

# Road To Zero

## Annual Crash Report



### WHAT IS THE ROAD TO ZERO?

The Road to Zero initiative, a program through the National Safety Council, is a coalition of communities committed to the belief that traffic injuries and deaths are not inevitable "accidents" but preventable crashes. The Road To Zero aims to eliminate traffic-related pedestrian fatalities by 2050.

In partnership with the Road to Zero initiative and AmericaWalks, Chapel Hill launched a Road to Zero Task Force and created a Pedestrian Safety Action Plan in 2019. Through this Action Plan, and with the guidance of the Road to Zero Task Force, Chapel Hill is working toward the goal of eliminating traffic-related pedestrian fatalities.

### WHAT IS THE PROBLEM?

From 2016 to 2020, there were 166 pedestrian and bicyclist-involved crashes in the Town of Chapel Hill. In 2020, there were 38 pedestrian and bicyclist-involved crashes, five more than the 5-year average. Chapel Hill had two consecutive years with zero pedestrian and bicyclist traffic fatalities in 2016 and 2017. Chapel Hill renewed ongoing efforts around pedestrian and bicyclist safety in response to two deaths in 2018, but has still had one death in each of the previous two years.

### 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 key 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 (2020) as well as trends over a five-year period (2016-2020). Data analysis in this report focuses on circumstantial trends (time of day, day of week), demographic trends (race, age), and environmental trends (speed limit, street maintenance).

### GOALS

The Town's Road to Zero Commitment establishes the goals to:

- Eliminate pedestrian road fatalities and serious injuries, and
- Make active transport safe, accessible, and enjoyable

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

### THE IMPACT OF COVID-19

COVID-19 had significant impacts on traffic patterns across the country. Many communities registered increased speeding and aggressive driving in 2020. Despite there being fewer vehicles and pedestrians on the road, Chapel Hill only had 5 fewer crashes from 2019 to 2020, and had a noticeable increase in crashes where the pedestrian or bicyclist was killed or seriously injured (from 1 to 3). The long-term impact of COVID-19 on traffic patterns and safety are still to be determined, but the Town is committed to continuing to highlight the connection between speed and safety.



## 2016-2020 Crash Snap Shot

67%

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

54%

OF PEDESTRIAN AND BICYCLIST CRASHES OCCUR ON STATE-OWNED STREETS

58%

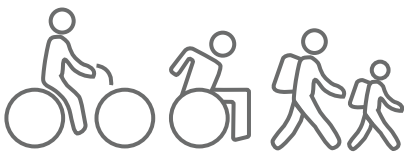
OF PEDESTRIAN AND BICYCLIST CRASHES OCCUR ON JUST 15% OF STREETS - THE HIGH CRASH NETWORK

41%

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

39%

OF PEDESTRIAN AND BICYCLIST CRASHES OCCUR DURING PEAK TRAFFIC HOURS (6-9AM, 4-7PM)



# Data-Driven Approach



The Town of Chapel Hill is implementing a data-driven approach to achieve its Road to Zero goals. Establishing the Town's High Crash Network (HCN) and Communities of Concern (CoC) is an important first step in this approach.

The High Crash Network spotlights streets with a high concentration of pedestrian and bicyclist-involved crashes over a five year period (2016-2020). The Town identified streets in the 75th percentile of total crashes and crashes-per-mile (total crashes/length of street) over the 5-year period. The 75th percentile accounts for which streets are more dangerous (by total crashes or crashes-per-mile) than 75% of other streets. Streets with 1 crash over this period are not included in the HCN. This analysis identified 19 streets as the Town's High Crash Network:

