

# Georgia Traffic Safety Facts

2021 Data

August 2023

In this fact sheet, information is presented as follows.

- [Non-Motorist Fatalities and Serious Injuries](#)
- [Crash Characteristics](#)
  - [Urban vs. Rural](#)
  - [Environmental Characteristics](#)
- [Contributing Circumstances](#)
  - [School Bus-Related Fatal Crashes](#)
- [Demographics](#)
  - [Older Pedestrian Population](#)
  - [Vulnerable Populations](#)
- [Safety Equipment & Protective Gear](#)
- [Personal Conveyances](#)

This fact sheet contains information from the Fatality Analysis Reporting System (FARS), Georgia Department of Transportation (GDOT) crash data modified by Crash Outcomes Data Evaluation System (CODES) at the Department of Public Health (DPH), Georgia Department of Transportation (GDOT) Numeric roadway data, Georgia Emergency Medical Services Information System (GEMSIS), Hospital Discharge Data, Emergency Room Data. Refer to the Data Considerations section at the end of this publication regarding the data and information presented.



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## PEDESTRIANS AND BICYCLISTS (NON-MOTORISTS)

Non-motorists, as defined in this fact sheet, include pedestrians and bicyclists using the 2021 FARS data. In some of the following discussions of pedestrian and bicyclist injuries both traffic and non-traffic (i.e., occurring on any place other than a traffic way including trails, driveways, parking lots, or sidewalks) are included in aggregate reporting. This fact sheet provides a preliminary overview of traffic fatalities, serious injuries, and crashes on Georgia roadways.

### 2021 Key Findings

Although pedestrians and bicyclists accounted for 18 percent of all traffic fatalities, they represented less than one percent of all individuals involved in motor vehicle crashes (0.86 percent).

#### *Pedestrians*

- In 2021, there were 306 pedestrians fatally injured in traffic crashes, a 10 percent increase from the 279 pedestrian fatalities in 2020.
- Similar to previous years, more than half of all pedestrian crashes occurred within the Atlanta region (58 percent).
- In 2021, more than three-quarters of pedestrian fatalities (76 percent) and more than half (57 percent) of pedestrian injuries occurred on roadways with posted speed limits at or above 40 mph.
- Forty-nine percent of pedestrian crashes on two-way, undivided principal arterials resulted in a pedestrian serious injury or fatality.
- The hospitalization and emergency room visit charges totaled \$188 million for the 2,356 pedestrians injured in motor vehicle traffic-related crashes.

#### *Bicyclists*

- There was an average of 23 bicyclist fatalities in traffic crashes each year between 2017-2021. In 2021, there were 15 bicyclist fatalities on Georgia roadways—a reduction of nearly half from the 31 bicyclist fatalities in 2019.
- The bicyclist crash rate is highest in urban counties outside of the Atlanta region.
- Sixty-one percent of bicyclist crashes occur at intersections.
- The hospitalization and emergency room visit charges totaled \$55 million for the 413 bicyclists injured in motor vehicle traffic-related crashes.

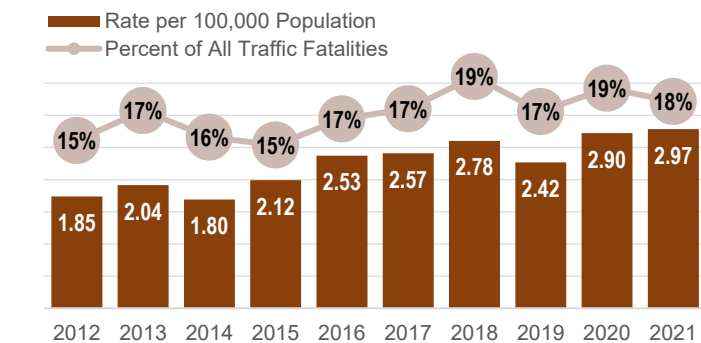
## Non-Motorist Fatalities and Serious Injuries

### Non-Motorist Fatalities

According to FARS data, there were 306 pedestrians and 15 bicyclists fatally injured in motor vehicle traffic crashes in 2021 (Table 1). The number of pedestrian fatalities in traffic crashes has nearly doubled in the past decade and increased by 10 percent, from 279 pedestrian fatalities in 2020 to 306 in 2021. There was an average of 23 bicyclist fatalities in traffic crashes per year between 2017-2021.

Although non-motorists represented less than one percent of all persons involved in motor vehicle crashes (0.86 percent), they accounted for 18 percent of all traffic fatalities—a net one percent decrease from the previous year. There were approximately three pedestrian and bicyclist fatalities for every 100,000 population in 2021. Figure 1 shows the rate and percentage of non-motorist traffic fatalities for the past decade.

Figure 1. **Rate and Percent of Non-Motorist Traffic Fatalities, 2012-2021**



Source: FARS 2012-2021; OASIS 2012-2021

Table 1 presents the total number of traffic fatalities, Georgia population, and non-motorist fatalities (pedestrians and bicyclists) from 2012 to 2021.

- The number of total traffic fatalities increased by 8 percent, from 1,664 in 2020 to 1,797 in 2021.
- The number of non-motorist fatalities increased by 3 percent, from 311 in 2020 to 321 in 2021.
- The rate of non-motorist fatalities increased by 2 percent, from 2.90 to 2.97 fatalities per 100,000 population—the highest rate in the past decade.

Table 1. **Rate and Percent of Non-Motorist Traffic Fatalities, 2012-2021**

Year	Total Traffic Fatalities	Georgia Population	Pedestrian		Bicyclist		Non-Motorists Fatalities		
			Number	Percent of All Traffic Fatalities	Number	Percent of All Traffic Fatalities	Number	Percent of All Traffic Fatalities	Rate per 100,000 Population
2012	1,192	9,919,945	167	14%	17	1.4%	184	15%	1.85
2013	1,180	9,992,167	176	15%	28	2.4%	204	17%	2.04
2014	1,164	10,097,343	163	14%	19	1.6%	182	16%	1.80
2015	1,432	10,214,860	194	14%	23	1.6%	217	15%	2.12
2016	1,556	10,310,371	232	15%	29	1.9%	261	17%	2.53
2017	1,540	10,429,379	253	16%	15	1.0%	268	17%	2.57
2018	1,504	10,519,475	262	17%	30	2.0%	292	19%	2.78
2019	1,491	10,617,423	236	16%	21	1.4%	257	17%	2.42
2020	1,664	10,710,017	279	17%	32	1.9%	311	19%	2.90
2021	1,797	10,799,566	306	17%	15	0.8%	321	18%	2.97

Source: FARS 2012-2021, OASIS 2012-2021

## Non-Motorist Injuries

The following section describes various responses to serious injuries experienced by pedestrians and bicyclists involved in motor vehicle traffic crashes and non-traffic crash incidents. Injured pedestrians and bicyclists can be counted multiple times for each response (e.g., an injured person may be counted as an emergency room visit, hospitalization, and/or trauma center patient).

