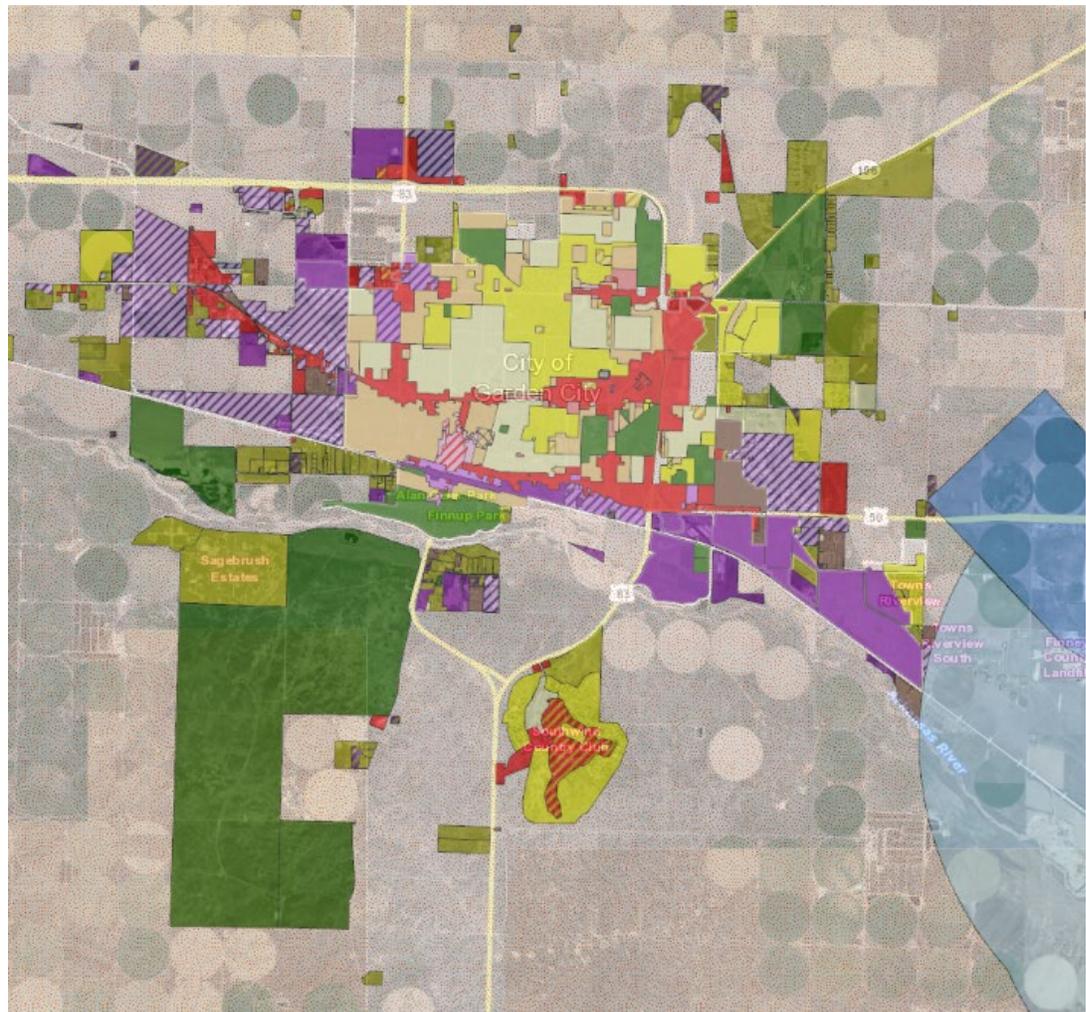


Figure 5 - Garden City Zoning Map

Future Land Use

Garden City's Future Land Use Plan outlines a strategic framework for land use and development through 2045. It reflects the community's vision for growth, influenced by growth projections, public and stakeholder input, and city development trends, while also considering the existing physical characteristics and land uses in the community. Key goals of the Future Land Use Plan include maintaining a balanced mix of residential, commercial, industrial, and recreational spaces, as well as promoting sustainable development with appropriate density to enhance housing options and support neighborhood sustainability.

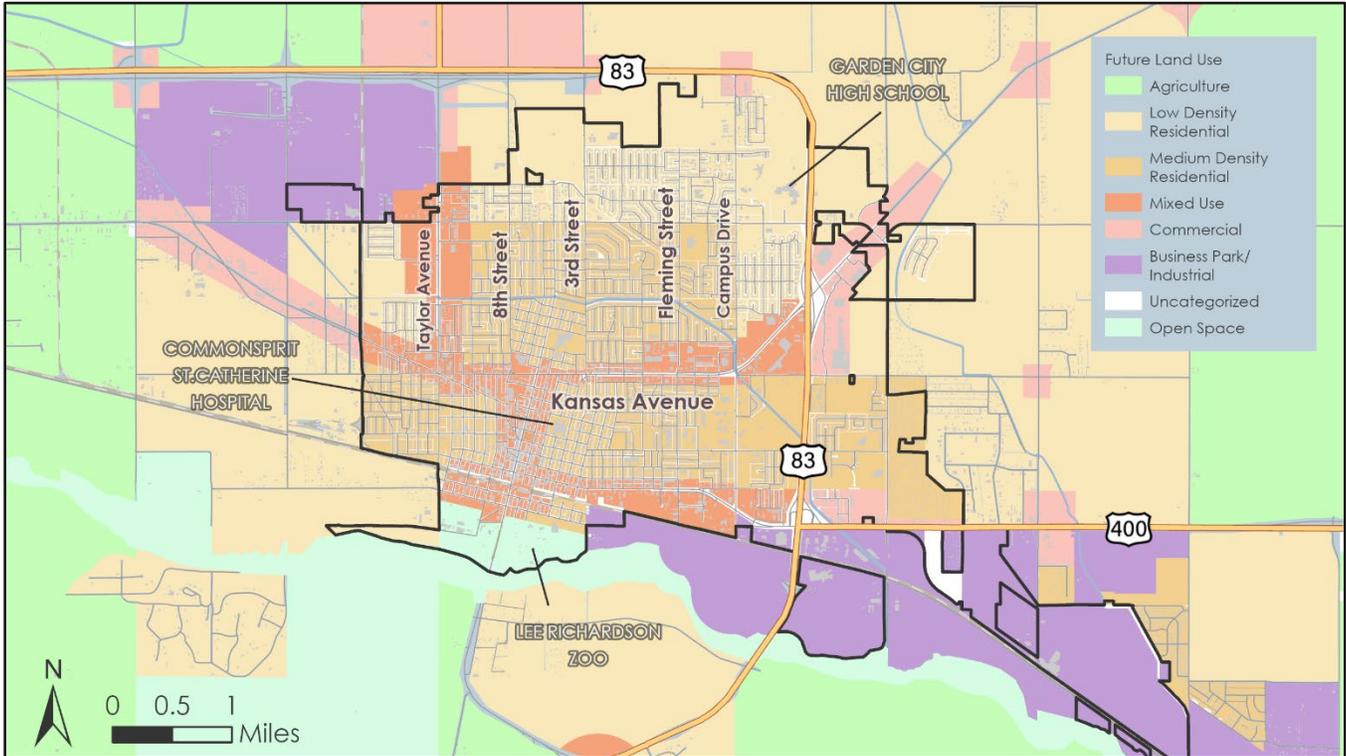


Figure 6 - Garden City Future Land Use Map

Functional Classification

According to the Kansas Department of Transportation (KDOT), Garden City's urban jurisdiction road network (Figure 7) includes freeway, principal arterial, minor arterial, major collector, and local roadways. A breakdown of roadway mileage by functional classification is provided in Table 1.

Table 1 - Garden City Roadway Mileage by Functional Classification

Functional Classification	Roadway Mileage
Principal Arterial, Other: Freeways and Expressways	5.92
Principal Arterial	11.21
Minor Arterial	24.19
Major Collector	29.41
Local Road	158.32
Total	229.05

