

# Annual Crash Report 2021



**VISION  
ZERO**  
SAFE STREETS IN CHAPEL HILL

## WHAT IS THE PROBLEM?

From 2017 to 2021, there were 184 pedestrian and bicyclist-involved crashes in the Town of Chapel Hill. This is an 11 percent increase in crashes from the previous 5-year total. In 2021, there were 38 pedestrian and bicyclist-involved crashes, the same amount as in 2020. The number of fatal or serious injury crashes increased from three to eight from 2020 to 2021. Chapel Hill renewed ongoing efforts around pedestrian and bicyclist safety in response to two deaths in 2018, but at least one pedestrian or bicyclist has been killed in each year since 2018.

## WHAT IS VISION ZERO?

Vision Zero is a global strategy to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all. Any loss of life on Chapel Hill streets is unacceptable. Vision Zero recognizes that people make mistakes, and that these mistakes should not be fatal. NC Vision Zero states that traffic safety solutions, based on data-driven strategies, must have a zero-tolerance approach to injury prevention.

In 2018, Chapel Hill launched a Road to Zero program, through which the Town created a Pedestrian Safety Action Plan. Chapel Hill has run street safety programs under the "Road to Zero" umbrella until October 2021, when Chapel Hill Town Council adopted a Vision Zero Resolution.

## VISION ZERO COMMITMENT

- Eliminate traffic deaths and serious injuries by 2031
- Vision Zero is the town-wide guiding principle for transportation, planning, the design of streets and sidewalks, the maintenance of public rights-of-way, and traffic enforcement
- The safety of vulnerable road users shall take priority over vehicular speeds and efficiency, and
- The safety of vulnerable road users shall be given top priority in transportation decisions.

## WHAT IS THE ANNUAL CRASH REPORT?

The Annual Crash Report is a key component of the Town's Pedestrian Safety Action Plan. The Town's Pedestrian Safety Action Plan was first published in 2019 and outlines steps to improve road safety, connectivity, and accessibility for pedestrians of all ages and abilities.

This report provides data on crashes from the previous year (2021) as well as trends over a five-year period (2017-2021). Data analysis in this report focuses on demographic trends (race, age) and environmental trends (speed limit, street maintenance) and temporal trends (month, day, time). This report presents data that informs Vision Zero Chapel Hill's data-driven approach to street safety.

The data presented in this report will inform policy, infrastructure and education changes, to reach these goals.

## 2017-2021 Crash Snapshot

**80%**

OF PEDESTRIAN AND BICYCLIST DEATHS AND SERIOUS INJURIES ARE ON STREETS WITH 35+ MPH SPEED LIMITS

**47%**

OF PEDESTRIAN AND BICYCLIST CRASHES OCCUR ON STATE-OWNED STREETS

**66%**

OF PEDESTRIAN AND BICYCLIST CRASHES OCCUR ON JUST 19% OF STREETS - THE HIGH CRASH NETWORK

**40%**

OF PEDESTRIAN AND BICYCLIST CRASH VICTIMS ARE NON-WHITE, EVEN THOUGH ONLY 27% OF THE TOWN'S POPULATION IDENTIFY AS NON-WHITE

**70%**

OF PEDESTRIAN AND BICYCLIST CRASHES OCCUR BETWEEN 8AM AND 7PM (DAYLIGHT HOURS)



## Data-Driven Approach



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The Town of Chapel Hill is implementing a data-driven approach to achieve its Vision Zero goals. Vision Zero Chapel Hill collects data on when and where crashes occur, demographics of impacted communities, street characteristics, and other inputs. As important as collecting a broad range of data to inform decision-making is the transparency of this data making it available and accessible to assist the public in monitoring progress toward Zero. Establishing the Town's High Crash Network (HCN) and Communities of Concern (CoC) is an important part of this approach.

### HIGH CRASH NETWORK

The High Crash Network spotlights streets with a high concentration of pedestrian and bicyclist-involved crashes over a five year period (2017-2021). Any street with at least 1 crash over this period is included in the HCN if that crash resulted in a fatality or serious injury.