| STREET NAME     | LENGTH (MI.) | # CRASHES (5-YEAR) | CRASHES PER MILE | STREET NAME       | LENGTH (MI.) | # CRASHES (5-YEAR) | CRASHES PER MILE |
|-----------------|--------------|--------------------|------------------|-------------------|--------------|--------------------|------------------|
| BANKS DR        | 0.17         | 2                  | 11.6             | PITTSBORO ST      | 0.44         | 6                  | 13.7             |
| COUNTRY CLUB RD | 0.65         | 4                  | 6.1              | S COLUMBIA ST     | 3.18         | 6                  | 1.9              |
| E CAMERON AVE   | 0.40         | 4                  | 9.9              | S ESTES DR        | 0.61         | 3                  | 4.9              |
| E FRANKLIN ST   | 2.72         | 14                 | 5.1              | SKIPPER BOWLES DR | 0.45         | 3                  | 6.6              |
| FORDHAM BLVD    | 8.29         | 3                  | 0.4              | SOUTH RD          | 0.66         | 4                  | 6.0              |
| MANNING DR      | 1.36         | 14                 | 10.3             | STADIUM DR        | 0.33         | 3                  | 9.2              |
| MLK, JR. BLVD   | 3.99         | 9                  | 2.3              | W FRANKLIN ST     | 0.57         | 4                  | 7.0              |
| MASON FARM RD   | 1.08         | 3                  | 2.8              | W ROSEMARY ST     | 0.58         | 5                  | 8.6              |
| N COLUMBIA ST   | 0.83         | 4                  | 4.8              | WILLIAM BLYTHE DR | 0.30         | 2                  | 6.7              |
|                 |              |                    |                  | WILLOW DR         | 1.06         | 3                  | 2.8              |

This High Crash Network of 19 streets accounts for 97 of the 166 pedestrian and bicyclist-involved crashes in Chapel Hill over the five year period, or 58.4%. These streets account for 45.1 of the 306.2 miles of street in Chapel Hill, or 14.7%. Establishing this HCN will help inform the Town's forthcoming policies, programs, and engineering design toolkit to improve safety conditions on the Town's most dangerous streets.

Communities of Concern are represented as any geographic area, analyzed by census block group, where the percentage of a vulnerable or under-served population is greater than the Town-wide threshold for that population. For example, if 50 % of the Town's households have access to at least one car, any census block group with fewer than 50% of households having access to one car would be identified as a **zero-car household Community of Concern**.

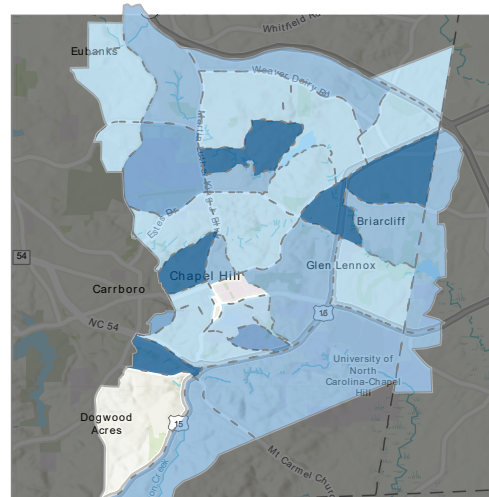
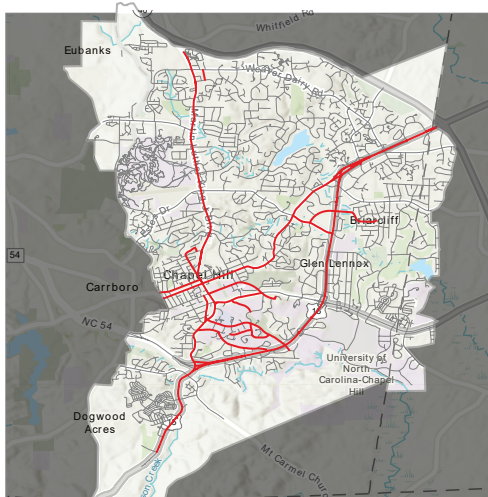
This approach was adapted from the regional metropolitan planning organization (DCHC MPO) 2020 Environmental Justice Report and analyzes four communities of concern: **racial minority population, elderly population, low-income household, and zero-car households**.

Represented in the darkest shade of blue in the map below (and larger on the next page), four census block groups exhibit all four of the analyzed Communities of Concern, including the Northside neighborhood and communities off Fordham and MLK Jr Blvds.