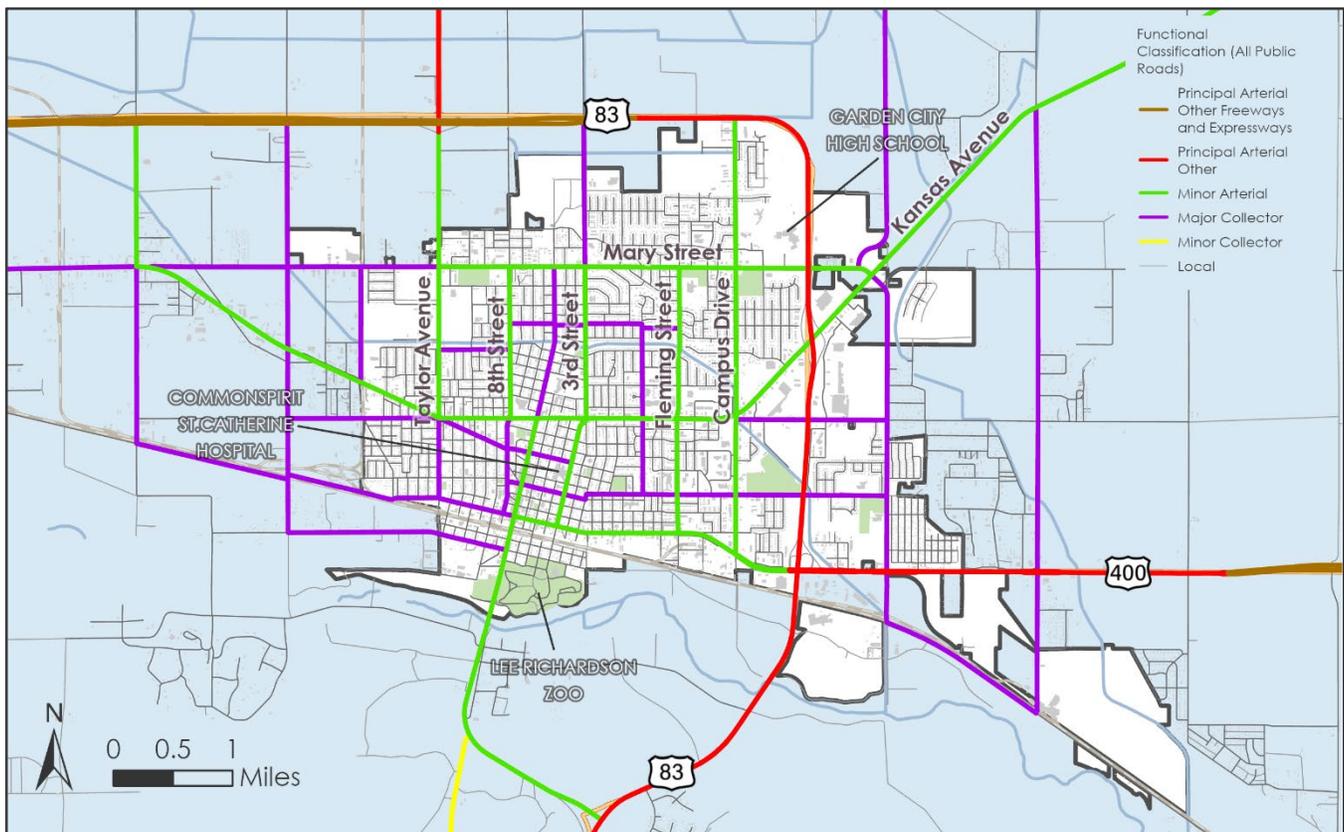


Figure 7 - Garden City Functional Classification Map

KDOT classifies U.S. 400 and U.S. 83 as Class B routes under the Kansas State Highway Classification System. Class B routes are crucial statewide and interstate corridors, serving distinct trip movements with consistent traffic volumes, including significant out-of-state and long-haul freight use.

Demographics

To gain a better understanding of Garden City, demographic data was collected from the 2021-2022 American Community Survey (ACS) 5-Year Estimates and the 2020 Decennial Census. Demographic data was collected to assess the socioeconomic conditions of Garden City.

Garden City has a population of 28,151 with a median age of 32 and a median household income of \$67,500. When commuting to work, most Garden City residents (82%) commute alone by car to work with an average travel time of 14 minutes. Other forms of transportation to work are used much less in Garden City, with only 0.6 percent of residents walking to work, 0.1 percent biking to work, and 2 percent working from home. Garden City residents average \$8,395 annually in transportation costs, with 8 percent of households lacking vehicles. Table 2 shows a summary of the demographics for Garden City compared with the state of Kansas:

Table 2 - Demographic Comparison of Garden City and the state of Kansas

Demographic	Garden City	Kansas
Population	28,151	2,937,880
Median Age	32	37.4
Median Household Income	\$67,500	\$69,747
Percent of Non-Native Residents	25%	7%
Average Transportation Cost per Year	\$8,395	\$10,166
Average Travel Time to Work	14	19.6
Zero Vehicle Households	8%	5.1%
Drove Alone to Work Rate	82%	79.3%
Work-from-Home Rate	2%	8.1%
Walked-to-Work Rate	0.6%	2.2%
Biked-to-Work Rate	0.1%	0.3%

NAICS Analysis

The North American Industry Classification System (NAICS) is a standard employed by federal statistical agencies to categorize business establishments. This system facilitates the collection, analysis, and publication of statistical data concerning the U.S. economy. An analysis using NAICS was performed to examine industry sectors in Garden City in comparison to the state of Kansas. Retail trade accounts for 19 percent of industry in Garden City, followed closely by Health Care and Social Assistance at 17.5 percent and Educational Services at 15.4 percent.

Industry breakdown between Garden City and the state of Kansas overall is similar, but Garden City has a higher concentration of retail trade, health care, educational services, accommodation/food services, and public service jobs while Kansas' industry breakdown is more diverse. Figure 8 provides a comparison of Garden City's top industries to the State of Kansas.

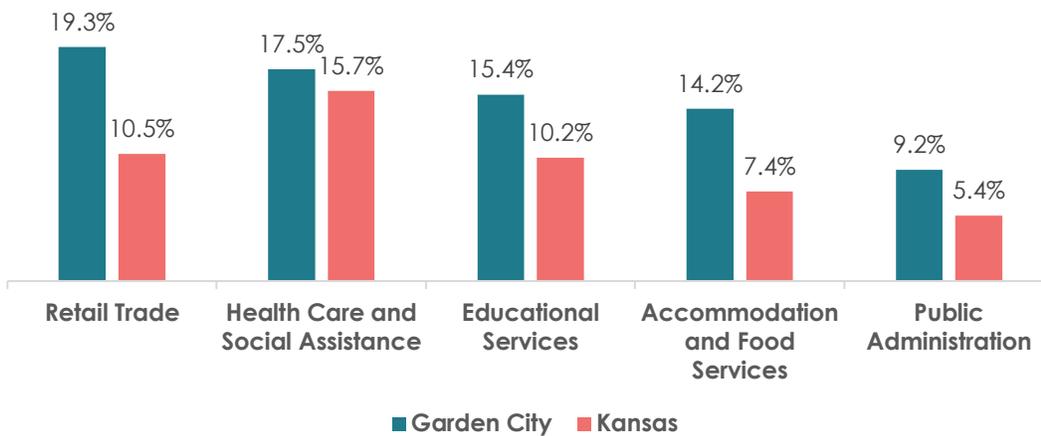
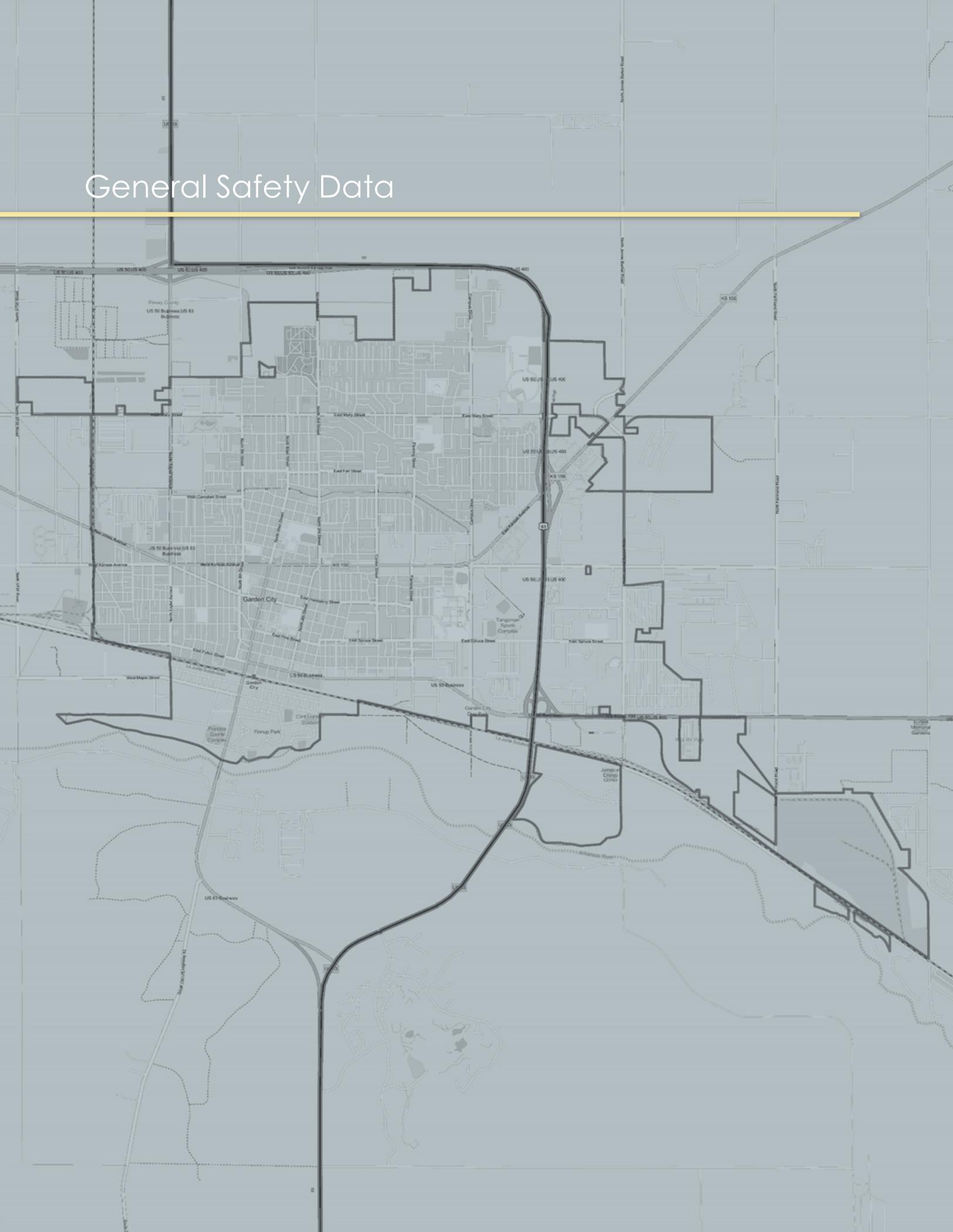


Figure 8 - Garden City vs State of Kansas Industry Breakdown

General Safety Data



General Safety Data

General safety data was collected to conduct a safety analysis of Garden City. This analysis evaluated roadway safety conditions and crash trends and identified vulnerable locations throughout Garden City. This analysis also determined the long-range needs of the community and formulated countermeasures and strategies to mitigate risks and address crash trends effectively.