Table 2. **Description of Traffic Injury Surveillance Data Sources**





Traffic Injury Surveillance Data Sources	
	<b>Suspected Serious Crash Injuries</b> are reported by law enforcement responding to a motor vehicle crash scene.
	<b>Emergency Medical Services</b> include all ground and air transports to an emergency facility for patients who are injured and require medical care in the state of Georgia.
	<b>Trauma Center</b> patients are identified as those with serious injuries that meet specific criteria. The State of Georgia follows the identification and treatment guidelines established by the American College of Surgeons along with the Centers for Disease Control and Prevention (CDC) Field Triage Criteria.
	<b>Emergency Room and Hospitalizations</b> include Georgia resident discharges from Georgia non-federal acute care hospitals. Emergency room (ER) visits include individuals who were discharged directly from the ER. Hospitalizations include individuals who may have visited the emergency room.

Table 3 shows the number and percent change of non-motorist, motor vehicle traffic-related serious injuries for each injury surveillance source. Between 2019 and 2020, all surveillance sources show a decrease in non-motorist serious injuries, and all but one source (Emergency Medical Services – EMS) show a decrease in bicyclist serious injuries. However, between 2020 and 2021, all surveillance sources showed an increase in non-motorist serious injuries—pedestrian injuries reported in crash reports increased by 60 percent, pedestrians transported to a hospital facility by EMS increased by 37 percent, pedestrian receiving care in a trauma center increased by 31 percent, and pedestrians receiving patient care in the emergency department increased by 54 percent.

Table 3. **Non-Motorist Motor Vehicle Traffic-Related Serious Injuries by Injury Surveillance Source, 2019-2021**

Injury Surveillance Source	2019		2020		2021	
	Pedestrians	Bicyclists	Pedestrians	Bicyclists	Pedestrians	Bicyclists
Crash Reports	395	88	358	71	572	95
Emergency Medical Services*	2,102	510	1,877	716	2,579	++
Trauma	1,141	519	826	148	1,084	205
Emergency Department**	2,682	543	1,529	349	2,356	413
Hospital**	758	92	654	68	701	63

\* EMS arrivals to motor vehicle traffic crashes with reported serious injuries and fatalities may or may not have resulted in transport to a medical facility.

\*\* All persons involved in a Georgia crash receive care in a Georgia Emergency Department or Hospital, regardless of their state residency.

Source: CODES 2020-2021, DPH Hospital Inpatient Discharge and Emergency Room Visit Data 2020-2021, GEMSIS 2020-2021, Georgia Trauma Registry 2020-2021

Table 4 shows the number, proportion, and rate (per population) of non-motorist serious injuries by age group and surveillance system. In 2021, non-motorists in the 21-to-24 age group represented the highest rate and proportion of police-reported suspected serious injuries, EMS transports, emergency room visits, and hospitalizations compared to other age groups. This age group represented nearly 9 percent of all serious injuries across all surveillance systems.

Table 4. **Non-Motorist Traffic-Related Serious Injuries, Percent of Total Serious Injuries, and Rate per 100,000 Population by Age Group and Injury Surveillance Source, 2021**

Age Group	Police-Reported Suspected Serious Crash Injuries			Emergency Medical Services			Trauma Center			Emergency Room			Hospitalizations		
	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate
<10	20	3%	1.51	118	5%	8.9	57	4%	4.3	73	4%	5.5	3	0%	0.2
10-14	25	4%	3.34	91	4%	12.2	44	3%	5.9	62	3%	8.3	5	1%	0.7
15-24	128	19%	8.63	456	18%	30.8	201	16%	13.6	395	20%	26.6	114	15%	7.7
15-20	68	10%	7.49	233	9%	25.7	101	8%	11.1	221	11%	24.3	55	7%	6.1
21-24	60	9%	10.45	223	9%	38.8	100	8%	17.4	174	9%	30.3	59	8%	10.3
25-34	133	20%	8.90	526	20%	35.2	253	20%	16.9	440	22%	29.4	149	20%	10.0
35-44	108	16%	7.56	420	16%	29.4	223	17%	15.6	315	16%	22.0	144	19%	10.1
45-54	92	14%	6.58	372	14%	26.6	162	13%	11.6	258	13%	18.4	117	15%	8.4
55-64	85	13%	6.33	359	14%	26.7	207	16%	15.4	294	15%	21.9	136	18%	10.1
65+	56	8%	3.54	243	9%	15.3	142	11%	9.0	168	8%	10.6	95	12%	6.0
<b>Total</b>	<b>667*</b>	<b>100%*</b>	<b>6.18</b>	<b>2,585</b>	<b>100%</b>	<b>23.9</b>	<b>1,289</b>	<b>100%</b>	<b>11.9</b>	<b>2,005</b>	<b>100%</b>	<b>18.6</b>	<b>763</b>	<b>100%</b>	<b>7.1</b>

\* Includes 20 suspected serious injuries with unknown age

Source: CODES 2021, DPH-OHIP Hospital Inpatient Discharge and Emergency Room Visit Only Data 2021, GEMSIS 2021, Georgia Trauma Registry 2021

### Suspected Serious Crash Injuries

Table 5 shows the percent and rate of serious injuries and fatalities among pedestrians and bicyclists involved in traffic-related crashes by age group. In 2021, there were:

- 12.89 *pedestrians* in the 21-to-24 age group with traffic-related serious or fatal injuries for every 100,000 population in that age group.
- 1.40 *bicyclists* in the 35-to-44 age group with traffic-related serious or fatal injuries for every 100,000 population in that age group.