This High Crash Network of 28 streets accounts for 121 of the 184 pedestrian and bicyclist-involved crashes in Chapel Hill from 2017 to 2021, or 65.8%. These streets account for 57.7 of the 306.2 road miles in Chapel Hill, or 18.9%.

This HCN informs the Town's forthcoming policies, programs, and engineering design toolkit to improve safety conditions on the Town's most dangerous streets.

This analysis identified 28 streets as the Town's High Crash Network:

COUNTRY CLUB RD	N COLUMBIA ST	S COLUMBIA ST
E CAMERON AVE	N ESTES DR	S ESTES DR
E FRANKLIN ST	NC-54	SKIPPER BOWLES DR
FORDHAM BLVD	NORTHFIELD DR	SOUTH RD
HOMESTEAD RD	OLD DURHAM RD	STADIUM DR
MANNING DR	PITTSBORO ST	W CAMERON AVE
MLK, JR. BLVD	RALEIGH RD	W FRANKLIN ST
MASON FARM RD	RALEIGH ST	W ROSEMARY ST
MCCAULEY ST	RIDGE RD	WESTMINSTER DR
		WILLOW DR

### COMMUNITIES OF CONCERN

The Communities of Concern (CoC) analysis identifies geographic areas where specific vulnerable or under-served populations are concentrated. These communities statistically more dependent on non-auto travel, are disproportionately involved in pedestrian or bicyclist crashes, or both. This approach was adapted from the regional metropolitan planning organization (DCHC MPO) 2020 Environmental Justice Report and analyzes the same five communities of concern that the MPO identified: **racial minority population, elderly population, low-income household, limited english proficiency (LEP) household and zero-car household**.

CoC are mapped by census block group, and are compared against regional thresholds. For example, 5.9% of households in Chapel Hill have access to zero cars (zero-car households). Any census block group in Chapel Hill with more than 5.9% zero-car households is identified as a **zero-car household Community of Concern**.

Represented in the darkest shade of blue in the map on the next page, three census block groups exhibit all five of the analyzed Communities of Concern, including communities off Fordham Blvd, 15-501 and 54.