Study Area Context

The City of Garden City is located within Finney County in the southwestern part of Kansas and can be accessed via multiple U.S. and state highways. Garden City is comprised of approximately 10.93 square miles of incorporated land with a diverse mix of uses. Garden City and the surrounding region is rural in nature and supports booming agriculture, energy, livestock, and manufacturing sectors.

Crash Summary

Crash volumes in Garden City were analyzed over the past five years (2018-2022), encompassing Killed or Severely Injured (KSI) crashes, other injury crashes, and property damage only incidents. Data is collected and provided by KDOT.

Crashes in Garden City decreased by nearly half between 2019 to 2020 but rose again in 2021 and again in 2022. Property damage only crashes represent the majority of incidents, followed by other injury crashes and then KSI crashes. The highest number of crashes occurred in 2019, while 2020 recorded the lowest amount. Over the five-year period, there was a total of 1,915 crashes, 33 of which were KSI crashes, including four fatalities (0.2%) and 29 serious injury crashes (1.5%). In total, 1.7 percent of all crashes resulted in either fatalities or serious injuries.

Table 3 - Garden City Crash Summary 2018-2022

Crashes by Year	Fatal Crashes	Serious Injury Crashes	Other Injury Crashes	Property Damage Only Crashes	Total
2018	1	7	69	400	477
2019	1	7	81	423	512
2020	2	4	51	213	270
2021	0	3	64	216	283
2022	0	8	70	295	373
All Crash Totals	4	29	335	1,547	1,915

Crash Severity

Crash severity ranges from the least severe type (property damage only), to the most severe (Fatal) on the KABCO scale. For most crash analyses conducted, we focus on the top two categories of Fatal and Serious Injury Crashes. These two crash types are defined as KSI.

KABCO Scale (Injury Severity)	
Fatal	K
Incapacitating Injury	A
Non-incapacitating Injury	B
Possible Injury	C
Property Damage Only	O

Figure 9 - Injury Severity Scale

Fatal and Serious Injury Crashes

Between 2018 and 2022, Garden City experienced four fatal crashes. Notably, half of these (2) crashes occurred in 2020. Fatal crashes then decreased to zero in both 2021 and 2022.

Garden City has experienced more serious injury crashes compared to fatal crashes between 2018 to 2022. In both 2018 and 2019, there were seven serious injury crashes. This number dropped to four in 2020 and three in 2021. However, in 2022, serious injury crashes increased again, with eight reported.

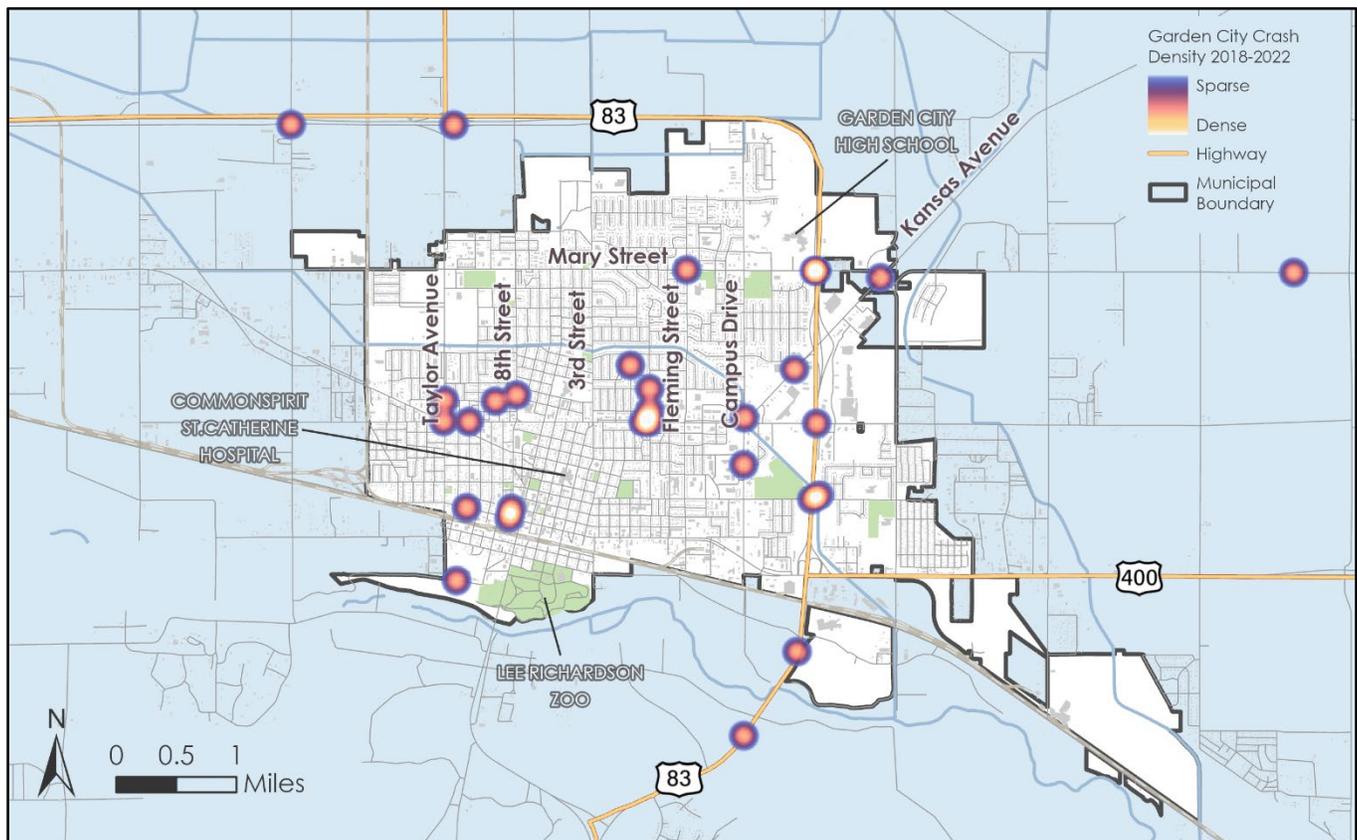


Figure 10 - Garden City KSI Crash Map (2018-2022)

Crash History Analysis



GARDEN CITY
HIGH SCHOOL

Kansas A

Mary Street

Taylor Avenue

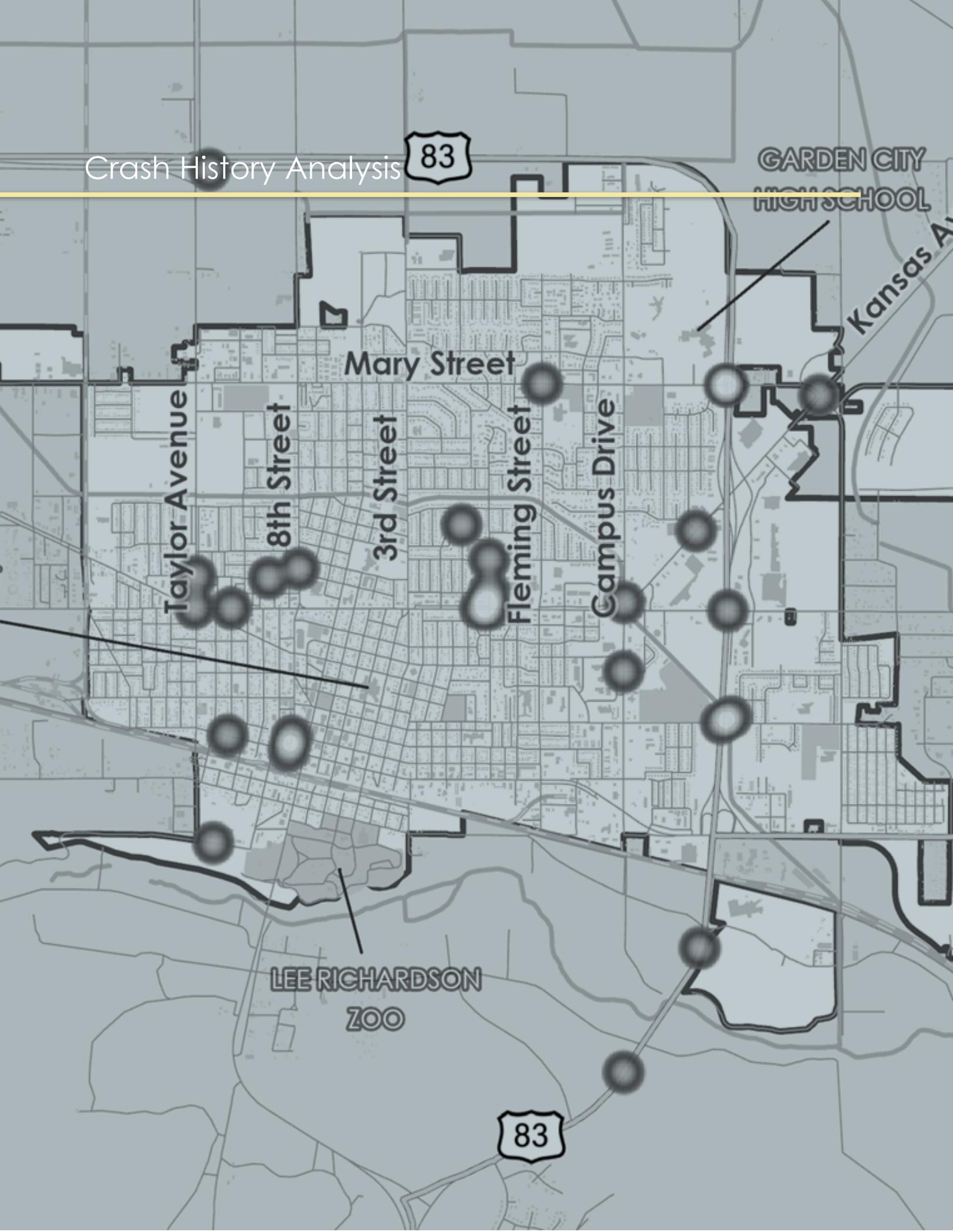
8th Street

3rd Street

Fleming Street

Campus Drive

LEE RICHARDSON
ZOO



Crash History Analysis

Crashes by Crash Type (Manner of Collision)

Crash data from 2018 to 2022 was analyzed to detail crash types, influencing factors, and risks. This analysis aids in understanding these factors and risks, leading to the identification of effective safety measures, targeted interventions, and strategic resource allocation, while also supporting data-driven policies to enhance and focus road safety initiatives.