Table 5. **Traffic-Related Non-Motorist Suspected Serious Injury and Fatality Rate by Age Group, 2021**

Age Group	Pedestrian Serious Injuries and Fatalities			Bicyclist Serious Injuries and Fatalities		
	Number	Percent	Rate	Number	Percent	Rate
<10	17	2%	1.29	5	5%	0.38
10-14	25	3%	3.34	6	5%	0.80
15-24	145	17%	9.78	14	13%	0.94
15-20	71	8%	7.82	6	5%	0.66
21-24	74	8%	12.89	8	7%	1.39
25-34	192	22%	12.85	16	15%	1.07
35-44	148	17%	10.36	20	18%	1.40
45-54	103	12%	7.36	18	17%	1.36
55-64	129	15%	9.60	17	15%	1.27
65+	94	11%	5.93	13	11%	0.76
<b>Total*</b>	<b>878</b>	<b>100%</b>	<b>7.15</b>	<b>110</b>	<b>100%</b>	<b>1.02</b>

\*Total includes 20 serious injuries and 3 fatalities of unknown age

Source: CODES 2021, FARS 2021

## Emergency Medical Services

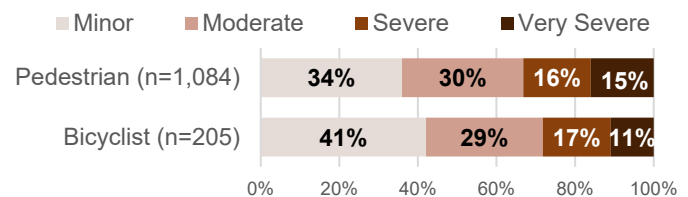
In 2021, four percent of all motor vehicle traffic-related Emergency Medical Services (EMS) transports involved non-motorists. EMS transported 2,586 pedestrians and bicyclists involved in motor vehicle traffic-related crashes to a hospital facility. The number of EMS pedestrian transports increased by 37 percent from the 1,877 transports in 2020.

## Trauma Center Patients

In 2020, the number of pedestrians identified as trauma patients treated within Georgia Trauma Centers increased by 31 percent, from 826 in 2020 to 1,084 in 2021. The number of bicyclist trauma patients increased by 39 percent, from 148 in 2020 to 205 in 2021.

Nearly one out of every three patients (34 percent) of pedestrians treated at the trauma centers had minor injuries, and 15 percent had very severe injuries. Similarly, 41 percent of bicyclists treated at trauma centers had minor injuries, and 11 percent had very severe injuries (Figure 2).

Figure 2. **Trauma Registry Pedestrian and Bicyclist Injuries Treated by Injury Severity Score, 2021**



Source: Georgia Trauma Registry 2021

## Emergency Room Visits & Hospitalizations

In 2021, the total motor vehicle-related (traffic and non-traffic) hospitalization and emergency room charges among Georgia residents were \$188 million for pedestrians and \$55 million for bicyclists.

- **Traffic-related** pedestrian emergency room visits and hospitalizations *increased* by 8 percent, and bicyclist emergency room visits and hospitalizations *increased* by 7 percent between 2020 and 2021. In 2021, there were 2,356 traffic-related emergency room visits and hospitalizations<sup>1</sup> involving pedestrians and 413 traffic-related emergency room visits and hospitalizations involving bicyclists—456 fewer non-motorist injuries than in 2019.
- **Non-traffic-related** pedestrian hospitalizations *increased* by 17 percent, and bicyclist emergency room visits and hospitalizations *decreased* by 25 percent between 2020 and 2021, after the substantial annual increase in 2020. There were an additional 1,149 pedestrian and 3,657 bicyclist non-traffic-related emergency room visits and hospitalizations.

<sup>1</sup> Hospitalizations may include individuals that visited the emergency room. Emergency room visits include individuals who were discharged directly from the ER. Hospitalizations and emergency room visits are for Georgia residents only, while fatalities can be a person from out of state.

## Crash Characteristics

According to police crash reports, 32 percent of all pedestrian crashes in Georgia (845 out of 2,615) resulted in at least one pedestrian that was seriously or fatally injured in 2021. In the same year, 15 percent of all bicyclist crashes (109 out of 731) resulted in at least one bicyclist that was seriously or fatally injured. Table 6 shows the number of non-motorist crashes, persons involved in crashes, and suspected serious injuries between 2017-2021.

### Urban vs. Rural<sup>2</sup>

There were 24.21 pedestrians per 100,000 population and 6.77 bicyclists per 100,000 population involved in a motor vehicle traffic crash across the state of Georgia (Figure 3). In Georgia, non-motorist crashes are more frequent in the urban areas (the Atlanta region and other urban regions) compared to rural areas where the residential population is less than 50,000 people. However, the proportion of non-motorist serious injury and fatal crashes are higher in rural areas than in urban areas—48 percent of pedestrian rural crashes and 23 percent of rural bicyclist crashes result in a non-motorist fatal or serious injury.

- Pedestrian crashes and crash rates were highest within the ten counties of the Atlanta Region<sup>3</sup> – 31.87 pedestrians per 100,000 population.
- The Atlanta Region accounted for 44 percent of the state population. However, 58 percent (1,508 out of 2,615) of all pedestrian crashes, 56 percent (306 out of 545) of all pedestrian serious injuries, and 48 percent (151 out of 312) of all pedestrian fatal injuries occurred within this area.
- Bicyclist crashes and crash rates were highest within the 31 other urban counties – 8.72 bicyclists per 100,000 population.

Table 6. **Non-Motorist Crashes and Serious Injury and Fatal Crashes, 2017-2021**

Year	Pedestrian		Bicyclist	
	Crashes	Serious Injury and Fatal Crashes	Crashes	Serious Injury and Fatal Crashes
2017	3,681	909	686	75
2018	2,172	581	550	69
2019	2,986	613	793	108
2020	2,332 <sup>+</sup>	625	654 <sup>+</sup>	100
2021	2,615	845	731	109

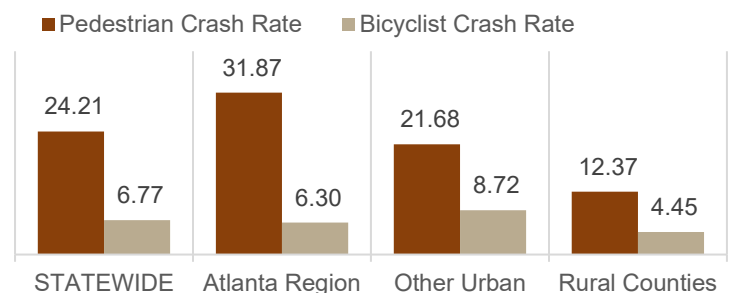
+ During the COVID-19 public emergency response, traffic crashes (including non-motorist crashes) with low injury severity were underreported in the police crash reports.  
Source: CODES 2017-2021, FARS 2017-2021