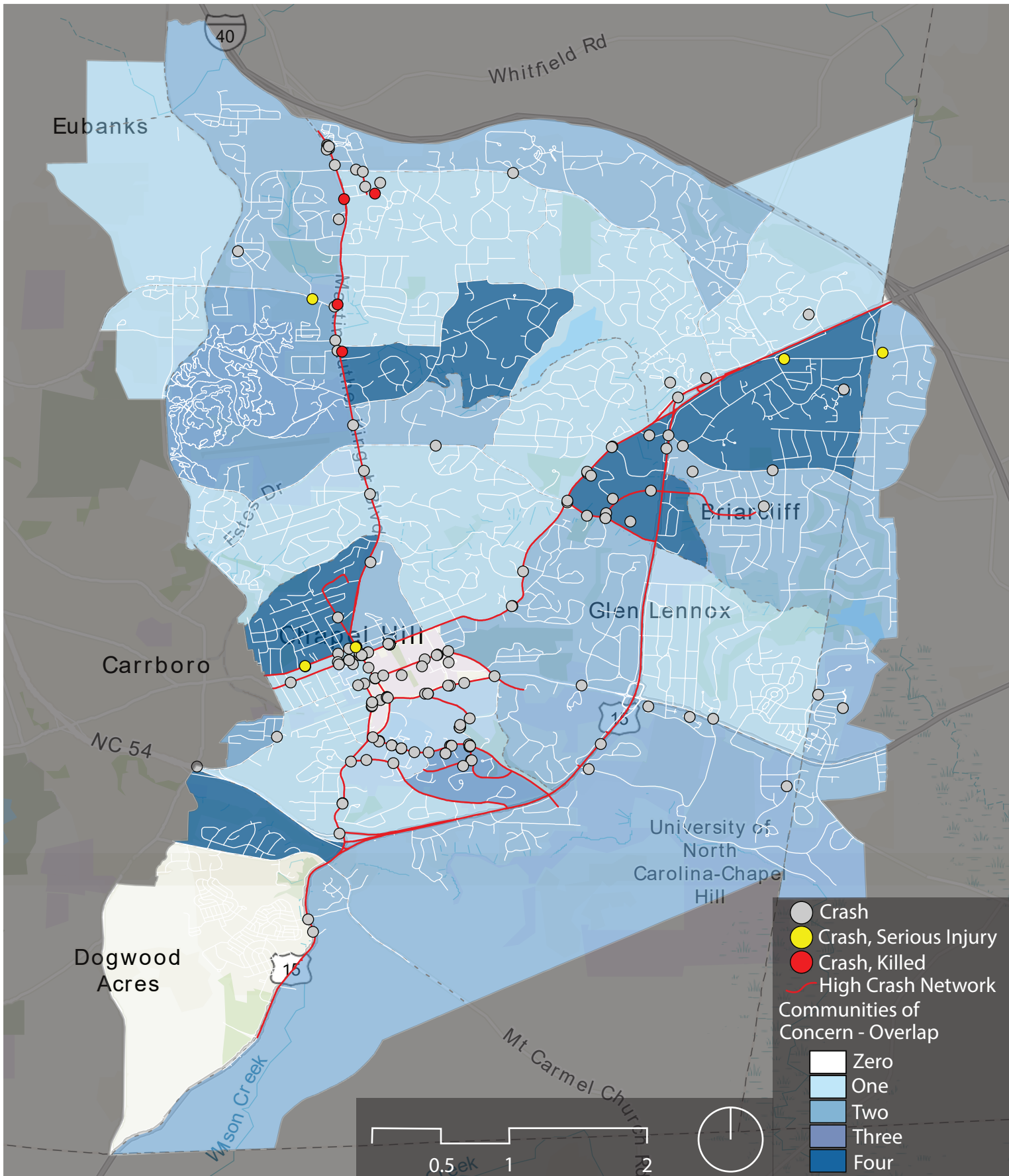
**Analyzing the High Crash Network and Communities of Concern helps the TOWN prioritize and plan safety improvements in corridors where crashes are highest and the communities are most vulnerable.**

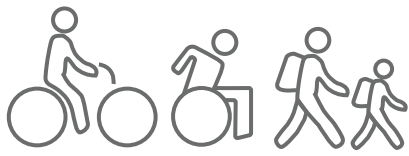
## Maps

The HCN and CoC maps, displayed below, combined with 5-year crash data make up the Town's Pedestrian and Bicyclist Crash Map. This map is displayed on the next page.