Angle-side impact crashes are the most common type, accounting for 33 percent of all crashes in Garden City. KSI crashes account for 1.7 percent of all crashes, with angle-side swipe collisions being the most frequent of KSI severity. This highlights the need for targeted safety measures, particularly for preventing angle-side swipe crashes, which have a significant impact on serious injuries and fatalities.

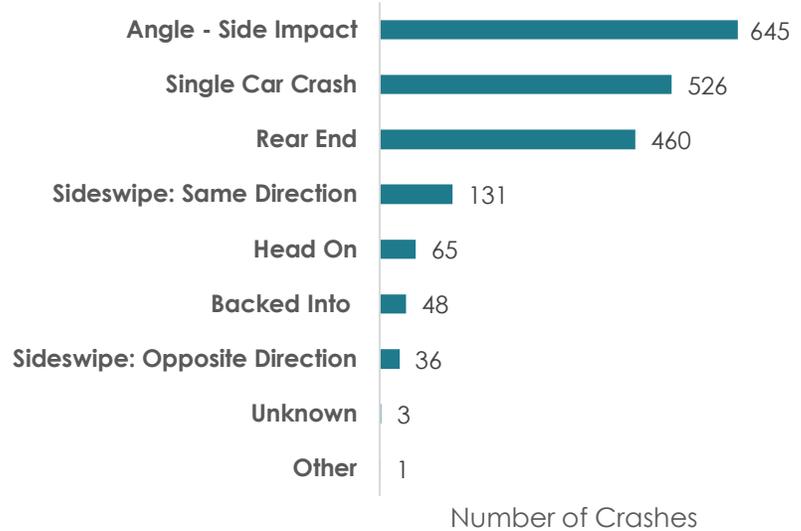


Figure 11 - Garden City Crashes by Manner of Collision

Single Car Crashes

Single car crashes refer to crashes where only one vehicle is involved, resulting from a variety of circumstances and contributing factors such as driver error, weather conditions, or mechanical failures. Among single-car crashes, crashes with parked motor vehicles are the most common, making up 50 percent of these crashes, though none have resulted in KSI outcomes. For KSI crashes involving single-car crashes, collisions with fixed objects are the most frequent, with four recorded cases. Overall, KSI crashes represent 1.7 percent of single-car crashes. The majority of single-car crashes, 84 percent, result in property damage only. This information is crucial for identifying

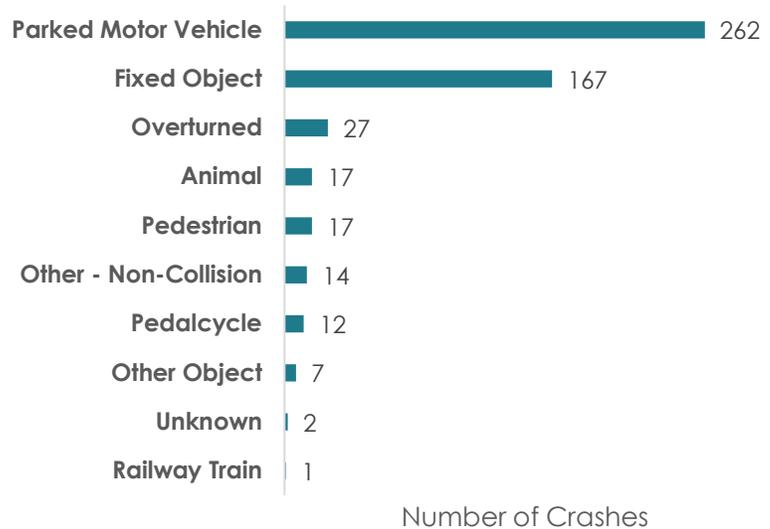


Figure 12 - Single Car Crash Breakdown

and implementing appropriate safety measures and interventions to reduce single crashes along U.S. 83.

Head On Crashes

Head-on crashes occur when the front ends of two vehicles collide directly, typically due to lane encroachment or driver error. Of the 65 head on crashes between 2018-2022, zero were fatal, however one resulted in serious injury. This underscores the urgent need for data-driven solutions and safety measures to reduce head-on collisions and their severe outcomes.

Angle - Side Impact Crashes

Angle side impact crashes are defined as when the front end of one vehicle strikes the side of another vehicle at an angle, typically at an intersection or when changing lanes. Angle side impact crashes account for 75 percent of fatal crashes and 31 percent of serious injury crashes in Garden City between 2018-2022. This highlights the urgent need for data-driven safety measures to address this type of crash and their severe outcomes.

Rear End Crashes

Rear-end crashes occur when the front of one vehicle collides with the rear of another vehicle, whether stationary or moving, typically due to driver inattention or sudden stops. Between 2018-2022 zero rear end crashes were fatal, but five were of serious injury severity. It is important to understand the underlying causal factors of rear end crashes and the data-driven safety measures needed to reduce and eliminate all severe rear end crashes.

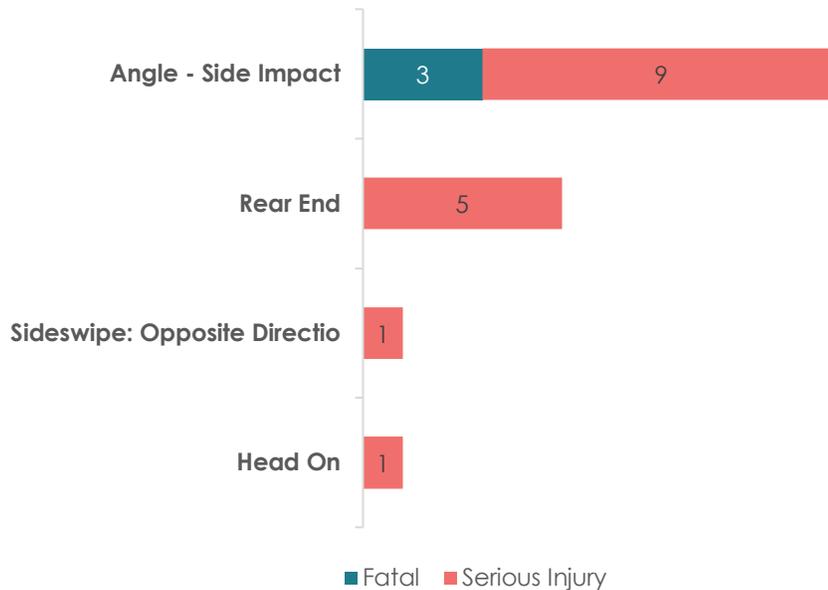


Figure 13 - Summary of Garden City KSI Crashes with Other Vehicles

Crashes by Location

Data from 2018 to 2022 was analyzed to map crash locations, helping to pinpoint high-risk areas and contributing factors. Identifying these high-risk areas and factors allows for the

development of effective safety measures, targeted interventions, and strategic resource allocation to improve safety in Garden City.

State vs Local Roads

Between 2018 and 2022, 75 percent (3 crashes) of the fatalities in Garden City occurred on state roads compared to only 25 percent (1 crash) on local roads. Conversely, 83 percent (24 crashes) of all serious injury crashes in Garden City occurred on local roads compared to 17 percent (5 crashes) on state roads. Overall, 76 percent (25 crashes) of KSI crashes occurred on local roads in Garden City.

Table 4 - Garden City State vs Local Roadway Crashes

Crash Location	Fatal		Serious Injury		Total KSI	
	Count	Percentage	Count	Percentage	Count	Percentage
State Road	3	75%	5	17%	8	24%
Local Road	1	25%	24	83%	25	76%
All Crashes	4	100%	29	100%	33	100%

Crashes in Equity Areas

To advance equity, data from the Climate and Economic Justice Screening Tool (CEJEST) was used to evaluate whether crashes were happening disproportionately in disadvantaged areas. Seven (7) census tracts in Garden City are considered disadvantaged across various categories. Between 2018 and 2022, the disadvantaged areas of Garden City experienced one fatal crash (25%) and 15 serious injury crashes (52%). Garden City is home to a higher concentration of disadvantaged areas compared to non-disadvantaged ones. Overall, 52 percent of all KSI crashes occurred in non-disadvantaged areas during this period, suggesting that a greater proportion of KSI crashes occurred in non-disadvantaged areas.