Table 7. **Number of Non-Motorist Crashes and Percent of Fatal or Serious Injury Crashes by Region, 2021**

Region	Pedestrian Crashes		Bicyclist Crashes	
	Number	Percent of Fatal or Serious Injury Crashes	Number	Percent of Fatal or Serious Injury Crashes
Atlanta Region (10 counties)	1,508	31%	298	14%
Other Urban (31 counties)	828	34%	333	14%
Rural Counties (118 counties)	278	48%	100	23%
<b>Statewide</b>	<b>2,615</b>	<b>34%</b>	<b>731</b>	<b>15%</b>

Source: CODES 2021

Figure 3. **Pedestrian and Bicyclist Crash Rate per 100,000 Population by Region Type, 2021**



Source: CODES 2021, OASIS 2021

<sup>2</sup> Rural counties are counties that have a residential population less than 50,000 persons. This is different than roadway classifications where urban road systems can be located in urban clusters (or metropolitan areas) of at least 2,500 persons within the rural counties.

<sup>3</sup> The Atlanta Region includes the ten counties that are defined by the Atlanta Regional Commission (ARC): Cherokee, Clayton, Cobb, DeKalb, Douglas, Fayette, Fulton, Gwinnett, Henry, and Rockdale counties.

Table 8 shows the percent of pedestrian and bicyclist crashes by region and roadway classification in 2021. Statewide, most pedestrian crashes occurred on minor arterial roadways (34 percent), and most bicyclist crashes occurred on local and minor arterial roadways (32 percent each roadway).

- In the Atlanta region, more pedestrian crashes occurred on *minor arterial* roadways (23 percent)—whereas most pedestrian crashes in other urban counties occur on *principal and minor arterial* roadways (9 percent).
- Within the Atlanta region, 34 percent of pedestrian fatalities (52 out of 154) occurred on the interstate (not shown).

Table 8. **Motor Vehicle Traffic Crashes Involving Non-Motorists by Region and Roadway Classification, 2021**

Non-Motorist Type Roadway Classification	Atlanta Region	Other Urban Counties	Rural Counties	Total	
<i>Pedestrian</i>	Interstate	3%	1%	-	5%
	Principal Arterial	11%	9%	3%	23%
	Minor Arterial	23%	9%	2%	34%
	Collectors	6%	5%	2%	13%
	Local	13%	8%	3%	24%
	Other	1%	-	-	1%
<b>Total</b>	<b>57%</b>	<b>32%</b>	<b>11%</b>	<b>100%</b>	
<i>Bicyclist</i>	Interstate	-	-	-	-
	Principal Arterial	7%	11%	4%	22%
	Minor Arterial	16%	13%	3%	32%
	Collectors	5%	6%	3%	14%
	Local	11%	17%	4%	32%
	Other	-	-	-	-
<b>Total</b>	<b>40%</b>	<b>47%</b>	<b>14%</b>	<b>100%</b>	

Source: Roadway data obtained for Numetric, 2021

Note: The sum of the individual cells may not equal row or column totals due to rounding error.

In 2021, 83 out of 159 Georgia counties experienced at least one non-motorist traffic fatality. The counties with the highest number of pedestrian fatalities were DeKalb (51 pedestrian fatalities), Fulton (45), and Clayton (20). While most pedestrian fatalities occurred in the Atlanta region, other urban counties and rural counties have higher rates of pedestrian serious and fatal injury per population and pedestrian crashes for every 1,000 motor vehicle crashes. Most bicyclist fatalities occurred in the Atlanta region and other urban counties like Glynn County. In 2021, these urban areas also had higher rates of bicyclist serious and fatal injuries per population and bicyclist crashes for every 1,000 motor vehicle crashes compared to rural areas.

Table 9. **Top Counties with the Highest Non-Motorist Serious Injury and Fatal Crashes, 2021**

Non-Motorist Type and Rank	Serious Injuries and Fatalities		Serious and Fatal Injury Rate		Non-Motorists Crash Rate		
	County	Count	County	Rate	County	Rate	
<i>Pedestrian</i>	1	Fulton	156	Chattooga	24.07	Sumter	1,631.12
	2	DeKalb	130	Clayton	22.89	Chattooga	1,152.07
	3	Clayton	68	Spalding	17.67	DeKalb	1,081.59
	4	Chatham	43	DeKalb	17.29	Clarke	1,037.10
	5	Cobb	37	Sumter	17.07	Carroll	967.44
<i>Bicyclist</i>	1	Fulton	20	Glynn	5.90	Glynn	868.58
	2	Chatham	9	Chatham	3.04	Chatham	577.99
	3	Gwinnett	5	Fulton	1.88	Fulton	208.24
	4	Glynn	5	Gwinnett	0.52	Gwinnett	95.06
	5	**	**	**	**	**	**

\*\*Counties with less than five pedestrian or bicyclist serious injuries or fatalities were excluded from the county rankings

Source: CODES 2021, FARS 2021

## Environmental Characteristics

Table 10 shows the information on environmental characteristics (location of crash, light condition, day, and season) describing where and when pedestrian and bicyclist crashes occurred in 2021.

- More than half (52 percent) of the pedestrian crashes occurred at locations that were not intersections, whereas 61 percent of bicyclist crashes occurred at intersections. According to Numetric, 67 percent of pedestrian fatal crashes and 62 percent of bicyclist fatal crashes did *not* occur at an intersection.
- One-fourth (25 percent) of all pedestrian crashes and 26 percent of all bicyclist crashes were hit-and-runs (not shown).
- More than half (52 percent) of the pedestrian crashes occurred in dark conditions, whereas 71 percent of bicyclist crashes occurred during daylight conditions. On average, 81 percent of all *fatal* pedestrian crashes occurred in dark environmental conditions within the past five years (2017-2021).
- Nearly one-third of pedestrian crashes (29 percent) and bicyclist crashes (30 percent) occurred in the fall months.