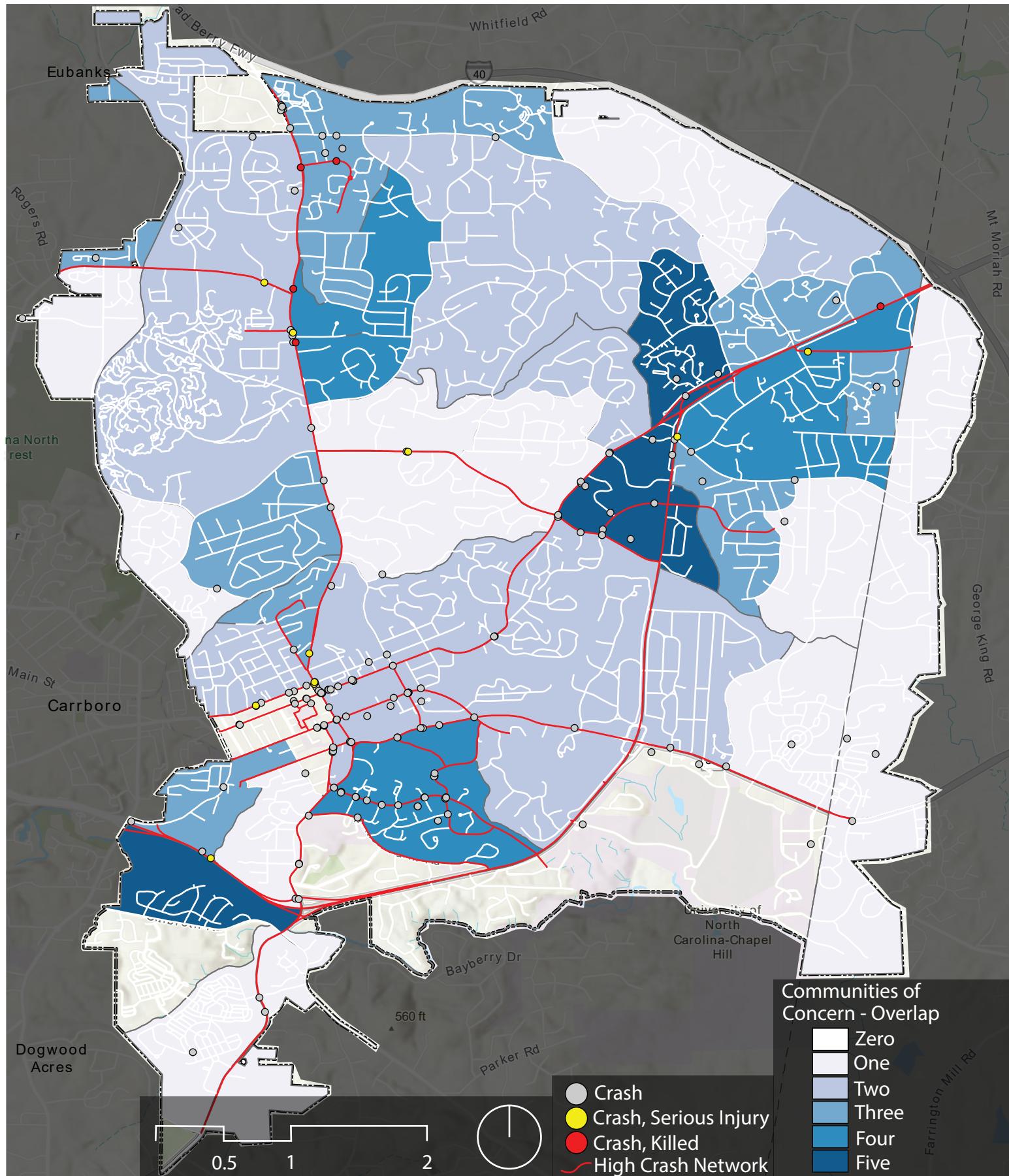
The Community of Concern thresholds for Chapel Hill are:

RACIALMINORITY (NON-WHITE) POPULATION: 34.5%  
ELDERLY (65+) POPULATION: 10.6%

LOW-INCOME LIMIT FOR HOUSEHOLDS (80% AMI): \$70,801  
LIMITED ENGLISH PROFICIENCY HOUSEHOLDS: 2.7%  
ZERO-CAR HOUSEHOLDS: 5.9%

**Analyzing the High Crash Network and Communities of Concern helps the Town prioritize and plan safety improvements in corridors where crashes are highest and the communities are most vulnerable.**