Table 5 - Garden City Equity vs Non-Equity Area Crashes

Crash Location	Fatal		Serious Injury		Total KSI	
	Count	Percentage	Count	Percentage	Count	Percentage
Equity Area	1	25%	15	52%	16	48%
Non-Equity Area	3	75%	14	48%	17	52%
All Crashes	4	100%	29	100%	33	100%

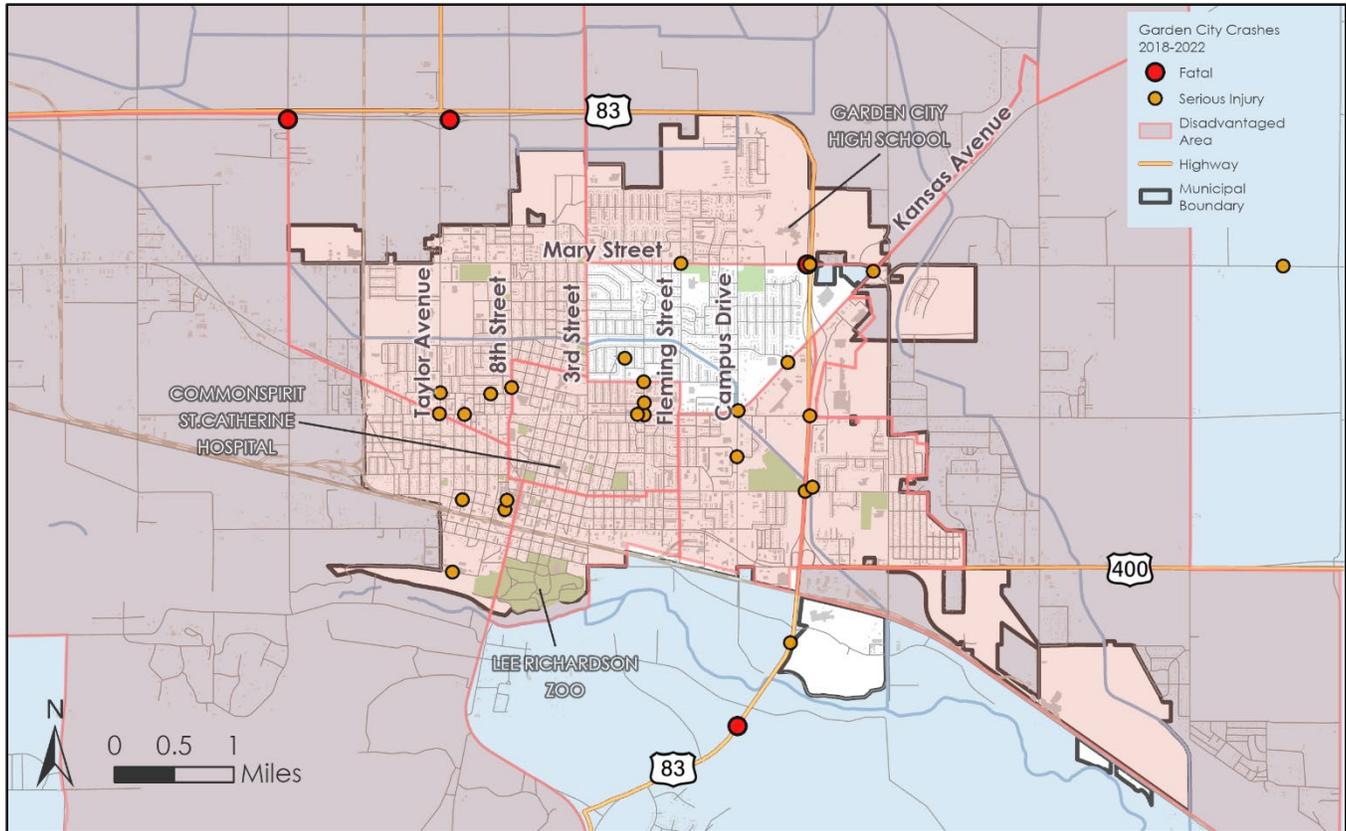


Figure 14 - Garden City KSI Crashes in Disadvantaged Areas (2018-2022)

Crashes by Mode

The most common modes of transportation involved in fatal and serious injury crashes were automobiles (11 crashes) and pickup trucks (9 crashes), as seen in . Crashes involving pickup trucks were the most common fatal crashes with two crashes. Two other crashes (1 with a tractor-trailer and 1 with a sport utility vehicle) also resulted in fatalities.

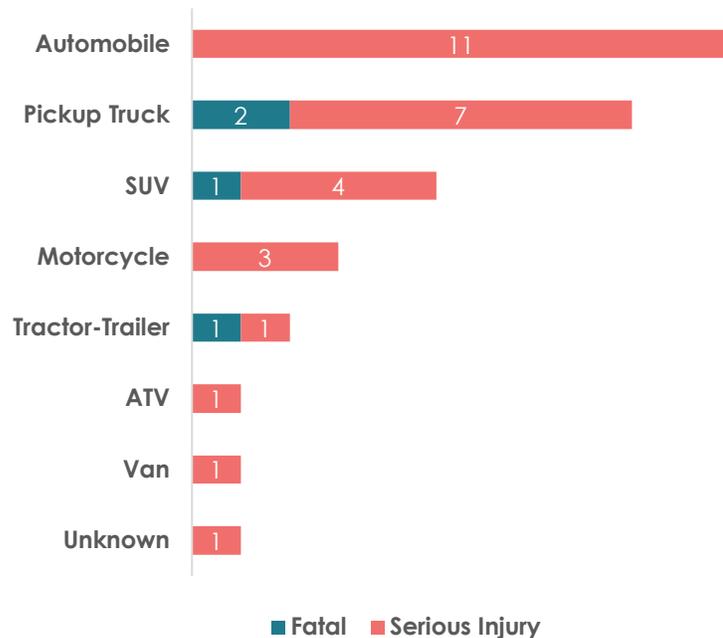


Figure 15 - Garden City KSI Crashes by Mode of Transportation

Vulnerable Road Users

Vulnerable Road Users (VRU) are generally defined by the KDOT as any road user including pedestrians, bicyclists, individuals using mobility aids, and other non-motorized road users who are at greater risk of injury or death in a traffic environment compared to motor vehicles.

KDOT's focus on VRU aligns with the Vision Zero and Safe System Approach to create safer road environments for all users by emphasizing the need for appropriate safety measures and infrastructure improvements.

KDOT completed a Vulnerable Road User Safety Assessment (VRUSA) that implements a Safe System Approach through a systematic data-driven safety analysis that uses a High Injury Network (HIN), High-Risk Network (HRN), and other data to effectively and efficiently identify safety risks for VRUs, appropriate measures, and support local agencies in addressing VRU safety.

High-Injury Network Designation	Fatal and Serious Injury		Centerline Miles	
	Crashes	Percentage	Total	Percentage
Highest Priority	323	31%	59	0.04%
High Priority	282	27%	138	0.10%
Medium Priority	138	13%	197	0.14%
Entire HIN	743	72%	394	0.28%
Statewide	1,034	100%	141,005	100%

Figure 16 - HIN Designation Matrix

Table 6 - Vulnerable Road User Involved KSI Crashes

Vulnerable Road Users	Fatal		Serious Injury		Total KSI	
	Count	Percentage	Count	Percentage	Count	Percentage
Pedestrian Involved	0	0%	2	7%	2	6%
Bicycle Involved	0	0%	1	3%	1	3%
All Crashes	4	100%	29	100%	33	100%

A HIN matrix categorizes road segments into various priority levels based on factors such as VRU injury crashes, VRU trip volumes, and additional relevant data (Figure 16). Following the development of the HIN, a HRN systematic analysis identified segments of elevated risk for VRU injury crashes based on similar roadway characteristics, contextual factors, or VRU usage.