Table 10. **Motor Vehicle Crashes Involving Pedestrians and Bicyclists by Environmental Characteristics, 2021**

Environmental Characteristics	All Pedestrian Crashes		All Bicyclist Crashes	
	Number	Percent	Number	Percent
<b>Location *</b>				
<b>Not at Intersection</b>	<b>1,352</b>	<b>52%</b>	<b>253</b>	<b>35%</b>
<b>At Intersection</b>	<b>1,039</b>	<b>40%</b>	<b>444</b>	<b>61%</b>
Roadway Intersection	599	23%	304	42%
In Crosswalk	261	10%	66	9%
Driveway Intersection	83	3%	41	6%
Sidewalk	48	2%	12	2%
Managed Lane / Bike Lane	18	1%	13	2%
Other Intersection**	14	1%	4	1%
<b>Other Location</b>	<b>273</b>	<b>10%</b>	<b>34</b>	<b>5%</b>
On Shoulder	97	4%	15	2%
Off Roadway	83	3%	14	2%
Entrance/Exit Ramp	27	1%	4	1%
Other**	33	1%	1	0%
<b>Light Conditions</b>				
Dark	1,352	52%	182	25%
Daylight	1,170	45%	520	71%
Dawn	39	1%	7	1%
Dusk	46	2%	18	2%
<b>Time of Day</b>				
Daytime (6:00a.m. – 5:59p.m.)	1,172	45%	470	64%
Nighttime (6:00p.m. – 5:59a.m.)	1,443	55%	261	36%
<b>Day of Week / Time of Day</b>				
<b>Weekday</b> (6:00a.m. Mon - 5:59p.m. Fri)	<b>1,673</b>	<b>64%</b>	<b>487</b>	<b>67%</b>
12:00 a.m. -5:59 a.m.	171	7%	25	3%
6:00 a.m. -11:59 a.m.	417	16%	104	14%
12:00 p.m. - 5:59 p.m.	540	21%	240	33%
6:00 p.m. - 11:59 p.m.	545	21%	118	16%
<b>Weekend</b> (6:00p.m. Fri - 5:59a.m. Mon)	<b>942</b>	<b>36%</b>	<b>244</b>	<b>33%</b>
12:00 a.m. -5:59 a.m.	188	7%	26	4%
6:00 a.m. - 11:59 a.m.	69	3%	49	7%
12:00 p.m. - 5:59 p.m.	146	6%	77	11%
6:00 p.m. - 11:59 p.m.	539	21%	92	13%
<b>Season / Time of Day</b>				
<b>Winter</b> (Jan-Feb, Dec)	<b>685</b>	<b>26%</b>	<b>119</b>	<b>16%</b>
Daytime	283	11%	76	10%
Nighttime	402	15%	43	6%
<b>Spring</b> (Mar-May)	<b>612</b>	<b>23%</b>	<b>200</b>	<b>27%</b>
Daytime	267	10%	132	18%
Nighttime	345	13%	68	9%
<b>Summer</b> (Jun-Aug)	<b>567</b>	<b>22%</b>	<b>196</b>	<b>27%</b>
Daytime	255	10%	117	16%
Nighttime	312	12%	79	11%
<b>Fall</b> (Sep-Nov)	<b>751</b>	<b>29%</b>	<b>216</b>	<b>30%</b>
Daytime	367	14%	145	20%
Nighttime	384	15%	71	10%

\*Location does not include crashes with unknown location or those less than 0.5 percent of total pedestrian or bike crashes. \*\*Other intersections include roundabouts, railroad crossings, and managed lanes (i.e., HOV lanes). \*\*\* Nighttime and daytime groupings are based on the time of day in hours. The time-groupings do not consider the change in lighting conditions associated with the seasons (i.e., longer daylight hours in the summer). Source: CODES 2020



Another important environmental factor that impacts the severity of traffic-related crash injuries is roadway characteristics. According to an AAA study, as vehicle speeds increase, the risk of pedestrian severe or fatal injuries also increases. At low vehicle impact speeds, 15 miles per hour (mph) or below, most pedestrians (91 percent) that are struck do not sustain severe or fatal injuries—8 percent will have a severe injury, and 2 percent will have a fatal injury. Pedestrians' risk of injury increases greatly when the vehicle impact speed increases at 25 mph or above. According to this 2011 AAA national study<sup>4</sup>, a vehicle impact speed at:

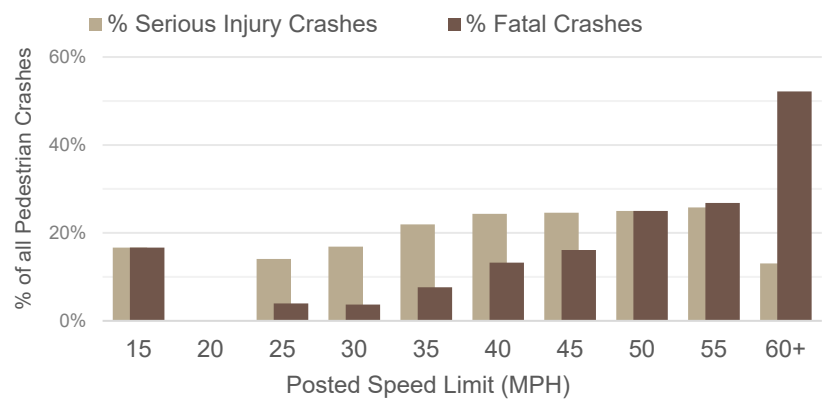
- 25 mph, resulted in 30% of struck pedestrians sustaining severe injuries and 12% sustaining fatal injuries
- 35 mph, resulted in 47% of struck pedestrians sustaining severe injuries and 20% sustaining fatal injuries
- 40 mph, resulted in 79% of struck pedestrians sustaining severe injuries and 45% sustaining fatal injuries

The national findings are similar to the patterns experienced in Georgia—the risk of pedestrian serious and fatal injuries increased significantly on roadways with posted speed limits at or above 40 mph. Among the pedestrian crashes on roadways with a posted speed limit of 40 mph, 13 percent of struck pedestrians sustained serious injuries, and 24 percent of struck pedestrians sustained fatal injuries (Figure 4). In 2021, more than three-quarters of pedestrian fatalities (76 percent) and more than half (57 percent) of pedestrian injuries occurred on roadways with posted speed limits at or above 40 mph.

According to Numetric, a greater proportion of all pedestrian serious injury or fatal crashes occurred on roadways with speed limits between 45-55 mph. Among all crashes where pedestrians were severely injured, 60 percent (577 out of 960) occurred on two-way, not-divided roadways.