# Chapel Hill Pedestrian and Bicyclist Crash Map 2021



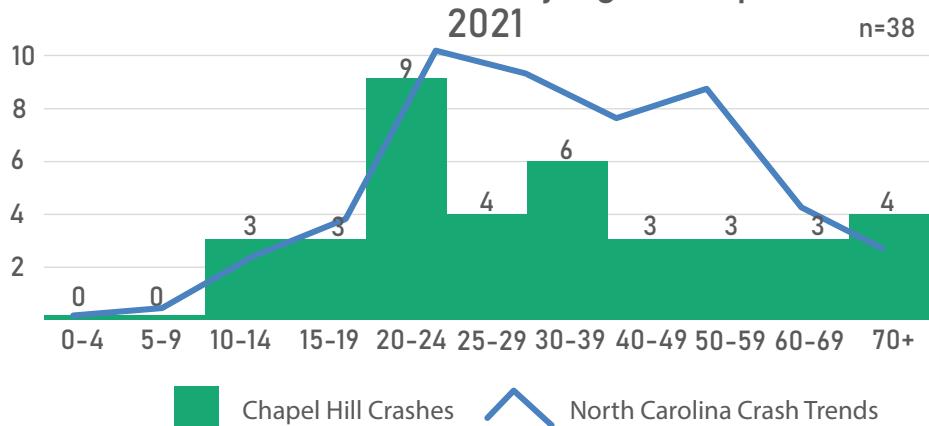


## General Trends - Demographics



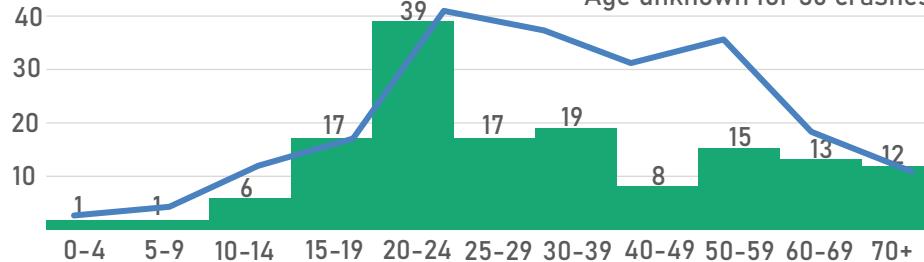
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### Crash Victims by Age Group



**2017-2021**

**n=148** Age unknown for 36 crashes



#### AGE

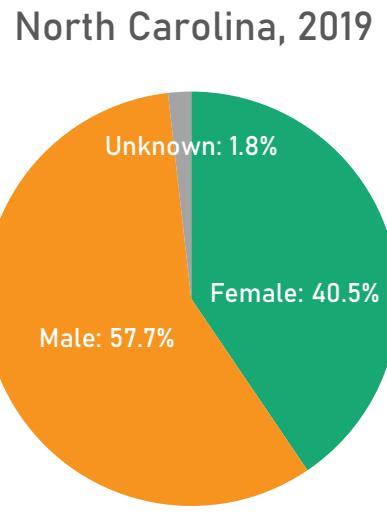
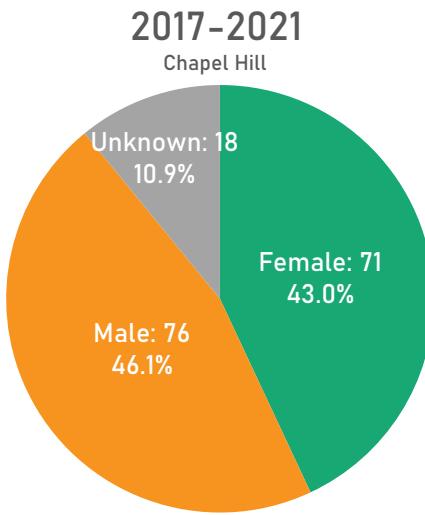
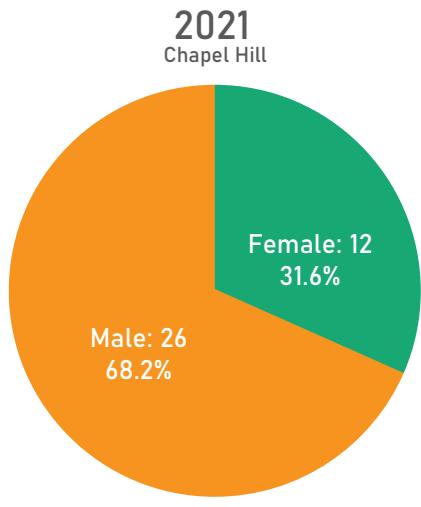
Pedestrians and bicyclists ages 15-29 consistently make up 45-55% of crash victims. As 41% of the Town's population, this age group is disproportionately involved in crashes. When scaled to Chapel Hill's crash numbers, the North Carolina Crash Trends show how crash victim ages in Chapel Hill would be distributed if they lined up with statewide trends.

#### GENDER

In Chapel Hill, males make up 47% of the population but were disproportionately involved as crash victims in 2021. Five-year trends show little discrepancy between genders involved in crashes and the percentage of Chapel Hill population.

\*Gender is identified by the police report. Police reports from UNC Police do not include gender and are listed as "unknown".