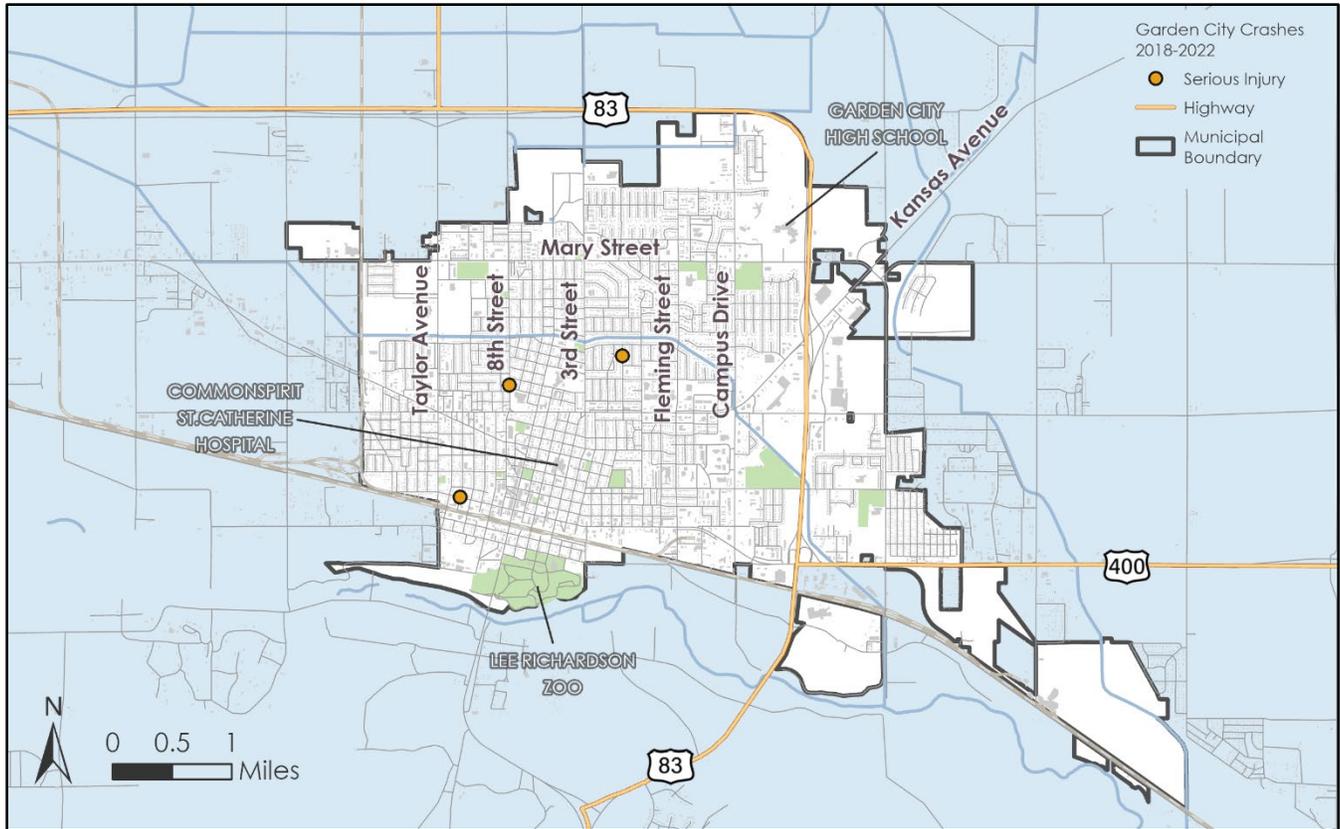


Figure 17 - Garden City VRU Involved KSI Crash Map (2018-2022)

Contributing Circumstances

Contributing circumstances refer to specific factors or conditions identified as having played a role in causing or exacerbating a traffic crash. These circumstances can involve driver behavior, environmental conditions, vehicle conditions, or roadway features that contribute to the occurrence and severity of crashes. Understanding these contributing factors is essential for traffic safety analysis and developing targeted interventions to reduce crashes and improve overall road safety. Figure 18 shows the percentage of KSI crashes by contributing circumstance. For example, 9 percent of VRU related crashes resulted in a KSI crash in Garden City. Crashes can involve multiple contributing circumstances; for example, an intersection crash can also involve an occupant protection issue, which means that the data presented in the chart will not total 100 percent.

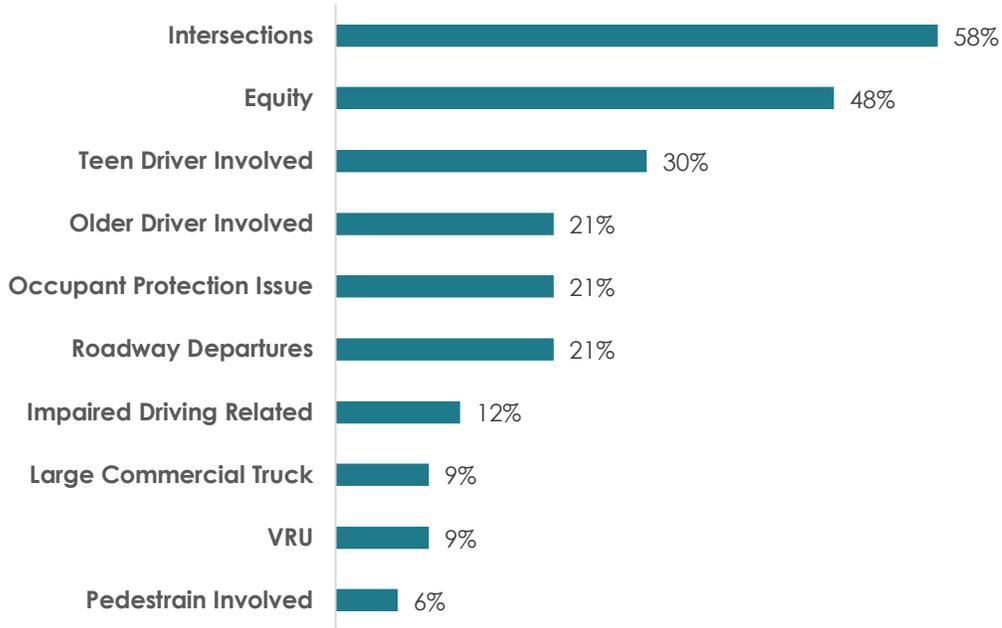


Figure 18 - Share of KSI Crashes by Contributing Circumstance

Intersections

Intersections represent the leading contributing circumstance, with 19 KSI crashes recorded in Garden City. This high occurrence rate highlights the need for enhanced intersection safety measures in Garden City. This could include the installation of additional traffic control devices, improved signage, and road design adjustments to minimize conflict points.

Roadway Departures

Roadway departures occur when a vehicle veers out of its designated lane, either crossing the edge line or centerline. A significant portion of KSI crashes (7 crashes) were roadway departure crashes in Garden City. Interventions for roadway departures could include rumble strips, enhanced road edge delineation, and median barriers to prevent vehicles from leaving the travel lane.

Occupant Protection Issues

Occupant protection issues (largely the failure to use seatbelts) contributed to seven KSI crashes in Garden City. These crashes emphasize the need for continued public education on seatbelt use and stricter enforcement of occupant safety laws.

Teen Driver Involvement

Teen drivers (18 years and younger) contributed to 10 KSI crashes in Garden City. This suggests a need for ongoing education programs focused on young drivers, as well as initiatives that promote safe driving habits and experience-building in less risky environments.

Older Driver Involvement

Older drivers (65 years and older) were involved in seven KSI crashes in Garden City. Given the aging population, targeted interventions such as driver refresher courses and intersection design modifications could help reduce these crashes.

Impaired Driving

Impaired driving was identified as a factor in four KSI crashes in Garden City. Strengthening DUI enforcement and public awareness campaigns could address this issue.

Large Commercial Vehicles

Large commercial vehicles were involved in three KSI crashes in Garden City between 2018-2022. Safety measures, such as improved truck route planning, better enforcement of vehicle safety regulations, and driver education programs, could mitigate these risks.

Vulnerable Road Users

Pedestrian-related KSI crashes were relatively rare, with two recorded. Bicyclist-related KSI crashes were also relatively rare with only one recorded. However, even a small number of such crashes can be severe due to the vulnerability of these road users. Enhancing pedestrian and cyclist infrastructure, especially in areas with known conflicts, is recommended.

Table 7 - Garden City KSI Crashes by Contributing Circumstance

Contributing Circumstances	Fatal		Serious Injury		Total KSI	
	Count	Percentage	Count	Percentage	Count	Percentage
Intersections	1	25%	18	62.1%	19	57.6%
Teen Driver Involved	0	0%	10	34.5%	10	30.3%
Older Driver Involved	1	25%	6	20.7%	7	21.2%
Occupant Protection Issue	4	100%	3	10.3%	7	21.2%
Roadway Departures	2	50%	5	17.2%	7	21.2%
Impaired Driving Related	1	25%	3	10.3%	4	12.1%
Large Commercial Vehicle	1	25%	2	6.9%	3	9.1%
VRU	0	0%	3	10.3%	3	9.1%
Pedestrian Involved	0	0%	2	6.9%	2	6.1%

Contributing Circumstances Matrix

The Contributing Circumstances Matrix provides a comprehensive view of the interplay between factors leading to KSI crashes in Garden City. The matrix highlights the overlap of contributing circumstances along both the horizontal and vertical axes, illustrating how certain conditions frequently coexist and compound the severity of crashes. For example,

intersections and older and younger drivers are a common intersecting crash type with six and seven crashes respectively. These intersections of contributing circumstances underscore the multifaceted nature of road safety challenges in Garden City, revealing the need for integrated strategies that address multiple risk factors simultaneously, such as improving intersection design while also promoting driver education.

Table 8 - Garden City Contributing Circumstances Matrix

Contributing Circumstance Matrix (Fatal + Serious Injury Crashes, 2018-2022)														
Garden City	Garden City	Finney County	U.S. 83 Corridor	Study Area Total	State	Intersections	Teen Driver Involved	Roadway Departures	Occupant Protection Issues	Older Driver Involved	Impaired Driving Related	Large Commercial Vehicles	Pedestrian Involved	Bicyclist Involved
KSI Crash Count	33	87	60	202	7787	19	10	7	7	7	4	3	2	1
<i>Intersections</i>	19	31	19	67	2383	19	7	0	1	6	1	1	1	1
<i>Teen Driver Involved</i>	10	17	10	42	1123	7	10	2	2	1	1	1	1	0
<i>Roadway Departures</i>	7	31	20	76	3407	0	2	7	5	1	1	1	0	0
<i>Occupant Protection Issue</i>	7	24	15	65	2233	1	2	5	7	2	2	1	0	0
<i>Older Driver Involved</i>	7	11	10	25	1433	6	1	1	2	7	1	0	0	0
<i>Impaired Driving Related</i>	4	10	4	24	1433	1	1	1	2	1	4	0	0	0
<i>Large Commercial Vehicles</i>	3	11	17	35		1	1	1	1	0	0	3	0	0
<i>Pedestrian Involved</i>	2	4	3	8		1	1	0	0	0	0	0	2	0
<i>Bicyclist Involved</i>	1	2	0	3	776	1	0	0	0	0	0	0	0	1

Priority Emphasis Areas

Intersections

Intersection crashes rank as the most common and hazardous types of collisions. In Garden City, 19 KSI crashes occurred at intersections, highlighting their significant risk. These crashes often involve vehicles approaching from different directions, as well as pedestrians and bicyclists navigating the intersection. Several factors heighten the risk of crashes at intersections, including the age of drivers—both older and younger—impaired or distracted driving, and the failure to wear seatbelts. The complex nature of intersections, where multiple paths converge, makes them particularly prone to crashes. The significant number of such crashes in Garden City underscores the need for targeted interventions to improve intersection safety for all road users.