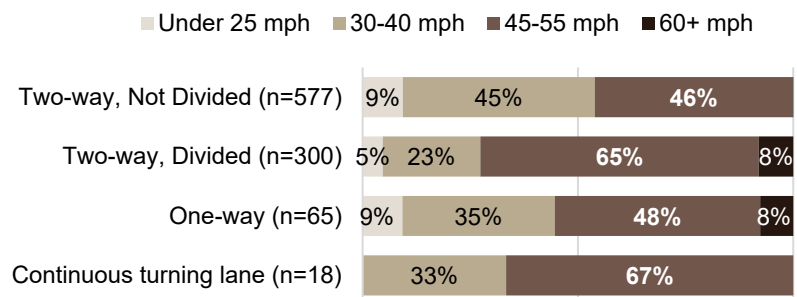
- 46 percent of severe pedestrian crashes that occurred on two-way undivided roadways had a posted speed limit of 45-55 mph.
- 65 percent of severe pedestrian crashes that occurred on two-way divided roadways had a posted speed limit of 45-55 mph.

Figure 4. **Percent of Pedestrian Crashes that Resulted in a Pedestrian Serious or Fatal Injury by Posted Speed Limit, 2021**



Source: Numetric 2021

Figure 5. **Percent of All Serious Injury or Fatal Pedestrian Crashes by Trafficway and Posted Speed Limit, 2021**



Source: Numetric 2021

<sup>4</sup> AAA Foundation for Traffic Safety, 2011, "Impact Speed and a Pedestrian's Risk of Severe Injury or Death." Available online: <https://nacto.org/wp-content/uploads/2017/11/2011PedestrianRiskVsSpeed.pdf>

## Contributing Circumstances

Readers are encouraged to exercise caution when interpreting the contributing factors for pedestrian-related traffic crashes. Contributing circumstances among individuals (drivers or pedestrians) involved in a pedestrian-related crash are underreported—59% of all pedestrian crashes had at least one contributing factor attributed to either the driver or pedestrian recorded in the crash report. Nearly one-quarter (25 percent) of all pedestrian crashes were hit-and-runs; therefore, the driver contributing factors are unknown and unreported on the police crash reports. For fatal or serious injury pedestrian crashes, contributing factors were more likely to be included in the crash report—60% of all serious injury pedestrian crashes and 52% of all fatal pedestrian crashes have contributing factors listed.

Table 12 shows the top contributing factors among serious injury or fatal pedestrian crash by the person involved in the crash. The top factors among drivers involved in pedestrian serious injury or fatal crashes were confirmed or suspected distracted driving. The top contributing factor among pedestrians seriously or fatally injured in a crash was the failure to yield to oncoming traffic.

Table 12. **Top Contributing Factors among Serious Injury or Fatal Pedestrian Crashes by Person Type, 2021**

Rank	Drivers Contributing Factors	Pedestrians Contributing Factors
	Description	Description
1	Confirmed or suspected distracted driver	Pedestrian failed to yield
2	Driver failed to yield	Confirmed distracted pedestrian
3	Speeding or aggressive driving	Under the influence of drugs and/or alcohol
4	Under the influence of drugs and alcohol	Disregard signage or traffic control
5	Driver vision was obscured, or the pedestrian was not visible	Pedestrian not visible

Source: CODES 2021

## SCHOOL BUS-RELATED FATAL CRASHES

From 2017 to 2021, there were 29 fatal school-transportation-related crashes in Georgia, in which 31 people of all ages were fatally injured—7 of which were school-aged children under 18 years old. Among the 7 school-age fatalities, 2 were occupants of school transportation vehicles, 1 was an occupant of another passenger vehicle, 4 were pedestrians, and there were no bicyclist fatalities. There were no fatalities among school-aged children in 2019 and 2020—during the COVID-19 public health emergency response.

## Demographics

### Sex & Age

The incident rates of male non-motorists involved in crashes were more than double the female incident rates. The male non-motorist crash rate per 100,000 population was 42.4 compared to 16.4 for females. The male non-motorist serious injury rate was 8.6 compared to 3.4 for females. Male non-motorists had a higher rate of involvement in crashes, serious injury crashes, and fatal crashes than women. The male non-motorist fatality rate was 4.7 compared to 1.3 for females – males were 3.6 times more likely to be fatally injured compared to females.

See the serious injury section and the cross-cutting highlight below (Older Pedestrian Population) for more information on pedestrian serious injuries and fatalities by age group.

## OLDER PEDESTRIAN POPULATION

In 2021, pedestrians aged 65+ years represented 8 percent of all pedestrians involved in crashes (230 out of 2,741), 8 percent of all pedestrian serious injuries (47 out of 572), and 15 percent of all pedestrian fatalities (47 out of 306). Persons aged 65+ years represented 15 percent of the Georgia population in 2021— a 1 percent increase in population compared to the previous year. As shown in Table 12, the number of pedestrians 65+ years of age that were seriously or fatally injured increased by 18 percent (from 80 in 2020 to 94 in 2021), and the rate of seriously or fatally injured pedestrians 65+ years increased by 17 percent (from 5.08 in 2020 to 5.93 in 2021). Table 13 shows the number, percent, and rate of serious injuries reported for each injury surveillance source for the older pedestrian population aged 55 years and older.

Table 12. Older Pedestrian (Aged 65+ Years) Serious Injuries, Fatalities, and Injury Rate, 2017-2021\*

Year	Serious Injury	Fatalities	Total Serious Injuries and Fatalities		Population		Rate Per 100,000 Population	
			Number	Annual % Change	Number	Annual % Change	Rate	Annual % Change
2017	56	36	92	35%	1,407,810	4%	6.53	30%
2018	22	42	64	-30%	1,460,409	4%	4.38	-33%
2019	33	30	63	-2%	1,516,954	4%	4.15	-5%
2020	38	42	80	27%	1,574,667	4%	5.08	22%
2021*	47	47	94	18%	1,584,071	1%	5.93	17%

Source: CODES 2021, FARS 2021, OASIS 2021

Table 13. Older Pedestrian (Aged 65+ Years) Traffic-Related Serious Injuries, Percent of Total Serious Injuries, and Rate by Age Group and Injury Surveillance Source, 2021