# Chapel Hill Pedestrian and Bicyclist Crash Map



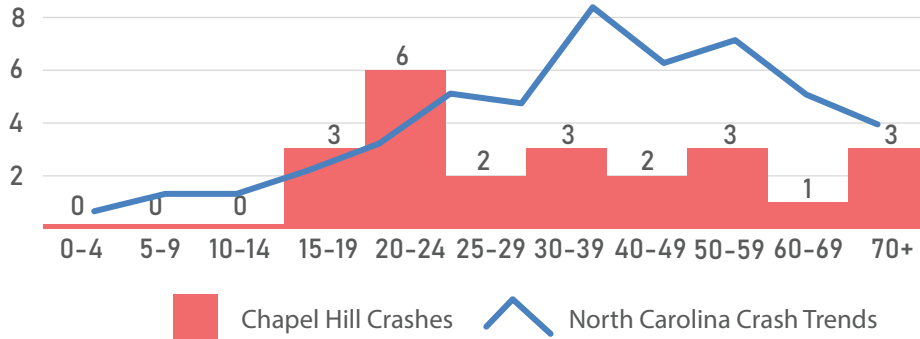


# General Trends - Demographics



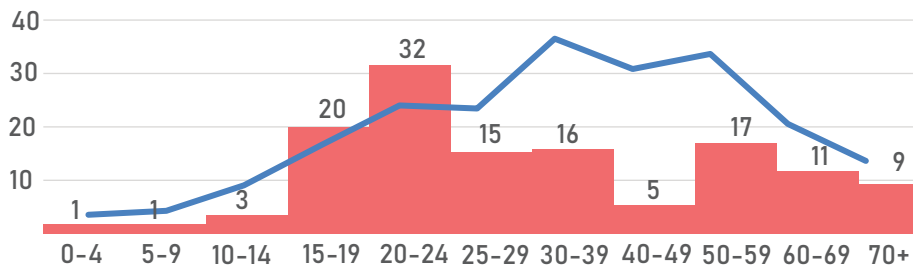
## Crash Victims by Age Group 2020

n=23



## 2016-2020

n=130

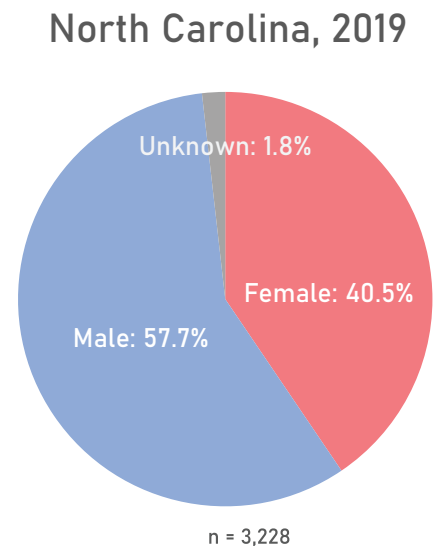
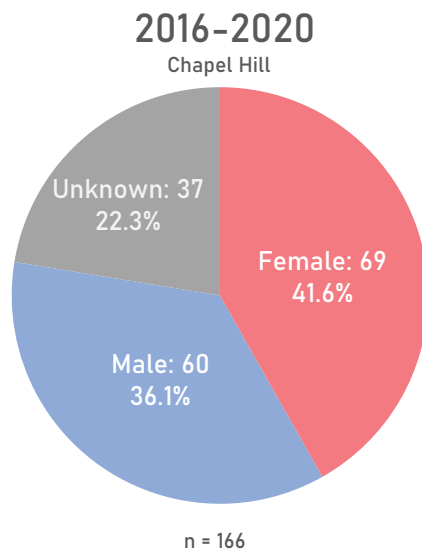
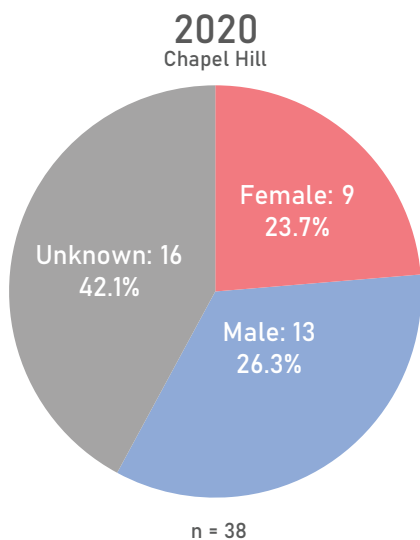


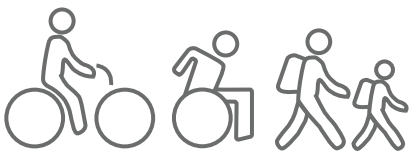
**AGE**  
Pedestrians and bicyclists ages 15-29 consistently make up 45-55% of crash victims. As 41% of the Town's population, this age group is disproportionately involved in crashes. When scaled to Chapel Hill's crash numbers, the North Carolina Crash Trends show how crash victim ages in Chapel Hill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

**GENDER**  
In Chapel Hill, where females make up 53% of the population, males were more frequently involved as crash victims in 2020. This trend is inconsistent with the Chapel Hill five year period, but is consistent with North Carolina statewide trends.