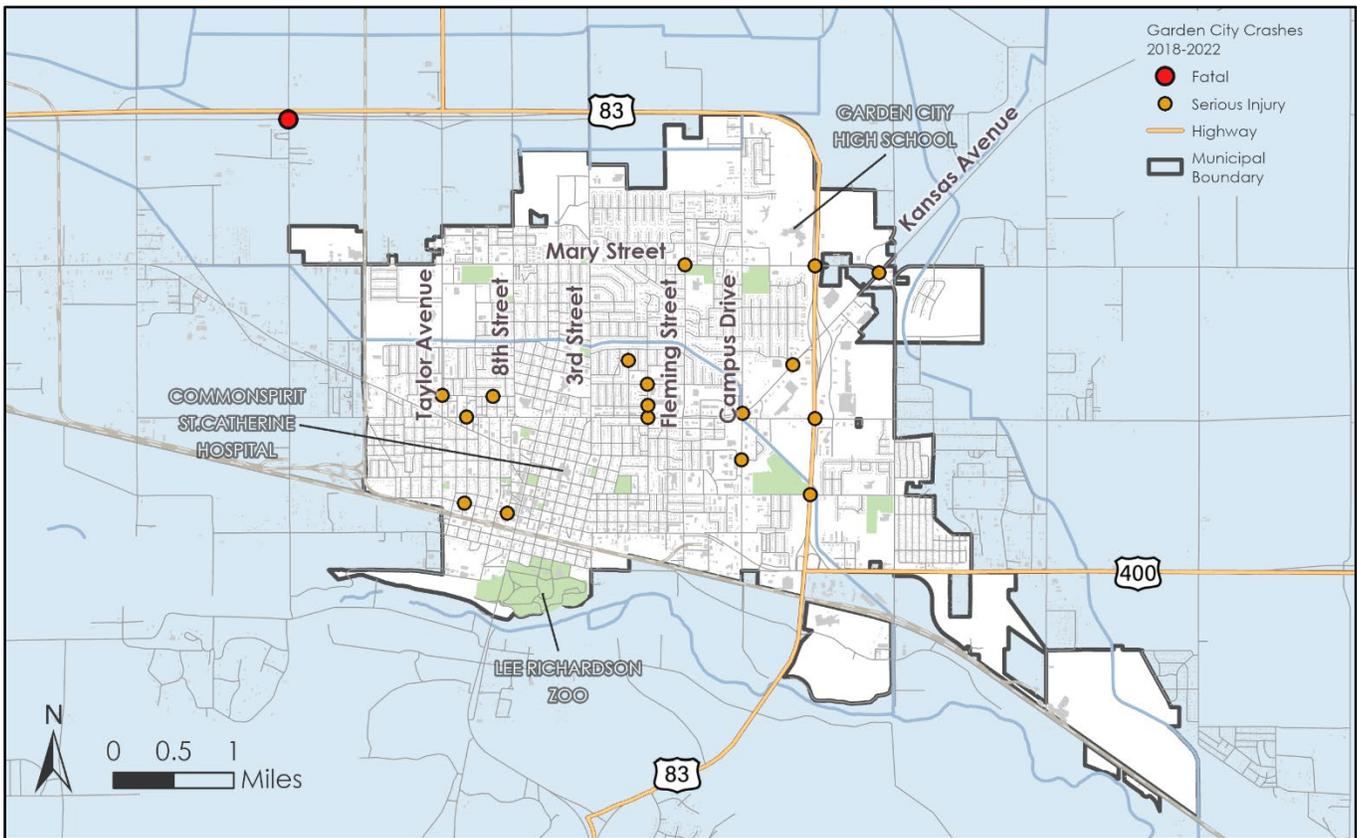


Figure 19 - Garden City Intersection Crash Map (2018-2022)

Roadway Departure

Roadway departure crashes are a leading cause of highway fatalities, accounting for over half of the deaths on U.S. roads each year. In Garden City, seven KSI crashes were attributed to roadway departures, making it one of the most common contributing circumstances. These crashes occur when a vehicle veers out of its designated lane, either crossing the edge line or centerline. Factors contributing to these crashes include excessive speed, roadway geometry such as shoulder width and curve radii, impaired driving, distracted driving, and failure to use seatbelts. The combination of these behaviors not only increases the likelihood of a crash but also exacerbates the severity of injuries and fatalities resulting from such events. Addressing these factors is vital to reducing the frequency and impact of roadway departure crashes in Garden City.

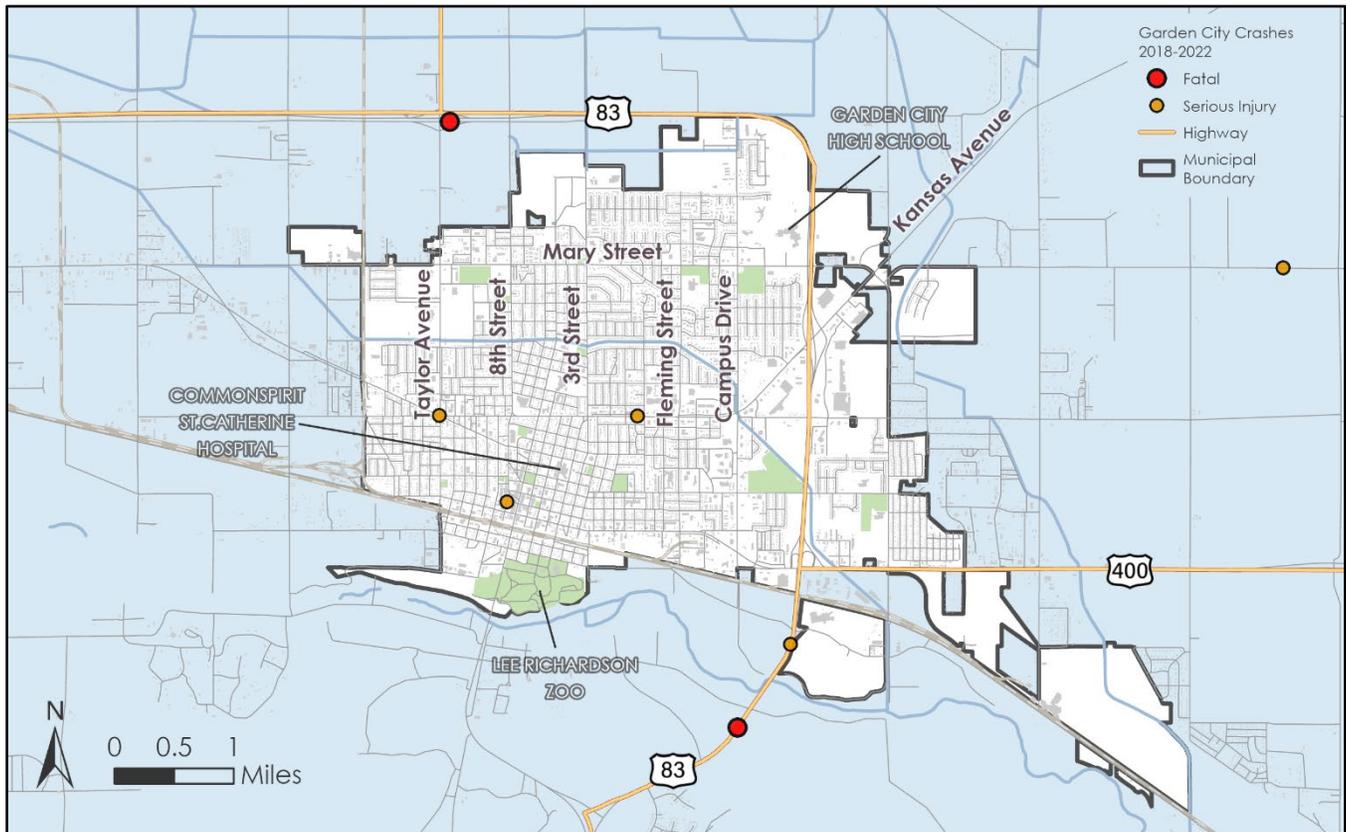


Figure 20 - Garden City Roadway Departure Crash Map (2018-2022)

Occupant Protection

The simple act of wearing a seatbelt is one of the most effective ways to reduce the risk of death or serious injury in a crash. Despite this, seven KSI crashes in Garden City were linked to occupant protection issues, primarily the failure to use seatbelts. This is especially evident in serious roadway departure and intersection crashes, where unrestrained occupants are far more likely to suffer catastrophic outcomes. Promoting consistent seatbelt use across all demographics is crucial for enhancing overall safety on all roadways.