Age Group	Police-Reported Suspected Serious Crash Injuries			Emergency Medical Services			Emergency Room			Hospitalizations		
	#	%	Rate	#	%	Rate	#	%	Rate	#	%	Rate
Less than 55	435	76%	5.53	1,979	77%	25.14	1,294	78%	16.44	486	69%	6.17
55-64	71	12%	5.29	357	14%	26.58	222	13%	16.53	125	18%	9.31
65-74	38	7%	3.85	157	6%	15.89	97	6%	9.82	64	9%	6.48
75-84	9	2%	1.98	73	3%	16.04	36	2%	7.91	22	3%	4.83
85+	-	-	-	13	1%	9.22	6	0%	4.25	3	0%	2.13
<b>*Total</b>	<b>572</b>	<b>100%</b>	<b>5.30</b>	<b>2,579</b>	<b>100%</b>	<b>23.88</b>	<b>1,655</b>	<b>100%</b>	<b>15.32</b>	<b>700</b>	<b>100%</b>	<b>6.48</b>

\*Total includes 19 suspected serious injuries with unknown age. Source: CODES 2021, DPH-OHIP Hospital Inpatient Discharge and Emergency Room Visit Only Data 2021, GEMSIS 2021

### Pedestrian Race/Hispanic Origin

In 2021, Black/African American, Non-Hispanics represented the majority (49 percent) of pedestrians fatally injured in motor vehicle traffic crashes and 32 percent of the Georgia residential population – compared to White, Non-Hispanics that represent 38 percent of pedestrian fatalities and 51 percent of the population (Table 7).

The Black/African American, Non-Hispanic pedestrian fatality rate was higher than any other race – 4.35 per 100,000 population. The pedestrian fatality rate per population among Black/African American Non-Hispanic individuals is more than doubled (2.1 times) the pedestrian fatality rate experienced among White Non-Hispanics.

According to the American Community Survey<sup>5</sup>, an estimated 62 percent of Black/African American Non-Hispanics use public transportation (excluding taxicabs) as a means of transportation to work in Georgia.

Table 14. Pedestrian Fatalities by Race/Hispanic Origin, 2021

Race / Hispanic Origin	Georgia Population Percent of Total Population	Pedestrian Fatalities		Rate per 100,000 Population
		Number	Percent	
Hispanic	10%	14	5%	1.27
White, Non-Hispanic	51%	116	38%	2.11
Black/African American, Non-Hispanic	32%	150	49%	4.35
Asian, Non-Hispanic	4%	11	4%	2.28
All Other Non-Hispanic or Race	2%	3	1%	**
Unknown Race and Unknown Hispanic	--	12	4%	**
<b>TOTAL</b>	<b>100%</b>	<b>306</b>	<b>100%</b>	<b>2.83</b>

Note: Race and Hispanic origin are not available in crash records.

Source: FARS 2021

<sup>5</sup> 2020 American Community Survey 1-year estimates: Table S0802 Means of Transportation to Work by Selected Characteristics

# VULNERABLE POPULATIONS

Vulnerable populations are communities within specific geographic areas that may be vulnerable in their ability to respond and prepare for public health emergencies and disasters. Demographic factors such as the proportion of community members without vehicles, with disabilities, older adults, minority status, and low-income/socioeconomic status are measures and attributes of socially vulnerable communities.


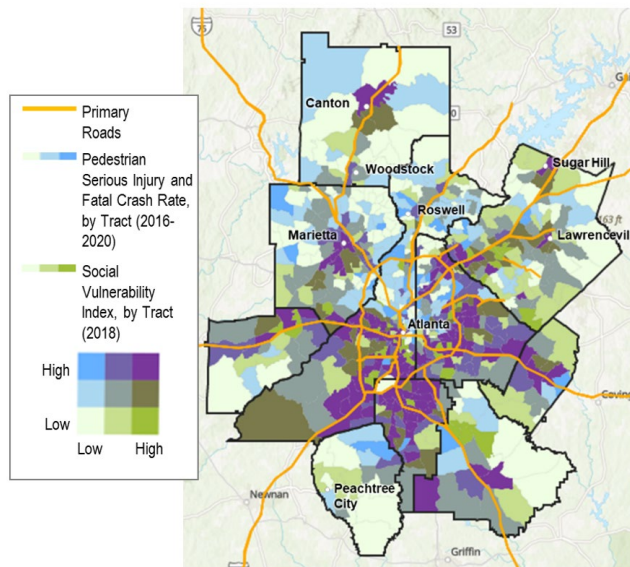
According to the Georgia Traffic Safety Facts study called "*Examining Social Vulnerability and the Association with Pedestrian Crashes*" (Georgia Crash Outcomes Data Evaluation System, 2022 ) , there is a positive correlation between vulnerable census tracts in Georgia and the rates of pedestrian serious and fatal injury crashes across the Atlanta region, other urban regions, and rural regions. In other words, the more vulnerable a community is, the higher the rate of pedestrian serious and fatal injury crashes. This positive, significant relationship was present for overall social vulnerability (shown in Figure 6 for the Atlanta Region) as well as for socioeconomic status, household composition and disability, minority status and language, and housing type and transportation vulnerability themes.

Figure 6. **Bivariate Map of Serious Injury and Fatal Pedestrian Crash Rates (per 100,000 census tract population) and Social Vulnerability Index in the Atlanta Region, by Overall Social Vulnerability Index (SVI) and SVI Themes.**



**Dark purple** census tracts are communities with **high** social vulnerability and **high** pedestrian serious and fatal injury crash rates.

**Darker blue** census tracts are communities with **low** social vulnerability and **high** pedestrian serious and fatal injury crash rates.

Source: Georgia Crash Outcomes Data Evaluation System. (2022, July). Examining Social Vulnerability and the Association with Pedestrian Crashes: 2016-2020 data. (Georgia Traffic Safety Facts). Atlanta, GA: Governor's Office of Highway Safety.

CDC's Social Vulnerability Index (SVI) data and other related sociodemographic variables can be leveraged to impartially assess roadway and public health concerns related to pedestrian safety. The findings from this research may encourage stakeholders to apply SVI assessments when implementing pedestrian safety efforts (i.e., engineering improvements, programmatic interventions, campaigning and education efforts, and other countermeasures to improve pedestrian safety).

## Safety Equipment & Protective Gear

### *Pedestrian Safety Equipment Use*

Safety equipment for pedestrians includes clothing or materials that make the pedestrian more visible to others. This can include reflective gear and the use of lights at night or dusk when visibility is poor. Safety equipment use among pedestrians is a relatively new field in police crash reports, and in 2021 safety equipment use was recorded for 45 percent of all pedestrians involved in motor vehicle traffic crashes (1,233 out of 2,741 pedestrians). Of those pedestrians with known equipment use, 6 percent were using lighting or reflective clothing (71 out of 1,233).