\*Crash Reports from UNC Police do not include gender and are listed as "unknown".

## Crash Victims by Gender



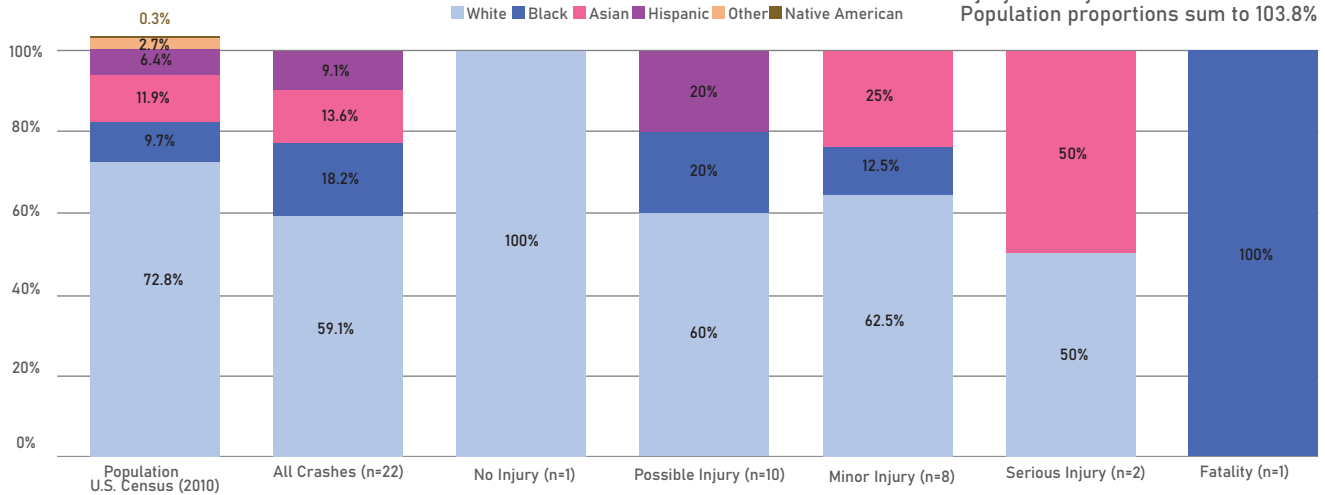


# General Trends - Demographics (cont'd)

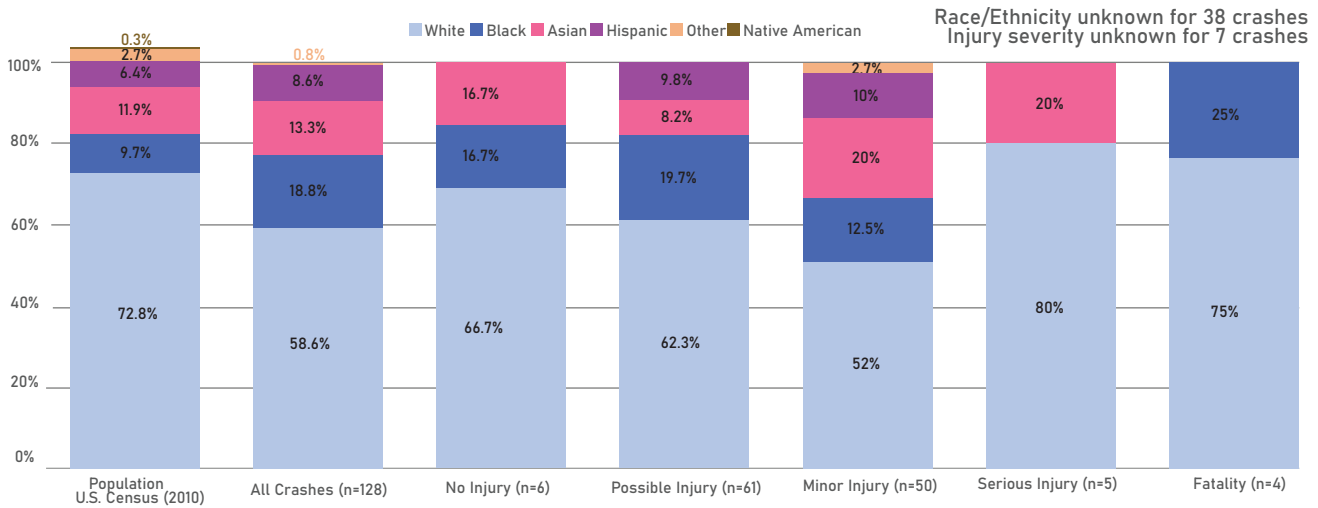


## Crash Victim Injury Severity and Racial Demographics

2020



2016-2020



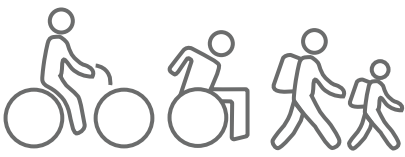
**RACE**  
In 2020, 59% of all crash victims were identified as White, 18% Black or African-American, 14% Asian or AAPI, and 9% Hispanic or Latino. These percentages are relatively consistent with the Chapel Hill five-year crash data, as well.

Since 2016, 7 of 9 serious injuries and fatality victims (78%) in Chapel Hill have been White.

Per the 2010 US Census, 9.7% of Chapel Hill residents identify as Black. Since 2016, 18.8% of crash victims in Chapel Hill are Black.

Compared against 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.