### Crash Victims by Gender





## General Trends - Demographics (cont'd)

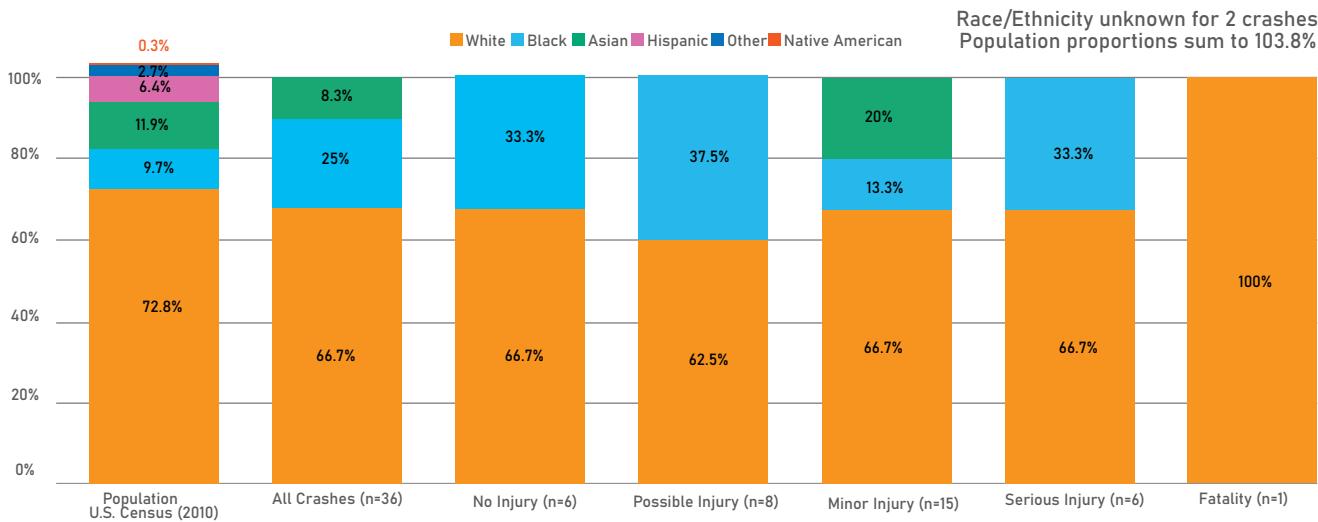


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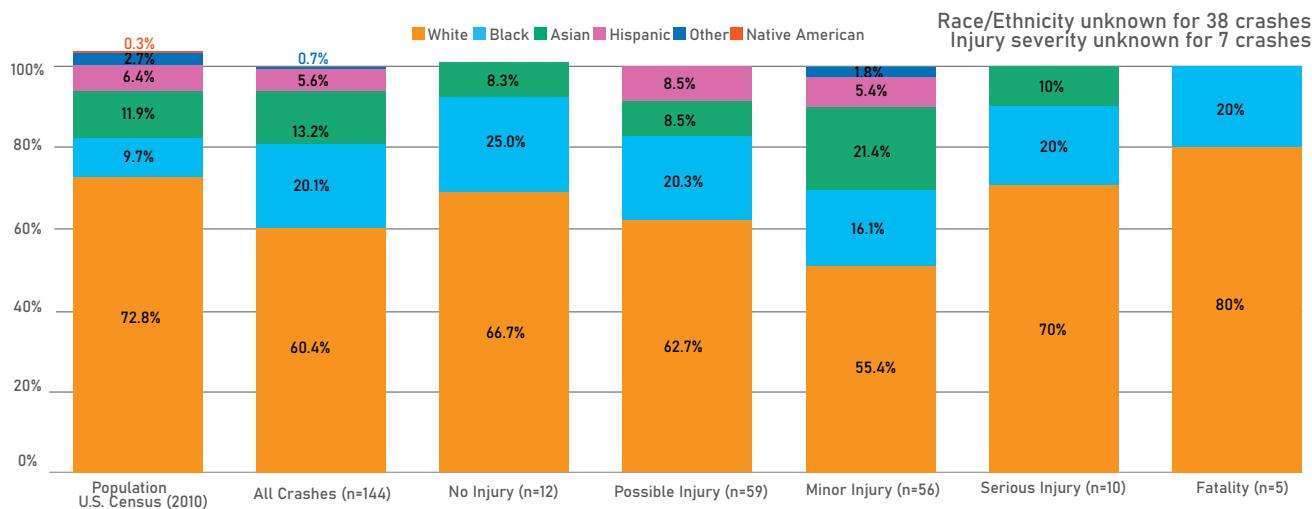
SAFE STREETS IN CHAPEL HILL

