Active Transportation

ITRE

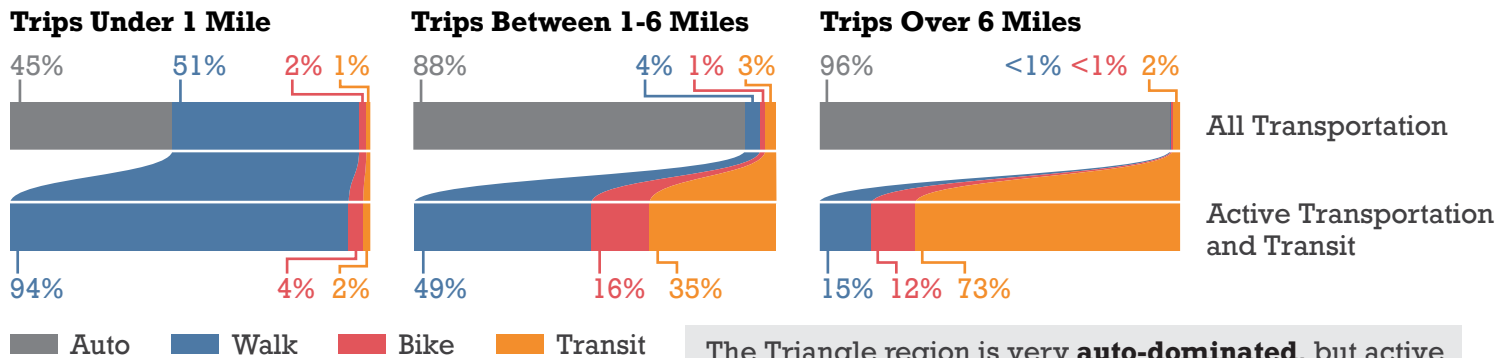## IN THE RESEARCH TRIANGLE REGION

Overview

A **multimodal transportation system** that encourages walking and biking has positive benefits for **improving health, promoting equity, and reducing congestion**. Active Transportation (walking and biking) projects are an element of the region's Metropolitan Transportation Plans (MTPs).

Trips Under 1 Mile

45%   51%   2% 1%

All Transportation

94%   4% 2%

Active Transportation and Transit

Trips Between 1-6 Miles

88%   4% 1% 3%

49%   16%   35%

Trips Over 6 Miles

96%   <1% <1% 2%

15% 12% 73%

■ Auto ■ Walk ■ Bike ■ Transit

Data sources include the 2016 Triangle Household Travel Survey and crash data from NCDOT.

The Triangle region is very **auto-dominated**, but active transportation still plays an important role in mobility, especially for shorter distance trips.

Travel Behavior

Various factors influence a person's choice to walk, bike, or take transit, including their personal or household characteristics, why they are traveling, whether the trip is made in an urban, suburban, or rural community, and the presence of sidewalks and bike lanes. **The information below focuses on trips between 1-6 miles**, as these seem most likely to benefit from planning and policy decisions, and infrastructure investments. *Note that not all of these graphs add up to 100%, and the scale is not consistent between them.*
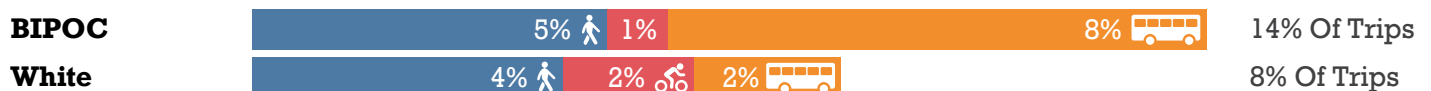
Income

Lower income families are much more dependent on non-auto transportation, especially public transit.

Lower Income	6% 🚶 3% 🚲 11% 🚌	20% Of Trips
Medium Income	4% 🚶 1% 2%	7% Of Trips
Higher Income	4% 🚶 1% 1%	5% Of Trips

Ethnicity

Non-white households rely heavily on non-auto travel modes.

BIPOC	5% 🚶 1% 8% 🚌	14% Of Trips
White	4% 🚶 2% 🚲 2% 🚌	8% Of Trips

Auto Ownership

Zero car housholds rely heavily on active transportation and public transit, with around 64% of total trips made using these means.