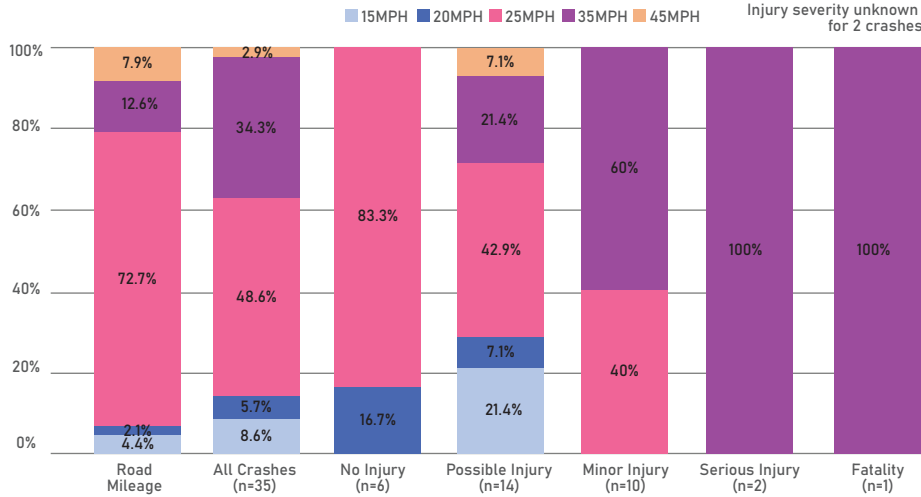


# General Trends - Environment



## Crashes by Speed Limit

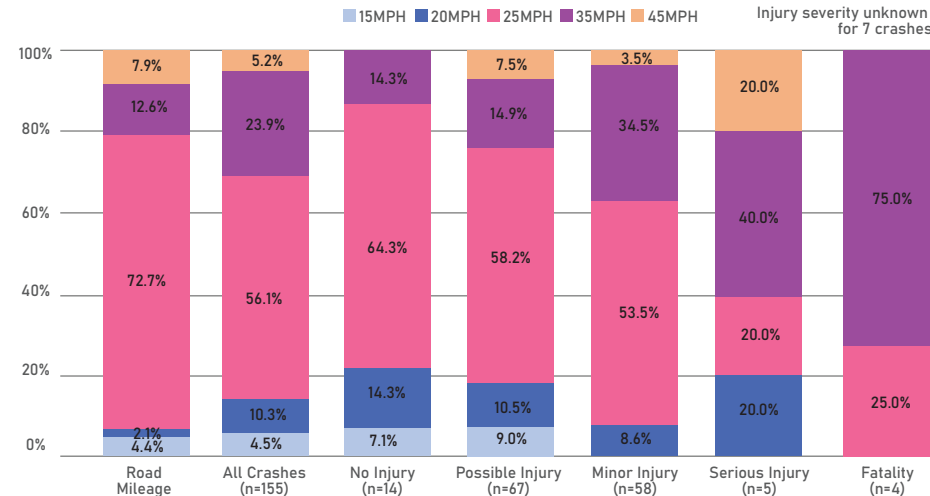
2020



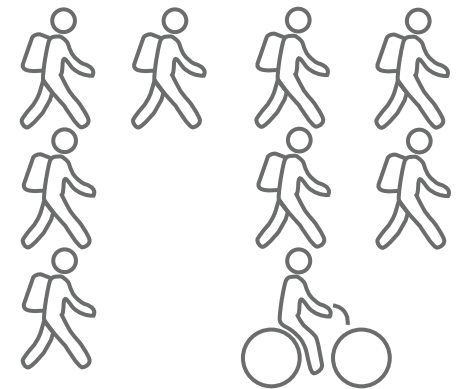
## Crashes by Number of Lanes

|                                 | Crashes (2020) | % (2020) | Crashes (5-Year) | % (5-Year) |
|---------------------------------|----------------|----------|------------------|------------|
| One Lanes                       | 1              | 2.6%     | 3                | 1.8%       |
| Two Lanes                       | 12             | 31.6%    | 49               | 29.5%      |
| Three Lanes                     | 6              | 15.8%    | 26               | 15.7%      |
| Four Lanes                      | 6              | 15.8%    | 37               | 22.3%      |
| Five Lanes                      | 7              | 18.4%    | 30               | 18.1%      |
| Six Lanes                       | 2              | 5.3%     | 8                | 4.8%       |
| Parking Lot/<br># Lanes Unknown | 4              | 10.5%    | 13               | 7.8%       |

2016-2020



Killed or Serious Injury Crashes 2016-2020



### SPEED LIMIT

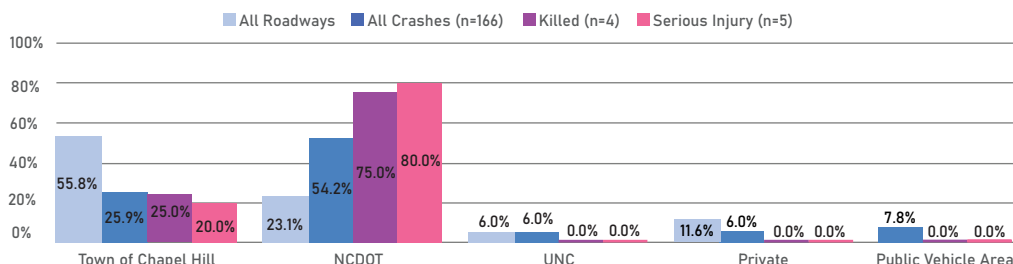