### Crash Victim Injury Severity and Racial Demographics

2021



2017-2021



#### RACE

In 2021, 67% of all crash victims were identified as White, 25% Black or African-American, and 8% Asian or AAPI. These percentages are relatively consistent with the Chapel Hill five-year crash data, as well.

Since 2017, 7 of 10 serious injuries and fatality victims (70%) in Chapel Hill have been White.

Per the 2010 US Census, 9.7% of Chapel Hill residents identify as Black. Since 2017 20.1% of crash victims in Chapel Hill are Black.

Compared with the population of Chapel Hill, this data shows that, consistently, a **non-White person is nearly 2x as likely as a White person** to be the victim of a pedestrian or bicycle-involved crash in Chapel Hill.

The Town's High Crash Network (page 3) borders many racial minority communities in Chapel Hill.

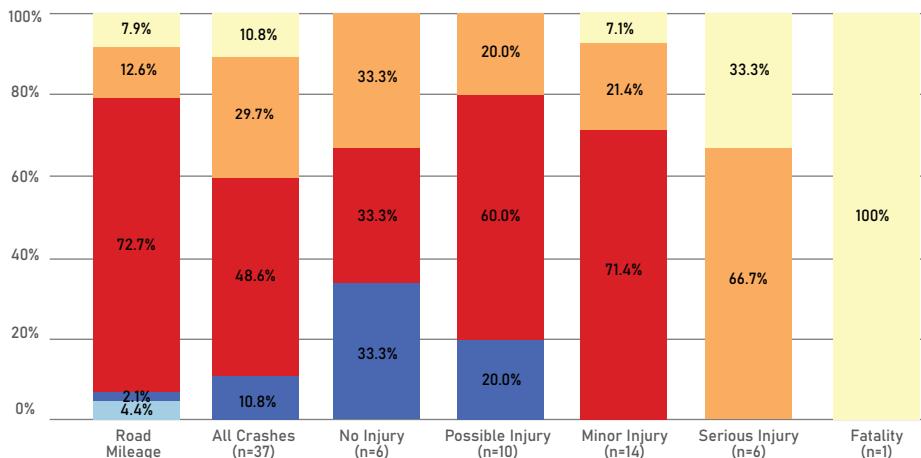


## General Trends - Environment

### Crashes by Speed Limit

2021

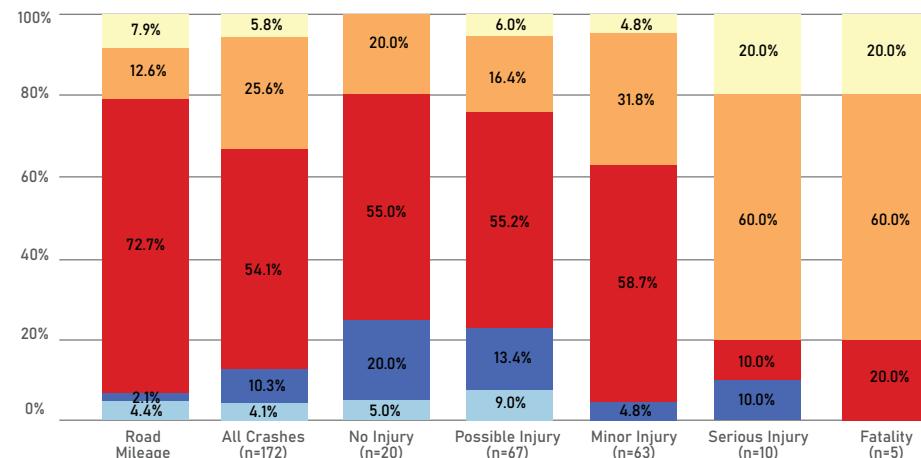
■ 15MPH ■ 20MPH ■ 25MPH ■ 35MPH ■ 45MPH



2017-2021

■ 15MPH ■ 20MPH ■ 25MPH ■ 35MPH ■ 45MPH

Injury severity unknown for 7 crashes



#### SPEED LIMIT

In Chapel Hill, 20% of streets have a speed limit of 35 or higher. In 2021, 40.5% of pedestrian and bicyclist-involved crashes occurred on these streets. One hundred percent of serious injury and fatal crashes occurred on streets with a speed limit of 35 MPH or higher. Over a five-year period, 31.4% of all crashes and 80% of serious injury or fatal crashes consistently occurred on 35+ MPH streets.