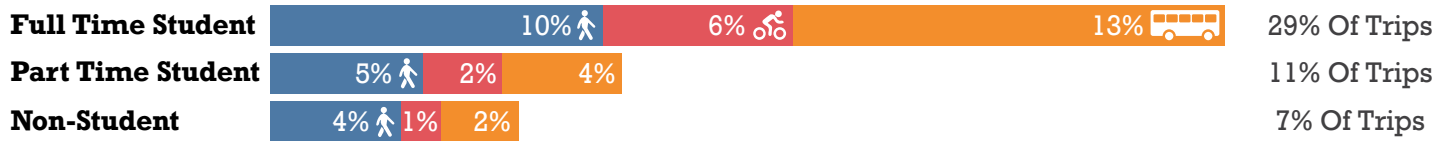|		
No Car	21% 🚶 3% 40% 🚌	64% Of Trips
<1 Car Per Worker	4% 6% 🚲 6%	16% Of Trips
1+ Car Per Worker	4% 1% 1%	6% Of Trips

NC STATE UNIVERSITY   CAMPO NC Capital Area Metropolitan Planning Organization   DCHC Metropolitan Planning Organization Planning Tomorrow Today   GO Triangle
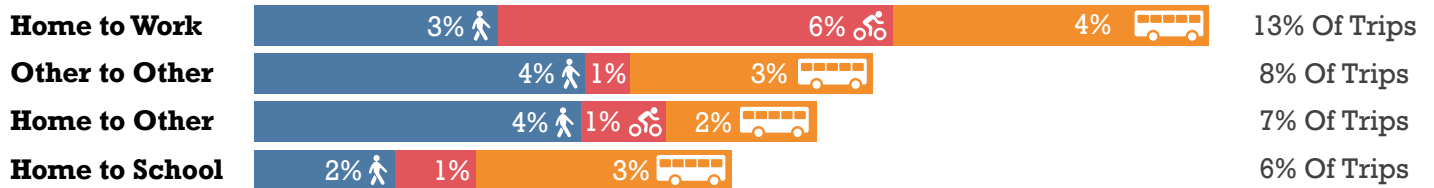
Updated 2021

Student Status

Students rely heavily on non-auto modes for travel in the Triangle, an important metric given the region's high concentration of universities and colleges.
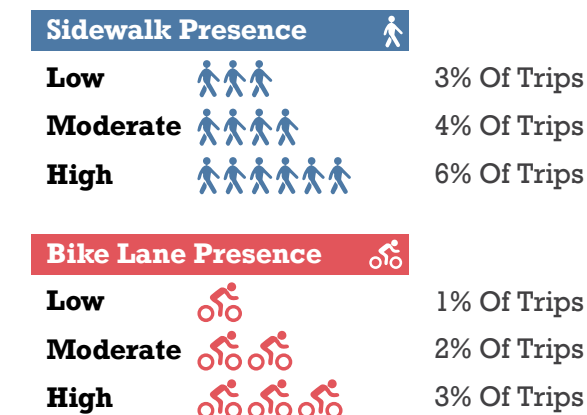
Full Time Student	10% 🚶 6% 🚲 13% 🚌	29% Of Trips
Part Time Student	5% 🚶 2% 4%	11% Of Trips
Non-Student	4% 🚶 1% 2%	7% Of Trips

Reason For Travel

Work trips show the greatest variation in mode for trips between 1-6 miles.

Home to Work	3% 🚶 6% 🚲 4% 🚌	13% Of Trips
Other to Other	4% 🚶 1% 3% 🚌	8% Of Trips
Home to Other	4% 🚶 1% 🚲 2% 🚌	7% Of Trips
Home to School	2% 🚶 1% 3% 🚌	6% Of Trips