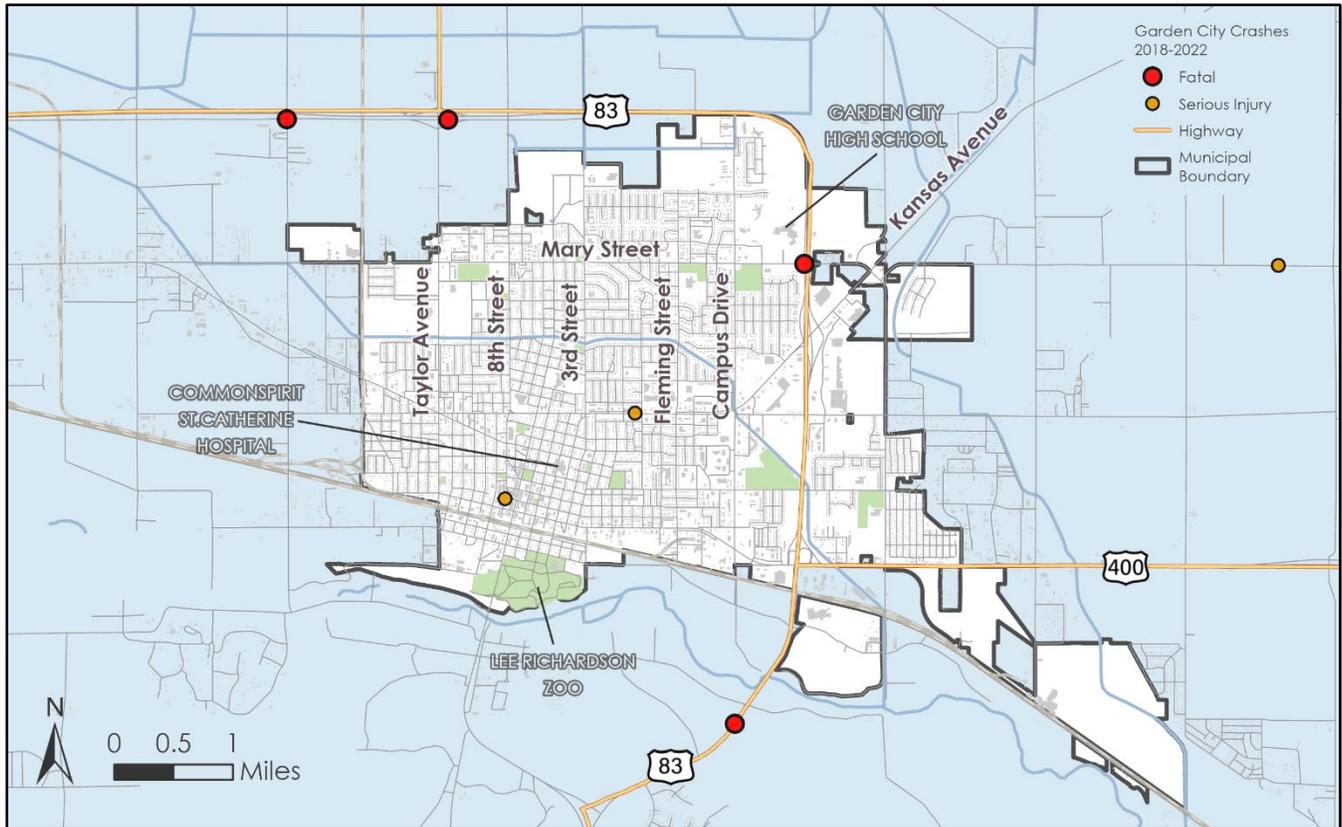


Figure 21 - Garden City Occupant Protection Related Crash Map (2018-2022)

Older Adults and Young Drivers

Crashes involving young drivers (18 years and younger), and older adults (65 years and older) represent a significant portion of crashes in Garden City. Specifically, 10 KSI crashes involved young drivers, and seven KSI crashes involved older drivers. Younger drivers, due to inexperience and often limited driving education, are at a higher risk of being involved in crashes. Conversely, as drivers age, their reaction times, vision, and cognitive abilities can decline, increasing the likelihood of a crash. Both age groups face unique challenges that contribute to their vulnerability on the road. Implementing targeted education and training programs, as well as designing roadways that account for the needs of these drivers, can help mitigate the risks they face.

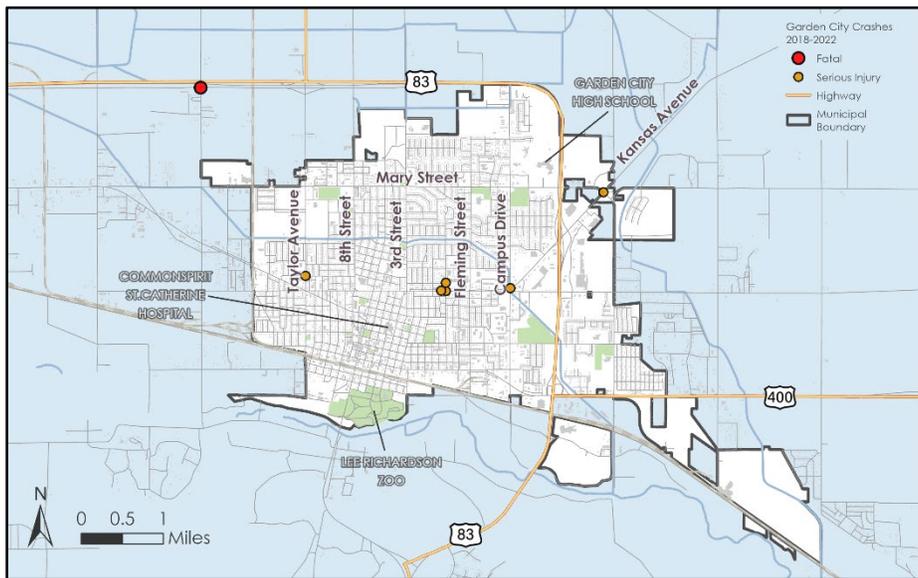


Figure 22 - Garden City Older Driver Involved Crash Map (2018-2022)

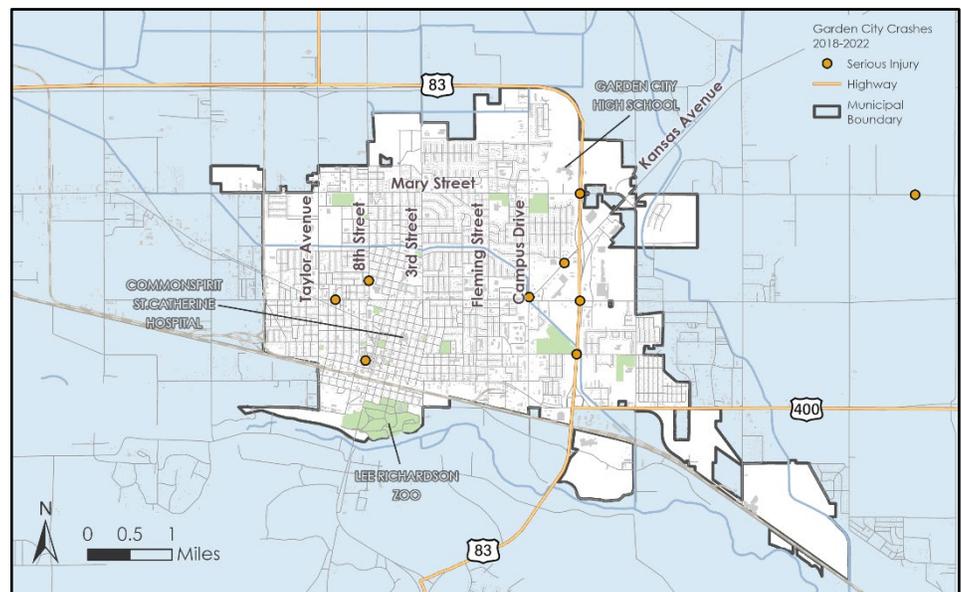


Figure 23 - Garden City Younger Driver Involved Crash Map (2018-2022)

Conclusion

Garden City, the largest city in Finney County and the greater western Kansas region, boasts a diverse population and a wide range of land uses. The city supports thriving agriculture, energy, livestock, and manufacturing sectors. Transportation safety is a key concern for the community as multiple U.S. and state highways, including U.S. 83, U.S. 400, and K-156, run through and connect to Garden City. Understanding the multifaceted roles these highways and roadways play is essential for developing long-term solutions that enhance safety outcomes. Below is a summary of the themes that emerged during analysis, which will influence the final plan.

- Four key factors significantly impact roadway safety in Garden City: intersection crashes, crashes involving older or teen drivers, roadway departures, and occupant protection issues, such as low seatbelt use. These elements are the primary contributors to fatal and serious injury crashes within Garden City. Implementing targeted interventions that address these issues offers the best opportunity to reduce the number of such crashes.
- Angle-Side Impact, Single Car crashes, and Rear End crashes accounted for 85 percent of crashes in Garden City between 2018 and 2022. Notably, Angle-Side Impact crashes account for 75 percent of the fatal crashes in Garden City.
- Crashes involving parked motor vehicles were the most prevalent types of single-vehicle accidents, accounting for 50 percent of such incidents between 2018 and 2022. Notably, however, none of these crashes have resulted in fatal or serious injuries.
- Overall, more crashes occurred on local roads in Garden City; however, the most severe incidents were predominantly on state highways, where speeds are higher. In fact, 75 percent of fatal crashes during the five-year period happened on U.S. 83, while more serious injury crashes occurred on local roads. This indicates that while local roads experience a higher volume of crashes, the most critical accidents are primarily associated with state roadways.
- A notable concentration of severe crashes was observed near commercial activity areas characterized by numerous access points. This indicates that high driveway density might play a significant role in influencing crash trends, as the increased entry and exit points can lead to higher conflict rates among vehicles.
- Recent crash trends exhibit fluctuations without a consistent pattern. Over the five years analyzed for this report, fatal crashes were low, with a total of 4, peaking at 2 in 2020 before declining to zero in 2021 and 2022. Serious injury crashes varied, starting with 7 incidents in 2018 and 2019, dropping to a low of 3 in 2021, and rising again to 8 in 2022. Overall, total crashes decreased in 2020 but rebounded in subsequent years.