#### NUMBER OF LANES

Consistently, about 30% of pedestrian and bicyclist-involved crashes occur on two-lane streets. In 2021, 52.6% of all crashes occurred on streets with four or more lanes. Since 2017, 73.3% of serious injury or fatal crashes occurred on streets with four or more lanes.

#### JURISDICTION

The Town owns 56% of roadways in Chapel Hill. From 2017 to 2021, 33.7% of all pedestrian and bicyclist-involved crashes occur on these roadways. The other 66.3% of crashes in Chapel Hill occur on roadways maintained by NCDOT, UNC, private property owners, or in public vehicle areas, such as parking lots. 11 out of 15 fatal or serious injury crashes in Chapel Hill from 2017 to 2021 occurred on roadways maintained by NCDOT.



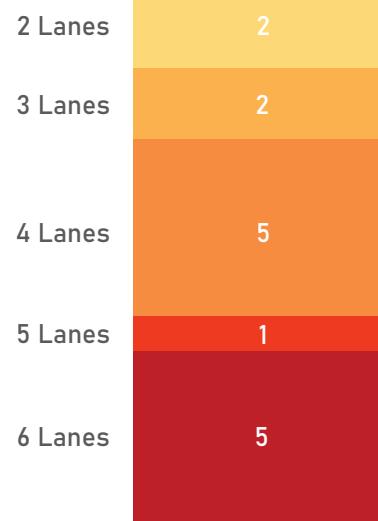
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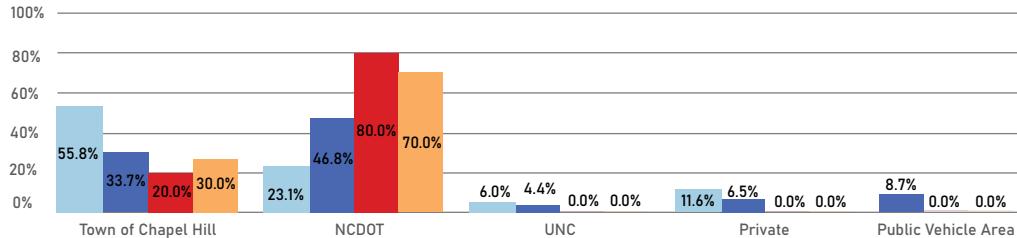
### Crashes by Number of Lanes

	Crashes (2021)	% (2021)	Crashes (5-Year)	% (5-Year)
One Lanes	0	0.0%	3	1.6%
Two Lanes	12	31.6%	56	30.4%
Three Lanes	6	15.8%	29	15.8%
Four Lanes	5	13.2%	34	18.5%
Five Lanes	9	23.7%	36	19.6%
Six Lanes	6	15.8%	14	7.6%
Parking Lot/ # Lanes Unknown	0	0.0%	12	6.5%

Killed or Serious Injury Crashes  
2017-2021



■ All Roadways ■ All Crashes (n=184) ■ Killed (n=5) ■ Serious Injury (n=10)





## General Trends - Temporal



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### DAY OF WEEK

Mid-week crashes are much more frequent than weekend crashes.

### TIME OF DAY

The vast majority of pedestrian and bicyclist-involved crashes (70.7%) occur between 8AM and 7PM.