Twenty percent of Chapel Hill Streets have a speed limit of 35 or higher. In 2020, 37% of pedestrian and bicyclist-involved crashes occurred on these streets. One hundred percent of serious injury and fatal crashes occurred on 35 MPH streets. Over a five-year period, injuries consistently occur on faster streets.

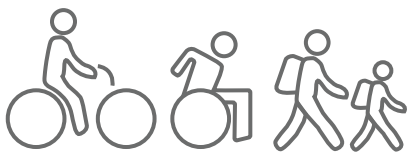
### NUMBER OF LANES

Consistently, about 30% of pedestrian and bicyclist-involved crashes occur on two-lane streets. Two in every five crashes occur on streets with four or more lanes. Over the five-year period 56% 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 2016 to 2020, 26% of crashes occur on these roadways. The other 74% of crashes in Chapel Hill occur on state-owned roadways, private roadways, or in public vehicle areas, such as parking lots. In Chapel Hill, a pedestrian or bicyclist-involved crash is 5 times more likely to occur on an NCDOT roadway than a Town of Chapel Hill roadway.





# General Trends - Circumstance

Despite traffic and travel patterns being significantly altered by COVID-19, circumstance trends have stayed consistent since 2016.

## DAY OF WEEK

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

## TIME OF DAY

Peak traffic hours (6-9 AM, 4-7 PM) are the most dangerous times for pedestrian and bicyclist-involved crashes.