### *Bicycle Helmet Use*

In 2021, safety equipment use was recorded for 74 percent of all bicyclists involved in motor vehicle traffic crashes (555 out of 751 bicyclists). Of those bicyclists with known equipment use, 29 percent wore a helmet, reflective clothing, or lighting (163 out of 555). Among the 68 bicyclists fatally injured in traffic crashes between 2019 and 2021, 7 percent were helmeted, 63 percent were un-helmeted, and 29 percent had an unknown or unreported helmet use.

## Personal Conveyances

According to the National Highway Traffic Safety Administration (NHTSA), people fatally injured in motor vehicle traffic crashes who were on "personal conveyances" are not classified as pedestrians. "Personal conveyances" are defined as roller skates, inline skates, skateboards, baby strollers, scooters, toy wagons, motorized skateboards, motorized toy cars, Segway-style devices, motorized and non-motorized wheelchairs, and scooters for those with disabilities. Non-motorists on personal conveyances represent less than one percent of all traffic-related fatalities. Table 15 presents the distribution of people fatally injured on personal conveyances as a percentage of total traffic fatalities in 2017-2021.

Table 15. **Total Traffic Fatalities and Personal Conveyance Fatalities, 2017–2021**

Year	Total Traffic Fatalities	Personal Conveyance	
		Number	Percent
2017	1,540	6	0.4%
2018	1,504	4	0.3%
2019	1,491	11	0.7%
2020	1,664	0	0%
2021	1,797	12	0.7%

Source: FARS 2017-2021

## Data Definitions and Considerations:

This fact sheet defines a pedestrian as any person on foot, walking, running, jogging, hiking, sitting, or lying down who is involved in a motor vehicle traffic crash. These exclude people on personal conveyances like roller skates, inline skates, skateboards, baby strollers, scooters, toy wagons, motorized skateboards, motorized toy cars, Segway-style devices, motorized and non-motorized wheelchairs, and scooters for those with disabilities. Bicyclists and other cyclists include riders of two-wheel, non-motorized vehicles, tricycles, and unicycles powered solely by pedals.

The 2021 Traffic Safety Research and Evaluation Group (TSREG) Preliminary Fatality Data includes all Georgia roadway fatalities for motorists, pedestrians, bicyclists, and other road users. Data is derived from the Georgia Department of Transportation's (GDOT) daily fatality reports, cross-referenced with the Georgia Electronic Accident Reporting System's (GEARS) online database, and validated with GDOT's Fatal Crash Recording System (FCRS) database. Delays in data availability at the time of analysis are possible due to the inherent nature of reporting roadway fatalities.

A traffic crash is defined as an incident that involves one or more motor vehicles where at least one vehicle was in transport, and the crash originated on a public trafficway, such as a road or highway. Crashes that occurred on private property, including parking lots and driveways, are excluded. However, in some cases where pedestrian and bicyclist injuries are discussed, traffic and non-traffic (i.e., occurring on any place other than a traffic way – trail, driveway, parking lot, or sidewalk) incidences are included in the aggregate reporting. Fatal crashes are defined as crashes that involve a motor vehicle traveling on a trafficway customarily open to the public and that result in the death of a motorist or a non-motorist within 30 days of the crash.

Serious injuries are those suspected serious injuries reported by law enforcement and used when any injury, other than fatal injury, prevents the injured person from walking, driving, or normally continuing the activities the person was capable of before the injury occurred.

"At Intersection" is used when a person is on a roadway either (1) in the intersection, (2) in the area between a crosswalk and the perimeter of the intersection, or (3) in a crosswalk (marked or unmarked) adjacent to an intersection. "Intersection-Related" is used when a person is within the trafficway 50 feet out from the perimeter of an intersection area or if the crash is related to the flow of traffic through an intersection. "Not at Intersection" is when the person is more than 50 feet out from the perimeter of an intersection, and the crash is not identified as related to the movement of vehicles through an intersection. "Non-Trafficway Locations" are crashes that occur outside the boundaries of the trafficway (i.e., driveways or parking lots).

The National Center for Health Statistics (NCHS), the Federal agency responsible for the use of the International Statistical Classification of Diseases and Related Health Problems, 10th revision (ICD-10) in the United States, has developed a clinical modification (CM) of the classification for morbidity (EMS, trauma, hospital, and ER data) purposes. ICD-10 Codes used were— Pedestrian traffic - V02-V04 (.1,.9), V09.2, Pedestrian non-traffic - V02-V04 (.0),V01,V05,V06,V09 (.0,.1,.3,.9),Pedal cyclist traffic - V12-V14 (.3-.9) V19 (.4-.6), Pedal cyclist non-traffic - V19(.4-.6),V10-V11,V12-V14(.0-.2),V15-V18,V19(.0-.3,.8,.9).

Contributing circumstances capture the precrash elements or improper actions of persons (pedestrians, bicyclists, other cyclists, and motorists) that may have caused the crash. There is at least one record per person involved in a fatal crash (FARS Data) and some missing records for persons involved in motor vehicle traffic crashes (Crash Data).

The Fatality Analytics Reporting System (FARS) and crash data expanded the safety equipment field to include new attributes related to non-motorist safety equipment (e.g., reflective equipment/clothing, protective pad, lighting, and other safety equipment). These new attributes were added after 2017 and may impact the trending and interpreting of safety equipment use over time. Additionally, FARS data allow the entry of multiple safety equipment being used in a single fatal crash event.

Blood Alcohol Concentration (BAC) values are imputed to address the problem of missing blood alcohol test results in FARS data system. A multiple imputation methodology is employed to generate specific values of BAC for persons involved in fatal crashes.

Rural counties have a population of less than 50,000 according to the United States decennial census of 2010 or any future such census (OCGA Section 31-6-2). This is different from roadway classifications, where urban road systems can be located in urban clusters (or metropolitan areas) of at least 2,500 persons within the rural counties.

**Additional Information:**

- The shorter Fact Sheet for non-motorists can be found on the Georgia Department of Transportation (GDOT) website: <https://www.dot.ga.gov/GDOT/Pages/BikePed.aspx>
- Other fact sheets and traffic safety topics are available on the Governor's Office of Highway Safety website: <https://www.gahighwaysafety.org/georgia-traffic-safety-facts/>

**References:**

Georgia Crash Outcomes Data Evaluation System. (2022, July). *Examining Social Vulnerability and the Association with Pedestrian Crashes: 2016-2020 data*. (Georgia Traffic Safety Facts). Atlanta, GA: Governor's Office of Highway Safety.

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