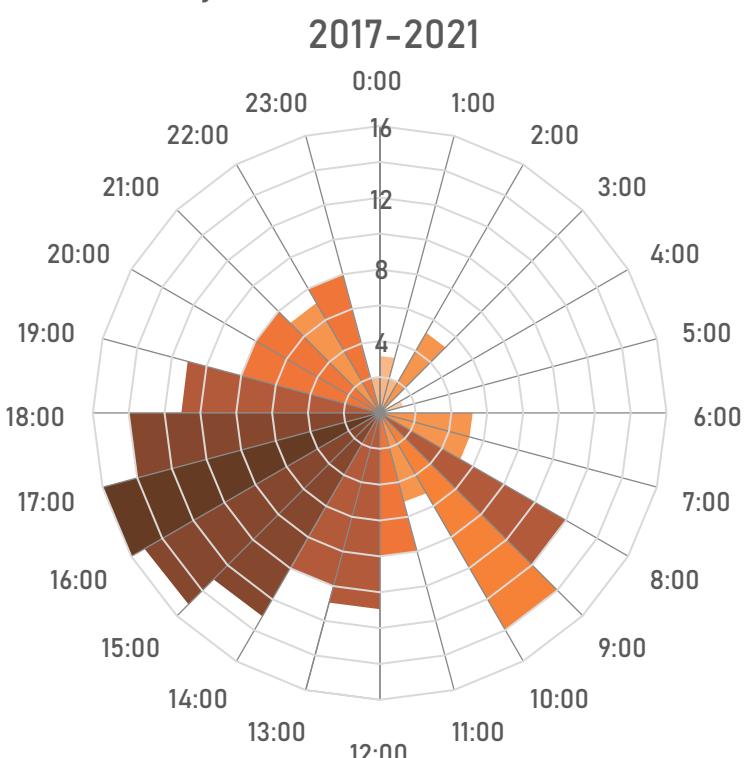
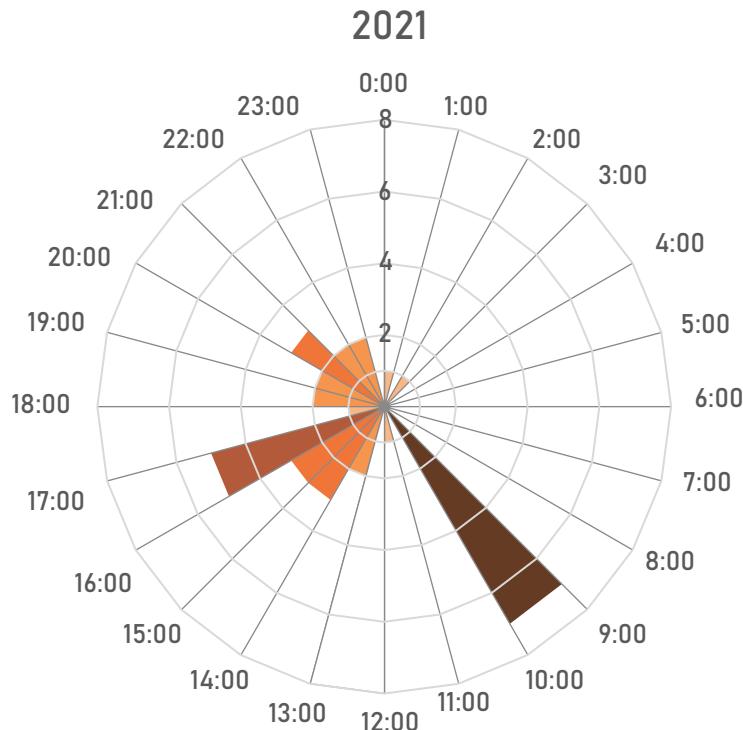
### MONTH

Pedestrian and bicyclist-involved crashes peak in March, August and October, potentially corresponding to daylight savings and academic calendars.

### Crashes by Day of Week



### Crashes by Hour of Day



### Crashes by Month