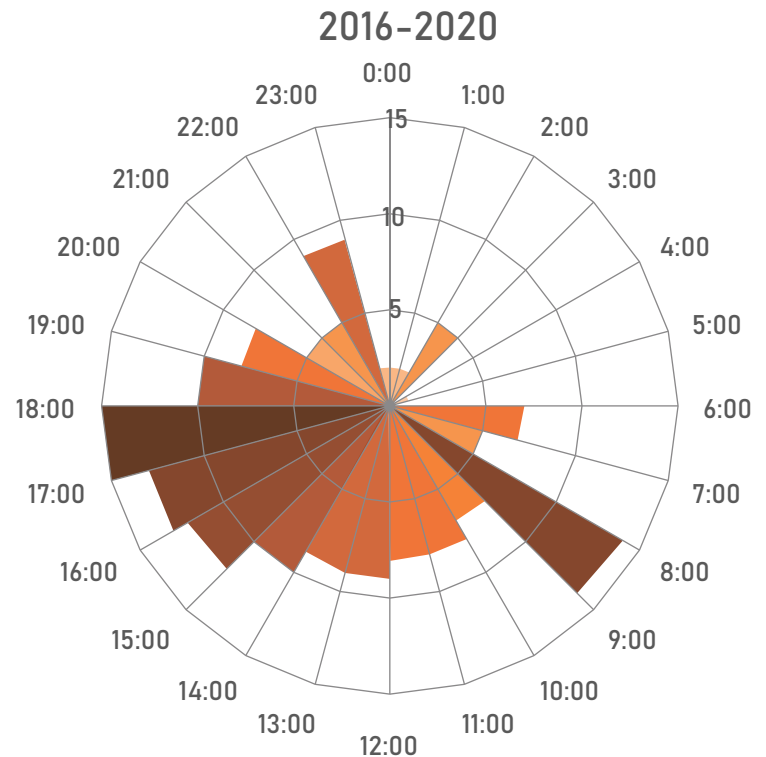
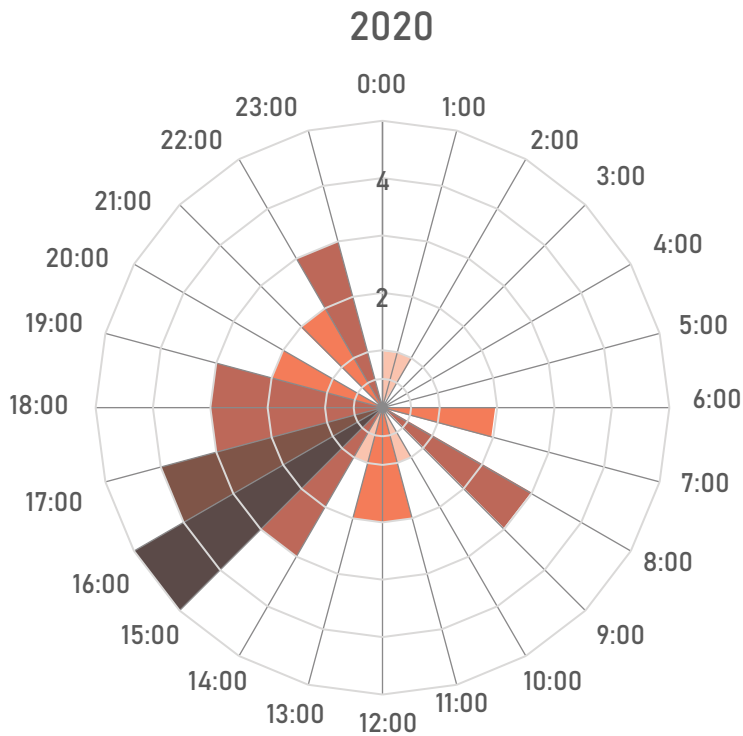
## MONTH

November has the most pedestrian and bicyclist-involved crashes, while Spring and Summer see numbers dip.

### Crashes by Day of Week

|        | SUN | MON | TUE | WED | THU | FRI | SAT |
|--------|-----|-----|-----|-----|-----|-----|-----|
| 2020   | 5   | 7   | 7   | 11  | 3   | 2   | 3   |
| 5-Year | 19  | 30  | 32  | 33  | 24  | 20  | 8   |

### Crashes by Hour of Day



### Crashes by Month