Bike Lanes and Sidewalks

Mode choice is largely determined by distance to destinations. However, the presence of infrastructure that promotes active transportation has the greatest effect on intermediate distances. The presence of bike lanes and sidewalks can encourage people to walk and bike.
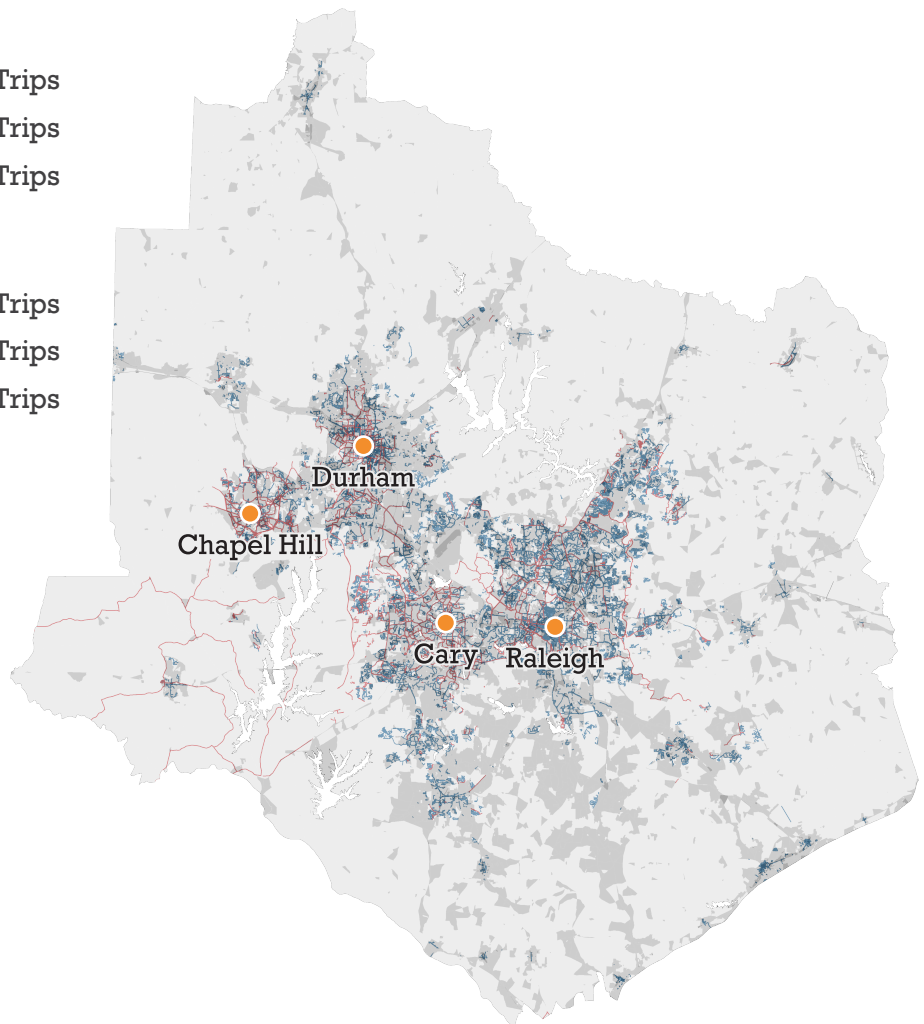
Sidewalk Presence 🚶

Low	🚶🚶🚶	3% Of Trips
Moderate	🚶🚶🚶🚶	4% Of Trips
High	🚶🚶🚶🚶🚶🚶	6% Of Trips

Bike Lane Presence 🚲

Low	🚲	1% Of Trips
Moderate	🚲🚲	2% Of Trips
High	🚲🚲🚲	3% Of Trips

Infrastructure
- ■ Sidewalks
- ■ Bike Lanes

Population Density
- ■ Urban
- ■ Suburban
- ■ Rural

Safety

Active travelers are among the most vulnerable roadway users in a crash situation. Understanding crash patterns and statistics can help us plan for safer communities for all.

Crash data for active travelers in the Triangle region highlighted the following trends, which have been paired with proven countermeasures that can improve safety related to biking and walking.

Problem: Higher concentration of crashes involving a pedestrian or bike in urban areas

Solution: Sidewalks
65-89% Reduction
in crashes involving pedestrians walking along roadways
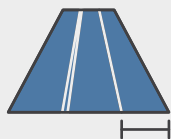
Solution: Paved Shoulders
71% Reduction
in crashes involving pedestrians walking along roadways

https://safety.fhwa.dot.gov/provencountermeasures/walkways/

Problem: Greater severity of crashes on higher speed facilities

Solution: Raised Median
46% Reduction
in pedestrian crashes

Solution: Pedestrian Crossing Island
56% Reduction
in pedestrian crashes

https://safety.fhwa.dot.gov/provencountermeasures/ped_medians/

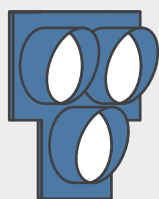**Problem:** A higher concentration of crashes at signalized intersections

Solution: Leading Pedestrian Intervals
60% Reduction
in the number of people hit by cars at intersections

https://safety.fhwa.dot.gov/provencountermeasures/lead_ped_int/

Problem: A higher concentration of mid-block crashes

Solution: Pedestrian Hybrid Beacons
55% Reduction
in pedestrian crashes
29% Reduction
in total crashes
15% Reduction
in serious injury and fatal crashes

https://safety.fhwa.dot.gov/provencountermeasures/ped_hybrid_beacon/